FOOD AND RELATED PRODUCTS

Compilation of recipes across Indian states

(Developed by Indian Academic Institutions)

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Compilation of recipes across India states

Developed by Indian Academic Institutions

COMPILED BY: NATIONAL CENTRE OF EXCELLENCE AND ADVANCED RESEARCH ON DIETS (NCEARD), LADY IRWIN COLLEGE

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EAST INDIA RECIPES

ASSAM MIX

(Complementary food)

SHELF LIFE
Best before one year from the date of manufacturing

COST
Rs. 110.00/ 300 g

Nutritional Information/100 grams

Energy	366 Kcal
Carbohydrate	71 gm
Protein	15 gm
Total fat	2 gm
Calcium	369 mg
Iron	5 mg

ASSAM MIX

(Complementary food)

Target Group and Benefits

- Infant, children, geriatrics

Ingredients

- Rice
- Green Gram Dal
- Gingelly Seed
- Groundnut
- Sucrose
- Vitamins
- Minerals

Method of Preparation

- Technology sold out to Aasray Concept Foods, Amingaon, Guwahati, Assam.

DEVELOPED BY

Department of Food Science and Nutrition, Assam Agricultural University, Jorhat, Assam

MULTIGRAIN ROTI MIX

(for Diabetics)

SHELF LIFE
45 days

COST
Rs. 60.00/ kg

Nutritional Information/100 grams

Energy	370 gm
Carbohydrate	57 gm
Protein	13 gm
Total fat	10 gm
Calcium	289 mg
Iron	3.17 mg
Crude fibre	3 gm
Vitamin C	6 mg

MULTIGRAIN ROTI MIX

(for Diabetics)

Target Group and Benefits

- Diabetics and general population

Ingredients

- **Wheat flour**
- **Foxtail millet flour**
- **Gram flour**
- **Kalmegh leaves powder (Andrographicpaniculata)/ Fenugreek seeds**

Method of Preparation

- Ingredients are mixed as per standardization after appropriate processing.

DEVELOPED BY
Department of Food Science and Nutrition, College of Community Science, AAU, Jorhat, Assam

GLUTEN FREE BISCUIT

SHELF LIFE
4 weeks

COST
Rs. 30.00/ 100g

Nutritional Information/100 grams

Carbohydrate	53-54 gm
Protein	9-10 gm
Total fat	24.25-24.60 gm
Calcium	43-44 mg
Iron	3.21-3.38 mg
Crude fibre	2.39-2.48 gm

GLUTEN FREE BISCUIT

Target Group and Benefits

- Patients with celiac disease and general population

Ingredients

- **Rice flours (waxy and non-waxy)**
- **Buckwheat and defatted soya flour**
- **Sugar**
- **Margarine**
- **Egg**
- **Baking powder**

Method of Preparation

- Waxy and non-waxy rice flour, buckwheat and defatted soya flour are mixed together with baking powder.
- Cream together margarine and sugar.
- Beat in eggs until fluffy and add flour mixture to make soft dough.
- Shaped biscuits are baked and stored.

DEVELOPED BY
Department of Food Science and Nutrition, College of Community Science, AAU, Jorhat, Assam

BALANCED ENTERAL FORMULA

(BEF)

SHELF LIFE
1 month

COST
Rs. 30.00/ 200g

Nutritional Information/100 grams

Energy	475 Kcal
Carbohydrate	62 gm
Protein	16 gm
Total fat	11.69 gm
Crude fibre	1.96 gm

BALANCED ENTERAL FORMULA

(BEF)

Target Group and Benefits

- Hospitalized and patients at home dependent on enteral nutrition support.
- Suitable for oral feeding and of low cost.

Ingredients

- Malted rice flour
- Malted green gram flour
- Popped amaranth
- Flaxseed flour
- Milk product (skimmed milk powder)
- Coconut oil

Method of Preparation

- Ingredients are mixed as per standardization after appropriate processing.

DEVELOPED BY
Department of Food Science and Nutrition, College of Community Science, AAU, Jorhat, Assam

WEANING MIX

(from malted konidhan {Foxtail millet})

SHELF LIFE
Up to 45 days

COST
Rs. 35.00/100g

Nutritional Information/100 grams

Energy	394-398 Kcal
Carbohydrate	62-64 gm
Protein	17.9-19.9 gm
Total fat	7.6-7.9 gm
Total mineral	1.8-2.0 gm
Crude fibre	1.3-1.7 gm

WEANING MIX

(from malted konidhan {Foxtail millet})

Target Group and Benefits

- Infant, children, geriatrics

Ingredients

- **Malted foxtail millet**
- **Malted green gram**
- **Roasted groundnut**
- **Roasted sesame**

Method of Preparation

- Ingredients are mixed as per standardization after appropriate processing.

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Department of Food Science and Nutrition, College of Community Science, AAU, Jorhat, Assam

JALPAN MIX

(Breakfast cereals)

SHELF LIFE
Up to six months

COST
Rs. 35.00/100g

Nutritional Information/100 grams

Energy	351 Kcal
Carbohydrate	75 gm
Protein	6.8 gm
Total fat	2.84 gm
Calcium	32 mg
Iron	5.57 mg

JALPAN MIX

(Breakfast cereals)

Target Group and Benefits

- General population

Ingredients

- Parboiled rice flour
- Puffed rice
- Flake rice
- Perched rice
- Raisins
- Dry dates
- Almond

Method of Preparation

- Ingredients are mixed as per standardization after appropriate processing.

DEVELOPED BY
Department of Food Science and Nutrition, College of Community Science, AAU, Jorhat, Assam

JACKFRUIT LEATHER

SHELF LIFE
Upto six months

COST
Rs 50/100gm

Nutritional Information/100 grams

Protein	2.20 gm
Total fat	2.56 gm
Crude fibre	3.02 gm

JACKFRUIT LEATHER

Target Group and Benefits

- Children and general population

Ingredients

- **Ripe Jackfruit pulp**
- **Sugar**
- **Potassium meta-bisulphite**

Method of Preparation

- Ripe Jackfruit pulp with added sugar (5%) and potassium meta-bisulphite are blended, concentrated and dried into thin sheet and folded.

DEVELOPED BY
Department of Food Science and Nutrition, College of Community Science, AAU, Jorhat, Assam

THEKUA

SHELF LIFE
2 -3 weeks

COST
Rs 200 / Kg i.e
Rs 50 / 250 gm

Nutritional Information/100 grams

Energy	333 Kcal
Protein	8.9 gm
Calcium	53 mg
Iron	3.83 mg

THEKUA

Target Group and Benefits

- School going children

Ingredients

- Wheat flour 250gm
- Mushroom Product 62.5gm
- Ghee 1 1/2 Tbsp
- Small cardamom 5 pieces
- Jaggery /Sugar 150gm
- Oil to fry

Method of Preparation

- Take whole wheat flour and crumble with ghee. Keep aside.
- Melt jaggery in 1/2 cup of water. Add crushed cardamom. Bring to boil.
- Make dough with jaggery syrup and wheat flour.
- Make small balls. Press on frame to emboss designs. Flatten it. Fry on medium low flame, cool it and pack.

DEVELOPED BY
Krishi Vigyan Kendra Harnaut (Nalanda)

MATHRI

SHELF LIFE
2-3 weeks

COST
Rs 200 / Kg i.e
Rs 50 / 250 gm

Nutritional Information/100 grams

Energy	313 Kcal
Protein	11.8 gm
Calcium	28 mg
Iron	2.82 mg

MATHRI

Target Group and Benefits

- School going children

Ingredients

- Maida 250gm
- Suji 20g
- Mushroom Powder 50gm
- Fat 1 1/2 tbsp (10ml)
- Black pepper 2 tsp (Hand pounded)
- Dry fenugreek leaves 2 tsp
- Salt - to taste
- Oil to fry

Method of Preparation

- Take maida, suji, mushroom powder crushed black pepper, fenugreek leaves together.
- Add salt to taste.
- Add fat and mix the ingredients well.
- Knead with hot water. Make a hard dough.
- Leave for 1/2 an hour and knead again. Make small balls and press between palms.
- Prick with fork and deep fry it.

DEVELOPED BY
Krishi Vigyan Kendra, Harnaut, Nalanda

LADOO

SHELF LIFE
Two weeks

COST
Rs 300 / kg i.e
Rs 75 / 250 gm

Nutritional Information/100 grams

Energy	197 Kcal
Protein	14 gm
Calcium	485 mg
Iron	1.91 mg

LADOO

Target Group and Benefits

- School going children

Ingredients

- Khoa - 200gm
- Suji - 50gm
- Mushroom powder - 40gm
- Sugar (Powdered)- 100gm
- Cardamom - 4 pieces
- Ghee - 3 tbsp (45ml)

Method of Preparation

- Take heavy bottom pan and melt 1/2 tbsp ghee. Roast suji and mushroom powder separately till golden brown. Keep aside.
- Melt the remaining ghee and add Khoa, fry for few minutes. Add roasted suji and mushroom powder. Mix well.
- Remove from flame. Add powdered sugar and crushed cardamom.
- Mix well. Make small balls and let them cool.

DEVELOPED BY
Krishi Vigyan Kendra Harnaut (Nalanda)

PEDA

SHELF LIFE
One week

COST
Rs 350 / kg i.e.
Rs 87 / 250 gm

Nutritional Information/100 grams

Energy	514 Kcal
Protein	16.2 gm
Calcium	675 mg
Iron	2.3 mg

PEDA

Target Group and Benefits

- School going children

Ingredients

- **Mushroom Powder - 250gm**
- **Milk - 1000ml**
- **Sugar - 100gm**

Method of Preparation

- Boil milk on medium flame till it thickens.
- When milk thickens, add mushroom powder & keep stirring.
- After mushroom gets cooked, add sugar.
- Keep stirring till it thickens.
- Cool it. Make ball and press it.

DEVELOPED BY
Krishi Vigyan Kendra Harnaut (Nalanda)

CAKE

SHELF LIFE
One week

COST
120 / Kg i.e Rs
30 / 250 gm

Nutritional Information/100 grams

Energy	284 Kcal
Protein	5.3 gm
Calcium	67 mg
Iron	1.01 mg

CAKE

Target Group and Benefits

School going children

Ingredients

- **Wheat flour - 100gm**
- **Sugar - 85gm**
- **Mushroom dried - 20gm**
- **Fat- 60gm**
- **Milk - 100gm**

Method of Preparation

- Mix all dry ingredients and sieve 2-3 times.
- Beat fat till creamy & fluffy.
- Add dry ingredients slowly. Mix milk slowly if needed.
- Cut fold the batter. Put it in greased baking dish.
- Bake for 35 minutes.
- Cool and cut it.

DEVELOPED BY
Krishi Vigyan Kendra Harnaut (Nalanda)

BISCUIT

SHELF LIFE
15 -20 days

COST
Rs 142 / Kg i.e
Rs 33 / 250 gm

Nutritional Information/100 grams

Energy	392 Kcal
Protein	7.3 gm
Calcium	22 mg
Iron	1.59 mg

BISCUIT

Target Group and Benefits

- School going children, pregnant ladies

Ingredients

- **Refined Wheat flour - 200gm**
- **Butter - 100gm**
- **Sugar (Powdered) - 100gm**
- **Egg - 80gm**
- **Mushroom dried - 20gm**
- **Vanilla essence - 5ml**

Method of Preparation

- Melt butter and beat till fluffy and creamy.
- Add slowly sugar essence & egg, keep beating.
- Add flour and mushroom powder mix.
- Knead well. Pull pieces off the dough.
- Roll to 1.5mm thickness. Cut into pieces and place them on baking sheet. Bake at 180º-200ºC for 12-15 minutes (425º F).

DEVELOPED BY
Krishi Vigyan Kendra Harnaut (Nalanda)

NUTRITIOUS LADDU

SHELF LIFE
3 months

COST
Rs 90/- per kg

Nutritional Information/100 grams

Energy	329 Kcal
Carbohydrate	60 gm
Protein	11.02 gm
Total fat	5.09 gm
Calcium	98 mg
Iron	2.18 mg

NUTRITIOUS LADDU

Target Group and Benefits

- Adolescent girls
- Pregnant and lactating women
- It is ready to eat product and can be used as and when required.
- This food product contains adequate amount of calcium, protein and energy.

Ingredients

- **Wheat: 4 cups**
- **Ragi: 1 cup**
- **Green gram: 1 cup**
- **Flax seed: 1 cup**
- **Jaggery: 3 cups**
- **Ghee: 1 cup**

Method of Preparation

- Soak wheat and ragi separately.
- Keep them for sprouting.
- Dry and roast them.
- Clean and roast flax seeds.
- Grind all ingredients and make powder.
- Make a paste of Jaggery and add all the ingredients.
- Add ghee and make laddu.

DEVELOPED BY
Department of Food & Nutrition, College of Community Science, DRPCAU, Pusa

COMPLEMENTARY FOOD

SHELF LIFE
3 months

COST
Rs 80/- per kg

Nutritional Information/100 grams

Energy	381 Kcal
Carbohydrate	64 gm
Protein	15.8 gm
Total fat	6.9 gm
Calcium	149 mg
Iron	0.35 mg

COMPLEMENTARY FOOD

Target Group and Benefits

- Infants and young children
- The product is ready to use which can be used by mothers very easily while at work too.

Ingredients

- **Wheat**
- **Sesame seed**
- **Groundnut**
- **Green gram dhal**
- **Sugar**

Method of Preparation

- Soak wheat and keep it for sprouting.
- Soak green gram dhal and dry.
- Clean sesame seeds.
- Roast all the ingredients and grind them to make powder.
- Mix them properly and store in an airtight container.

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Department of Food & Nutrition, College of Community Science, DRPCAU, Pusa

PUSA SHAKTI

SHELF LIFE
6 months

COST
Rs 20/100 gm
Rs 10/50 gm

Nutritional Information/100 grams

Energy	394 Kcal
Carbohydrate	60.00 gm
Protein	11.60 gm
Total fat	11.00 gm

PUSA SHAKTI

Target Group and Benefits

- All age groups

Ingredients

- Rice
- Bengal gram
- Groundnut
- Quality protein maize
- Salt
- Spices
- Nutritional supplements

Method of Preparation

- Not provided

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Department of Food & Nutrition, College of Community Science, DRPCAU, Pusa

KHEER MIX

SHELF LIFE
6 months

COST
Rs.40/125 gram

Nutritional Information/100 grams

Energy	368 Kcal
Carbohydrate	80 gm
Protein	10.60 gm
Total fat	0.30 gm
Calcium	259 mg
Iron	5.60 mg

KHEER MIX

Target Group and Benefits

- All age groups
- This nutri rich product can very easily be cooked by addition of only water.

Ingredients

- **Milk**
- **Sugar**
- **Quality protein maize**
- **Rice**
- **Raisins**
- **Dates**
- **Sago**
- **Nutritional supplements**

Method of Preparation

- Not provided

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Department of Food & Nutrition, College of Community Science, DRPCAU, Pusa

PROTEINO-H KADHI MIX

SHELF LIFE
6 months

COST
Rs.10/25 grams

Nutritional Information/100 grams

Energy	325 Kcal
Carbohydrate	39 gm
Protein	16.4 gm
Total fat	10.5 gm
Calcium	145 mg
Iron	6.00 mg

PROTEINO-H KADHI MIX

Target Group and Benefits

- All age groups
- The product is rich in protein and calcium and can be prepared in 5 minutes.

Ingredients

- **Quality protein maize**
- **Milk**
- **Spices**
- **Pulses**
- **Salt**
- **Sago**
- **Nutritional supplements**

Method of Preparation

- Not provided

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Department of Food & Nutrition, College of Community Science, DRPCAU, Pusa

MULTI GRAIN FLOUR-I

IMAGE NOT PROVIDED

SHELF LIFE
3 months

COST
Rs 40/- per kg

Nutritional Information/100 grams

Energy	338 Kcal
Carbohydrate	70 gm
Protein	10.9 gm
Total fat	1.59 gm
Calcium	122 mg
Iron	4.64 mg

MULTI GRAIN FLOUR-I

IMAGE NOT PROVIDED

Target Group and Benefits

- All age groups.
- The flour is rich in calcium and can be used in routine diet.
- The flour with low phytate content have better digestibility.

Ingredients

- **Wheat and ragi (9:1)**

Method of Preparation

- Wash wheat and soak overnight.
- After removal of water, dry it.
- Likewise, soak ragi and keep it for sprouting.
- Dry it.
- Grind them and mix.

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MULTI GRAIN FLOUR-III

IMAGE NOT PROVIDED

SHELF LIFE
3 months

COST
Rs 50/- per kg

Nutritional Information/100 grams

Energy	339 Kcal
Carbohydrate	68 gm
Protein	13.4 gm
Total fat	2.44 gm
Calcium	79 mg
Iron	4.88 mg

MULTI GRAIN FLOUR-III

IMAGE NOT PROVIDED

Target Group and Benefits

- All age groups.
- This is a convenience food suitable for all especially people with higher protein requirement per 100 kilo calorie.

Ingredients

- **Wheat, Ragi, Gram flour (8:1:1)**

Method of Preparation

- Wash wheat and soak overnight.
- After removal of water, dry it.
- Likewise, soak ragi and keep it for sprouting.
- Soak Bengal gram dhal in water for 4-5 hours and dry it.
- Grind them and mix.

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Department of Food & Nutrition, College of Community Science, DRPCAU, Pusa

NUTRITIOUS STUFF-I

SHELF LIFE
1 month

COST
Rs 100/- per kg

Nutritional Information/100 grams

Energy	490 Kcal
Carbohydrate	50 gm
Protein	14.3 gm
Total fat	25.97 gm
Calcium	123 mg
Iron	1.94 mg

NUTRITIOUS STUFF - I

Target Group and Benefits

- All age groups
- This nutri stuff can especially be very beneficial for children and women who require high protein with high energy.

Ingredients

- **Flax seed and Jaggery**

Method of Preparation

- Clean flax seeds, roast them and grind.
- Add jaggery and mix.
- Use 10 g of the product at least 3 times a day.

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Department of Food & Nutrition, College of Community Science, DRPCAU, Pusa

NUTRITIOUS STUFF-II

SHELF LIFE
1 month

COST
Rs 100/- per kg

Nutritional Information/100 grams

Energy	451 Kcal
Carbohydrate	35 gm
Protein	14.3 gm
Total fat	27.84 gm
Calcium	163 mg
Iron	11.05 mg

NUTRITIOUS STUFF- II

Target Group and Benefits

- All age groups.
- This ready to eat high energy food contains high amount of protein.

Ingredients

- **Flax seed**
- **Salt**
- **Red chilli powder**
- **Mango powder**

Method of Preparation

- Clean flax seeds, roast them and grind.
- Add all ingredients and mix.
- Consume 10 g of the product at least 3 times a day.

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NUTRITIOUS STUFF-III

SHELF LIFE
1 month

COST
Rs 100/- per kg

Nutritional Information/100 grams

Energy	507 Kcal
Carbohydrate	43 gm
Protein	16.1 gm
Total fat	30.3 gm
Calcium	266 mg
Iron	2.85 mg

NUTRITIOUS STUFF- III

Target Group and Benefits

- All age groups.
- This ready to eat high energy food contains high amount of protein and calcium.

Ingredients

- **Flax seed**
- **Sesame seed**
- **Jaggery**

Method of Preparation

- Clean flax seeds and sesame seeds separately, roast and grind them.
- Add jaggery and mix
- Use 10 g of the product at least 3 times a day.

DEVELOPED BY
Department of Food & Nutrition, College of Community Science, DRPCAU, Pusa

TISHEE/LINSEED LADOOS

SHELF LIFE
15-20 days

COST
Rs 225.00/kg

Nutritional Information/100 grams

Energy	330 Kcal
Protein	7.82 gm
Calcium	180 mg
Iron	2.21 mg

TISHEE/LINSEED LADOOS

Target Group and Benefits

- Farmers/Farmwomen/Children of Farm Families
- Students
- Extension Functionaries

Ingredients

- **Linseed: 100gm**
- **Ragi/Madua Atta : 100gm**
- **Ktira gond: 20gm**
- **White til/sesame seeds: 10gm**
- **Jaggery: 120gm**
- **Ghee 30gm**
- **Methi: 2gm**

Method of Preparation

- Roast the ragi flour, linseed, gond, methi, white til separately and grind them.
- Prepare Jaggery Syrup.
- Mix all the ingredients well.
- Make small round shape ladoos using ghee.

DEVELOPED BY
Department of Home Sc., BAU, Kanke, Ranchi, Jharkhand

MADUA/RAGI LADOOS

SHELF LIFE
20-25 days

COST
Rs 250.00/kg

Nutritional Information/100 grams

Energy	550 Kcal
Protein	5 gm
Calcium	75 mg
Iron	1 mg

MADUA/RAGI LADOOS

Target Group and Benefits

- Farmers/Farmwomen/Children of Farm families
- Students
- Extension Functionaries

Ingredients

- **Besan: 50gm**
- **Madua Atta: 50gm**
- **Roasted Groundnut: 20gm**
- **Sugar: 70gm**
- **Ghee: 90gm**
- **Elaichi powder: 1gm**

Method of Preparation

- Roast the ragi flour, besan and groundnut separately.
- Grind the roasted groundnut coarsely.
- Prepare sugar syrup solution.
- Add elaichi powder and mix all ingredients.
- Make small round shape ladoos using ghee.

DEVELOPED BY
Department of Home Sc., BAU, Kanke, Ranchi, Jharkhand

MUSHROOM PICKLE

SHELF LIFE
6-9 months

COST
Rs. 300/kg

Nutritional Information/100 grams

Energy	45 Kcal
Calcium	8 mg
Protein	3.2 gm
Phosphorous	110 mg
Iron	1.7 mg

MUSHROOM PICKLE

Target Group and Benefits

- Farm families

Ingredients

- **Mushroom**
- **Green Peas**
- **Carrot**
- **Ginger**
- **Garlic**
- **Turmeric Powder**
- **Salt**
- **Green chilli**
- **Acetic Acid**
- **Spices**
- **Oil**

Method of Preparation

- Wash & chop the mushroom, carrot, green peas, ginger, garlic, green chilli.
- Fry them in oil in a frying pan for 5-6 minutes and add salt.
- Roast the coriander, methi and other spices & grind them and mix well.
- Add the spices over the fried vegetables and mix them properly for 2-3 minutes.
- Add vinegar & keep them for cooling.
- Pack in a jar/polybag.

DEVELOPED BY
Home Science Department, BAU, Ranchi, Jharkhand

JACKFRUIT PICKLE

SHELF LIFE
6-9 months

COST
Rs. 250/kg

Nutritional Information/100 grams

Energy	51 Kcal
Calcium	30 mg
Protein	2.6 gm
Phosphorous	40 mg
Iron	1.7 mg
Sodium	35 mg
Potassium	328 mg

JACKFRUIT PICKLE

Target Group and Benefits

- Farm families

Ingredients

- **Jackfruit (peeled)**
- **Turmeric Powder**
- **Salt**
- **Acetic Acid**
- **Spices**
- **Oil**

Method of Preparation

- Cure raw pieces of Jackfruit (peeled) with Turmeric Powder + salt + Acetic Acid for 10-15 days.
- Then add spices + Oil.

DEVELOPED BY
Home Science Department, BAU, Ranchi, Jharkhand

WEST INDIA RECIPES

GUR PARA

SHELF LIFE
One month

COST
Rs 7.1 / 100gm

Nutritional Information/100 grams

Energy	464 Kcal
Carbohydrate	50 gm
Protein	12.5 gm
Total fat	23.25 gm
Calcium	177 mg
Iron	6.6 mg
Total fibre	4.4 gm
Vitamin A	5 mcg

GUR PARA

Target Group and Benefits

- Pregnant/ Lactating women
- Children.
- Energy and Protein dense
- Easy to prepare
- Cost effective

Ingredients

- **Wheat Flour 15g**
- **Soya 15g**
- **Bajra 15g**
- **Jaggery 30g**
- **Oil 20g**
- **Til (gingelly seeds) 5g**

Method of Preparation

- Melt jaggery in lukewarm water and strain it.
- Mix soya flour, wheat flour, bajra and til and knead with jaggery water.
- Make balls and roll into chapatis.
- Cut into desired size.
- Deep fry till golden brown.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

GUAR PHALI FRY

SHELF LIFE
One month

COST
Rs 5.11/ 100gm

Nutritional Information/100 grams

Energy	169 Kcal
Carbohydrate	4 gm
Protein	3 gm
Total fat	15.3 gm
Calcium	103 mg
Iron	3.32 mg
Total fibre	4.1 gm
Vitamin A	205 mcg

GUAR PHALI FRY

Target Group and Benefits

- Children and adults
- Healthy snack option
- Adds variety
- Simple to prepare
- Cost effective
- Readily available

Ingredients

- **Guar Phali 85g**
- **Oil 15g**

Method of Preparation

- Wash and dry guar phali.
- Heat oil and deep fry the guar phali.
- Sprinkle salt and spices.
- Serve as a snack.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

MOONG DAL LADDOO

SHELF LIFE
One month

COST
Rs 12.42/ 100gm

Nutritional Information/100 grams

Energy	407 Kcal
Carbohydrate	54 gm
Protein	15.5 gm
Total fat	13.8 gm
Calcium	139 mg
Iron	5.32 mg
Total fibre	4.8 gm
Vitamin A	49 mcg

MOONG DAL LADDOO

Target Group and Benefits

Pregnant/ Lactating women

- Rich protein source
- Energy dense
- Easy to prepare
- Easily acceptable

Ingredients

- **Moong Dal 40g**
- **Bhuna Chana 20g**
- **Jaggery 25g**
- **Ghee 10g**
- **Til 5g**

Method of Preparation

- Pick and wash moong dal and dry it properly.
- Dry roast it till it turns golden brown.
- Grind moong dal and bhuna chana separately.
- Mix moong dal, bhuna chana, jaggery, til and ghee.
- Shape into laddoo.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

MURMURA SATTU LADDOO

SHELF LIFE
One month

COST
Rs 7.82/ 100gm

Nutritional Information/100 grams

Energy	485 Kcal
Carbohydrate	55 gm
Protein	8.4 gm
Total fat	25.3 gm
Calcium	45 mg
Iron	4.29 mg
Total fibre	2 gm
Vitamin A	2 mcg

MURMURA SATTU LADDOO

Target Group and Benefits

- Young children
- Pregnant and Lactating mothers
- Nutrient dense
- Easy preparation and transportation
- Long shelf life
- Acceptable
- Inexpensive

Ingredients

- **Murmura 30g**
- **Bhuna Chana 15g**
- **Jaggery 25g**
- **Peanut 10g**
- **Ghee 20g**

Method of Preparation

- Roast all the ingredients.
- Grind them.
- Mix powdered jaggery and hot ghee.
- Shape into round laddoos.
- Keep it in an airtight container.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

PANJIRI

SHELF LIFE
One month

COST
Rs 6.52 / 100gm

Nutritional Information/100 grams

Energy	368 Kcal
Carbohydrate	43 gm
Protein	13.8 gm
Total fat	15.7 gm
Calcium	66. mg
Iron	5.11 mg
Total fibre	4.3 gm
Vitamin A	3. mcg

PANJIRI

Target Group and Benefits

- Children and adults
- Nutrient dense
- Easy preparation and transportation
- Long shelf life
- Acceptable
- Inexpensive

Ingredients

- **Dalia 35g**
- **Soya chunks 10g**
- **Bhuna Chana 10g**
- **Peanut 10g**
- **Jaggery 30g**
- **Oil 5g**

Method of Preparation

- Dry roast dalia, soya flour and peanut separately.
- Grind all the ingredients.
- Mix it properly and store in an airtight container.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

TILKUTA

SHELF LIFE
One month

COST
Rs 6.15 / 100gm

Nutritional Information/100 grams

Energy	400 Kcal
Carbohydrate	63 gm
Protein	7.1 gm
Total fat	13 gm
Calcium	574 mg
Iron	7.41 mg
Total fibre	5.2 gm
Vitamin A	4 mcg

TILKUTA

Target Group and Benefits

- Pregnant and Lactating mothers
- Rich source of dietary Iron
- Delicious and nutritive
- Extremely simple to prepare
- Highly acceptable.

Ingredients

- **Til 30g**
- **Jaggery 70g**

Method of Preparation

- Dry roast til.
- Crush til and jaggery together in a mortar and pestle till they blend together.
- Store in an airtight container.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

PAUSHTIK BAATI

SHELF LIFE
2-3 days

COST
Rs 9.9 / 100gm

Nutritional Information/100 grams

Energy	442 Kcal
Carbohydrate	34 gm
Protein	15.7 gm
Total fat	26.6 gm
Calcium	98 mg
Iron	6.02 mg
Total fibre	7.1 gm
Vitamin A	958 mcg

PAUSHTIK BAATI

Target Group and Benefits

- Adult women and children
- Indigenous recipe, very popular in Rajasthan
- Energy dense
- Simple to prepare
- Highly acceptable
- Good shelf life

Ingredients

- **Wheat Flour 30g**
- **Soya chunks 15g**
- **Bengal gram dal 20g**
- **Methi leaves 10g**
- **Ghee 25g**

Method of Preparation

- To prepare the baati, mix wheat flour, besan, methi leaves, coriander leaves, salt and ghee.
- Using your hands knead a stiff dough with warm water. Shape the dough in the size of a ping pong ball. Meanwhile, heat the gas tandoor and roast the dough ball on low heat for sometime. Make sure they are brown and crusty.
- Pour some more ghee on the baati.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

FOGLA RAITA

SHELF LIFE
One day

COST
Rs 7.60 / 100gm

Nutritional Information/100 grams

Energy	120 Kcal
Protein	3 gm

FOGLA RAITA

Target Group and Benefits

- Pregnant and lactating mothers
- Indigenous food
- Simple to prepare
- Calcium rich

Ingredients

- **Fogla 20g**
- **Curd 80g**
- **Mint Leaves (Dry) To Taste**

Method of Preparation

- Boil fogla and drain the water.
- Grind it coarsely.
- Beat the curd and mix with fogla, salt, mint leaves and spices.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

KACHI HALDI KI SABJI

SHELF LIFE
One month

COST
Rs 11.37 / 100gm

Nutritional Information/100 grams

Energy	463 Kcal
Carbohydrate	52 gm
Protein	1.6 gm
Total fat	27.9 gm
Calcium	145 mg
Iron	30.13 mg
Total fibre	16.8 gm

KACHI HALDI KI SABJI

Target Group and Benefits

- General population
- Rich source of antioxidants
- Fibre rich
- Adds variety
- Seasonal and inexpensive

Ingredients

- **Haldi 80g**
- **Ghee 20g**
- **Spices**

Method of Preparation

- Peel and grate fresh turmeric.
- Heat ghee, add jeera.
- Add haldi and spices.
- Cook for a few minutes.
- Cook till it is dry.
- Store it in an airtight container.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

BATHUA MAKKA BAJRA MATHRI

COST
Rs 6.5 / 100gm

Nutritional Information/100 grams

Energy	414 Kcal
Carbohydrate	38 gm
Protein	7.3 gm
Total fat	25 gm
Calcium	126 mg
Iron	3.77 mg
Total fibre	8.6 gm
Vitamin A	226 mcg

BATHUA MAKKA BAJRA MATHRI

Target Group and Benefits

- All age groups
- Energy dense snack
- Popular and familiar food
- Long shelf life

Ingredients

- **Bathua 15g**
- **Bajra 30g**
- **Makka 30g**
- **Til 5g**
- **Oil 20g**

Method of Preparation

- Wash and grind bathua.
- Add it to bajra and makka flour. Add til and salt.
- Add 5 g oil. Mix well.
- Knead it into a stiff dough.
- Make small balls and roll into chapatis.
- Cut into small discs and deep fry till golden brown in colour.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

DANA METHI CHANA

SHELF LIFE
Two days

COST
Rs.8/100gm

Nutritional Information/100 grams

Energy	177 Kcal
Protein	9.3 gm
Calcium	32 mg
Iron	2.76 mg
Total fibre	9.8 gm
Vitamin A	64 mcg

DANA METHI CHANA

Target Group and Benefits

- Pregnant and lactating mothers
- Elderly persons

Ingredients

- **Chana dal 30g**
- **Dana methi (fenugreek seeds) 10g**
- **Onion 20g**
- **Oil 5g**
- **Mustard seeds 5g**
- **Spices**

Method of Preparation

- Soak dana methi and chana dal separately.
- Boil both separately.
- Heat oil and add mustard seeds.
- Fry onions till pink.
- Add boiled chana dal and dana methi.
- Add spices and salt.
- Cook for a few minutes.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

PAPAYA CHUTNEY

SHELF LIFE
One week

COST
Rs. 5/100gm

Nutritional Information/100 grams

Energy	77 Kcal
Protein	0.3 gm
Calcium	11 mg
Iron	0.1 mg
Total fibre	1.1 gm
Vitamin A	64 mcg
Vitamin C	10 mg

PAPAYA CHUTNEY

Target Group and Benefits

- Pregnant and lactating mothers

Ingredients

- **Raw papaya**
- **Mustard seeds 1 tsp**
- **Green chili 4-5 chillies**
- **Turmeric powder 1 tsp**
- **Salt**
- **Sugar 1 tsp**

Method of Preparation

- Put oil in a pan, heat and add mustard seeds and chilli.
- Add grated papaya.
- Add turmeric and salt.
- Mix properly.
- Cook for 2-3 minutes under steam.

DEVELOPED BY
Department of Home Science, University of Rajasthan, Jaipur

DATE PALM CAKE

SHELF LIFE
7 days in the refrigerator and winters 2 days without refrigerator

COST
Rs. 80/300gms

Nutritional Information/100 grams

Energy	450 Kcal
Protein	11 gm
Calcium	560 mg
Iron	7 mg
Total fat	15 gm

DATE PALM CAKE

Target Group and Benefits

- Vulnerable groups.
- It is a good source of iron, potassium, calcium and phosphorus.

Ingredients

- **Wheat flour**
- **Sugar**
- **Baking powder**
- **Baking soda**
- **Milk powder**
- **Date paste**
- **Date chunks**
- **Oil**

Method of Preparation

- Sieve wheat flour, milk powder, powdered sugar, baking powder and baking soda, 2 to 3 times.
- Take oil in a bowl and add all the sieved ingredients.
- Add water and mix by cut and fold method.
- Add Paste and shreds of date in the cake batter. Consistency should be ribbon like.
- Bake at 170˚C for 45 minutes.
- Serve cool.

DEVELOPED BY
Department of Food and Nutrition, College of Home Science, SKRAU, Bikaner

BAJRA KURKURE

SHELF LIFE
6 months without frying
1 month after frying

COST
Rs.25/100gm

Nutritional Information/100 grams

Energy	500 Kcal
Protein	14.5 gm
Calcium	62 mg
Iron	8 mg

BAJRA KURKURE

Target Group and Benefits

- All age groups.
- To replace junk food with nutritious alternative.

Ingredients

- **Bajra**
- **Peanut**
- **Oil**
- **Spices**

Method of Preparation

- Add four times water and make bajra dalia or porridge.
- Mix spices like salt, chilli powder, heeng, ajwain, papad khaar.
- Cook till the grains are softened.
- Add groundnut powder.
- Extrude and dry for two days.
- Deep fry, serve with sprinkled chaat masala.

DEVELOPED BY
Department of Food and Nutrition, College of Home Science, SKRAU, Bikaner

BAJRA BISCUIT

SHELF LIFE
3 months

COST
Rs.45/100gm

Nutritional Information/100 grams

Energy	500 Kcal
Protein	14.5 gm
Calcium	62 mg
Iron	8 mg

BAJRA BISCUIT

Target Group and Benefits

- Vulnerable groups.
- Pearl millet has high nutritive value and forms the staple food of arid region. It is rich source of calcium, iron, dietary fibre and micronutrients.

Ingredients

- **Bajra flour**
- **Wheat flour**
- **Butter**
- **Peanut**
- **Sugar**
- **Ammonia**

Method of Preparation

- Sieve flours and baking powder 2 to 3 times.
- Mix butter, ammonia and sugar till they become creamy.
- Add bajra flour with baking powder in that.
- Add essence and knead to make dough with milk.
- Put peanut in the dough. Roll it and cut desired shapes.
- Place in baking tray and bake at 175˚C for 10 minutes.
- Serve cool with tea/coffee.

DEVELOPED BY
Department of Food and Nutrition, College of Home Science, SKRAU, Bikaner

ENERGY DENSE GRUEL

IMAGE NOT PROVIDED

SHELF LIFE
1 DAY

COST
Rs. 4.50/ drink

Nutritional Information/100 grams

Energy	366 Kcal
Protein	6.7 gm
Calcium	132 mg
Iron	12.07 mg
Total fibre	0.9 gm
Total fat	2.7 gm

ENERGY DENSE GRUEL

IMAGE NOT PROVIDED

Target Group and Benefits

- Easy to cook.
- Require less cooking time.
- Easy to swallow (low viscosity).
- Easy to digest.
- Culturally acceptable.
- The gruel prepared from the mix under the study could be further enriched with dehydrated vegetables, fruits or herbs and used by geriatric population.

Ingredients

- **Rice flakes powder 57gm**
- **Sugar powder 21gm**
- **Milk powder 7gm**
- **Ragi ARF (Amylase Rich Flour) 15gm**

Method of Preparation

- Gruel was prepared by mixing all the raw ingredients namely rice flakes, sugar powder, milk powder and Ragi ARF with 350 ml of water.
- The mixture was cooked on medium flame for 5-7 minutes till the sides of the slurry starts bubbling.
- It was then taken down from the flame and cooled to bring it to a room temperature.

DEVELOPED BY

Department of Foods And Nutrition, The Maharaja Sayajirao University of Baroda

FLAXSEED LADOO/GLOBS

IMAGE NOT PROVIDED

SHELF LIFE
One week in cool condition

COST
Rs. 2.45 / ladoo.

Nutritional Information/100 grams

Energy	498 Kcal
Protein	14.8 gm
Carbohydrate	40 gm
Total fat	33.6 gm

FLAXSEED LADOO/GLOBS

IMAGE NOT PROVIDED

Target Group and Benefits

- Winter season product for Mild Cognitive Impairment among elderly.
- Help to reduce cognitive impairment, uplift mood, reduce atherogenic indices, improves quality of life (QOL).

Ingredients

- Flaxseed 80g
- Jaggery 20g

Method of Preparation

- Cook roast flaxseed coarse powder on low flame till slight oil comes out of it. Turn off flame.
- Add jaggery and make ladoo of it.

DEVELOPED BY
Department of Foods And Nutrition, The Maharaja Sayajirao University of Baroda

POHA LADOO

SHELF LIFE
6 months

COST
NA

Nutritional Information/100 grams

Energy	428 Kcal
Protein	20.3 gm
Total fat	14.4 gm
Calcium	100 mg
Iron	7.41 mg
Total fibre	1 gm
Folic acid	24.00 mcg

POHA LADOO

Target Group and Benefits

- Adolescent girls of age group 13-19 years.

Ingredients

- **Poha**
- **Wheat flour**
- **Besan**
- **Soybean flour**
- **Coconut**
- **Sesame**
- **Groundnut**
- **Jaggery**
- **Ghee**

Method of Preparation

- Roast poha and make it into powder form.
- Roast wheat flour, besan and soyabean flour separately.
- Add grated coconut, sesame seeds, groundnut powder and jaggery. Mix them well.
- Make small balls out of it using ghee.

DEVELOPED BY
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola

PEARL MILLET COOKIES

SHELF LIFE
6 months

COST
NA

Nutritional Information/100 grams

Energy	361 Kcal
Protein	17.4 gm
Total fat	73.7 gm
Calcium	303 mg
Iron	10.34 mg
Carbohydrate	354 gm

PEARL MILLET COOKIES

Target Group and Benefits

- All age groups.

Ingredients

- **Pearl Millet (Bajra)**
- **Coconut**
- **Margarine fat**
- **Liquid glucose**
- **Sugar powder**
- **Milk powder**
- **Baking powder**

Method of Preparation

- Make a powder of pearl millet, blend it with fat.
- Add liquid glucose, sugar powder, milk powder and baking powder to it.
- Knead it into a dough and make a small ball of it.
- Bake it at 225 degree centigrade.

DEVELOPED BY
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola

SORGHUM COOKIES

SHELF LIFE
6 months

COST
Rs.150/kg

Nutritional Information/100 grams

Energy	703 Kcal
Protein	12.4 gm
Total fat	70.6 gm
Calcium	149 mg
Iron	6.44 mg
Carbohydrate	108 gm

SORGHUM COOKIES

Target Group and Benefits

- All age groups.

Ingredients

- **Sorghum**
- **Coconut**
- **Margarine fat**
- **Liquid glucose**
- **Sugar powder**
- **Milk powder**
- **Baking powder**

Method of Preparation

- Make a powder of sorghum, blend it with fat.
- Add liquid glucose, sugar powder, milk powder, grated coconut and baking.
- Knead it into a dough and make a small ball of it and bake it at 225 degree centigrade.

DEVELOPED BY
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola

MIXED MILLET COOKIES

SHELF LIFE
6 months

COST
NA

Nutritional Information/100 grams

Energy	345 Kcal
Protein	13 gm
Total fat	53.2 gm
Calcium	248 mg
Iron	6.20 mg
Carbohydrate	105 gm
Total fibre	11.1 gm

MIXED MILLET COOKIES

Target Group and Benefits

- All age groups.

Ingredients

- **Sorghum**
- **Pearl millet (Bajra)**
- **Finger millet (Ragi)**
- **Samai millet**
- **Mixed herbs**
- **Margrine fat**
- **Liquid glucose**
- **Sugar powder**
- **Milk powder**
- **Baking powder**

Method of Preparation

- Make a powder of sorghum,pearl millet, finger millet, samai millet and blend it with fat.
- Add liquid glucose, sugar powder and milk powder.
- Knead it into a dough and make a small ball of it.
- Bake it at 225 degree centigrade.

DEVELOPED BY
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola

SORGHUM SHEV

SHELF LIFE
6 months

COST
Rs. 250/kg

Nutritional Information/100 grams

Energy	349 Kcal
Protein	10.4 gm
Total fat	11.2 gm
Calcium	25 mg
Iron	4.1 mg
Carbohydrate	73 gm
Total fibre	1.6 gm

SORGHUM SHEV

Target Group and Benefits

- All age groups.

Ingredients

- Sorghum powder
- Red chilli powder
- Salt to taste
- Oil
- Cumin seeds
- Onum seeds

Method of Preparation

- Sorghum is ground to a powder form.
- Mix with cumin seeds, red chilli powder, salt and onum seeds.
- Knead a dough by adding water.
- Put the dough in a shev maker and deep fry in oil.

DEVELOPED BY
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola

SORGHUM CHAKLI

SHELF LIFE
6 months

COST
Rs. 250/kg

Nutritional Information/100 grams

Energy	349 Kcal
Protein	10.4 gm
Total fat	11.2 gm
Calcium	25 mg
Iron	4.1 mg
Carbohydrate	73 gm
Total fibre	1.6 gm

SORGHUM CHAKLI

Target Group and Benefits

- All age groups.

Ingredients

- **Sorghum powder**
- **Red chilli powder**
- **Salt to taste**
- **Oil**
- **Cumin seeds**
- **Onum seeds**
- **Sesame seeds**

Method of Preparation

- Sorghum is ground to a powder form.
- Mix with cumin seeds, red chilli powder, salt, onum seeds and sesame seeds.
- Knead a dough by adding water.
- Put the dough in a chakli maker and deep fry chaklis in oil.

DEVELOPED BY
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola

AMLA CANDY

SHELF LIFE
2 months

COST
Rs. 40/packet of 200 gm

Nutritional Information/100 grams

Energy	200 Kcal
Protein	1.4 gm
Vitamin C	500 mg

AMLA CANDY

Target Group and Benefits

- All age groups.
- Non diabetic individuals.
- Non obese individuals.
- It is the tastiest form in which amla can be consumed.
- It is rich in antioxidants that come from amla.

Ingredients

- **Amla 1kg**
- **Sugar 1kg**
- **Black pepper powder 5g**
- **Roasted cumin seeds powder 5g**
- **Black salt 10g**
- **Rock salt 10g**
- **Powdered sugar 100g**

Method of Preparation

- Amla is washed and then boiled in 100 ml water in a pressure cooker till one whistle.
- Then immediately amla is taken out and the segments (slices) are seperated.
- In a container, layer is made of sugar, then a layer of amla and such 2-3 layers in total are made.
- It is kept for 3 days and is stirred 2 times a day with clean spoon.
- Then the segments are taken out and sundried for 2-3 days and it is ensured that they remain soft.
- Black pepper powder, roasted cumin seeds powder, black salt, rock salt, and powdered sugar are then added in dried amla segments.
- The prepared candies are stored in an airtight container.

DEVELOPED BY
Krishi Vigyan Kendra, Banasthali Vidyapith

MORINGA BITES

SHELF LIFE
1 month

COST
Rs 5/packet

Nutritional Information/100 grams

Energy	373 Kcal
Protein	25.2 gm
Calcium	687 mg
Iron	5.1 mg
Zinc	2.7 mg

MORINGA BITES

Target Group and Benefits

- Geriatric population.
- All age groups.
- It is pre cooked, therefore, can be prepared easily any time, soft in texture when cooked.
- Contains Moringa leaf powder which has nutritional benefits.
- Low in cost.

Ingredients

- **Soybean powder 5g**
- **Drumstick leaves powder 2.5g**
- **Gingelly seed powder 2.5g**
- **Skim milk powder 5g**
- **Whole wheat flour 10g**

AMOUNT OF BITES PREPARED 25g

Method of Preparation

- All powdered nutrients and whole wheat flour are taken in a bowl and dough is kneaded using water.
- Small balls are made from the dough and they are rolled out on a rolling board. The bites are prepared by cutting them in hemispheres with the help of round bottle cap.
- Bites are allowed to dry in a shade.
- They are then roasted, after cooling they are packed in an auto sealed sachet and stored in an air tight container.

DEVELOPED BY
Department of Food Science and Nutrition, Banasthali Vidyapith

CUMIN MUNCH

SHELF LIFE
1 week

COST
Rs 5/packet

Nutritional Information/100 grams

Energy	416 Kcal
Protein	19.2 gm
Calcium	584 mg
Iron	6 mg
Zinc	3.4 mg

CUMIN MUNCH

Target Group and Benefits

- Geriatric population.
- All age groups.
- It can be munched any time and is easy to chew.
- It is tasty and nutrient dense.
- It is a source of energy, protein, iron, calcium and zinc.
- It aids in digestion.

Ingredients

- **Cumin powder 0.6g**
- **Soybean powder 2.5g**
- **Gingelly seed powder 1.9g**
- **Jaggery 3.1g**
- **Dried coconut powder 0.6g**
- **Skim milk powder 1.3g**

AMOUNT OF CUMIN MUNCH PREPARED 10g

Method of Preparation

- Soybean powder is roasted.
- Jaggery is melted in a heavy metal pan. One tablespoon warm water is then added in it and it is allowed to cook on low to medium flame for 3-4 minutes with continuous stirring.
- After that, all ingredients are added one by one in it. They are gently mixed with the melted jaggery.
- After 5-7 minutes, when mixture gets cooked, it is put on a greased tray.
- Then it is cut into desired shapes using cutters.

DEVELOPED BY
Department of Food Science and Nutrition, Banasthali Vidyapith

AMLA SQUASH

SHELF LIFE
6-8 months
(refrigerated)

COST
Rs. 100/bottle
of 800 ml

Nutritional Information/100 grams

Energy	203 Kcal
Protein	1.8 gm
Vitamin C	452 mg

AMLA SQUASH

Target Group and Benefits

- All age groups.
- Non diabetic individuals.
- It serves dual purpose: it can be mixed with warm water during winters and chilled during summer.
- It utilises the sugar syrup of other amla products, which otherwise goes waste.
- Those who use it daily have reported that it cleanses the GI system and alleviates indigestion.

Ingredients

- **Sugar syrup of amla candy or amla murabba 1 litre**
- **Lemon juice 65ml**
- **Ginger juice 5ml**
- **Black salt 4g**

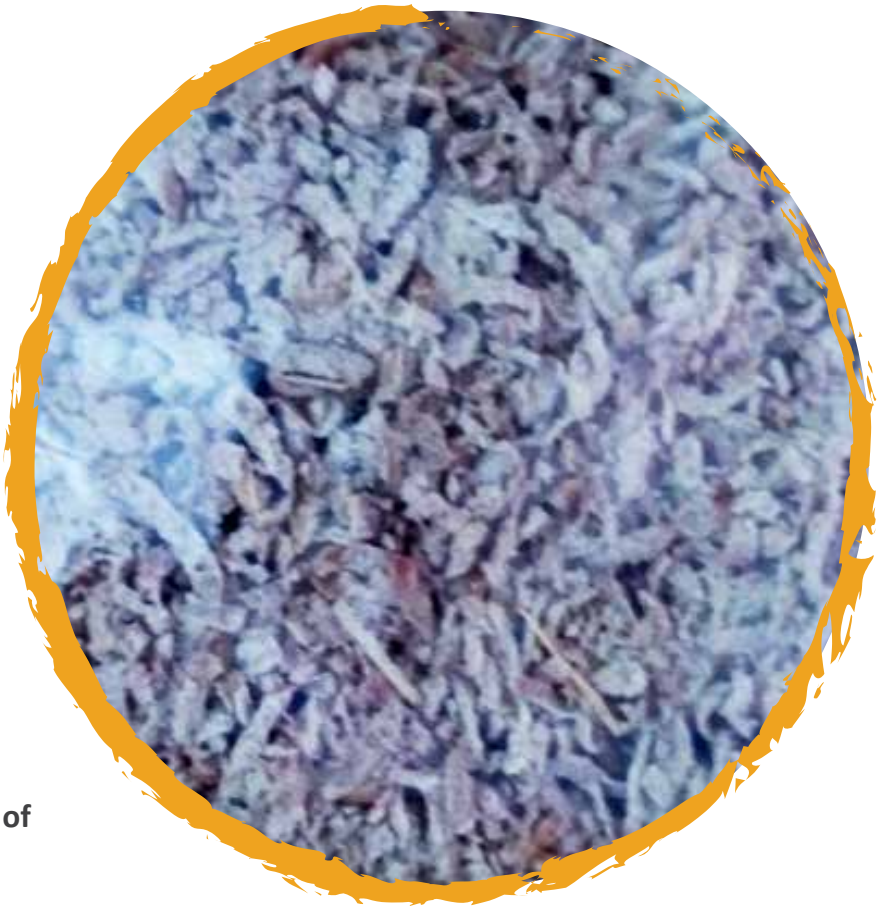
AMOUNT OF SQUASH PREPARED- 1 Litre

Method of Preparation

- Left out sugar syrup of amla candy or amla murabbas is cooked till it forms one string sugar syrup.
- Then it is cooled down and lemon juice, ginger juice and black salt is added properly into it.
- The prepared squash is stored in a clean air tight bottle.

DEVELOPED BY
Krishi Vigyan Kendra, Banasthali Vidyapith

AMLA MOUTH FRESHENER



SHELF LIFE
6-8 months

COST
Rs. 20/packet of 100g

Nutritional Information/100 grams

Energy	77 Kcal
Protein	2.8 gm
Vitamin C	722 mg

AMLA MOUTH FRESHENER

Target Group and Benefits

- All age groups.
- Normotensive individuals.
- It is a nutritional substitute for popular mouth fresheners.
- It is rich in antioxidants that come from amla and source of many minerals that are a part of rock salt.

Ingredients

- **Grated amla 1kg**
- **Rock salt 50g**
- **Black salt 10g**
- **Black cumin seeds powder 20g**
- **Carom seeds powder 20g**

AMOUNT OF MOUTH FRESHENER PREPARED- 350g

Method of Preparation

- Amla is grated. Black cumin seeds and carom seeds are then grated to make the powder.
- The mixture of grated amla together with rock salt, black salt, black cumin seeds powder and carom seeds powder is then sundried.
- The prepared recipe is stored in an air tight container.

DEVELOPED BY
Krishi Vigyan Kendra, Banasthali Vidyapith

AMLA LADOO

SHELF LIFE
1 month during winters
6 months without garnishing with dried coconut powder

COST
Rs. 140/Kg

Nutritional Information/100 grams

Energy	233 Kcal
Protein	2.3 gm
Vitamin C	504 mg

AMLA LADOO

Target Group and Benefits

- All age groups.
- Non diabetic individuals.
- Non obese individuals.
- It is the tastiest form in which amla can be consumed.
- It is rich in energy and antioxidants that come from amla.

Ingredients

- **Grated amla 1kg**
- **Sugar 500g**
- **Citric acid 2g**
- **Cardamom powder 5g**
- **Dried coconut powder 100g**

AMOUNT OF LADOOS PREPARED- 500g

Method of Preparation

- The grated amla is put in boiling water for 2 minutes and then taken out immediately.
- After straining it properly, sugar and citric acid is added to it.
- Then it is cooked in a steel utensil on a low flame until it gains a state of binding.
- When it cools down, cardamom powder is added and is given the shape of ladoos and garnished with dried coconut powder.
- Ladoos are then stored in an air tight container.

DEVELOPED BY
Krishi Vigyan Kendra, Banasthali Vidyapith

PEANUT BUTTER

SHELF LIFE
3 months

COST
Rs. 25 per cup
(cost as per 2015)

Nutritional Information/100 grams

Calories	540 Kcal
Protein	15 gm
Total fat	35 gm
Carbohydrate	45 gm

PEANUT BUTTER

Target Group and Benefits

- Children aged 6-59 months.

Ingredients

- **Peanut Butter**
- **Skimmed milk powder**
- **Sugar**
- **Soya Oil**
- **Micro-Nutrient Premix**
- **Emulsifier**

Method of Preparation

- Sort and grind peanuts in to peanut butter.
- Heat little portion of oil and add emulsifier to it and stir.
- Mix the heated oil with remaining quantity of oil and peanut butter in planetary mixture.
- Add skimmed milk powder, powder sugar and micronutrients powder to it and mix well.
- Homogenize the mixture by running it through peanut grinder.
- Pack into 100 gm cups and label.

DEVELOPED BY

CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

SOY BASED HEALTH DRINK

SHELF LIFE
6 hours at room temperature
5 days at 8-10°C

COST
Rs. 5.3-5.5 per 100ml

Nutritional Information/100 grams

Energy	214 Kcal
Copper	3.3 mg
Protein	6.5 gm
Total fat	13.9 gm
Calcium	48 mg
Iron	14.6 mg
Sodium	46.8 mg
Vitamin C	51 mg
Phosphorus	105.1 mg
Magnesium	52.9 mg
Zinc	9.5 mg
Selenium	140 mg
Vitamin A	1 mcg
Vitamin B1	62.8 mg
Vitamin B2	0.4 mg
Vitamin B3	9.4 mg
Vitamin B5	4.6 mg
Vitamin B6	2.7 mg
Vitamin B1 2	295.6 mcg
Vitamin D	240 mcg
Vitamin E	15.5 mg
Vitamin K	148.2 mcg
Folic acid	1218 mcg

SOY BASED HEALTH DRINK

Target Group and Benefits

- 6-24 months children.

Ingredients

- **Processed soybean flour**
- **Whole milk powder**
- **Flaxseed powder**
- **Soybean oil**
- **Sugar powder**
- **Nutrient pre-mix**

Method of Preparation

- Weigh all ingredients. Sort soyabeans manually.
- Wash under tap water. Soak for 12-14 hours. Dehull manually. Wash again under tap water.
- Dry soyabean in closed oven at 105°C for 5-6 hours to remove moisture.
- Roast at 100-140°C (soybeans) and 160-180°C (flaxseeds) using non-sticky Teflon pan on induction cooker for 5-10 min till specific aroma and colour is achieved.
- Grind soyabean and flaxseed using mixer-cum-grinder to get majority of the particle size below 200µm.
- Sieve using sieving membrane of size 500µm.
- Blend remaining ingredients using portable blender at speed of 12000 RPM for 2 minutes and 15000 RPM for 3 minutes with alternatively turning on and off for 40 and 20 seconds respectively.

DEVELOPED BY
CTARA, Indian Institute of Technology, Bombay

NON-MILK BASED FOOD

SHELF LIFE

No effect on physical characteristics for 1 month at ambient conditions (30ºC and 50% RH). Check for rancidity.

COST

Rs. 10.35/sachet (Price of the proposed product is based only on the cost of ingredients and can further go down if manufactured on a large scale)

Nutritional Information/100 grams

Energy	480 Kcal
Copper	2.3 mg
Protein	16.5 gm
Total fat	18.6 gm
Calcium	690 mg
Iron	3.13 mg
Sodium	180 mg
Vitamin C	134 mg
Phosphorus	216 mg
Magnesium	240 mg
Zinc	4.7 mg
Manganese	1.23 mg
Iodine	129 mcg
Selenium	0 mg
Vitamin A	5 mcg
Vitamin B1	0.24 mg
Vitamin B2	0.13 mg
Niacin	2.7 mg
Pantothenic acid	0.9 mg
Biotin	0.64 mcg
Vitamin B1 2	0.09 mcg
Vitamin D	1.71 mcg/IU
Vitamin E	0.24 mcg
Vitamin K	2.54 mcg
Folic acid	117.22 mcg
Potassium	800 mg

NON-MILK BASED FOOD

Target Group and Benefits

- Children aged 6-59 months.

Ingredients

- **Chickpea Flour**
- **Sugar**
- **Jaggery powder**
- **Soy milk powder**
- **Whey powder**
- **Peanut paste**
- **Desi ghee**
- **Soybean oil**
- **Cardamom powder**

Method of Preparation

- Weigh all ingredients using digital weighing machine to ensure right proportion.
- Roast peanut at 350 degrees for 15 minutes.
- Note the moisture of roasted peanuts.
- Grind peanut into a fine paste in electric cum mixer grinder.
- Set the Skillet on medium low heat and pour chickpea flour in it.
- Stir continuously to prevent the flour from burning and sticking to the bottom of the pan.
- Cook for 15 mins at 350 degrees or more until a light brown colour is obtained.
- Remove from the heat source, and stir continuously for some time to prevent further cooking in the hot pan.
- First add oil and mix remaining ingredients one at a time using mixer grinder to obtain a consistent paste.

DEVELOPED BY
Indian Institute of Technology Bombay

NUTRITIOUS NANKHATAIS

SHELF LIFE
2 months
at room
temperature

COST
Rs. 70 – Rs. 90
per 100g

Nutritional Information/100 grams

Energy	545 Kcal
Carbohydrate	41 gm
Protein	16.2 gm
Total fat	35.3 gm

NUTRITIOUS NANKHATAIS

Target Group and Benefits

- Children aged 25-60 months.

Ingredients

- **Wheat**
- **Milk powder**
- **Soy**
- **Oil**
- **Sugar**
- **Cardamom**
- **Baking powder**
- **Micronutrient Premix**

Method of Preparation

- Keep all the ingredients ready in the weighed quantity.
- Preheat oven at 180°C for 10 minutes.
- Sieve sugar (powdered) and baking powder in a pan.
- Add oil to the sieved mixture and mix in uni-direction to get thin paste.
- Add sieved wheat flour, soy flour and micro-nutrient powder into the sugar paste along with powdered cardamom and make dough.
- Make small dumplings of equal size and bake at 180°C for 20 minutes till light brown.
- Cool the product and pack as per the recommended weight.

DEVELOPED BY

CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

MULTIGRAIN FLOUR PASTE

SHELF LIFE
2 months at room temperature

COST
Rs. 70 – Rs. 90 per 100g

Nutritional Information/100 grams

Energy	565 Kcal
Carbohydrate	40 gm
Protein	19.1 gm
Total fat	36.4 gm

MULTIGRAIN FLOUR PASTE

Target Group and Benefits

- For 6-60 months aged children.

Ingredients

- **Wheat**
- **Ragi**
- **Bajra**
- **Soyabean**
- **Milk powder**
- **Jaggery**
- **Oil**
- **Micronutrient Premix**

Method of Preparation

- Keep all the ingredients ready in the weighed quantity.
- Roast all the flours separately at 120-160°C (until you get a roasted aroma) for 5-10 minutes.
- Allow the flours to cool.
- Grate jaggery and in a blender mix grated jaggery and oil, till it becomes a thin paste.
- Mix in a spoon of flours, milk powder and micronutrient premix at a time and blend till it becomes a homogenous thin paste.
- Cool the product and pack as per the recommended weight.

Note: The particle size has to be <200µm.

DEVELOPED BY

CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

MATHRI

SHELF LIFE
2 months
at room
temperature

COST
Rs. 70 – Rs. 90
per 100g

Nutritional Information/100 grams

Energy	512 Kcal
Carbohydrate	42 gm
Protein	20.6 gm
Total fat	29.2 gm

MATHRI

Target Group and Benefits

- For 25-60 months aged children.

Ingredients

- **Wheat flour**
- **Chana flour**
- **Soya bean**
- **Seasame**
- **Oil**
- **Salt**
- **Pepper**
- **Ajwain**
- **Turmeric**
- **Red Chilli Powder**
- **Micro-Nutrient Premix**

Method of Preparation

- Keep all the ingredients ready in the weighed quantity.
- Sieve wheat flour and add hot oil (7.5 ml) into the flour.
- Add salt, turmeric powder, red chilli powder, and black pepper powder, ajwain, micro-nutrients. Knead stiff dough using water as required.
- Cover it with a muslin cloth and keep aside for 5 minutes.
- Roll small thin mathris of equal size and make perforations on it using fork.
- Heat oil in a pan and fry mathris till golden brown.
- Cool the product and pack as per the recommended weight.

DEVELOPED BY
CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

SHAKARPARA

SHELF LIFE
2 months
at room
temperature

COST
Rs. 70 – Rs. 90
per 100g

Nutritional Information/100 grams

Energy	521 Kcal
Carbohydrate	38 gm
Protein	24.7 gm
Total fat	30 gm

SHAKARPARA

Target Group and Benefits

- For 25-60 months aged children.

Ingredients

- **Wheat flour**
- **Milk powder (whole)**
- **Sugar**
- **Oil**
- **Salt**
- **Baking powder**
- **Micronutrient Premix**

Method of Preparation

- Keep all the ingredients ready in the weighed quantity.
- Dissolve the sugar by adding powdered sugar in 50ml boiling water.
- Sieve wheat flour and micronutrient premix together. Add hot oil (10 ml) to the sieved flour.
- Knead dough using sugar syrup.
- Keep aside for 5 minutes.
- Roll out ½-1 cm thick roti out of the dough and cut shakarparas.
- Heat oil in pan and fry all shakarparas.
- Cool the product and pack as per the recommended weight.

DEVELOPED BY
CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

UPMA PREMIX

SHELF LIFE
2 months
at room
temperature

COST
Rs. 70 – Rs. 90
per 100g

Nutritional Information/100 grams

Energy	519 Kcal
Carbohydrate	51 gm
Protein	15.7 gm
Total fat	28.2 gm

UPMA PREMIX

Target Group and Benefits

- For 6-60 months aged children.

Ingredients

- **Suji (semolina)**
- **Soyabean flour**
- **Peanuts**
- **Oil**
- **Sugar**
- **Rai (Mustard seeds)**
- **Salt**
- **Turmeric powder**
- **Micronutrient Premix**

Method of Preparation

- Keep all the ingredients ready in the weighed quantity.
- Dry roast groundnuts, semolina and soya bean flour separately in a pan and keep aside.
- Grind the roasted groundnuts into a fine powder.
- Heat oil in a pan.
- Add mustard (let it splutter) and then add turmeric, salt, soy flour and semolina and stir for 5 -10 minutes.
- Allow it to cool and add micro-nutrients in it.
- Pack as per the recommended weight.

DEVELOPED BY
CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

LADOO PREMIX

SHELF LIFE
2 months
at room
temperature

COST
Rs. 70 – Rs. 90
per 100g

Nutritional Information/100 grams

Energy	522 Kcal
Carbohydrate	53 gm
Protein	15.8 gm
Total fat	27.4 gm

LADOO PREMIX

Target Group and Benefits

- For 6-60 months aged children.

Ingredients

- **Wheat flour**
- **Ragi flour**
- **Soya flour**
- **Sugar**
- **Milk powder**
- **Fat**
- **Cardamom**
- **Micronutrient Premix**

Method of Preparation

- Keep all the ingredients ready in the weighed quantity.
- Roast all other flours (wheat flour, ragi flour and soy flour), sieve and keep aside.
- Mix milk powder, sugar and cardamom powder and sieve it in the flours.
- Heat oil in a pan and mix all the dry ingredients and roast in oil for 10 minutes till roasted aroma is achieved.
- Allow it to cool and add micronutrients in it.
- Pack as per the recommended weight.

Note: The particle size has to be <200µm.

DEVELOPED BY

CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

ZHUNKA PREMIX

SHELF LIFE
2 months
at room
temperature

COST
Rs. 70 – Rs. 90
per 100g

Nutritional Information/100 grams

Energy	531 Kcal
Carbohydrate	34 gm
Protein	23.8 gm
Total fat	33.1 gm

ZHUNKA PREMIX

Target Group and Benefits

- For 6-60 months aged children.

Ingredients

- **Gram flour**
- **Soyabean flour**
- **Groundnut**
- **Oil**
- **Mustard**
- **Turmeric powder**
- **Red chilli powder**
- **Garlic**
- **Salt**
- **Micronutrient Premix**

Method of Preparation

- Keep all the ingredients ready in the weighed quantity.
- Roast the flours and groundnuts separately.
- Grind the roasted groundnuts into a coarse powder.
- Heat oil in a pan, add mustard (let it splutter) and chopped garlic and groundnuts to it.
- Add turmeric, red chillies and add salt.
- Add all the flours and roast for 5 minutes.
- Allow it to cool and add micronutrients.
- Pack as per the recommended weight.

DEVELOPED BY

CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

WHEAT PORRIDGE PREMIX

SHELF LIFE
2 months
at room
temperature

COST
Rs. 70 – Rs. 90
per 100g

Nutritional Information/100 grams

Energy	513 Kcal
Carbohydrate	49 gm
Protein	16.9 gm
Total fat	27.6 gm

WHEAT PORRIDGE PREMIX

Target Group and Benefits

- For 6-24 months aged children.

Ingredients

- **Wheat**
- **Groundnut**
- **Milk powder**
- **Sugar**
- **Oil**
- **Micronutrient Premix**

Method of Preparation

- Keep all the ingredients ready in the weighed quantity.
- Roast the wheat flour and peanuts separately.
- Grind the roasted groundnuts into a fine powder and keep aside.
- Heat oil, add peanuts, sugar and milk powder and roast for 5 minutes.
- Allow it to cool and add Micronutrients.
- Pack as per the recommended weight.

Note: The particle size has to be <200µm.

DEVELOPED BY

CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

KHEER PREMIX

SHELF LIFE
2 months
at room
temperature

COST
Rs. 70 – Rs. 90
per 100g

Nutritional Information/100 grams

Energy	423 Kcal
Carbohydrate	66 gm
Protein	18.9 gm
Total fat	9.3 gm

KHEER PREMIX

Target Group and Benefits

- For 6-24 months aged children.

Ingredients

- **Rice**
- **Milk powder (whole)**
- **Sugar**
- **Oil**
- **Micronutrient Premix**

Method of Preparation

- Keep all the ingredients ready in the weighed quantity.
- Roast the rice.
- Grind the rice, milk powder and sugar into a fine powder.
- Heat oil, add the powdered mixture and roast for 5 minutes.
- Allow it to cool and add micronutrients.
- Pack as per the recommended weight.

Note: The particle size has to be <200µm.

DEVELOPED BY

CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

RAGI PORRIDGE PREMIX

SHELF LIFE
2 months
at room
temperature

COST
Rs. 70 – Rs. 90
per 100g

Nutritional Information/100 grams

Energy	452 Kcal
Carbohydrate	65 gm
Protein	16.5 gm
Total fat	14.1 gm

RAGI PORRIDGE PREMIX

Target Group and Benefits

- For 6-24 months aged children.

Ingredients

- **Malted ragi**
- **Milk powder (whole)**
- **Roasted groundnut**
- **Sugar**
- **Oil**
- **Micronutrient Premix**

Method of Preparation

- Keep all the ingredients ready in the weighed quantity.
- Germinate whole ragi.
- Dry roast the sprouted ragi. Once dry, grind it into a fine powder.
- Heat oil in a pan, add malted ragi flour and roast for 2 minutes.
- Then add all the ingredients and roast for another 5 minutes.
- Allow it to cool and add micronutrients & pack as per the recommended weight.

Note: The particle size has to be <200µm.

DEVELOPED BY

CTARA, Indian Institute of Technology Bombay and Sion Hospital Mumbai

MILK AND CURD

(fortified with Iron, VitB12, VitC and folic acid using nano-encapsulation technologies)

SHELF LIFE
Not determined yet

COST
Not determined yet

Nutritional Information/100 grams

Iron	9 mg
Folate	58 mcg
Vitamin B1 2	0.33 mcg
Vitamin C	2 mg

In addition to nutrients found in standard milk and curd

MILK AND CURD

(fortified with Iron, VitB12, VitC and folic acid using nano-encapsulation technologies)

Target Group and Benefits

- Tribal adolescent girls of Maharashtra.
- The fortified food is expected to result in an increase in the haemoglobin levels of the target group.

Ingredients

- **Ferrous bisglycinate**
- **Vitamin B12**
- **Ascorbic acid**
- **Folic acid**
- **Soya-phosphatidylcholine**
- **Oleic Acid**

After the nano-encapsulated product is made, it is spray dried and mixed with milk and curd

Method of Preparation

- Lipids were used at a concentration of 10 mg/ml.
- The ratio of soy phosphatidylcholine: oleic acid was maintained at 9:1.
- This mixture was then heated on a hot plate at a temperature of 45-50°C.
- 50 ml of buffer (as needed) was prepared and 100 mg of the micronutrient was added to it. The solution was then slowly added to the mixture of lipids and allowed to form slurry by constant stirring at 800-900 rpm.
- Solution was then homogenized using an Ultra-Turrax T25 homogenizer at 9000 rpm, for 20-25 minutes with intervals in between. Once homogenized, the solution was centrifuged to obtain the liposome pellet.
- The final product mixture was obtained after spray drying.
- This can be easily mixed with milk and curd, no changes in taste, colour or odour was observed.

DEVELOPED BY
Indian Institute of Technology, Bombay

SOUTH INDIA RECIPES

β-CAROTENE AND MINERAL FORTIFIED BUNS

SHELF LIFE
1 week at room temperature

COST
Rs. 2.0/ bun (subject to inflation)

Nutritional Information/100 grams

Energy	260 kcal
Protein	7.4 gm
Total fat	6.2 gm
Iron	6.7 mg
Zinc	4.0 mg
β-carotene	850 mcg

β-CAROTENE AND MINERAL FORTIFIED BUNS

Target Group and Benefits

- Children (2-10Y).
- The product is highly liked by children, it is a micronutrient fortified product with enhanced bioaccessibility.
- This will help in alleviation of iron, zinc and vitamin A deficiencies.

Ingredients

- **Wheat flour**
- **Compressed yeast**
- **Sugar powder**
- **Salt**
- **Fat (vanaspati)**
- **Redpalm oil**
- **Dry gluten powder**
- **Calcium propionate**
- **Acetic acid**

Method of Preparation

- The ingredients are weighed and mixed till a well developed dough is formed.
- The nutritious bun dough is fermented for 90 min. at 30 °C and 75 % RH and is remixed.
- The dough is scaled to 65 g dough pieces.
- Then the dough pieces are rounded, proofed (60 – 80 min, 30 °C, 85 % RH) and baked at 200 °C for 15 min. The buns are cooled for 2 –3 hours and packed.

DEVELOPED BY
CSIR-Central Food Technological Research Institute, Mysore

BIFIDOBACTERIA ENRICHED SOYA CURD

SHELF LIFE
4 days

COST
Rs. 165.19/litre

Nutritional Information/100 grams

Energy	48 Kcal
Protein	4.5 gm
Calcium	71 mg
Iron	9.84 mg
Sodium	44.0 mg
Zinc	0.49 mg
Potassium	212 mg
Magnesium	21.3 mg
Carbohydrate	6 gm

BIFIDOBACTERIA ENRICHED SOYA CURD

Target Group and Benefits

- General population.
- Replenish the count of bifidobacteria (responsible for maintaining the host health and prevent disorders).

Ingredients

- **Soymilk**
- **Skim milk**
- **Sucrose**

Method of Preparation

- *B. breve* CFR142 activated from frozen stock by 2 successive subculturing in MRS (de Mann Rogasa Sharpe) broth containing 0.05% cysteine hydrochloride and incubating under anaerobic conditions at 37° C for 24 hrs.
- Microbiological media and chemicals used in the study procured from Hi Media Pvt. Ltd, Mumbai, India.
- Primary inoculum development: Freshly grown culture was centrifuged and pellet was inoculated in Skim milk (10%) containing 0.5% sucrose and incubating for 4-5hrs at 37°C.
- Fermentation Process: Primary inoculum prepared was centrifuged and pellet was inoculated in 75% (v/v) Soymilk: 25% (w/v) skim milk combination medium. Fermentation was carried out at 37°C for 6-8 hrs.

DEVELOPED BY
CSIR-Central Food Technological Research Institute, Mysore

CALCIUM RICH READY-TO-EAT FORMULATION

(phyto-cal)

SHELF LIFE
6 months

COST
Being done

Nutritional Information/100 grams

Protein	15 gm
Dietary fiber	40.6 gm
Calcium	890 mg
Iron	10 mg

CALCIUM RICH READY-TO-EAT FORMULATION

(phyto-cal)

Target Group and Benefits

- The formulation is a natural plant based calcium source. It is a ready-to-use product in powder form, suitable as a food ingredient in different cuisines.
- Formulation can be used as such, or can be appropriately modified to be used as a spread, or can be incorporated in any traditional or contemporary food products suitably.
- The mineral and fibre rich formulation can also be used to replace (50%) wheat partially in bakery products like cake.

Ingredients

- **Malted finger millet seed coat**
- **Rice bran**

Method of Preparation

- Unit operation involved are pulverising, sieving, mixing, drum drying, etc.
- The finger millet seed coat and rice are blended together. Appropriately processed to reduce the particle size and antinutrients like phytic acid.
- The blend is drum dried to obtain a RTE calcium rich formulation.

DEVELOPED BY

CSIR-Central Food Technological Research Institute, Mysore

FORTIFIED MANGO BAR

SHELF LIFE
6 months

COST
Rs. 33/- per 100g

Nutritional Information/100 grams

Energy	210 Kcal
Protein	1.3 gm
Carbohydrate	53 gm

FORTIFIED MANGO BAR

Target Group and Benefits

- Pre-school children at Anganwadis.
- School going children.
- Can be used as a snack in school meal programmes.

Ingredients

- **Mango pulp**
- **Carrot**
- **Sugar**
- **Food acidulant**
- **Permitted class II preservative**

Method of Preparation

- Mango pulp is extracted from mature ripe mangoes and the pulp is pretreated.
- Mango pulp is blended with sugar, carrot and permitted class II preservative.
- The homogenized pulp is dehydrated under controlled conditions to obtain fortified mango bar.
- The fortified mango bar is cut and packed in food grade flexible packaging material.

DEVELOPED BY
CSIR-Central Food Technological Research Institute, Mysore

SESAME BASED NUTRITIOUS SUPPLEMENT

SHELF LIFE
Eight months in PET bottles and up to 1 year in glass bottles at normal conditions of storage (65% RH and 27ºC).

COST
Rs. 300 per Kg (subject to inflation)

Nutritional Information/100 grams

Energy	543 Kcal
Protein	19 gm
Total fat	37 gm

SESAME BASED NUTRITIOUS SUPPLEMENT

Target Group and Benefits

- This supplement is formulated for children.
- The product is a high protein and calorie dense product with balanced amino acids and fatty acid. The PDCAAS score of the product is 0.74.

Ingredients

- **Sesame seeds**
- **Whey protein concentrate**
- **Palmolein oil**
- **Lecithin**
- **Sugar**
- **Specialty fat**
- **BHA**

Method of Preparation

- Good quality dehulled sesame seeds are precleaned to remove foreign matter, such as stones and chaff, before roasting.
- Roasting is done till it emits a good aroma at 120°C for 5-6 min in a rotary hot air roaster.
- Roasted seeds (37%) are ground into a paste in a colloid mill and mixed with powdered sugar (26%), whey protein (16%), refined palmolein oil (21%) in a homogenizer for 5-10 min.
- Then specialty fat (1%) melted in a portion of refined oil and lecithin (0.5% of mass) also melted in refined oil and BHA (0.02% of fat) is added to the homogenized mix and mixed for a while and stored in air tight containers and kept at room temperature.

DEVELOPED BY
CSIR-Central Food Technological Research Institute, Mysore

HIGH PROTEIN BISCUITS

SHELF LIFE
5 months

COST
NA

Nutritional Information/100 grams

Protein	14 gm
Total fat	13 gm
Carbohydrate	70 gm

HIGH PROTEIN BISCUITS

Target Group and Benefits

- Biscuits are easy to use during travel or at home because of its availability.
- Biscuits apart from offering good taste, is a snack item with substantial energy having wholesome and nutritious quality at affordable prices and good shelf life.
- The biscuits can be used in the programmes of State/Central Governments.

Ingredients

- **Wheat flour**
- **Soya protein**
- **Sugar**
- **Fat**
- **Salt**
- **Skimmed milk powder**
- **Leavening agents**

Method of Preparation

- High protein biscuits are made from soft dough based on creaming method and processed in rotary moulder.
- The biscuits are baked in the continuous tunnel type oven as followed for sweet soft dough type biscuits, cooled and packed.

DEVELOPED BY
CSIR-Central Food Technological Research Institute, Mysore

MULTIGRAIN BASED LOW-FAT FORTIFIED SNACK

SHELF LIFE
6 months

COST
Rs. 75.5/kg

Nutritional Information/100 grams

Energy	389 Kcal
Protein	13.8 gm
Total fat	4 gm
Carbohydrate	74 gm
Vitamin A	2162 IU
Vitamin C	24 mg
Thiamin	1.04 mg
Riboflavin	1.12 mg
Niacin	14.4 mg
Folic acid	924 µg
Iron	11.8 mg
Zinc	6.8 mg
Calcium	7 mg

MULTIGRAIN BASED LOW-FAT FORTIFIED SNACK

Target Group and Benefits

- The product can be consumed as anytime snack for all age groups.
- The product is a RTE crisp puffed snack.
- The product is low fat and can be fortified with vitamin and mineral mix and flavoured to desired taste.

Ingredients

- **Parboiled broken rice**
- **Sorghum**
- **Defatted soy flour**
- **Green gram dhal gelatinised starch flour**
- **Salt**

Method of Preparation

- Unit operation involved are pulverising, sieving, mixing extruding, toasting, coating and packaging.
- The grains are partially gelatinized and blended together.
- The moist powdery material is then extruded and cut to 1-2 cm.
- The flakes are toasted to obtain a RTE crisp puffed snack.
- The toasted flakes are then coated with vitamin and mineral mix.

DEVELOPED BY
Central Food Technological Research Institute, Mysore

ENERGY FOOD (NEW FORMULATION)

SHELF LIFE
Six months at room temperature

COST
Rs. 50 per Kg (subject to inflation)

Nutritional Information/100 grams

Energy	360 Kcal
Protein	15.8 gm
Total fat	2.5 gm
Iron	6.0 mg
Vitamin A	2000 IU

ENERGY FOOD (NEW FORMULATION)

Target Group and Benefits

- Pre-school children, Pregnant and lactating mothers.
- Energy food is a ready to eat food formulation in powder form.
- This is fortified with micronutrients.
- This is an almost ready to eat food and does not need extensive cooking at the point of distribution and consumption.
- Production of 'Energy Food', requires simple processing steps.

Ingredients

- **Roasted wheat flour**
- **Malted jowar flour**
- **Defatted and toasted soya flour**
- **Roasted Bengal gram flour**
- **Cane sugar**
- **Calcium carbonate**
- **Ferrous sulphate**
- **Vitamin premix**

Method of Preparation

- The process consists mainly of pre-cleaning all the raw materials, roasting under optimal conditions, powdering them to the required mesh size and mixing with sugar and micronutrients.
- The product is homogenised under hygienic conditions and packed in air tight containers.
- The beneficiaries, namely mothers and children, are advised to mix the food in water and consume the same in the form of gruel or laddu.

DEVELOPED BY

CSIR-Central Food Technological Research Institute, Mysore

PAUSHTIK ATTA

SHELF LIFE
4 months
(27ºC)

COST
Rs. 35 per Kg
(subject to inflation)

Nutritional Information/100 grams

Energy	340 Kcal
Protein	15 gm
Total fat	2.5 gm
Iron	6 mg
Zinc	3 mg
Calcium	129 mg
Riboflavin	58.3 mg

PAUSHTIK ATTA

Target Group and Benefits

- People who are subjected to micronutrient deficiencies can consume this.
- Paushtik atta is a nutritive product prepared by blending wheat flour and soy flour fortified with vitamins and minerals to enhance the nutritional quality of the product.
- Common salt is added to improve the taste of the product. Paushtik atta is acceptable as whole wheat flour for common food preparation.
- It contains higher amount of proteins 15% as compared to whole wheat flour (12%).
- It can be used for the preparation of puri, phulka, parantha and chapatis in the same way as ordinary atta.

Ingredients

- **Whole wheat**
- **Defatted soya flour**
- **Calcium carbonate**
- **Vitamin premix**
- **Common salt**

Method of Preparation

- Wheat was cleaned of extraneous matter and milled and blended with defatted soya flour and micronutrients and packed in air tight containers

DEVELOPED BY
CSIR- Central Food Technological Research Institute, Mysore

KOKUM JELLY CANDY

SHELF LIFE
8 -10 months

COST
Technology transfer cost: Rs. 50,000/-

Nutritional Information/100 grams

Energy	345 Kcal
Protein	0.1 %
Total fat	0.1 %
Carbohydrate	86.2 %
Vitamin C	40 mg

KOKUM JELLY CANDY

Target Group and Benefits

- These jelly candies are aimed towards children whose diet requires high calories.
- The product does not contain synthetic/ artificial colour, flavour, acidulant, and hazardous food additives.

Ingredients

- **Dried Kokum rinds**
- **Water**
- **Sugar**
- **Liquid glucose**
- **Pectin**

Method of Preparation

- Extraction of juice from the dried kokum rind by soaking in water.
- Boiling the juice with sugar, pectin and liquid glucose till end point.
- Pouring the mass on cold SS surface.
- Allowing to cool and set gel.
- Cutting into desired shapes and sizes.
- Packing the pieces in BOPP or Cellophane.

DEVELOPED BY
CSIR-Central Food Technological Research Institute, Mysore

READY-TO-COOK JOWAR MEAL

SHELF LIFE
4 months

COST
Rs. 65/- per kg

Nutritional Information/100 grams

Energy	350 Kcal
Protein	12 gm
Carbohydrates	60 gm
Total fat	6.5 gm
Crude Fiber	2.43 gm
Calcium	54 mg
Iron	4 mg

READY-TO-COOK JOWAR MEAL

Target Group and Benefits

- Children (3-5 years), Adolescent girls, Pregnant women and Lactating mothers.
- Delivers health benefitting properties of sorghum in combination with pulses and oilseeds as a source of quality protein and fat.
- Spices and condiments are added to the product to suit the pallet of the target beneficiaries.
- The key ingredients are taken through a controlled processing to enhance digestibility, reduce anti-nutrients and enhance the bioavailability of micronutrients.
- The product delivers approximately 350 Kcal of energy per 100 gm of the product.

Ingredients

- **Sorghum**
- **Bengal gram**
- **Groundnut**
- **Spices**
- **Condiments**

Method of Preparation

- The product is a ready-to-cook breakfast mix.
- To 1 part of the mix add 4-5 parts of the boiling water. Cook for 15 minutes. Serve hot.

DEVELOPED BY
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

READY-TO-COOK MULTIGRAIN MEAL

SHELF LIFE
4 months

COST
Rs. 85/- per kg

Nutritional Information/100 grams

Energy	326 Kcal
Protein	14.2 gm
Carbohydrates	62 gm
Total fat	2.5 gm
Crude Fiber	3.5 gm
Calcium	81 mg
Iron	3.67 mg

READY-TO-COOK MULTIGRAIN MEAL

Target Group and Benefits

- Children (3-5 years),Adolescent girls, Pregnant women and Lactating mothers.
- Delivers health benefitting properties of sorghum and foxtail millet along with green gram as a source of quality protein.
- Spices and condiments are added to the product to suit to the pallet of the target beneficiaries.
- The key ingredients are taken through a controlled processing to enhance digestibility, reduce anti-nutrients and enhance the bioavailability of micronutrients.
- The product delivers approximately 326 Kcal of energy per 100 gm of the product.

Ingredients

- **Sorghum**
- **Green gram**
- **Foxtail millet**
- **Spices**
- **Condiments**

Method of Preparation

- The product is a ready-to-cook breakfast mix.
- To 1 part of the mix add 4-5 parts of the boiling water. Cook for 15 minutes. Serve hot.

DEVELOPED BY

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

NUTRI-COOKIES

SHELF LIFE
4 months

COST
Rs. 170/- per kg

Nutritional Information/100 grams

Energy	445 Kcal
Protein	6 gm
Carbohydrates	58 gm
Total fat	20 gm
Calcium	69 mg
Iron	1.8 mg

NUTRI-COOKIES

Target Group and Benefits

- Children (3-5 years), Adolescent girls, Pregnant women, Lactating mothers.
- The product promotes the consumption of millets in a convenient and acceptable format and ultimately improve the dietary diversity of target beneficiaries (tribal population, especially women and children) using the health benefitting properties of sorghum and finger millet along with barley and soya.
- The product delivers 445 Kcal of energy per 100 gm of the product.

Ingredients

- **Sorghum**
- **Finger millet**
- **Barley**
- **Soya**
- **Vegetable fat**
- **Sugar**

Method of Preparation

- Can be consumed directly.

DEVELOPED BY
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

MILLET CHIKKI

SHELF LIFE
3 months

COST
Rs. 220/- per kg

Nutritional Information/100 grams

Energy	500 Kcal
Protein	12.3 gm
Carbohydrates	61 gm
Total fat	22.8 gm
Calcium	100 mg
Iron	3.1 mg

MILLET CHIKKI

Target Group and Benefits

- Children (3-5 years), Adolescent girls, Pregnant women, Lactating mothers.
- Benefits: The product promotes the consumption of millets in a convenient and acceptable format and ultimately improve the dietary diversity of target beneficiaries (tribal population, especially women and children) using the health benefitting properties of millets along with ground nut, sesame and jaggery.
- The product delivers approximately 500 Kcal of energy per 100 gm of the product.

Ingredients

- **Pearl millet**
- **Groundnut**
- **Sesame**
- **Jaggery**
- **Sugar**
- **Liquid glucose**

Method of Preparation

- The product is a ready-to-eat and energy dense bar and can be consumed directly.

DEVELOPED BY
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

GARDEN CRESS LADOO

IMAGE NOT PROVIDED

SHELF LIFE
7 days

COST
Rs. 1/-

Nutritional Information/100 grams

Protein	15.7 gm
Carbohydrates	62 gm
Iron	22.28 mg

GARDEN CRESS LADOO

IMAGE NOT PROVIDED

Target Group and Benefits

- Adolescent girls (10-19 yrs) from lower socio economic group.

Ingredients

- **Garden cress seeds**
- **Ground nuts**
- **Jaggery**
- **Ghee**

Method of Preparation

- Roast the Garden cress seeds and ground nuts and pulverize to coarse powder.
- Jaggery should be made into fine powder and mixture should be mixed homogeneously.
- 100g – 4 ladoos.

DEVELOPED BY
Sri Venkateshwara University, Tirupati

GARDEN CRESS BISCUITS

IMAGE NOT PROVIDED

SHELF LIFE
7 days

COST
Rs. 1/-

Nutritional Information/100 grams

Protein	11.6 gm
Carbohydrates	28 gm
Iron	5.39 mg

GARDEN CRESS BISCUITS

IMAGE NOT PROVIDED

Target Group and Benefits

- Adolescent girls (10-17 years) from lower socio economic group.

Ingredients

- **Garden cress seeds**
- **Ground nuts**
- **Wheat flour**
- **Sugar**
- **Vanaspati**

Method of Preparation

- Roast the Garden cress seeds and ground nuts separately and pulverize to coarse powder.
- Wheat flour, sugar, vanaspati and coarsely ground garden cress seeds and groundnut are mixed and made into a dough.
- Biscuits were made with 10mm thickness and baked at 175° for about 15 minutes.
- 100g – 4 Biscuits.

DEVELOPED BY
Sri Venkateshwara University, Tirupati

RAGI (FINGER MILLET) COOKIE

SHELF LIFE
6 months

COST
Rs. 200/kg

Nutritional Information/100 grams

Energy	450 Kcal
Protein	5.4 gm
Carbohydrate	63 gm
Total fat	19.90 gm
Dietary fibre	10 gm
Calcium	140 mg
Iron	6.37 mg
Zinc	2.88 mg
Magnesium	5.25 mg

RAGI (FINGER MILLET) COOKIE

Target Group and Benefits

- Social welfare Residential School children.
- Better protein, minerals and dietary fibre.

Ingredients

- **Ragi**
- **Combined with transfree fat**
- **Sugar**
- **Refined wheat flour**
- **Other cookie ingredients**

Method of Preparation

- Sifting all flours, creaming fat and sugar, Blending biscuit additives dough making, extruding and baking at 180˚C in a rotary drier.

DEVELOPED BY

Millet processing and Incubation centre of Professor Jayashankar Telangana State Agricultural University, Telangana

PEARL MILLET COOKIE

SHELF LIFE
6 months

COST
Rs. 200/kg

Nutritional Information/100 grams

Energy	462 Kcal
Protein	6.1 gm
Carbohydrate	64 gm
Total fat	21.03 gm
Dietary fibre	10.30 gm
Calcium	55 mg
Iron	8.66 mg
Zinc	2.69 mg
Magnesium	4.79 mg

PEARL MILLET COOKIE

Target Group and Benefits

- Social welfare Residential School children
- Better protein, minerals and dietary fibre.

Ingredients

- **Processed Pearl millet**
- **Combined with transfree fat**
- **Sugar**
- **Refined wheat flour**
- **Other cookie ingredients**

Method of Preparation

- Sifting all flours, creaming fat and sugar, Blending biscuit additives dough making, extruding and baking at 180˚C in a rotary drier.

DEVELOPED BY

Professor Jayashankar Telangana State Agricultural University, Telangana

SORGHUM (JOWAR) COOKIE

SHELF LIFE
6 months

COST
Rs. 200/kg

Nutritional Information/100 grams

Energy	458 Kcal
Carbohydrate	64 gm
Protein	5.9 gm
Total fat	19.98 gm
Calcium	67 mg
Iron	1.76 mg
Dietary fibre	12.20 gm
Zinc	0.58 mg
Magnesium	6.60 mg

SORGHUM (JOWAR) COOKIE

Target Group and Benefits

- Social welfare Residential School children.
- Better protein, minerals and dietary fibre.

Ingredients

- **Processed Sorghum**
- **Combined with transfree fat**
- **Sugar**
- **Refined wheat flour**
- **Other cookie ingredients**

Method of Preparation

- Sifting all flours, creaming fat and sugar, Blending biscuit additives dough making, extruding and baking at 180˚C in a rotary drier.

DEVELOPED BY

Millet processing and Incubation centre (MPIC) of Professor Jayashankar Telangana State Agricultural University (PJTSAU), Telangana

PUSHTI

SHELF LIFE
4 months

COST
Rs. 135/- kg

Nutritional Information/100 grams

Carbohydrate	78 gm
Protein	13 gm
Total fat	1.24 gm
Fibre	0.88 gm

PUSHTI

Target Group and Benefits

- Infants >6months to 36months.
- Promotes growth.
- Low cost, easily digested, greater nutrient availability, and suitable for old people too.

Ingredients

- **Wheat**
- **Sugar**
- **Defatted soy flour**
- **Vitamin mix**

Method of Preparation

- Wheat is dehulled for 8 min. and winnow the grain manually to separate the husk.
- Wheat is conditioned to a moisture level of 11 to 12% by sprinkling little water and the grains are heaped for some time and popped in Butty or electric popping and milled to flour.
- Soy flour is roasted for 6 min. at 80°C in a hot pan till it gives a characteristic aroma.
- Sugar is powdered in dry grinder.
- The popped wheat flour, roasted soy flour and powdered sugar are sewed, mixed well by adding vitamin and mineral mix.
- Prepared Pushti is packed in polythene bags of 250 gauge in 250g. or 500g.

DEVELOPED BY
Dept. Foods and Nutrition, College of Home Science, PJTSAU, Telangana

AMYLASE RICH MALTED MIXES

SHELF LIFE
4 months

COST
Rs. 100/- per kg

Nutritional Information/100 grams

Energy	342 Kcal
Protein	15.7 gm
Total fat	1 gm

AMYLASE RICH MALTED MIXES

Target Group and Benefits

- Children > 6 months to 6 years in particular; but suitable for all ages.
- Low cost, simple technology, reduce bulk and viscosity of diet, increase palatability and nutrient quality, easily digestible.

Ingredients

- **Wheat/Ragi**
- **Green gram**
- **Sugar**
- **Skim milk powder**

Method of Preparation

- Cleaning of ragi / wheat and green gram from foreign materials
- Steeping in water 18 hrs for ragi and 16 hrs for wheat and green gram
- Tieing in a thin muslin cloth
- Drain water
- Allowing for germination 2 days for ragi and wheat, 1 day for green gram, drying in drier by spreading thinly on a tray
- Removal of vegetable portion by gentle abrasion against dry clean cloth
- Grounding it to fine flour and sieving
- Amylase rich malted mixes

DEVELOPED BY
Dept. Foods and Nutrition, Post Graduation & Research Centre College of Home Science, PJTSAU, Telangana.

QUINOA NANKHATAI

SHELF LIFE
3 months

COST
NA

Nutritional Information/100 grams

Energy	406 Kcal
Carbohydrate	72 gm
Protein	10.9 gm
Total fat	8.20 gm
Fibre	4.1 gm

QUINOA NANKHATAI

Target Group and Benefits

- All age groups

Ingredients

- Refined wheat flour
- Quinoa flour
- Sugar
- Margarine
- Butter
- Ghee
- Baking powder
- Salt
- Water

Method of Preparation

- Mixing, Sheeting, Cutting, Baking

DEVELOPED BY
Indian Institute of Food Processing Technology, Thanjavur

MAHUA NUTRIBAR

SHELF LIFE
3 months

COST
NA

Nutritional Information/100 grams

Energy	318 Kcal
Carbohydrate	57 gm
Protein	12.43 gm
Total fat	4.63 gm
Fibre	12.6 gm

MAHUA NUTRIBAR

Target Group and Benefits

- All age groups

Ingredients

- Mahua flower
- Moringa leaves
- Chia seeds
- Jaggery
- Almonds
- Cashew
- Peanuts

Method of Preparation

- Mixing, Heating, Sheeting, Cutting, Cooling

DEVELOPED BY
Indian Institute of Food Processing Technology, Thanjavur

RAGI BISCUIT

SHELF LIFE
3 months

COST
Rs. 55/200 g

Nutritional Information/100 grams

Energy	336 Kcal
Carbohydrate	73 gm
Protein	7.7 gm
Total fat	1.3 gm
Fibre	3.6 gm

RAGI BISCUIT

Target Group and Benefits

- All age groups

Ingredients

- **Finger millet (Ragi)**
- **Sugar**
- **Shortening**

Method of Preparation

- Mixing, Sheeting, Cutting, Baking

DEVELOPED BY
Indian Institute of Food Processing Technology, Thanjavur

MILLET ICECREAM

SHELF LIFE
6 months

COST
Rs. 10 /50 ml cone

Nutritional Information/100 grams

Energy	183 Kcal
Carbohydrate	36 gm
Protein	3.1 gm
Total fat	9.1 gm
Fibre	0.6 gm

MILLET ICECREAM

Target Group and Benefits

- Lactose intolerance and Vegan People

Ingredients

- **Millet milk**
- **Non dairy Cream**
- **Sugar**
- **Natural flavours**

Method of Preparation

- Extract milk from millets and cream from soya beans.
- Blend Cream and Milk together.
- Add all other dry ingredients and whip for some time.
- Ageing and whipping again.
- Freezing to -28°C

DEVELOPED BY
Indian Institute of Food Processing Technology, Thanjavur

COCONUT ICECREAM

SHELF LIFE
6 months

COST
Rs. 5/50 ml cone

Nutritional Information/100 grams

Energy	231 Kcal
Carbohydrate	33 gm
Protein	1.09 gm
Total fat	10.7 gm
Fibre	0.3 gm

COCONUT ICECREAM

Target Group and Benefits

- All individuals especially lactose intolerant and vegan people.

Ingredients

- **Coconut Milk**
- **Coconut Cream**
- **Natural flavour**
- **Sugar**

Method of Preparation

- Extract milk and cream from mature coconuts.
- Blend Cream and Milk together.
- Add all other dry ingredients and whip for some time.
- Ageing and whipping again.
- Freezing to -28sC.

DEVELOPED BY
Indian Institute of Food Processing Technology, Thanjavur

MORINGA LEAF POWDER

SHELF LIFE
6 months

COST
NA

Nutritional Information/100 grams

Energy	205 Kcal
Carbohydrate	38 gm
Protein	27.10 gm
Total fat	2.3 gm
Fibre	19.20 gm

MORINGA LEAF POWDER

Target Group and Benefits

- All age groups especially pregnant woman and adolescent boys and girls

Ingredients

- **Fresh Moringa leaves**

Method of Preparation

- Flour (maida – moringa leaf powder)
- Sieving
- Blending (50:50)
- 35% moisture (For one kg – 350 ml of water)
- Hand mixing
- Extruding
- Steaming 60˚C for 20 min.
- Drying (50˚C for 4 to 5 hours)
- Packaging
- Storing

DEVELOPED BY
Indian Institute of Food Processing Technology, Thanjavur

MORINGA PASTA

SHELF LIFE
6 months

COST
NA

Nutritional Information/100 grams

Energy	205 Kcal
Carbohydrate	52 gm
Protein	10.45 gm
Total fat	0.9 gm
Fibre	14.47 gm

MORINGA PASTA

Target Group and Benefits

- All age groups especially pregnant woman and adolescent boys and girls

Ingredients

- **Moringa leaf powder**
- **Wheat flour**

Method of Preparation

- Mixing, Blending, Extrusion, Steaming, Drying, Packing

DEVELOPED BY
Indian Institute of Food Processing Technology, Thanjavur

FINGER MILLET IDLI/DOSA DRY MIX

SHELF LIFE
6 months

COST
Rs. 150/Kg

Nutritional Information/100 grams

Energy	340 Kcal
Carbohydrate	64 gm
Protein	11.67 gm
Total fat	4.02 gm
Fibre	6.70 gm

FINGER MILLET IDLI/DOSA DRY MIX

Target Group and Benefits

- All age groups.
- Rice in protein, fibre and minerals.

Ingredients

- **Finger millet**
- **Black gram flour**
- **Salt**

Method of Preparation

- Raw material cleaning-pulverizing-seiving-blending in standardized ratio-packing.

DEVELOPED BY
Indian Institute of Food Processing Technology Thanjavur

FOXTAIL IDLI/DOSA DRY MIX

SHELF LIFE
6 months

COST
Rs. 150/Kg

Nutritional Information/100 grams

Energy	349 Kcal
Carbohydrate	65 gm
Protein	12.09 gm
Total fat	4.36 gm
Fibre	5.56 gm

FOXTAIL IDLI/DOSA DRY MIX

Target Group and Benefits

- All age groups.
- Rice in protein, fibre and minerals.

Ingredients

- **Foxtail Millet**
- **Black gram flour**
- **Salt**

Method of Preparation

- Raw material cleaning-pulverizing-seiving-blending in standardized ratio-packing.

DEVELOPED BY
Indian Institute of Food Processing Technology Thanjavur

LITTLE MILLET IDLI/DOSA DRY MIX

SHELF LIFE
6 months

COST
Rs. 150/Kg

Nutritional Information/100 grams

Energy	348 Kcal
Carbohydrate	62 gm
Protein	16.26 gm
Total fat	4.08 gm
Fibre	5.56 gm

LITTLE MILLET IDLI/DOSA DRY MIX

Target Group and Benefits

- All age groups.
- Rice in protein, fibre and minerals.

Ingredients

- **Little Millet**
- **Black gram flour**
- **Salt**

Method of Preparation

- Raw material cleaning-pulverizing-seiving-blending in standardized ratio-packing.

DEVELOPED BY
Indian Institute of Food Processing Technology Thanjavur

KODO MILLET IDLI/DOSA DRY MIX

SHELF LIFE
6 months

COST
Rs. 150/Kg

Nutritional Information/100 grams

Energy	349 Kcal
Carbohydrate	65 gm
Protein	11.67 gm
Total fat	4.47 gm
Fibre	5.24 gm

KODO MILLET IDLI/DOSA DRY MIX

Target Group and Benefits

- All age groups.
- Rice in protein, fibre and minerals.

Ingredients

- **Kodo Millet**
- **Black gram flour**
- **Salt**

Method of Preparation

- Raw material cleaning-pulverizing-seiving-blending in standardized ratio-packing.

DEVELOPED BY
Indian Institute of Food Processing Technology Thanjavur

BARNYARD MILLET IDLI/DOSA DRY MIX

SHELF LIFE
6 months

COST
Rs. 150/Kg

Nutritional Information/100 grams

Energy	349 Kcal
Carbohydrate	63 gm
Protein	13.75 gm
Total fat	4.54 gm
Fibre	5.79 gm

BARNYARD MILLET IDLI/ DOSA DRY MIX

Target Group and Benefits

- All age groups.
- Rice in protein, fibre and minerals.

Ingredients

- **Barnyard millet**
- **Black gram flour**
- **Salt**

Method of Preparation

- Raw material cleaning-pulverizing-seiving-blending in standardized ratio-packing.

DEVELOPED BY
Indian Institute of Food Processing Technology Thanjavur

GRAPE POMACE COOKIES

SHELF LIFE
3 months

COST
NA

Nutritional Information/100 grams

Energy	426 Kcal
Carbohydrate	77 gm
Protein	5.69 gm
Total fat	10.61 gm
Fibre	2.13 gm

GRAPE POMACE COOKIES

Target Group and Benefits

- All age groups.

Ingredients

- **Grape pomace**
- **Refined wheat flour**
- **Sugar**
- **Butter**

Method of Preparation

- Refined wheat flour and grape pomace powder were blended.
- Sugar powder, shortening , vanilla essence were added and sheeted to 10 mm thickness and cut into circular shapes.
- Baked at 160°C for 12 min.
- Packed in air-tight metalized polyester pouches and stored.

DEVELOPED BY
Indian Institute of Food Processing Technology (IIFPT), Thanjavur

BAL POSHAN AHAAR

SHELF LIFE
One year

COST
Rs. 18 per 500 kcal

Nutritional Information/100 grams

Energy	470 Kcal
Carbohydrates	61 gm
Copper	1.4 mg
Protein	10.6 gm
Total fat	20.6 gm
Calcium	440 mg
Iron	16 mg
Sodium	78 mg
Vitamin C	54.3 mg
Phosphorus	560 mg
Magnesium	94 mg
Zinc	12.3 mg
Iodine	31.8 ug
Thiamin	0.6 mg
Vitamin A, IU	1494 IU
Vitamin A, RE	822 mcg
Vitamin B6	0.8 mg
Niacin	7.1 mg
Pantothenic acid	9.3 mg
Biotin	74.8 ug
Vitamin B 12	2.3 ug
Vitamin D2	11.1 ug
Vitamin D3	15.5 ug
Vitamin E	22 mg
Vitamin K	16.2 ug
Potassium	700 mg
Folate	228 ug
Monounsaturated	7.4 gm
Polyunsaturated	5.8 gm
Riboflavin	2 mg

BAL POSHAN AHAAR

Target Group and Benefits

- For 6-59 months aged children.

Ingredients

- **Cereals**
- **Legumes**
- **Skim milk powder**
- **Oil**
- **Sugar**
- **Vitamin**
- **Mineral mix**

Method of Preparation

- Boil 200 ml of water and cool it down to luke warm temperature.
- Empty contents of sachet in a clean and sterilized bowl.
- Add the boiled and cooled water. Stir well.
- Feed with a clean sanitized spoon.

DEVELOPED BY
St John's Research Institute

BALAMRUTHAM

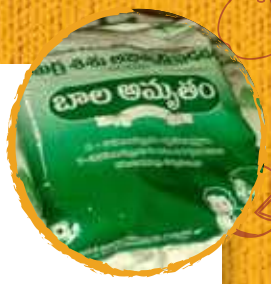
SHELF LIFE
NA

COST
Rs. 9/100g

Nutritional Information/100 grams

Energy	410 Kcal
Protein	11.6 gm
Fat	11.2 gm
Calcium	169 mg
Iron	7.3 mg
Vitamin C	1 mg
Carbohydrate	66 gm
Niacin	3.22 mg
Total Folate	42.1 mcg
Vitamin B1 2	0.6 mcg
Riboflavin	0.3 mg
Thiamin	0.6 mg
Fiber	1.1 gm
Betacarotene	200 mcg
Retinol	21.6 mcg

BALAMRUTHAM



Target Group and Benefits

- 6 months to 3 years children.
- It is the weaning food introduced under ICDS to provide improved nutrition to the children.
- It is fortified and thus provides 50% of iron, calcium, vitamins and other RDA that children require per day.

Ingredients

- **Roasted wheat: 55g**
- **Roasted Bengal gram Dhal: 5g**
- **Skimmed milk powder: 10g**
- **Sugar: 20g**
- **Oil: 10g**

Method of Preparation

- The recommended quantity is 100 g, 3-5 times every day.
- It is served as porridge mixed with hot water and for older children; it can be given in the form of “Laddu”.

DEVELOPED BY
The Department Of Public Health Nutrition (NIN)

KISHORIAMRUTHAM

IMAGE NOT PROVIDED

SHELF LIFE
NA

COST
Rs. 13/serving

Nutritional Information/100 grams

Energy	440 Kcal
Protein	13.1 gm
Fat	16.3 gm
Calcium	421 mg
Iron	13.1 mg
Vitamin C	15 mg
Niacin	9.7 mg
Total Folate	30.2 mcg
Vitamin B1 2	0.5 mcg
Riboflavin	0.7 mg
Thiamin	0.7 mg
Fiber	1.3 gm
Betacarotene	24 mcg
Retinol	217 mcg

KISHORIAMRUTHAM

IMAGE NOT PROVIDED

Target Group and Benefits

12- 17 Years

Ingredients

- Roasted wheat: 60g
- Roasted Bengal gram Dhal: 15g
- Groundnuts roasted: 15g
- Skimmed milk powder: 10g
- Sugar: 25g
- Oil: 15g

Method of Preparation

- Information not provided

DEVELOPED BY
The Department Of Public Health Nutrition (NIN)

DALIA/BROKEN WHEAT KHICHDI

SHELF LIFE
NA

COST
NA

Nutritional Information/100 grams

PRIMARY SCHOOL CHILDREN

Energy	369 Kcal
Protein	14.9 gm
Fat	4 gm

SECONDARY SCHOOL CHILDREN

Energy	553 Kcal
Protein	22.3 gm
Fat	5.9 gm

DALIA/BROKENWHEAT KHICHDI

Target Group and Benefits

5-15 years

Ingredients

PRIMARY SCHOOL CHILDREN

- Broken Wheat: 100g
- Green Gram Dal: 20g
- Onion: 20g
- Tomato: 10g
- Potato: 30g
- Carrot: 15g
- Coriander leaves: 5g
- Oil: 2g

SECONDARY SCHOOL CHILDREN

- Broken Wheat: 150g
- Green Gram Dal: 30g
- Onion: 30g
- Tomato: 15g
- Potato: 45g
- Carrot: 20g
- Coriander leaves: 8g
- Oil: 3g

Method of Preparation

- Mid Day Meals planned for Bihar State.

DEVELOPED BY
The Department Of Public Health Nutrition (NIN)

RAGI LADOO

SHELF LIFE
NA

COST
NA

Nutritional Information/100 grams

PRIMARY SCHOOL CHILDREN

Energy	203 Kcal
Protein	2.5 gm
Fat	3.6 gm

SECONDARY SCHOOL CHILDREN

Energy	225 Kcal
Protein	3.4 gm
Fat	5.4 gm

RAGI LADOO

Target Group and Benefits

5-15 years

Ingredients

PRIMARY SCHOOL CHILDREN

- Ragi: 30g
- Sugar/jaggery: 20g
- Oil: 3g

SECONDARY SCHOOL CHILDREN

- Ragi: 45g
- Sugar/jaggery: 10g
- Oil: 5g

Method of Preparation

- Mid Day Meals planned for Bihar State.

DEVELOPED BY
The Department Of Public Health Nutrition (NIN)

SAMBHAR RICE

SHELF LIFE
NA

COST
NA

Nutritional Information/100 grams

PRIMARY SCHOOL CHILDREN

Energy	459 Kcal
Protein	12.1 gm
Fat	5 gm

SECONDARY SCHOOL CHILDREN

Energy	606 Kcal
Protein	16.6 gm
Fat	7.4 gm

SAMBHAR RICE

Target Group and Benefits

5-15 years

Ingredients

PRIMARY SCHOOL CHILDREN

- Rice: 100g
- Red gram dhal: 15g
- Drumstick : 10g
- Ladies finger : 10g
- Bottle gourd: 10g
- Radish: 10g
- Onion: 5g
- Tomato: 5g
- Oil: 4g

SECONDARY SCHOOL CHILDREN

- Rice: 150g
- Red gram dhal: 25g
- Drumstick: 15g
- Ladies finger: 15g
- Bottle gourd: 15g
- Radish: 15g
- Onion: 5g
- Tomato: 5g
- Oil: 6g

Method of Preparation

- Mid Day Meals planned for Bihar State

DEVELOPED BY
The Department Of Public Health Nutrition (NIN)

GROUNDNUT LADOO

SHELF LIFE
NA

COST
NA

Nutritional Information/100 grams

PRIMARY SCHOOL CHILDREN

Energy	148 Kcal
Protein	4.9 gm
Fat	8.9 gm

SECONDARY SCHOOL CHILDREN

Energy	224 Kcal
Protein	6.1 gm
Fat	14.1 gm

GROUNDNUT LADOO

Target Group and Benefits

5-15 years

Ingredients

PRIMARY SCHOOL CHILDREN

- Groundnut: 20g
- Jaggery: 10g
- Oil: 1g

SECONDARY SCHOOL CHILDREN

- Groundnut: 30g
- Jaggery: 15g
- Oil: 2g

Method of Preparation

- Mid Day Meals planned for Bihar State

DEVELOPED BY
The Department Of Public Health Nutrition (NIN)

VEGETABLE BIRYANI

SHELF LIFE
NA

COST
NA

Nutritional Information/100 grams

PRIMARY SCHOOL CHILDREN

Energy	409 Kcal
Protein	9.8 gm
Fat	3.2 gm

SECONDARY SCHOOL CHILDREN

Energy	611 Kcal
Protein	14.6 gm
Fat	5.1 gm

VEGETABLE BIRYANI

Target Group and Benefits

5-15 years

Ingredients

PRIMARY SCHOOL CHILDREN

- Rice: 100g
- Peas: 20g
- Beans: 2.5g
- Potato: 2.5g
- Carrot: 2.5g
- Cauliflower: 2.5g
- Onion: 7.5g
- Oil: 2.5g

SECONDARY SCHOOL CHILDREN

- Rice: 150g
- Peas: 30g
- Beans: 2.5g
- Potato: 2.5g
- Carrot: 2.5g
- Cauliflower: 2.5g
- Onion: 7.5g
- Oil: 4g

Method of Preparation

- Mid Day Meals planned for Bihar State

DEVELOPED BY
The Department Of Public Health Nutrition (NIN)

MIXED VEGETABLE SABJI

SHELF LIFE
NA

COST
NA

Nutritional Information/100 grams

PRIMARY SCHOOL CHILDREN

Energy	51 Kcal
Protein	0.9 gm
Fat	3.3 gm

SECONDARY SCHOOL CHILDREN

Energy	73 Kcal
Protein	1.5 gm
Fat	4.5 gm

MIXED VEGETABLE SABJI

Target Group and Benefits

5-15 years

Ingredients

PRIMARY SCHOOL CHILDREN

- Potato: 20g
- Cauliflower: 5g
- Fenugreek leaves: 5g
- Onion: 5g
- Tomato: 5g
- Oil: 2.5g

SECONDARY SCHOOL CHILDREN

- Potato: 30g
- Cauliflower: 10g
- Fenugreek leaves: 10g
- Onion: 7.5g
- Tomato: 7.5g
- Oil: 4g

Method of Preparation

- Mid Day Meal planned for Bihar State

DEVELOPED BY
The Department Of Public Health Nutrition (NIN)

PALAK RICE

SHELF LIFE
NA

COST
NA

Nutritional Information/100 grams

PRIMARY SCHOOL CHILDREN

Energy	500 Kcal
Protein	16.4 gm
Fat	5.9 gm

SECONDARY SCHOOL CHILDREN

Energy	752 Kcal
Protein	24.6 gm
Fat	10.5 gm

PALAK RICE

Target Group and Benefits

5-15 years

Ingredients

PRIMARY SCHOOL CHILDREN

- Rice: 100g
- Spinach: 20g
- Potato: 10g
- Beans: 10g
- Soya bean: 20g
- Onion: 5g
- Tomato: 5g
- Oil: 5g

SECONDARY SCHOOL CHILDREN

- Rice: 150g
- Spinach: 25g
- Potato: 20g
- Beans: 15g
- Soya bean: 30g
- Onion: 7.5g
- Tomato: 7.5g
- Oil: 7.5g

Method of Preparation

- Mid Day Meal planned for Bihar State

DEVELOPED BY
The Department Of Public Health Nutrition (NIN)

ROTI DHAL+SABJI

SHELF LIFE
NA

COST
NA

Nutritional Information/100 grams

PRIMARY SCHOOL CHILDREN

Energy	478 Kcal
Protein	16.1 gm
Fat	9.7 gm

SECONDARY SCHOOL CHILDREN

Energy	719 Kcal
Protein	24.1 gm
Fat	14.6 gm

ROTI DHAL+SABJI

Target Group and Benefits

5-15 years

Ingredients

PRIMARY SCHOOL CHILDREN

- Wheat flour: 100g
- Red gram dhal: 20g
- Spinach: 10g
- Potato: 10g
- Cauliflower: 10g
- Cabbage: 10g
- Onion: 5g
- Tomato: 5g
- Oil: 7.5g

SECONDARY SCHOOL CHILDREN

- Wheat flour: 150g
- Red gram dhal: 30g
- Spinach: 20g
- Potato: 20g
- Cauliflower: 10g
- Cabbage: 10g
- Onion: 8g
- Tomato: 8g
- Oil: 11.3g

Method of Preparation

- Mid Day Meal planned for Bihar State

DEVELOPED BY
The Department Of Public Health Nutrition (NIN)

NORTH INDIA RECIPES

GOLDEN SWEET POTATO PAPAD

SHELF LIFE
6 months

COST
Rs. 20/-

Nutritional Information/100 grams

Energy	469 Kcal
Carbohydrate	67 gm
Protein	1.0 gm
Beta carotene	1110 µg
Iron	2.2 mg

GOLDEN SWEET POTATO PAPAD

Target Group and Benefits

- For children (6 -12 yrs) deficient with vitamin A and Iron.
- Golden sweet potato is a natural enriched sources of Vitamin A.
- Protect eyes from Night Blindness and age related decline.

Ingredients

- **Golden sweet potato-250 gm**
- **Oil -10 ml**
- **Chilli powder – ¼ tsp**
- **Salt- ½ tsp (As required)**

Method of Preparation

- Boil Golden sweet potato.
- Remove the peel.
- Add, oil, salt and red chilli powder in washed sweet potato and make dough.
- Make small balls of dough.
- Roll it and dry it.

DEVELOPED BY
Department of Home Science, DDU Gorakhpur University, Gorakhpur

GOLDEN SWEET POTATO CHIPS

SHELF LIFE
6 -12 months

COST
Rs. 8/-

Nutritional Information/100 grams

Energy	462 Kcal
Carbohydrate	67 gm
Protein	1.0 gm
Beta carotene	1150 µg
Iron	6.3 mg

GOLDEN SWEET POTATO CHIPS

Target Group and Benefits

- Vitamin A deficient children (6-12 yrs).
- Golden sweet potato is a natural Biofortified food.
- By using golden sweet potato, chips were made for amelioration of Vitamin A deficiency among children.
- Improves the immune system.

Ingredients

- **Golden sweet potato-1 kg**
- **Salt- ½ tsp (As required)**

Method of Preparation

- Wash sweet potato tubers and peel them.
- Keep the tubers submerged in water.
- Slice the sweet potatoes using chips cutter.
- Dip the chips in water for 30 minutes.
- Put the chips in hot water.
- Spread the chips and allow to dry.

DEVELOPED BY
Department of Home Science, DDU Gorakhpur University, Gorakhpur

GOLDEN SWEET POTATO SHARBAT

(Orange Flesh Sweet Potato Sharbat)

SHELF LIFE
24 hrs

COST
Rs. 20/-

Nutritional Information/100 grams

Energy	275 Kcal
Carbohydrate	67 gm
Protein	1.7 gm
Beta carotene	1,096 µg
Iron	2.10 mg
Fat	0.30 gm

GOLDEN SWEET POTATO SHARBAT

(Orange Flesh Sweet Potato Sharbat)

Target Group and Benefits

- Vitamin A and Iron deficient (Anemia) children (6-12 yrs).
- Golden sweet potato is rich source of Vitamin A.
- To develop enrich food product using Golden sweet potato in eradication of Vitamin A deficiency and Iron deficiency (anemia) among children.

Ingredients

- **Golden sweet potato juice-25 ml**
- **Beet root juice- 125ml**
- **Amla juice- 12.5 ml**
- **Jaggery – 12.5 gm**

Method of Preparation

- Extract the juice of golden sweet potato, beet root and amla separately.
- Now mix all three juices in 2:2:1 ratio.
- Add jaggery/ honey according to taste.
- Serve chill.

DEVELOPED BY
Department of Home Science, DDU Gorakhpur University, Gorakhpur

KHATTIMEETHI GUAVA CANDY

SHELF LIFE
1 Month

COST
Rs. 2/-

Nutritional Information/100 grams

Energy	74 Kcal
Protein	0.7 gm
Vit C	69 mg
Iron	0.6 mg
Fiber	2.6 gm

KHATTI MEETHI GUAVA CANDY

Target Group and Benefits

- Diabetic and hypertensive patients.
- Commonly used toffees are only the source of calorie and fat while this candy contains goodness of guava fruit, fenugreek seeds, cinnamon and lemon.
- Reduce the blood pressure and blood sugar levels. It provides taste with nutrition.

Ingredients

- **Ripe Guava -1 kg**
- **Sugar-375 gm**
- **Cinnamon-12.5 gm**
- **Fenugreek powder-12.5 gm**
- **Lemon juice-2.5ml**

Method of Preparation

- Wash the guava and cut it.
- Pressure cook it for 10-15 minutes, and then blend the cooked guava in smooth pulp.
- Sieve the pulp to remove seeds. Cook the sieved pulp on medium flame.
- Add sugar, cinnamon powder, fenugreek powder and lemon juice.
- Stir continuously till it becomes thick. Grease a flat tray and spread guava cheese in to a thick layer.
- Allow to cool and cut in desirable shapes when it is lukewarm.
- Keep it overnight and then wrap it.

DEVELOPED BY
Department of Home Science, DDU Gorakhpur University, Gorakhpur

SOYA FORTIFIED DAL PITHA

SHELF LIFE
24 hrs

COST
Rs. 30/Plate

Nutritional Information/100 grams

Energy	300 Kcal
Carbohydrate	46 gm
Protein	17.2 gm
Iron	4.8 mg

SOYA FORTIFIED DAL PITHA

Target Group and Benefits

- All age groups.
- Dal pitha is a traditional recipe of UP.
- It is low cost recipe so it can be consumed by person belonging to different socio-economic status.
- Dal Pitha is fortified with soya flour to enrich protein and carbohydrate content.

Ingredients

- **Rice Flour- 50 gm**
- **Soya flour- 25gm**
- **Ghee- 3 tbsp**
- **Chana dal- 25gm**
- **Green chilli- 2**
- **Garlic- 3 gm**
- **Ginger- 5 gm**
- **Coriander leves- 5 gm**
- **Ajwain- ¼ tsp**
- **Turmeric powder- ¼ tsp**
- **Amchur powder- ¼ tsp**
- **Hing- 1 pinch**
- **Salt- According to taste**

Method of Preparation

- Soak the black chana dal for five to six hours.
- Grind it with green chillies, ginger and very little water.
- Take the mixture and add coriander leaves, ajwain, turmeric powder, amchur, salt and asafoetida. Keep aside.
- Prepare dough with rice and soya flour with warm water.
- Divide the dough into equal portions and roll out each portion into small circle, like puris.
- Take the rolled out dough in your hand and fill each puri with dal masala mixture one by one. Moisten the edge of the puri and fold one side onto the other in a semicircle and seal the ends properly.
- Take a big vessel and boil 8 cups of water in it. Carefully slide the pitha in boiling water one by one.
- Let the pitha boiled on high flame for two or three minutes. Don't cover.
- Now lower the flame to medium and let it cook for another 10 minutes.
- Remove pitha gently from water. Pour ghee on the pitha and serve with green chutney.

DEVELOPED BY
**Department of Home Science,
DDU Gorakhpur University, Gorakhpur**

MIXED CEREALS METHI GHATTI

SHELF LIFE
24 hrs

COST
Rs. 40/-

Nutritional Information/100 grams

Energy	295 Kcal
Carbohydrate	40 gm
Protein	9.3 gm
Iron	5.08 mg
Calcium	75 mg

MIXED CEREALS METHI GHATTI

Target Group and Benefits

- Obese Person
- To improve the nutritive value of local food with fortification of protein, dietary fiber, iron and calcium by using flour of wheat, bajra, maize and jowar along with methi leaves.
- Maintaining the healthy weight is an extremely important part of overall health.

Ingredients

- **Wheat flour- 25 gm**
- **Bajra flour- 25 gm**
- **Maize flour- 25 gm**
- **Jowar flour- 25 gm**
- **Sattu – 55 gm**
- **Methi leaves- 25 gm**
- **Green chilli- 5 gm**
- **Garlic- 10 gm**
- **Cumin seed- 5 gm**
- **Lemon juice- 1 tsp**
- **Mustard oil- 1 tsp**

Method of Preparation

- Prepare the dough of mix flour of wheat, bajra, maize and jowar along with methi leaves.
- Then prepare the stuffing material of sattu mixture with sattu (roasted chana powder), green chillies, cumin seed, garlic, lemon juice and mustard oil and mix well.
- Take small ball of dough, stuff with prepared sattu mixture.
- Then roast or deep fry and serve with chokha.

DEVELOPED BY
**Department of Home Science,
DDU Gorakhpur University,Gorakhpur**

REKWACH

SHELF LIFE
24 hrs

COST
Rs. 20/-

Nutritional Information/100 grams

Energy	276 Kcal
Carbohydrate	41 gm
Protein	14.7 gm
Beta carotene	1,833 µg
Iron	3.85 mg
Fat	3.4 gm
Fiber	3 gm

REKWACH

Target Group and Benefits

- Vitamin A and Iron deficient children.
- For improving the condition of children and pregnant woman suffering from Vitamin A and Iron deficiency.
- To enrich local food rekwach by Golden sweet potato's leaf.
- Improve the hemoglobin level and good health.

Ingredients

- **Golden sweet potato leaves- 150 gm**
- **Arvi leaves -10 gm**
- **Besan- 25gm**
- **Ginger & Green chilli paste-1/2 tsp**
- **Garlic paste- 1/2tsp**
- **Turmeric powder- 1/2tsp**
- **Coriander powder – 1/2 tsp**
- **Asofoetida- 1 pinch**
- **Lemon juice- 1 tsp**
- **Salt- According to taste**

Method of Preparation

- Cut golden sweet potato leaves.
- Mix with coriander powder, asafoetida, ginger-green chili paste, turmeric powder, garlic paste, lemon juice, gram besan (gram flour powder), chilli powder, salt and water properly.
- Then put the mixture on the arvi leaf and roll it over.
- Place all the rolls in the steamer and cook for 20 to 25 minutes or till they become firm.
- Keep aside for 10 minutes to cool and cut it into pieces and serve hot.

DEVELOPED BY
Department of Home Science, DDU Gorakhpur University, Gorakhpur

RAGI SATTU SHARBAT

SHELF LIFE
24 hrs

COST
Rs. 20/-

Nutritional Information/100 grams

Energy	55 Kcal
Protein	2.5 gm
Calcium	38 mg
Iron	0.75 mg

RAGI SATTU SHARBAT

Target Group and Benefits

- It is a common food consumed by people of all age groups and socioeconomic conditions.
- Sattu sharbat is a traditional beverage used in UP and Bihar during summer season.
- Sattu is rich in calorie and protein.
- So, we fortified it with ragi to enhance its calcium and iron content to control calcium and iron deficiency.

Ingredients

- **Chana sattu-50 gm**
- **Ragi- 40 gm**
- **Cumin seed-2gm**
- **Mint leaves-5 gm**
- **Lemon juice-5 ml**

Method of Preparation

- Roast the whole ragi and chana first then grind it in powder.
- Mix prepared sattu with jeera powder and salt.
- Add water and mix to a smooth consistency ensuring there are no lumps.
- Now add chopped pudina leaves and lemon juice.

DEVELOPED BY
Department of Home Science, DDU Gorakhpur University, Gorakhpur

FLAX SEED LADOO

SHELF LIFE
24 hrs

COST
Rs. 20/-

Nutritional Information/100 grams

Energy	534 Kcal
Carbohydrate	29 gm
Protein	18.3 gm
Fat	42.2 gm
Dietary Fiber	27.2 gm
Omega-3 fatty acid	22.81 gm
Omega-6 fatty acid	5.9 gm

FLAX SEED LADOO

Target Group and Benefits

- People suffering from Arthritis.
- Flax seed is high in alpha linolenic acid a type of omega -3 fatty acid which is a known anti inflammatory.
- It helps to remove joint pain in arthritis.

Ingredients

- **Flaxseed-70 gm**
- **Jaggery-20 gm**
- **Crushed groundnut- 10 gm**

Method of Preparation

- Roast the flaxseed carefully and grind it to fine powder.
- In a pan add jaggery and melt it.
- After melting, add flaxseed powder and crushed groundnut.
- Mix it well. Then make ladoo from the mixture.

DEVELOPED BY
Department of Home Science, DDU Gorakhpur University, Gorakhpur

GARLIC DRUMSTICK SOUP

SHELF LIFE
24 hrs

COST
Rs. 20/-

Nutritional Information/100 grams

Energy	44 Kcal
Protein	2.2 gm
Beta carotene	1,008 µg
Calcium	37 gm
Phosphorus	16.86 mg
Vitamin C	9 mg

GARLIC DRUMSTICK SOUP

Target Group and Benefits

- Arthritis and Anemic patients.
- Drumstick is available in abundance mainly during summer season in Eastern U.P and garlic is also a common ingredient of the household. Both ingredients are beneficial for arthritis.
- Arthritis is a common problem among aged population and this product can be easily consumed.

Ingredients

- **Drumstick powder- 20 gm**
- **Corn flour- 10 gm**
- **Garlic powder- 10 gm**
- **Turmeric powder- 1pinch**
- **Chilli powder – 2 gm**
- **Pepper powder- 2 gm**
- **Salt- 2 gm**

Method of Preparation

- Dry drumstick and garlic and grind them.
- Then mix corn flour, chilli powder, pepper powder and salt with garlic and drumstick powder.
- Add this mixture to 150 ml boiling water and cook for 3-4 minutes and stir continuously.

DEVELOPED BY
Department of Home Science, DDU Gorakhpur University, Gorakhpur

BEET ROOT CANDY

SHELF LIFE
7 months when stored at 8°C

COST
Rs. 250/kg

Nutritional Information/100 grams

Carbohydrate	69.4 %
Protein	1.92 %
Fat	0.74 %
Dietary Fibre	6.08 %

BEET ROOT CANDY

Target Group and Benefits

- All age group people- especially children.

Ingredients

- **Beet root**
- **Pectin**
- **Citric acid**
- **Sugar**

Method of Preparation

- Wash, peel and slice beet root.
- Grind into paste.
- Boil puree with sugar and pectin.
- Judge the end point.
- Add citric acid at the end.
- Cool and shape into candy.

DEVELOPED BY
Centre of Food Science and Technology, IAS, BHU, Varanasi

HERBAL TOFU TIKKA

SHELF LIFE
1-2 weeks at refrigerated condition

COST
Rs. 180/kg

Nutritional Information/100 grams

Carbohydrate	69.4 %
Protein	12 %
Fat	7.42 %
Dietary Fibre	0.75 %

HERBAL TOFU TIKKA

Target Group and Benefits

- All age groups.

Ingredients

- **Soybeans**
- **Curry leaves**
- **Moringa leaves**

Method of Preparation

- Prepare soya milk.
- Add curry and moringa leaves in coagulated soymilk.
- Filter, strain and press.
- Herbal tofu is ready.

DEVELOPED BY
Centre of Food Science and Technology, IAS, BHU, Varanasi.

HERBAL SPICED BREAD

SHELF LIFE
5-7 days

COST
Rs. 30/ 200gm

Nutritional Information/100 grams

Carbohydrate	60.8 %
Protein	8.56 %
Fat	1.92 %
Dietary Fibre	1.84 %

HERBAL SPICED BREAD

Target Group and Benefits

- All age groups
- Good antioxidant activity

Ingredients

- Whole wheat flour
- Refined wheat flour
- Oat flour compressed yeast
- Vegetable oil
- Sugar
- Salt
- Turmeric
- Cardamom
- Cinnamon
- Ajwain
- Cumin
- Black pepper
- Cloves
- Fenugreek
- Mustard seeds
- Bay leaves

Method of Preparation

- Mix all ingredients to make dough-kneading-intermediate proofing (32˚C for 60 minutes)-molding-panning-final proofing (32˚C for 30 minutes)-baking-cooling-packing.

DEVELOPED BY
Centre of Food Science and Technology, IAS, BHU, Varanasi.

GREEN CHILLI POWDER

SHELF LIFE
4-5 months

COST
Rs. 300/kg

Nutritional Information/100 grams

Carbohydrate	69.4 %
Protein	15.17 %
Fat	5 %
Dietary Fibre	25 %

GREEN CHILLI POWDER

Target Group and Benefits

- As a seasoning for all groups

Ingredients

- **Green chilli powder**

Method of Preparation

- Raw green Chilli –cleaning and sorting – drying- grinding –green chilli powder

DEVELOPED BY
Centre of Food Science and Technology, IAS, BHU, Varanasi.

FENUGREEK AND STEVIA ENRICHED BISCUITS

SHELF LIFE
6 months

COST
Rs. 150/kg

Nutritional Information/100 grams

Carbohydrate	76.75 %
Protein	5.90 %
Fat	14.85 %
Dietary Fibre	1.5 %

FENUGREEK AND STEVIA ENRICHED BISCUITS

Target Group and Benefits

- Diabetic Patients

Ingredients

- **Fenugreek seed**
- **Wheat flour**
- **Stevia**
- **Butter**
- **SMP**
- **Salt**
- **Baking soda**
- **Baking powder**

Method of Preparation

- Mix fat and sugar –add all dry ingredients to make dough-shape into biscuits- baked at 170˚C for 20 minutes –cool and stored

DEVELOPED BY
Centre of Food Science and Technology, IAS, BHU, Varanasi

HIGH PROTEIN SPIRULINA BAR

SHELF LIFE
2 months

COST
Rs. 400/kg

Nutritional Information/100 grams

Carbohydrate	71.45 %
Protein	11.40 %
Fat	9.02 %
Dietary Fibre	0.83 %

HIGH PROTEIN SPIRULINA BAR

Target Group and Benefits

- All age group people

Ingredients

- **Jaggery**
- **Liquid glucose**
- **Ghee**
- **Peanuts**
- **Roasted Bengal gram**
- **Corn flakes**
- **Puffed rice**
- **Spirulina**
- **Coconut flakes**

Method of Preparation

- Heat jaggery till it melts.
- Mix all ingredients into melted jaggery after crushing.
- Form bars from the mixture.
- Store and pack.

DEVELOPED BY

Centre of Food Science and Technology, IAS, BHU, Varanasi.

DOLICHOS LABLAB POD AND BUCK WHEAT FLOUR BASED FIBRE ENRICHED BISCUITS

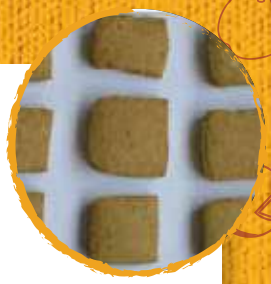
SHELF LIFE
6 months

COST
Rs. 150/kg

Nutritional Information/100 grams

Carbohydrate	66.61 %
Protein	8.05 %
Fat	15.90 %
Dietary Fibre	5.25 %

DOLICHOS LABLAB POD AND BUCK WHEAT FLOUR BASED FIBRE ENRICHED BISCUITS



Target Group and Benefits

- Cholesterol, Colon cancer, Lower Glycemic index, Bowel disorder and Enhance lipid metabolism

Ingredients

- **Dolichos lablab pod powder**
- **Buckwheat flour**
- **Wheat flour(maida)**
- **Sugar**
- **Butter**
- **Skim milk powder**
- **Salt**
- **Vanilla essence**
- **Baking soda**
- **Baking powder**

Method of Preparation

- Mix fat and sugar –add all dry ingredient to make dough-shape into biscuits- baked at 170˚C for 20 minutes –cool and stored

DEVELOPED BY
Centre of Food Science and Technology, IAS, BHU, Varanasi

GUAVA SEED POWDER FORTIFIED YOGHURT

SHELF LIFE
15 days at refrigerated condition

COST
Rs. 150/kg

Nutritional Information/100 grams

Carbohydrate	9.11 %
Protein	3.12 %
Fat	6.02 %
Dietary Fibre	0.81 %

GUAVA SEED POWDER FORTIFIED YOGHURT

Target Group and Benefits

- All age group people

Ingredients

- **Guava seed powder**
- **Milk**
- **Yoghurt strain**

Method of Preparation

- Raw milk 40˚C –inoculate with yoghurt strains packaging–incubation at 40˚C – storage at 8˚C

DEVELOPED BY

Centre of Food Science and Technology, IAS, BHU, Varanasi

GUAVA CHOCOLATE

SHELF LIFE
2 months

COST
Rs. 40/100gm

Nutritional Information/100 grams

Energy	500 %
Carbohydrate	43 %
Protein	1.87 %
Fat	30.04 %

GUAVA CHOCOLATE

Target Group and Benefits

- All age group people

Ingredients

- **Guava chocolate**
- **Guava powder**
- **Sugar**
- **Milk powder**
- **Cocoa powder**

Method of Preparation

- Reframe
- Melt cocoa butter.
- Add guava powder, milk powder, sugar and cocoa powder.
- Temper and crystallize at 3 degree C.
- Mould and pack.

DEVELOPED BY
Centre of Food Science and Technology, IAS, BHU, Varanasi.

POTATO FLOUR BISCUIT

(made from Kufri Chipsona)

SHELF LIFE
3 months (packed in aluminium laminates, at room temperature under cool and dry conditions)

COST
2.00 Rs./ 50g / serving (four biscuits of 4.5±0.33 cm diameter)

Nutritional Information/100 grams

Carbohydrate	69.57 gm
Protein	8.67 gm
Fat	13.86 gm
Energy	437 kcal

POTATO FLOUR BISCUIT

(made from Kufri Chipsona)

Target Group and Benefits

- Children and people with high energy requirement
- Biscuits are one of the most common forms of RTE product among children.
- The biscuits prepared from blend containing 25% potato flour had the highest overall acceptability because potato flour may be used as an inexpensive, acceptable and nutritious replacement of refined wheat flour having high carbohydrate and energy for preparation of bakery products.

Ingredients

- **Wheat flour 75g**
- **Potato powder 25g**
- **Refined oil 16 ml**
- **Sugar 19g**
- **Glucose 1g**
- **Milk powder 1g**
- **Baking powder 1g**

Method of Preparation

- Mixing and preparation of Flour mix (wheat flour : potato flour in 3:1 ratio)
- Whipping of powdered sugar + refined oil
- Dough making
- Sheeting and Moulding
- Baking
- Packaging
- Storing

DEVELOPED BY

Centre of Food Science and Technology, IAS, BHU, Varanasi.

POTATO FLOUR BASED INFANT COMPLEMENTARY FOOD

SHELF LIFE
1 month (packed in aluminium laminates, placed at room temperature under cool and dry conditions)

COST
Rs. 5.8/50 gm

Nutritional Information/100 grams

Carbohydrate	63 gm
Protein	18.9 gm
Fat	3.5 gm
Crude fibre	3.2 gm
Energy	357 kcal

POTATO FLOUR BASED INFANT COMPLEMENTARY FOOD

Target Group and Benefits

- Weaning children and infants
- A year round availability and is highly economical
- Optimal physicochemical properties, is energy dense and hypoallergenic containing highly bioavailable protein source which could be utilized for mass supplementation programmes.

Ingredients

- **Potato powder 28%**
- **Rice flour 65%**
- **Protein isolates 7%**
- **Carrot 3%**
- **Spinach 3%**
- **Skimmed milk 10%**
- **Sugar 10%**
- **Salt 1%**

Method of Preparation

- Selection of ingredients (Potato powder, rice flour, protein isolate, dried and powdered spinach, carrot; skim milk powder, salt and sugar)
- Mixing of all ingredients
- Homogenization through sifting
- Packing
- Storage

DEVELOPED BY
Centre of Food Science and Technology, IPS, University of Allahabad, UP

POTATO FLAKES ENERGY BAR

SHELF LIFE
3 weeks
(stored at room temperature under cool and dry conditions)

COST
Rs. 9.44/50 gm

Nutritional Information/100 grams

Energy	371 kcal
Carbohydrate	71 gm
Protein	10.7 gm
Fat	5.1 gm
Crude fibre	5.1 gm

POTATO FLAKES ENERGY BAR

Target Group and Benefits

- Growing children, sports person, chronic energy deficient person.
- This energy bar fulfils quick energy requirements (high glycemic index) with high mineral content and sensorial score.
- Unlike commercial bar it has conventional ingredients (jaggery, amaranthus seed, potato flakes) can also be used as meal substitution during emergencies.

Ingredients

- **Potato flakes**
- **Corn flakes**
- **Jaggery**
- **Amaranthus seed**
- **Ground nut**
- **Guar gum**
- **Raisins**

Method of Preparation

- Weigh all ingredients.
- Roasting of ingredients except potato, corn flakes and jaggery.
- Melting of jaggery at 50˚C.
- Mixing of all ingredients homogenously.
- Place butter paper in a mould and transfer the above mixture in the mould.
- Kept at room temperature for hardening.
- Packaging.
- Storing.

DEVELOPED BY
Centre of Food Science and Technology, IPS, University of Allahabad, UP

IRON AND ZINC FORTIFIED READY TO EAT (RTE) FOOD/ PANJIRI

SHELF LIFE
3 months

COST
Small Scale production (batch of 325 kg) 3.30 INR per serving (30g)

Nutritional Information/100 grams

Energy	373 kcal
Carbohydrate	77 gm
Protein	17.3 gm
Fat	7.7 gm
Crude fibre	3 gm
Calcium	44 mg
Iron	4.7 mg
Zinc	5 mg

IRON AND ZINC FORTIFIED READY TO EAT (RTE) FOOD/ PANJIRI

Target Group and Benefits

- Children aged between 4 to 6 years
- The developed product is a fortified ready to eat (RTE) food product prepared using locally available ingredients for children especially of pre-school and school going age.
- It can be easily used in programmes at schools and anganwadis as it requires no further preparation and is a stable as well as acceptable food product.

Ingredients

- **Wheat flour 51.7%**
- **Chick pea flour 17.2%**
- **Sugar 20.7%**
- **Fat 6.8%**
- **Skimmed milk powder 1.4%**

Method of Preparation

- It was prepared by roasting the mixture of wheat and chick pea flour in fat on a low to medium flame for about 20 minutes.
- After it was cooled down, powdered sugar, skimmed milk powder, NaFeEDTA(25ppm) and ZnO(25ppm) was mixed thoroughly and was sealed in LDPE bags in the serving size of 30g.

DEVELOPED BY
Centre of Food Science and Technology, IPS, University of Allahabad, UP

GLUTEN FREE PASTA

SHELF LIFE
6 months

COST
NA

Nutritional Information/100 grams

Carbohydrate	79 gm
Protein	11.2 gm
Fat	1.2 gm
Crude fibre	4.2 gm
Calcium	312 mg
Iron	1.5 mg
Phosphorus	198 mg

GLUTEN FREE PASTA

Target Group and Benefits

- Celiac disease patients.
- Gluten-free Pasta is the kind of pasta that's made from a grain which contains no gluten and therefore can be consumed by celiac disease patients.

Ingredients

- **Ragi flour- 45 g**
- **Corn flour- 44.14 g**
- **Guar gum powder- 0.625%**

Method of Preparation

- Sieving of Corn Flour.
- Heat Corn flour with water to gelatinize (400ml of water is used per 100g of sample).
- Add ragi flour and guar gum powder into gelatinized corn flour.
- Make the dough.
- Pass into pasta maker.
- Cutting of pasta.
- Dry pasta in hot air oven at 80-85◦C for 3-5 hours.
- Cool it for 10-15min.
- Pack in plastic bags.

DEVELOPED BY
Centre of Food Science and Technology, IPS, University of Allahabad, UP

MILLET BASED RTE EXTRUDATES

SHELF LIFE
1 month at ambient condition

COST
Rs 6/- per serving of 100g for preschooler
Rs 9/- per serving of 150 g for sedentary women

Nutritional Information/100 grams

	PRESCHOOLER(100G)	WOMEN (150 G)
Energy	563 Kcal	625 Kcal
Protein	10 gm	17 gm
Carbohydrate	84 gm	94 gm
Iron	6 mg	9 mg
Calcium	133 mg	200 mg

MILLET BASED RTE EXTRUDATES

Target Group and Benefits

- Preschool Children and Sedentary Women
- RTE extruded products prepared by composite flour (using linear programming) are fulfilling the nutritional requirements (calories, protein, iron and calcium) of preschoolers and sedentary women thus provide versatility for the development of high nutritive food products.

Ingredients

PRESCHOOL

- **Red Rice 15g**
- **Barnyard 40 g**
- **Kodo 5g**
- **Finger millet 40g**

WOMEN

- **Red Rice 40g**
- **Barnyard 40g**
- **Kodo 30g**
- **Finger millet 40g**

Method of Preparation

- Formulation of composite flour from Kodo millet, barnyard millet, finger millet and red rice
- Conditioning of flour by sprinkling water (moisture 20%)
- Passing the flour through extruder at 1250C, screw speed100rpm
- Cooling and sprinkling of salt and taste maker before packing

DEVELOPED BY

Centre of Food Science and Technology, IPS, University of Allahabad, UP

WHEATGRASS MATHRI

SHELF LIFE
45 days

COST
Rs. 3/ 100 gm

Nutritional Information/100 grams

Energy	497 kcal
Protein	7.9 gm
Fat	27.9 gm
Fiber	7.9 gm
Carbohydrate	49 gm
Iron	5.36 mg
Ascorbic acid	7.00 mg
Phosphorus	72.33 mg
Calcium	117 gm

WHEATGRASS MATHRI

Target Group and Benefits

- Formulated product is recommended for the all sections of the society but especially for the anemic group.
- Wheatgrass is highly valuable due to its medicinal properties.
- Despite the medicinal properties wheatgrass could not be part of daily diet as it is not a regular part of diet so there is requirement to prepare food products using wheatgrass.

Ingredients

- **Wheatgrass fFlakes**
- **Wheat flour**
- **Common salt**
- **Refined oil**
- **Spices**

Method of Preparation

- Wheatgrass flakes, wheat flour and refined oil were mixed in the proportions as obtained in the experimental design to form different formulations.
- These formulated mixes were further mixed with fixed ingredients i.e. common salt (2.8 gm), and ajwain (3.5 gm).
- The dry powder was thoroughly mixed, followed by the addition of refined oil and cold water (25–35 ml), to make pliable dough. Refined oil was used during the dough preparation to enhance the stability of the product as well as improve the texture of the end product. Small round balls were made from the dough, rolled and flattened into circular shape (20 cm diameter) and cut into desirable shape.
- These pieces were fried (according to the combinations) in refined sunflower oil and heated up to 150±5 °C to a golden brown colour. The final products were packed in paper/ foil/ polyethylene (PFP) pouches prior to further analysis.

DEVELOPED BY
Department of Home Science, University of Allahabad

WHEATGRASS CUPCAKE

SHELF LIFE
7 to 10 days

COST
Rs. 15/100 gm

Nutritional Information/100 grams

Energy	497 kcal
Protein	12.7 gm
Fat	5.50 gm
Fiber	9 gm
Carbohydrate	50 gm
Phosphorus	78.33 mg
Calcium	160 mg
Iron	12.46 mg

WHEATGRASS CUPCAKE

Target Group and Benefits

- The optimized formulation could be recommended to all the age groups but especially for children, lactating mothers and geriatric population due to its high calcium, iron and fiber content.
- Wheatgrass (Triticum aestivum) is widely used as a medicinal agent for the treatment of multiple human diseases and disorders.
- Recently, wheatgrass has attracted much research interest due to its beneficial health effects, and antioxidant activity.

Ingredients

- **Wheatgrass powder**
- **Refined wheat flour**
- **Sugar**
- **Milk**
- **Butter**
- **Baking powder**
- **Cocoa powder**

Method of Preparation

- During preparation of the cake, firstly, dry ingredients (refined wheat flour, baking powder, salt and wheatgrass powder) were mixed thoroughly.
- In a separate cup, sugar and butter were mixed, and then melted shortening was added and mixed for 1 min at 85 rpm by using a mixer. Then, dry ingredient mix and milk were added simultaneously to this mixture and mixed first for 2 min at 85 rpm, then for 1 min at 140 rpm and finally for 2 min at 85 rpm..
- Take a cupcake mold, cake samples of 100 g were baked in microwave oven at 180±5ºC for 30 minutes. Wheatgrass cupcake was packed in paper/ foil/ polyethylene (PFP) pouches prior to further analysis.

DEVELOPED BY
Department of Home Science, University of Allahabad

MAHUANUTRIBALLS

SHELF LIFE
45 Days

COST
Rs. 6.5/100 gm

Nutritional Information/100 grams

Energy	424 kcal	Carbohydrate	74 gm
Protein	11.3 gm	Phosphorus	403.33 mg
Fat	10.3 gm	Calcium	217 mg
Fiber	6 gm	Iron	4.50 mg

MAHUANUTRI BALLS

Target Group and Benefits

- Reproductive age group women

Ingredients

- **Mahua**
- **Sorgham**
- **Pearl millet**
- **Sesame seeds**
- **Flax seeds**

Method of Preparation

- Heat a pan and dry roast all ingredients.
- Mahua was roasted separetly with little oil.
- Cool the roasted ingredients and coarsely ground in a grinder.
- Mix all the ingredients together and make small balls.

DEVELOPED BY
Department of Home Science, University of Allahabad

KATHALE

SHELF LIFE
48 hrs in refrigerator

COST
Rs. 12/100 ml

Nutritional Information/100 grams

Protein	0.19 %
Fat	0.19 %
fibre	0.002 %
Calcium	2 gm
Iron	1.88 mg
Phosphorus	1.23 mg

KATH ALE

Target Group and Benefits

- Firstly Kaitha is an underutilized fruit with good nutritional potential.
- So its consumption should be increased by producing new products made using kaitha. Fermented drinks are always appreciated for improving digestion and boosting immunity.
- Therefore recommended for Geriatric population, people with low gastrointestinal potential.

Ingredients

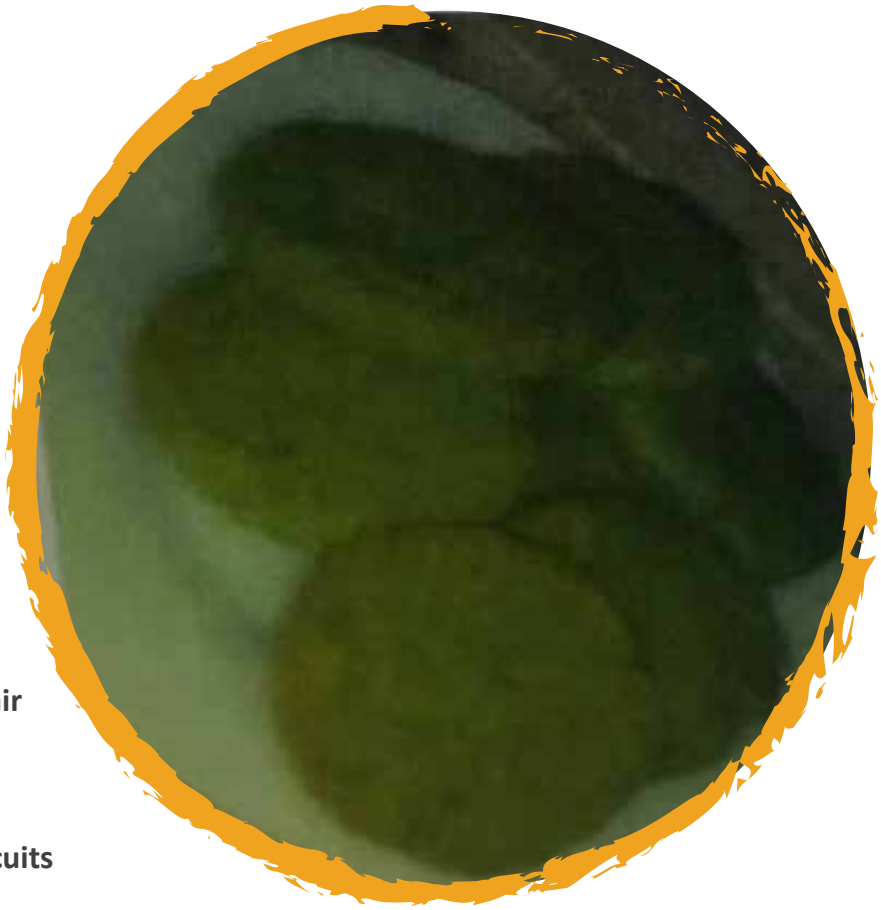
- **Unripe Kaitha**
- **Ginger Juice**
- **Sugar**
- **Yeast**

Method of Preparation

- Take 20 g sugar to a bottle through a dry funnel then added 3g fresh granular active baker's yeast in it.
- Grate ginger and make a juice.
- Add ginger juice and dry kaitha powder and 200ml clean water to the bottle.
- Cap the bottle, ferment for 45 hours and refrigerate.

DEVELOPED BY
Department of Home Science, University of Allahabad

SPIRULINA COOKIES



SHELF LIFE
3 Months in an air tight container

COST
Rs. 13 for 12 biscuits

Nutritional Information/100 grams

Protein	20.43 %
Fat	16.25 %
fibre	1.18 %
Calcium	229 gm
Iron	3.94 mg

SPIRULINA COOKIES

Target Group and Benefits

- Spirulina is blue green algae with rich content of protein, iron, vitamin B12, copper and phytonutrients.
- It may be used for combating anemia which is a major community problem of India.
- It is recommended to all age groups specially to anemic people.

Ingredients

- **Wheat flour**
- **Spirulina**
- **Sugar**
- **Salt**

Method of Preparation

- Mix Spirulina Powder along with other ingredients.
- Make into dough.
- Then bake at 170 degree C for 10 minutes.

DEVELOPED BY
Department of Home Science, University of Allahabad

MULTIGRAIN GINGER LADOO

IMAGE NOT PROVIDED

SHELF LIFE
Best 2-3 months; 3-4 months with losses in moisture content

COST
Not calculated

Nutritional Information/100 grams

Energy	451 Kcal
Protein	9 gm
fat	18.36 gm
Fibre	1.48 gm
Calcium	77 mg
Carotene	32 mcg
Thiamin	0.24 mg
Riboflavin	0.04 mg
Niacin	3.96 mg
Folic acid	24.44 µg
Iron	3.04 mg
Vit C	0.16 mg
Sodium	11.24 mg

MULTIGRAIN GINGER LADOO

IMAGE NOT PROVIDED

Target Group and Benefits

- All ages
- Healthy with macro and micro nutrients.
- Energy giving especially for winter or cool season.

Ingredients

- **Wheat flour**
- **Barley**
- **Bengal gram flour**
- **Groundnut**
- **Gingelly seeds (til)**
- **Ginger powder**
- **Pipali**
- **Sugar/jaggery**
- **Ghee**
- **Green cardamom**
- **Dates**

Method of Preparation

- Roast all flours, groundnut, gingelly seed separately.
- Grind groundnut coarsely.
- Finely grind sugar (jaggery), herbs and spices.
- Mix the above ingredients.
- Heat ghee/clarified butter and add this to the mixture well.
- Quickly take a portion of the mixture and make balls /ladoos.
- Store in an airtight container

DEVELOPED BY
Suman Prasad Maurya
NDUAT, Kumarganj, Ayodhya

GOOSEBERRY MOUTH FRESHENER

IMAGE NOT PROVIDED

SHELF LIFE
More than a year

COST
As per the cost of amla

Nutritional Information/100 grams

Energy	24 Kcal
Carbohydrate	4 gm
Protein	0.34 gm
Total Fat	0.16 gm
Vitamin C	252 mg

GOOSEBERRY MOUTH FRESHENER

IMAGE NOT PROVIDED

Target Group and Benefits

- All ages
- Rich in Vitamin C

Ingredients

- **Amla**

Method of Preparation

- Wash the amla fruit.
- Grate the fruit, sun dry and store.
- Consume after meals or as and when wanted.

DEVELOPED BY
Suman Prasad Maurya
NDUAT, Kumarganj, Ayodhya

CAKE USING COARSELY GROUNDED CHIA SEEDS

IMAGE NOT PROVIDED

SHELF LIFE
4-5 days

COST
Rs. 64/- 202g

Nutritional Information/100 grams

Energy	425 Kcal
Carbohydrate	56 gm
Fat	20.2 gm
Protein	5.1 gm
Crude Fibre	2.2 mg

CAKE USING COARSELY GROUNDED CHIA SEEDS

IMAGE NOT PROVIDED

Target Group and Benefits

- Children.

Chia seeds are rich in:

- Omega-3, which reduces the level of triglycerides
- Phytosterols, prevent cardiovascular diseases
- Possess anticancer, antioxidants, bactericidal, and antifungal effects.

Jaggery contains:

- Micronutrients which possess antitoxic and anti-carcinogenic properties.

Ingredients

- **Whole wheat flour: 35 g**
- **Grounded Chia seeds: 15 g**
- **Jaggery Powder: 50 g**
- **Butter: 50 g**
- **Egg: 50 g**
- **Baking Powder: 1.5 g**
- **Vanilla Essence: 1 ml**

Method of Preparation

- The cake was prepared using whole wheat flour and different proportion of coarsely grounded chia seeds (20%, 30%, 40%)
- Jaggery was used as sweetener to optimize the concentration.
- Cake was prepared

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

IRON RICH CHIKKI

SHELF LIFE
3 months

COST
Rs. 31/- 100 gm

Nutritional Information/100 grams

Carbohydrate	59 gm
Protein	7.20 gm
Iron	12.20 mg

IRON RICH CHIKKI

Target Group and Benefits

All age group people

BENEFITS:

- Rich in antioxidants
- Promotes brain health
- Controls diabetes
- Reduces cholesterol
- Rich in protein
- Boosts the immune system

Ingredients

- **Jaggery: 60 gm**
- **Date: 15 gm**
- **Pearl Millet: 10 gm**
- **Walnut: 5 gm**
- **Sesame seed: 5 gm**
- **Pumpkin seed: 2.5 gm**
- **Watermelon seed: 2.5 gm**

Method of Preparation

- The product was made using the standard procedure using the new ingredients

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

ANTIOXIDANT RICH CHOCOLATES (USING MANGO KERNELS)

IMAGE NOT PROVIDED

SHELF LIFE
8 months

COST
Rs. 39/- 100 gm

Nutritional Information/100 grams

Energy	529 Kcal
Carbohydrate	66-81 gm
Fat	27.4 gm
Protein	3.8 gm

ANTIOXIDANT RICH CHOCOLATES (USING MANGO KERNELS)

IMAGE NOT PROVIDED

Target Group and Benefits

All age groups.

Chocolates are a source of:

- Antioxidant compounds
- Lipids

Mango kernels are potential source for:

- Functional food ingredients
- Antimicrobial compounds
- Fat
- Protein

Ingredients

- **Dark chocolate: 95 gm**
- **Mango seeds: 5 gm**

Method of Preparation

- Chocolates were developed using standardized development techniques with two variants – unroasted mango kernel chocolates and roasted mango kernel chocolates.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

GUAVA FLAVOURED MAYONNAISE

IMAGE NOT PROVIDED

SHELF LIFE
2 months

COST
Rs. 42/- 100 gm

Nutritional Information/100 grams

Energy	391 Kcal
Carbohydrate	27 gm
Fat	32.5 gm
Protein	3.9 gm
Vitamin C	33 mg

GUAVA FLAVOURED MAYONNAISE

IMAGE NOT PROVIDED

Target Group and Benefits

Children.

Milk is a good source of:

- Essential amino acids
- Complete food

Guava is rich in:

- Vitamin A, prevents night-blindness
- Vitamin C, prevents scurvy
- Rich in PUFA
- Dietary fibre

Method of Preparation

- Mayonnaise was prepared using the basic procedure and guava was incorporated as the flavouring agent

Ingredients

- **Milk powder: 22.5**
- **Water: 22.5**
- **Soybean Oil: 27**
- **Vinegar: 4.5**
- **Lemon Juice: 4.5**
- **Salt: 0.9**
- **Mustard powder: 1.8**
- **Black Pepper: 1.8**
- **Xanthan gum: 0.45**
- **Guar gum: 0.5**
- **Soy lecithin: 3.6**
- **Guava Pulp: 10**

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

PIZZA BASE

(with Refined Wheat, Soybean and Oat Flour)

IMAGE NOT PROVIDED

SHELF LIFE
6 months

COST
Rs. 25/- 100 gm

Nutritional Information/100 grams

Energy	335 Kcal
Carbohydrate	56 gm
Fat	8.9 gm
Protein	7.9 gm
Crude Fibre	33 mg

PIZZA BASE

(with Refined Wheat, Soybean and Oat Flour)

IMAGE NOT PROVIDED

Target Group and Benefits

All age groups.

Oats are an excellent source of:

- soluble fibre in the form of beta-glucans,
- Rich in antioxidants
- B- Vitamins and minerals
- Proteins
- Plant fat.

Soybean :

- Rich in good quality protein
- Rich in vitamins and minerals
- Lowers serum cholesterol levels.

Ingredients

- **Refined wheat flour: 40%**
- **Oats flour: 40%**
- **Soybean flour: 20%**
- **Yeast: 2 gm**
- **Water: 40 ml**
- **Oil: 5 ml**
- **Salt and sugar: 1/4 tea spoon**

Method of Preparation

- Ingredients were standardised
- Time- temperature combination was optimized
- Dough was prepared and yeast was added with salt
- Dough was kept for 10-15 minutes
- Baking was done at 175 ˚C for 10 minutes

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

GLUTEN FREE COOKIES

SHELF LIFE
6 months

COST
Rs. 125/- 250 gm

Nutritional Information/100 grams

Carbohydrate	71 gm
Protein	6.7 gm
Fat	12.20 gm

GLUTEN FREE COOKIES

Target Group and Benefits

Gluten intolerant people

BENEFITS

- Rich in fibre
- Low glycemic index
- Rich in iron
- Good for heart health
- Lowers blood sugar level
- Improves bladder health
- Good source of antioxidants

Ingredients

- **Raw banana flour: 15%**
- **Corn flour: 30%**
- **Arrowroot flour: 30%**
- **Pumpkin seeds powder: 10%**
- **Skim milk powder: 15%**
- **Cocoa powder**
- **Butter**
- **Castor sugar: 50%**
- **Milk**
- **Egg**
- **Baking powder**

Method of Preparation

- Cookies were prepared using the standard procedure with the new ingredients

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NUTRIBAR FROM MILLETS

IMAGE NOT PROVIDED

SHELF LIFE
8 months

COST
Rs. 34/- 100 gm

Nutritional Information/100 grams

Energy	352 Kcal
Carbohydrate	75 gm
Fat	3.5 gm
Crude Fibre	20.5 mg
Calcium	20 mg

NUTRIBAR FROM MILLETS

IMAGE NOT PROVIDED

Target Group and Benefits

School going children, working people

BENEFITS

- Helps in controlling diabetes
- Rich in fibre (beta – glucan)
- Rich source of vitamins and minerals
- Increases cholesterol metabolism
- Anti-cancer properties
- Helps in preventing heart diseases
- Removes the toxins from the liver

Ingredients

- **Puffed millets: 25 gm**
- **Jaggery: 45 gm**
- **Oats: 15 gm**
- **Flax seeds: 5 gm**
- **Watermelon seeds: 5 gm**
- **Poppy seeds: 5 gm**
- **Dry fruits: 2 gm**

Method of Preparation

- Roast the puffed millets (pearl millet and sorghum) , oats , flaxseeds , watermelon seeds and poppy seeds for 1-2 minutes
- Prepare a jaggery syrup in a pan with water and cook for 4-5 minutes and stir continuously
- Add the dry ingredients to the syrup and mix well
- Cut the product into bars.

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ALLERGEN FREE FROZEN DESSERTS

IMAGE NOT PROVIDED

SHELF LIFE
Ice Cream 4 months
Cookies: 6 months

COST
Rs. NA

Nutritional Information/100 grams

Fat	9.7 gm
Protein	3 gm

ALLERGEN FREE FROZEN DESSERTS

IMAGE NOT PROVIDED

Target Group and Benefits

People allergic to eggs, gluten, soya bean, tree nuts, peanuts and milk

Benefits -

- Lowers the cholesterol
- Rich in antioxidants
- May reduce cancer risk
- Contain high quality protein
- Ease in digestion

Ingredients

- **Oat flour**
- **White sugar**
- **Brown sugar**
- **Ground flax seeds**
- **Vanilla extract**
- **Full fat coconut milk**
- **Coconut oil**
- **Baking soda**
- **Strawberries**
- **Vodka**
- **Maple syrup**
- **Sea salt**
- **Lemon**
- **Banana**

Method of Preparation

COOKIES

- Preheat the oven to 350°F
- Mix the oil and sugars in stand mixture
- Add flax meal and vanilla and beat until smooth and add salt and soda
- Add the oat flour and prepare a dough
- Bake on a greased tray for 7 minutes or until the edges are barely golden

ICE CREAM

- Blend all the ingredients in a high speed blender
- Put in a freezer container and freeze or use an ice cream maker
- Stir every 30 minutes until frozen (if not using ice cream mixture)
- Freeze overnight for the most firm consistency

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PHOENIX - BERRY JAM

SHELF LIFE
12 months

COST
Rs. 600/- 500 gm

Nutritional Information/100 grams

Iron	94 mg
Vitamin C	59 mg

PHOENIX - BERRY JAM

Target Group and Benefits

- All age groups.

BENEFITS

- Nutrient rich
- Rich in vitamin C, K & B complex
- Anti – geriatric
- Anti – oxidant
- Rich in vitamins and minerals

Ingredients

- **Phoenix pulp: 120 gm**
- **Berry pulp: 80 gm**
- **Sugar: 75-80%**
- **Pectin: 1 gm**
- **Citric acid: 0.4 gm**
- **Preservative: 0.5 gm**

Method of Preparation

- Prepared with the standard procedure of making jam

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PROBIOTIC POMODORO KULFI

IMAGE NOT PROVIDED

SHELF LIFE
12 months

COST
Rs. 52/- 100 gm

Nutritional Information/100 grams

Fat	3.9 gm
Protein	8.7 gm
Sucrose	8.7 gm

PROBIOTIC POMODORO KULFI

IMAGE NOT PROVIDED

Target Group and Benefits

Lactose intolerant, people with weak digestive system and low immunity

- Anti- microbial activity
- Prevents and treats diarrhoea
- Relieves from symptoms caused by lactose intolerance
- Has anti-carcinogenic activity
- Has anti-mutagenic activity
- Stimulates digestive system

Ingredients

- **Milk: 60 gm**
- **Tomato juice: 20 gm**
- **Honey: 15 gm**
- **Cardamom powder: 3.8 gm**
- ***L.acidophillus* culture: 1.25 gm**

Method of Preparation

- Concentrate milk to about two folds
- Add honey and cardamom
- Cool the mix to room temperature
- Add tomato juice under sterilized conditions, stirring constantly
- Transfer mix to 80ml conical mould
- Add probiotic strain to mix under laminar airflow chamber
- Incubate the mix at 5 °C for 1-2 hours
- Freeze the mix at -18 to -20 °C for 10-12 hours

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GRANITA

(from Aparajita flower)

SHELF LIFE
8 months

COST
Rs. 24/- 100 gm

Nutritional Information/100 grams

Total soluble solids	55
Vitamin C	59 mg

GRANITA

(from Aparajita flower)

Target Group and Benefits

People of all age groups

BENEFITS

- Memory enhancer
- Anti-stress, tranquilizing nootropic and calming agent
- Promotes intelligence
- Antioxidant properties
- Enhances sight acuteness
- Prevents cancer
- Controls type-2 diabetes
- Reduces coronary heart disease

Ingredients

- **Water: 200 ml**
- **Sugar: 50 gm**
- **Anthocyanin extract-: ml**
- **Bioactive components (from seed): 200 µl**
- **Citric acid: 0.25gm**
- **Sodium bicarbonate: 0.63gm**
- **Blueberry essence: 100 µl**

Method of Preparation

- Anthocyanin extract and bioactive were added to the sugar syrup at the rate of 1.5% and 0.002% respectively
- Blueberry essence was added at the rate of 0.001% into it
- Water was added in the ratio of 1:3 (i.e. 1part concentrate and 3 parts water)
- The mixture is poured into a glass dish or flat-bottomed pan
- It was placed in the freezer for 30 minutes
- The mixture was stirred very thoroughly with a fork and was allowed to freeze for another 30 minutes
- This process was repeated in every 30 minutes for 2 hours

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COOKIES USING FINGER MILLET FLOUR AND BLACK SOYBEAN

IMAGE NOT PROVIDED

SHELF LIFE
15 days

COST
Rs. 47/- 200 gm

Nutritional Information/100 grams

Energy	556 Kcal
Carbohydrate	17 gm
Fat	34.6 gm
Crude Fibre	36.8 gm
Calcium	22 mg
Iron	12 mg
Vitamin C	12 mg

COOKIES USING FINGER MILLET FLOUR AND BLACK SOYBEAN

IMAGE NOT PROVIDED

Target Group and Benefits

People with iron and calcium deficiency

BENEFITS

- Anti-diabetic
- Anti-diarrheal
- Anti-inflammatory
- Antioxidant and antimicrobial properties
- Rich source of calcium, phosphorus, essential amino acids and iron

Ingredients

- **Finger millet: 88 gm**
- **Black soyabean: 12 gm**
- **Butter: 55 gm**
- **Jaggery: 50 gm**
- **Baking powder: 1/4 tsp**
- **Vanilla flavour: 1/6 tsp**
- **Salt: 1/6 tsp**

Method of Preparation

- Soak the black soybean for 3-4 hours and then grind
- Preheat the oven at 145 °C
- Sieve finger millet flour with baking powder and salt
- Cream the butter and beat in melted jaggery and add flavour
- Mix in small proportions in butter
- Mix beans paste in flour mixture
- Develop the dough
- Form sheet and cut into desired shape
- Bake at 145 °C for 20-25 minutes

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GRAM FLOUR CHIPS

(fortified with flax seeds and chia seeds)

IMAGE NOT PROVIDED

SHELF LIFE
4 months

COST
Rs. 42/- 100 gm

Nutritional Information/100 grams

Energy	442 Kcal
Protein	20.8 gm
Carbohydrate	54 gm
Total Fat	16.05 gm
Crude Fibre	6.7 gm
Calcium	230 mg

GRAM FLOUR CHIPS

(fortified with flax seeds and chia seeds)

IMAGE NOT PROVIDED

Target Group and Benefits

Vegetarians, heart patients, diabetics, people with high blood pressure and cholesterol

BENEFITS

- Rich source of protein
- Prevents cardio vascular and heart diseases
- Helps to control high blood pressure, cholesterol and blood glucose levels
- Helps prevent hyperglycaemia, hypertension and hyperlipidemia
- Excellent source of calcium, phosphorus and potassium
- Anti-inflammatory, anti-arrhythmic and anti-carcinogenic

Ingredients

- **Bengal gram flour: 70 gm**
- **Flaxseed flour: 10 gm**
- **Chia seed flour: 10 gm**
- **Oil: 10 ml**
- **Baking powder: 1/4 tsp**
- **Salt: 2.5 gm**
- **Black pepper: 1.5 gm**

Method of Preparation

- Preheat the oven at 170 °C
- Knead flour with salt, oil and pepper and lukewarm water
- Make small balls from the dough
- Roll into thin chapattis and then cut into small triangles
- Grease a baking tray and keep the triangles on it
- Bake for 10 minutes

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PAPAYA BEVERAGE

(Ready-To-Serve Spiced Papaya Beverage)

SHELF LIFE
7 day at refrigerated conditions

COST
Rs. 13/- 100 gm

Nutritional Information/100 grams

Energy	40 Kcal
Protein	0.9 gm
Carbohydrate	16 gm
Total Fat	0.7 gm

PAPAYA BEVERAGE

(Ready-To-Serve Spiced Papaya Beverage)

Target Group and Benefits

All age groups

BENEFITS

- High in fibre
- High in vitamins and minerals
- Good antioxidant

Ingredients

- **Papaya**
- **Ginger**
- **Black pepper**
- **Salt/sugar**
- **Lemon juice**

Method of Preparation

- Papaya was washed and peeled. It was then cut into two halves and seeds were removed
- The pulp was grinded and filtered through muslin cloth
- Fresh ginger and ground black pepper powder were boiled for 10 mins
- Salt, lemon and sugar were added and a preservative potassium metabisulphite were also added
- It was filled in sterilized glass bottles and corking was done.
- This was followed by pasteurization at 80°C for 20 minutes

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CARROT TOFFEES

IMAGE NOT PROVIDED

SHELF LIFE
2 months

COST
Rs. 13/- 100 gm

Nutritional Information/100 grams

Energy	175 Kcal
Protein	0.6 gm
Carbohydrate	42 gm
Fat	1.12 gm
Vitamin A	652 ug

CARROT TOFFEES

IMAGE NOT PROVIDED

Target Group and Benefits

All age groups

BENEFITS

- Carrot-rich in antioxidants that protect body from cardiovascular diseases, cancer, good for vision due to high levels of beta carotene
- Carrots can help prevent post-menopausal breast cancer & also protects body from other forms of cancer in the bladder, colon, larynx, & prostate
- Regulate blood sugar in the body
- Zero fat content

Ingredients

- **Carrot: 100 gm**
- **Sugar: 60 gm**
- **Pectin: 5 gm**
- **Citric acid: 0.5 gm**
- **Vanilla essence: 4-5 drops**

Method of Preparation

- Carrots were washed and boiled and made into a paste
- Sugar was added to the paste
- Water was boiled & pectin was added to it with continuous stirring
- Mixture was cooled until the TSS was 68°Brix
- Small round toffees were made using oil on the palm

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BURANSHCAKE

IMAGE NOT PROVIDED

SHELF LIFE
9 days

COST
Rs. 43/- 250 gm

Nutritional Information/100 grams

Energy	175 Kcal
Protein	0.6 gm
Carbohydrate	42 gm
Fat	1.12 gm
Sugar	38 gm
Vitamin A	652 ug

BURANSH CAKE

IMAGE NOT PROVIDED

Target Group and Benefits

- All age groups

BENEFITS

- Buransh flowers offers fibre & is good source of K, Ca, Fe, & vitamin C
- Offer good amount of phytochemicals of medicinal value -phenols, saponins, xanthoproteins, tannins, flavonoid quercetin & coumarins
- Is anti-diabetic, anti-inflammatory, antimicrobial, & has heart and liver protecting properties.
- Apple is high in pectin fibre, boost metabolic levels, improve heart health & regulate blood sugar levels

Ingredients

- **Buransh juice: 25 gm**
- **Refined flour: 75 gm**
- **Whole wheat flour: 25 gm**
- **Apple: 100 gm**
- **Sugar: 50 gm**
- **Butter: 50 gm**
- **Vanilla essence: 2 drops**
- **Baking powder: 5 gm**

Method of Preparation

- Preheat the oven to 180°C & grease the baking pan with butter.
- Whisk together flours, baking soda in a large bowl. Separately mix sugar & melted butter.
- Peel, wash & grate the apple. In a pan take 50 ml water. Add grated apple, powdered sugar to the boiling pan. Keep heating until the mixture gets viscous & light brown.
- Mix dry & wet ingredients together & whisk to get a pouring consistency.
- Pour the batter in the greased baking pan & bake for 20 mins.

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RAGI JALJEERA

SHELF LIFE
5 months

COST
Rs. 20/- 500 ml

Nutritional Information/100 grams

Calories	481 Kcal
Protein	10.7 gm
Total dietary fibre	16 gm

RAGI JALJEERA

Target Group and Benefits

All age groups

BENEFITS

- Provides hydration and has no added sugar
- Reduces appetite; has high amount of dietary fibre
- Mint- source of vitamin A, contains antioxidant & anti-inflammatory agent
- Lowers cholesterol, increase Fe absorption, improve digestive health

Ingredients

- **Whole ragi: 200 gm**
- **Lemon juice: 1 tbsp.**
- **Mint leaves: 10 gm**
- **Chaat masala: 1 tsp**
- **Salt: pinch**

Method of Preparation

- Take 100ml of ragi milk (100g of ragi soaked in 350 ml of water overnight. Boil it with 50 ml of water for 10 min.Grind it with 300 ml water. Place the ground mass in muslin cloth & extract milk from mass) and prepared mint juice to it.
- Add 1 tbsp lemon juice, 1 tsp. chaat masala, pinch of salt for flavouring ragi & mint water.
- Shake it & allow it to cool for a while.
- Serve chilled for better consumer acceptance.

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BITERITEBAR

SHELF LIFE
9 months

COST
Rs. 25/- 100 gm

Nutritional Information/100 grams

Carbohydrate	53 gm
Total Fat	24.7 gm
Protein	13.8 gm
Saturated fat	2.7 gm
Dietary fibre	5.7 gm

BITE RITE BAR

Target Group and Benefits

All age groups

BENEFITS

- Oats-prevents CVD disease
- Amaranth seeds- aids in weight management
- Puffed rice- low in calories, gluten free
- Sesame seeds- rich in oleic acid, lowers LDL
- Dates- rich in dietary fibre, antioxidant
- Cinnamon- antioxidant, anti-diabetic, anti-septic, anti-inflammatory, anti-flatulent properties
- Jaggery- rich in Fe and good for diabetics

Ingredients

- **Oats: 25 gm**
- **Puffed rice: 15 gm**
- **Amaranth seeds: 15 gm**
- **Black chana whole (roasted): 10 gm**
- **Jaggery/honey: 20 gm**
- **Butter: 20 gm**
- **Coconut dry: 15 gm**
- **Choco chips: 10 gm**
- **Almonds: 10 gm**
- **Peanuts: 10 gm**
- **Walnuts: 5 gm**
- **Dates: 5 gm**
- **Green cardamom: 2 gm**
- **Cinnamon: 1 gm**

Method of Preparation

- Weigh 25g of oats, 1.5g each puffed rice, amaranth seeds, Bengal gram dhal dry, & 10g each almond, coconut, peanuts, dates, 5g sesame seeds & 60g jaggery & 20g butter.
- Roast all the dry ingredients separately (including nuts & coconut) & bring jaggery plus table spoon of water to boil until one drop consistency.
- Add all the ingredients to this mixture with constant stirring & mix it properly & then immediately spread it uniformly in the tray.
- Then sprinkle sesame seeds & nuts over it. Let it cool for 15 mins & then cut it out into desired shapes.

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SPIRULINA NUTRISHAKE

IMAGE NOT PROVIDED

SHELF LIFE
15 months

COST
Rs. 30/- 250 ml
(one bottle)

Nutritional Information/100 grams

Engery	144 Kcal
Carbohydrate	33 gm
Fat	0.5 gm
Protein	3.7 gm
Calcium	68 mg

SPIRULINA NUTRISHAKE

IMAGE NOT PROVIDED

Target Group and Benefits

All age groups

BENEFITS

- Spirulina- rich source of beta carotene; anti-cancer property
- Papaya: used to cure intestinal problems & kill intestinal worms & parasites
- Yoghurt: rich in K, Ca, protein & vitamins-B-12
- Orange juice: rich in vitamin C, potassium, folic acid
- Pineapple juice: has anti-inflammatory properties.

Ingredients

- **Yoghurt: 20 gm**
- **Papaya: 80 gm**
- **Orange juice: 150 gm**
- **Pineapple juice: 10 gm**
- **Spirulina powder: 900 mg**
- **Castor sugar: 20 gm**
- **Vanilla essence: one drop**

Method of Preparation

- Peel around 100g papaya & make it into a puree
- Take fresh oranges & blend them in a juicer to squeeze 150 ml orange juice
- Take fresh pineapple & blend it in a juicer to squeeze out 10 ml juice
- Weigh 20g yoghurt accurately
- Put all the ingredients together in a blender along with 900 mg of spirulina powder & blend

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RAGIFLAX COOKIES

IMAGE NOT PROVIDED

SHELF LIFE
4 months

COST
Rs. 26/- 150 gm

Nutritional Information/100 grams

Engery	431 Kcal
Carbohydrate	53 gm
Fat	23.6 gm
Protein	6.4 gm

RAGI FLAX COOKIES

IMAGE NOT PROVIDED

Target Group and Benefits

All age groups

BENEFITS

- Ragi flour is a good source of protein and is gluten free.
- It acts as a good baby food due to its rich nutrient content and also is a great whole grain source of calcium.
- Flax seeds are rich in omega-3 essential fatty acids and lignans- which have both plant estrogen and antioxidant qualities.
- Flax seeds contain both soluble and insoluble fibre.
- It also helps in prevention of growth of cancerous cells.
- Cinnamon powder lowers blood sugar levels and has antifungal, antiviral and anti-inflammatory properties.

Ingredients

- **Whole wheat flour: 30 gm**
- **Ragi flour: 20 gm**
- **Flaxseeds: 10 gm**
- **Castor sugar: 35 gm**
- **White butter: 35 gm**
- **Egg: 1/4th**
- **Cinnamon powder: a pinch**
- **Vanilla essence: 2 drops**

Method of Preparation

- Weigh the flours (as measured) and sieve the flours and a pinch of baking powder together for 3-4 times.
- Cream the butter and castor sugar well and add the beated egg white and vanilla essence to the creamed mixture.
- Add the flaxseeds in to the mixture and make them into a dough.
- Divide the mixture into small walnut size balls and coat the balls with flaxseeds on a greased baking tray.
- Bake at 170 degree Celsius for 10-12 minutes in a pre-heated oven.
- Cool the cookies on wire mesh and proceed for packaging.

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BUN WITH MAIZE FLOUR

IMAGE NOT PROVIDED

SHELF LIFE
10 days

COST
Rs. 18/- 100 gm

Nutritional Information/100 grams

Protein	8.58 gm

BUN WITH MAIZE FLOUR

IMAGE NOT PROVIDED

Target Group and Benefits

The target group is all age groups

Maize is rich in

- Omega- 3
- Minerals

Ingredients

- **Maize flour: 10 gm**
- **Wheat flour: 90 gm**
- **Water**
- **Sugar: 10 gm**
- **Salt: 5 gm**
- **Yeast: 5 gm**
- **Shortening: 5 gm**
- **Non- fat dry milk: 5 gm**

Method of Preparation

- Add yeast, salt, shortening, non- fat dry milk, sugar, whole wheat flour and 55ml water.
- Knead the dough and keep for proofing till pin whole stage.
- Bake in oven at 218°C and then cool down.

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TOMATO MUSHROOM MIXED KETCHUP

IMAGE NOT PROVIDED

SHELF LIFE
4 weeks

COST
Rs. 35/- 500 ml

Nutritional Information/100 grams

Protein	1.53 gm

TOMATO MUSHROOM MIXED KETCHUP

IMAGE NOT PROVIDED

Target Group and Benefits

The target groups are anaemic and diabetic person

Tomatoes are rich in

- Vitamin A
- Folic Acid

Mushroom are rich in

- Vitamin B

Ingredients

- **Tomato pulp: 250 kg**
- **Onion: 75 gm**
- **Garlic: 10 gm**
- **Sugar: 30 gm**
- **Black pepper: 5 gm**
- **Cinnamon: 5 gm**
- **Salt: 15 gm**
- **Cloves: 5 gm**
- **Cardamom: 5 gm**
- **Cumin seeds: 5 gm**
- **Red chilli powder: 5 gm**
- **Vinegar: 5 ml**
- **Sodium benzoate: 0.03 gm**

Method of Preparation

- Chopped tomatoes and mushroom cooked with all spices and grinding.
- It is then strained through sieve and cooking is continued with pulp, sugar, salt and vinegar.
- Cooled and packed in pre-sterilized glass bottles.

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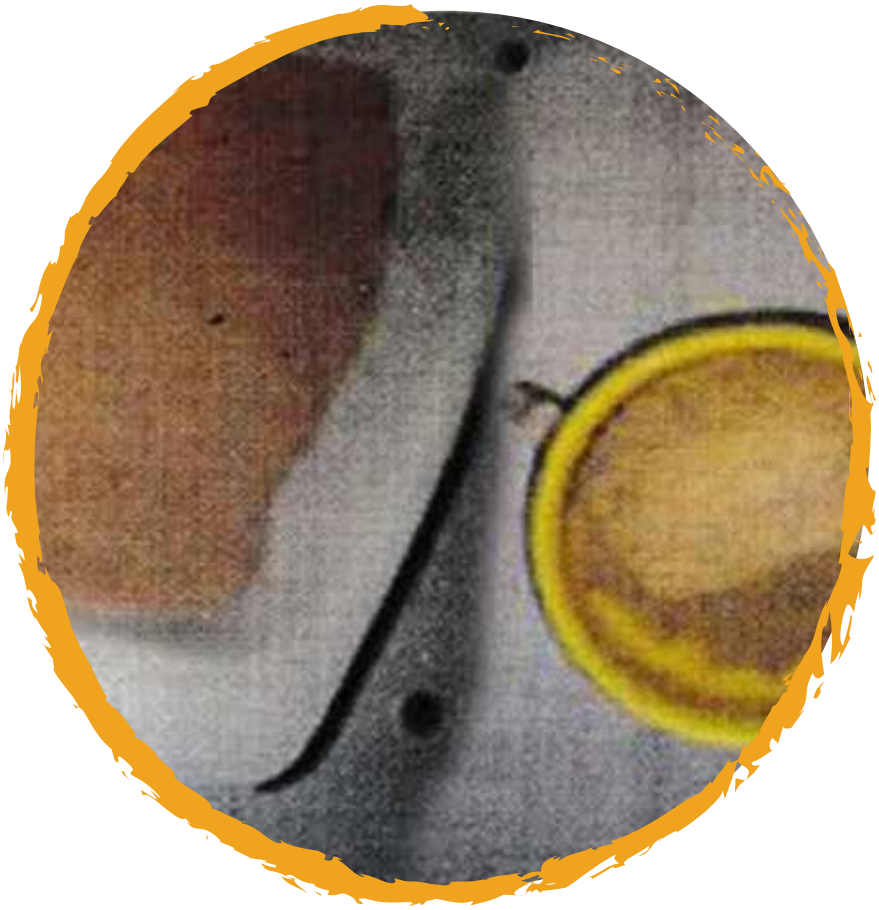
PROBIOTIC MILK DRINK POWDER



SHELF LIFE
6 months

COST
NA

Nutritional Information/100 grams

Protein	19.82 gm
Fat	16.05 gm

PROBIOTIC MILK DRINK POWDER

Target Group and Benefits

Lactose intolerant people.

Probiotic helps in –

- Treatment of diarrhoea, immunomodulation.
- Increase production of lymphocytes.

Ingredients

- **Dairy whitener: 80 gm**
- **Sugar: 10 gm**
- **Cocoa powder: 10 gm**
- **Flavour: 0.05%**
- **Probiotic strain**

Method of Preparation

- Mix dairy whitener, sugar, coco powder, flavour and probiotic strain then sieve the mixture and store at room temperature.

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APPLE SPREAD

(Value added apple spread with aloe vera juice and dates)

IMAGE NOT PROVIDED

SHELF LIFE
7 days

COST
NA

Nutritional Information/100 grams

Sucrose content	less than 10 %
Vitamin C	12.04 %

APPLE SPREAD

(Value added apple spread with aloe vera juice and dates)

IMAGE NOT PROVIDED

Target Group and Benefits

Diabetic patients, all age groups.

Apples rich in-

- Antioxidant
- Vitamin C
- Vitamin B-complex.

Orange rich in-

- Vitamin C
- Vitamin A
- Vitamin B- complex.

Aloe vera reduce blood glucose.

Dates rich in dietary fibre, antioxidant.

Ingredients

- **Apple**
- **Aloe vera**
- **Orange**
- **Dates**

Method of Preparation

- Orange juice, aloe vera juice, sugar, orange peel powder, orange juice concentrate was mixed thoroughly.
- The mixture was poured into sterilised ice tray and beaten twice at an interval of 20 min. The mix was covered with cellophane sheet and kept for freezing for 4 hours.

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WHOLE WHEAT PIZZA BASE

(with Bengal gram flour)

IMAGE NOT PROVIDED

SHELF LIFE
3 days

COST
Rs. NA

Nutritional Information/100 grams

Engery	345 Kcal
Carbohydrate	57 gm
Fat	4.12 gm
Protein	19.60 gm
Iron	0.18 mg
Dietary fibre	2.15 gm

WHOLE WHEAT PIZZA BASE

(with Bengal gram flour)

IMAGE NOT PROVIDED

Target Group and Benefits

Bengal gram rich in –

- Fe
- Zn
- Mg
- Reduce risk of chronic disease.

Ingredients

- **Whole wheat flour**
- **Bengal gram flour**
- **Refined edible oil: 5 gm**
- **Dry active yeast: 2.5 gm**
- **Water: 50 ml**
- **Salt: 1 gm**
- **Sugar: 2.5 gm**

Method of Preparation

- Dissolve yeast in lukewarm water, stir in sugar and keep for 10 min till frothy and on other side sieve the flour, make a well in centre.
- Add yeast mixture to the flour along with the fat, salt and prepare the dough using little water.
- Divide the dough into 2 parts and cover with a wet muslin cloth and keep it for 45 min till it doubles in size.
- Knead lightly and roll out into thick chapatis and keep for 10-15 min.
- Bake at 175˚C for 10 min till golden brown on the bottom.

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ANTIOXIDANT RICH DRINK

from Fruits and vegetable Pomace

IMAGE NOT PROVIDED

SHELF LIFE
1 year

COST
NA

Nutritional Information/100 grams

Total fibre	2.19 gm
Carbohydrates	69.40 %
Protein	3.37 gm
Fat	0.12 gm

ANTIOXIDANT RICH DRINK

from Fruits and vegetable Pomace

IMAGE NOT PROVIDED

Target Group and Benefits

- All age groups

Benefits:

Antioxidants-

- Protect the cells from damage inflicted by free radicals.
- Needed for most body metabolic functions.

Fruits and vegetables are rich in –

- Phenolic compounds
- Carotenoids
- Flavonoids
- Vitamins.

Ingredients

- **Carrot**
- **Beetroot**
- **Apple**

Method of Preparation

- Clean and wash the vegetables.
- Peel the vegetables.
- Extract the juice from carrot, beetroot and apple to obtain the pomace by juicer.
- Dry the pomace at 60°C for 8 hours in the dehydrator.
- Powder in grinder.
- Reconstitute with water.
- Filter through muslin cloth.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

EXTRUDED MULTIGRAIN SPAGHETTI

fortified with calcium caseinate protein

SHELF LIFE
7 days

COST
Rs 45/ 100 gms

Nutritional Information/100 grams

Engery	307 Kcal
Protein	19.7 gm
Fat	1.5 %
Calcium	145 mg
Carbohydrate	52 gm

EXTRUDED MULTIGRAIN SPAGHETTI

fortified with calcium caseinate protein

Target Group and Benefits

- All age groups

Benefits:

- Millets are great source of starch
- Bengal gram has significant amounts of essential amino acids
- Casein supplementation increases serum amino acid levels

Ingredients

- **Whole wheat flour 75%**
- **Pearl millet 15%**
- **Bengal gram flour 10%**
- **Calcium caseinate protein**
- **Salt**
- **(multigrain atta: calcium caseinate=90:10)**

Method of Preparation

- All the dry ingredients were mixed accurately.
- Dough was made and covered with a damp towel.
- Dough was cut into pieces.
- Dough was passed through pasta making machine.
- Dried in a tray drier till spaghetti was brittle.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

RICE FLOUR PIZZA BASE

with Spinach (Gluten free)

IMAGE NOT PROVIDED

SHELF LIFE
3 Days

COST
NA

Nutritional Information/100 grams

Energy	450 Kcal
Carbohydrates	81 gm
Protein	15 gm
Fat	7.7 gm

RICE FLOUR PIZZA BASE

with Spinach (Gluten free)

IMAGE NOT PROVIDED

Target Group and Benefits

- Children and Adults

Benefits :

- Rice flour is high in protein and contains insoluble fibre – which lowers the risk of some medical conditions such as diverticular disease, colon diseases and type-2 diabetes.
- Spinach is loaded with flavanoids which act as antioxidants, protecting the body from free radicals. These are also rich source of vitamin K, A, Mg, P, Zn and dietary fibre.
- Egg contains 12 to 14 % proteins of good quality which are well balanced with respect to all essential amino acids. It is particularly rich in riboflavin, folic acid, vitamin- B12.

Ingredients

- **Rice flour 100g**
- **Spinach 80g**
- **Egg 1**
- **Salt a pinch**
- **Baking powder a pinch**

Method of Preparation

- Clean the spinach leaves and pick out leaves only.
- Boil spinach in little water till the leaves get tender.
- Make the boiled spinach in the form of puree.
- Now take rice flour and sieve it once also add little salt.
- Add eggs and mix well. Add the spinach puree in the flour.
- Form the dough into one large ball.
- Place the dough on a cookie sheet lined with parchment.
- Bake the gluten free pizza crust at 220 degree Celsius for 12- 15 minutes.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

MULTIGRAIN BEETROOT ORANGE PASTA

(Pink Pasta)

IMAGE NOT PROVIDED

SHELF LIFE
12 months

COST
Rs 50/500 gms

Nutritional Information/100 grams

Energy	400 kcal
Protein	11.7 gm
Carbohydrate	81 gm
Fats	3.3 gm

MULTIGRAIN BEETROOT ORANGE PASTA

(Pink Pasta)

IMAGE NOT PROVIDED

Target Group and Benefits

All age groups

Benefits :

- Oats flour are rich in fibre called beta- glucan which helps in lowering bad cholesterol.
- Ragi flour aids in digestion and is rich in calcium, protein, and also have good amount of iron and other minerals.
- Bajra flour has very high fibre content and rich in calcium, phosphorous and iron.
- Beetroot is rich in vitamin A, C, B and other vitamins and minerals which include P, Na, K, Mn.
- Oranges are full of vitamins and minerals. These protect from cardiovascular diseases, purifies blood, lowers cholesterol and keeps teeth and bones healthy.

Ingredients

- **All purpose flour 335g**
- **Oats flour 166g**
- **Ragi flour 85g**
- **Bajra flour 85g**
- **Beetroot 300**
- **Orange pulp 200g**

Method of Preparation

- Weigh all the flours and add grated beetroot to it.
- Keep the dough kneaded with orange pulp and let it rest for 5-10 minutes and knead again.
- Roll the dough to thin sheets into various shapes.
- Boil it for 4-5 min and then add into cold water and keep it for air drying overnight.
- Dried pasta is ready.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

WHEAT FLOUR COWPEA FLOUR BISCUITS

IMAGE NOT PROVIDED

SHELF LIFE
6 months

COST
NA

Nutritional Information/100 grams

Energy	578 kcal
Crude fibre	6.73 gm
Carbohydrates	46 gm
Protein	12.2 gm
Fat	38.30 gm
Calcium	22 mg
Iron	30 mg

WHEAT FLOUR COWPEA FLOUR BISCUITS

IMAGE NOT PROVIDED

Target Group and Benefits

- Children, adolescents and working mothers.
- Good source of protein.
- Water soluble vitamins.
- Minerals.

Ingredients

- **Refined wheat flour- 50g**
- **Cowpea flour- 50g**
- **Butter- 40g**
- **Sugar- 40g**
- **Egg- 1/2**
- **Poppy seeds- 2tbsp**
- **Baking powder- 1/2tbsp**
- **Orange juice- 2tbsp**
- **Orange rind- 2tbsp**

Method of Preparation

- Preheat oven to 180°C and line a baking tray with vegetable oil.
- Combine poppy seeds, juice and rind in a bowl, set aside for 10 minutes.
- Beat butter, sugar, eggs in a bowl using electric heater, stir in flours, baking soda, poppy seeds until just combined.
- Prepare the dough.
- Sheet the dough (3-5 mm thick) and mould it.
- Bake at 180°C for 10 min. Cool and pack.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

PULSE BASED COOKIES

IMAGE NOT PROVIDED

SHELF LIFE
1 month

COST
Rs. 50/ 100 gms

Nutritional Information/100 grams

Energy	26 kcal
Crude fibre	4.2 gm
Protein	23.20 gm
Fat	42.3 gm

PULSE BASED COOKIES

IMAGE NOT PROVIDED

Target Group and Benefits

- All age groups, people allergic to eggs
- Increased fibre content
- Increased protein content
- High mineral content in soybeans

Ingredients

- **Refined wheat flour- 72.5%**
- **Bengal gram flour-22.5%(in 100g)**
- **Soya flour- 5%**
- **Butter- 75g**
- **Sugar- 70g**
- **Milk- 25ml**
- **Baking soda- 0.3125g**
- **Vanilla essence-1tbs**

Method of Preparation

- Flours were weighed and added with baking soda.
- Butter and sugar were creamed together.
- Milk and flour were added, few drops of vanilla essence were added, and beaten to form batter.
- Balls of batter were placed in tray and put in preheated oven.
- Cookies were kept to cool.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

CAULIFLOWER LEAF POWDER VALUE ADDED FOOD PRODUCTS

IMAGE NOT PROVIDED

SHELF LIFE
Bread- 5-7 days (refrigeration)
Biscuit- 7 days

COST
Rs. 17, Rs 44

Nutritional Information/100 grams

BISCUIT:

Crude fibre	7.4 Kcal
Protein	13.1 gm

BREAD:

Crude fibre	8.7 Kcal
Protein	15.6 gm

CAULIFLOWER LEAF POWDER VALUE ADDED FOOD PRODUCTS

IMAGE NOT PROVIDED

Target Group and Benefits

- All age groups.
- People suffering from obesity, diabetes and hypercholesterolemia
- More protein and ash content
- Increased bioavailability of minerals like iron and calcium

Ingredients

Bread:

- **Sugar(5g)**
- **Dry yeast(10g)**
- **Whole wheat flour(100g) (90%flour,10%DCGLP)**
- **Salt(5g)**
- **Oil-2tsp**

Biscuit:

- **Butter-(50g)**
- **Whole wheat flour 100g(90%flour,10%DCGLP)**
- **Milk-2tbsp**
- **Sugar-(50g)**
- **Baking powder-(5g)**
- **Vanilla essence-1/2tsp**

Method of Preparation

Bread:

- Yeast solution is left, to froth for 10 minutes.
- Whole wheat flour, DCGLP salt, oil brown sugar and yeast solution is mixed.
- Poured into greased tin, leave to rise, covered with a cling film.
- Baking is done, left to cool.

Biscuits:

- Mix all the ingredients to make a dough.
- Dough is rolled to 0.5cm thickness, round shape is cut.
- Biscuit is placed on the baking tray.
- Baking tray is placed in preheated oven at 180°c for 16 minutes.
- Biscuits are cooled on a cooling rack.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

JACKFRUIT SEED FLOUR PASTA

With Whole Wheat Flour

IMAGE NOT PROVIDED

SHELF LIFE
9 months

COST
Rs 20

Nutritional Information/100 grams

Carbohydrate	72 gm
Protein	13.6 gm
Fat	1 gm
Fibre	2.4 gm

JACKFRUIT SEED FLOUR PASTA

With Whole Wheat Flour

IMAGE NOT PROVIDED

Target Group and Benefits

- All age groups especially people watching their weight

Benefits:

- Jackfruit contains antioxidant prenylflavones.
- Good source of vitamin A.
- Good source of vitamin C.
- Rich source of pectin.
- Helps in alleviating pancreatic ailments and aids in blood purification.

Ingredients

- **Jackfruit seed flour 10g**
- **whole wheat flour 90g**
- **Oil 5g**
- **Water 30ml**

Method of Preparation

- Mix Jackfruit seed flour and whole wheat flour in 10:90 ratio.
- Add 5g oil and 30ml water.
- Knead to make a dough.
- Rest the dough for 30 mins.
- Roll the dough in a thin sheet.
- Cut the sheet into thin strips.
- Dry the strips.
- Cool the strips.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

FRUIT JELLY WITH CHIA SEEDS

IMAGE NOT PROVIDED

SHELF LIFE
6 months

COST
Rs 25/100 gms

Nutritional Information/100 grams

Protein	1.83 gm
Calcium	0.0166 mg/ml
Vitamin C	800 mg/ml

FRUIT JELLY WITH CHIA SEEDS

IMAGE NOT PROVIDED

Target Group and Benefits

- All age groups

Benefits:

- Chia seeds are a good source of Omega 3 fatty acids
- Good source of iron and calcium
- High in protein.

- Mango juice chia jelly
- Mango juice 50ml
- Sugar 20g
- Chia seeds 2g
- Lemon juice 2ml
- Alma extract chia jelly
- Alma 50gm
- Water 100ml
- Sugar 20g
- Chia seeds 2g
- Lemon juice 2ml
- Gelatine jelly
- Mango juice 50ml
- Sugar 20g
- Gelatine powder 2g
- Lemon juice 2ml

Method of Preparation

- Boil the fruits separately in water and after straining, crush to extract juice.
- Add sugar and boil the mixture.
- Add Chia seeds and Citric acid.
- Boil rapidly to the jellying point of 110°c.
- Pour into the mould.
- Cool the jelly.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

BUN WITH MAIZE FLOUR

IMAGE NOT PROVIDED

SHELF LIFE
10 days

COST
Rs 24/ 100 gms

Nutritional Information/100 grams

Protein	8.6 gm

BUN WITH MAIZE FLOUR

IMAGE NOT PROVIDED

Target Group and Benefits

- All age groups

Benefits:

- Maize is good for digestion.
- It has high fibre.
- Reduces risk of cardiovascular diseases.
- Has antioxidants.

- **Maize flour-10g**
- **Wheat flour-90g**
- **Water**
- **Sugar-10g**
- **Salt-5g**
- **Yeast-5g**
- **Shortening-5g**
- **Non fat dry milk-5g**

Method of Preparation

- Add yeast, salt, shortening, non fat dry milk, sugar, whole wheat flour and 55ml water.
- Knead the dough and keep for proofing till pinhole stage.
- Bake in oven at 218°C and then cool down.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

WHOLE WHEAT PIZZA BASE

(with Bengal gram flour)

IMAGE NOT PROVIDED

SHELF LIFE
3 days

COST
NA

Nutritional Information/100 grams

Energy	345 Kcal
Protein	19.60 gm
Carbohydrates	57 gm
Fat	4.12 gm
total dietary fibre	100 gm
Iron	0.18 mg

WHOLE WHEAT PIZZA BASE

(with Bengal gram flour)

IMAGE NOT PROVIDED

Target Group and Benefits

- Bengal gram reduce risk of chronic disease.
- Bengal gram provide various micronutrients (Fe, Zn, Mg)

Ingredients

- **Whole wheat flour**
- **Bengal gram flour**
- **Refined edible oil 5g**
- **Dry active yeast 2.5g**
- **Water 50ml**
- **Salt 1g**
- **Sugar 2.5g**

Method of Preparation

- Dissolve yeast in lukewarm water, stir in sugar and keep for 10 min till frothy and on other side sieve the flour, make a well in centre.
- Add yeast mixture to the flour along with the fat, salt and prepare the dough using little water.
- Divide the dough into 2 parts and cover with a wet muslin cloth and keep it for 45 min till it doubles in size.
- Knead lightly and roll out into thick chapattis and keep for 10-15 min.
- Bake at 175˚C for 10 min till golden brown on the bottom.

DEVELOPED BY
Department of Food and Nutrition, Lady Irwin College, University of Delhi

CENTRAL INDIA RECIPES

SATTU

IMAGE NOT PROVIDED

SHELF LIFE
2 months

COST
NA

Nutritional Information/100 grams

Energy	364 - 381 Kcal
Calcium	15.5 - 131.5 mg
Phosphorous	310.2 - 394.2 mg
Iron	7.7- 9.0 mg

SATTU

IMAGE NOT PROVIDED

Target Group and Benefits

- NA Information not provided

Ingredients

- Chickpea
- Ragi
- Amaranth
- Oat
- Barley
- Wheat

Method of Preparation

- Information not provided

DEVELOPED BY
Jawaharlal Nehru Krishi Vishwavidyala, Jabalpur, MP

DRUMSTICK LEAF POWDER

SHELF LIFE
NA

COST
NA

Nutritional Information/100 grams

Energy	64 Kcal
Carbohydrate	8 gm
Protein	9.4 gm
Fat	1.4 gm
Calcium	185 mg
Iron	4 mg
Vitamin A	7.564 IU
Vitamin B1	0.51 mg
Vitamin B2	2.88 mg
Vitamin C	52 mg

DRUMSTICK LEAF POWDER

Target Group and Benefits

Adult

- Used in salads or tea as regular diet
- Used to make allopathic medicines and ayurvedic medicines

Ingredients

- **Drumstick leaves**

Method of Preparation

- Information not provided

DEVELOPED BY
Jawaharlal Nehru Krishi Vishwavidyala, Jabalpur

DRUMSTICK POD POWDER

SHELF LIFE
NA

COST
NA

Nutritional Information/100 grams

Energy	37 Kcal
Carbohydrate	9 gm
Protein	2.1 gm
Fat	0.2 gm
Calcium	30 mg
Iron	0.36 mg
Vitamin B1	0.37 mg
Vitamin B2	1.79 mg
Vitamin C	141 mg

DRUMSTICK POD POWDER

Target Group and Benefits

Adult

- Used in salads or tea as regular diet
- Used to make allopathic medicines and ayurvedic medicines

Ingredients

- **Drumstick leaves**

Method of Preparation

- Information not provided

DEVELOPED BY
Jawaharlal Nehru Krishi Vishwavidyala, Jabalpur

AMYLASE RICH FLOUR

IMAGE NOT PROVIDED

SHELF LIFE
30 days (if stored in airtight container) and 3 months (if refrigerated)

COST
Rs. 50-65 per kg of serving

Nutritional Information/100 grams

Energy	322 Kcal
Carbohydrate	54 gm
Protein	27.9 gm
Fat	5.33 gm
Fibre	2 gm
Iron	5.6 mg
Calcium	61 mg

AMYLASE RICH FLOUR

IMAGE NOT PROVIDED

Target Group and Benefits

- Infants, children, adolescents and old age
- Cost effective, easy methods, high in protein, calcium and iron, easy to digest

Ingredients

- **Wheat germ 75g**
- **Green gram 25g**

Method of Preparation

- **Soaking:** Wheat germ and Green Gram should be sorted and cleaned prior to soaking.
- **Malting:** Drain extra water and wash properly and remove unsoaked seeds before keeping for germination (Malting). Keep hydrated wheat and Green Gram or Gram separately in perforated stainless steel pots cover them an leave for 24 to 36 hours to let the seeds germinate. Sprouts will come out approximately 0.5 to 1 cm.
- **Drying:** Sundry germinated wheat and green Gram or Gram separately
- **Roasting:** Pre heat heavy base karahi and put the fire slow to roast dried garmented wheat and Green Gram or Gram separately until turns slight brown and sweet aroma comes. Keep on stirring continuously.
- **Grinding:** Allow roasted seeds to cool down. Now we can mix roasted wheat and Green Gram or Gram. Grind them in dry grinder jar in mixer into flour for infants or coarsely grind to make porridge.
- **Storage:** It can be stored in an air tight container or refrigerated.

HOW TO FEED:

- **For infants** 01 Tablespoon ARF + 01 Teaspoon Ghee or Oil + 01 Tablespoon jaggery, pinch of iodised salt + 100 to 150 ml milk, mix and boil and use it as complementary food at least twice a day.
- **For adults** 30 gram porridge + 02 Teaspoon Ghee or Oil + 02 pinch of iodised salt + 20 gram jaggery + 200 ml milk, mix and boil. Use it as breakfast or mid meal.

DEVELOPED BY
Sarojini Naidu Government Girls Post Graduate College, Bhopal

AMYLASE RICH FLOUR

IMAGE NOT PROVIDED

SHELF LIFE
30 days (if stored in airtight container) and 3 months (if refrigerated)

COST
Rs. 50-65 per kg of serving

Nutritional Information/100 grams

Energy	328 Kcal
Carbohydrate	55 gm
Protein	26.2 gm
Fat	6.3 gm
Fibre	2 gm
Iron	5.6 mg
Calcium	80 mg

AMYLASE RICH FLOUR

IMAGE NOT PROVIDED

Target Group and Benefits

- Infants, children, adolescents and old age
- Cost effective, easy methods, high in protein, calcium and iron, easy to digest

Ingredients

- **Wheat germ 75g**
- **Whole gram 25g**

Method of Preparation

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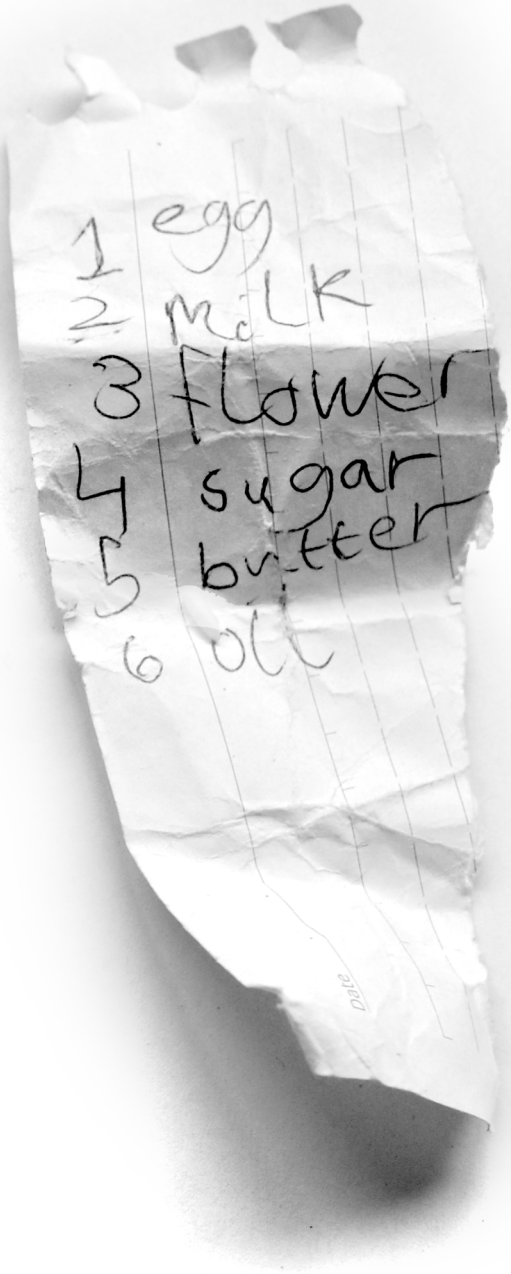
DEVELOPED BY
Sarojini Naidu Government Girls Post Graduate College, Bhopal

National Centre of Excellence and Advanced Research on Diets, Lady Irwin College



RECIPE BOOK

Recipes from
pupils of Grangetown Primary School and St Paul's Church of Wales Primary School,
Grangetown, Cardiff, Wales

This booklet was developed following a workshop in Jan 2015 with
Yr 2 BSc Welsh School of Architecture students, Cardiff University,
in collaboration with Community Gateway- Cardiff University,
and Grange Gardens Pavilion Action Group

Cardiff University Prifysgol Caerdydd

wsa

Engage Inspire Transform
Ymgysylltu Ysbrydoli Trawsnewid

MY RECIPE BOOK

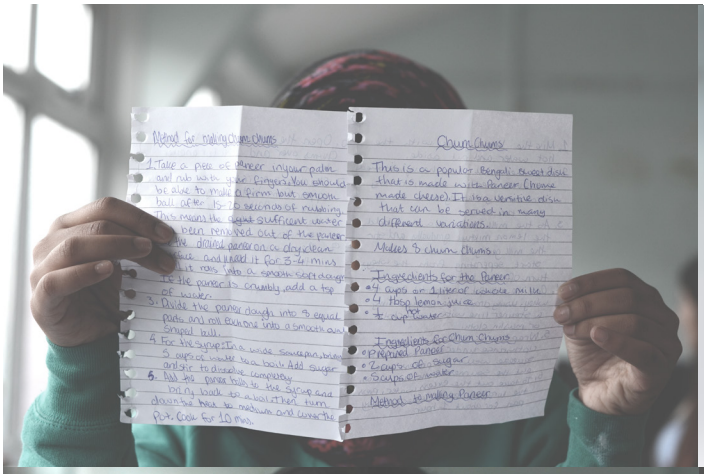
" EATING IS NOT MERELY A MATERIAL PLEASURE. EATING WELL GIVES A SPECTACULAR JOY TO LIFE AND CONTRIBUTES IMMENSELY TO GOODWILL AND HAPPY COMPANIONSHIP. IT IS OF GREAT IMPORTANCE TO THE MORALE "

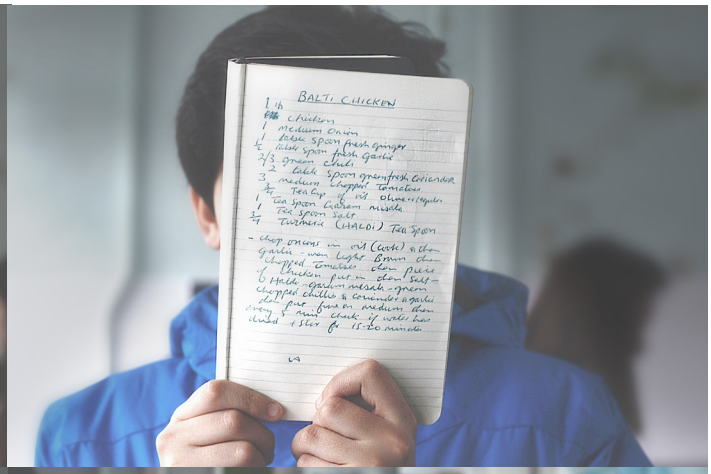
ELSA SCHIAPARELLI

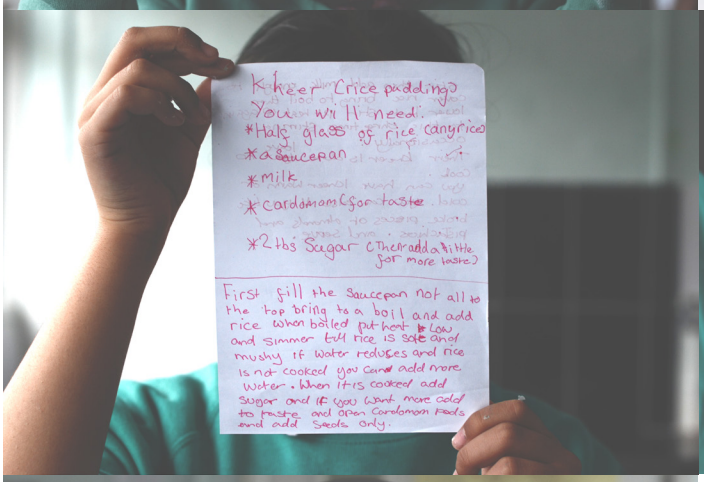
Thursday, January 22nd 2015 - Grangetown Primary School and St Pauls Primary School brought their favorite recipe from home. Some brought main course recipe, and some brought dessert recipe. By using colored papers, rubber band, string, dry ingredient - such as pasta, rice, and herbs the students create a collage based on the recipe that they have brought.

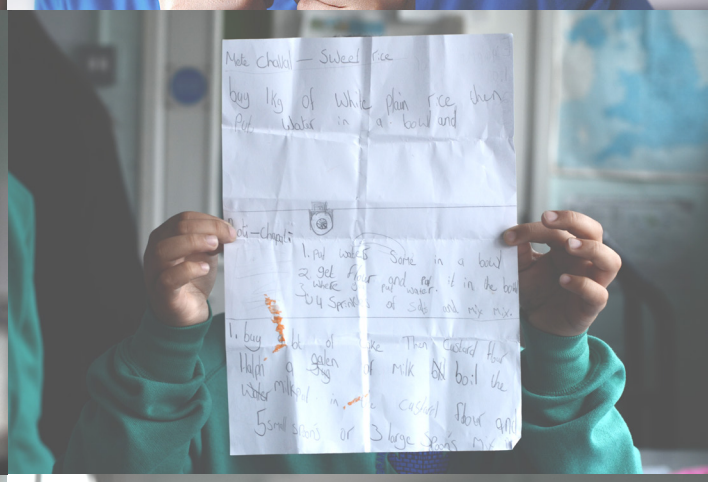
The workshop aims to fully understand Grangetown's population, food culture, and their daily habit. The research will lead us to a deeper understanding of the community's interest in food and its process, and help generate ideas that suits the living culture of the community.

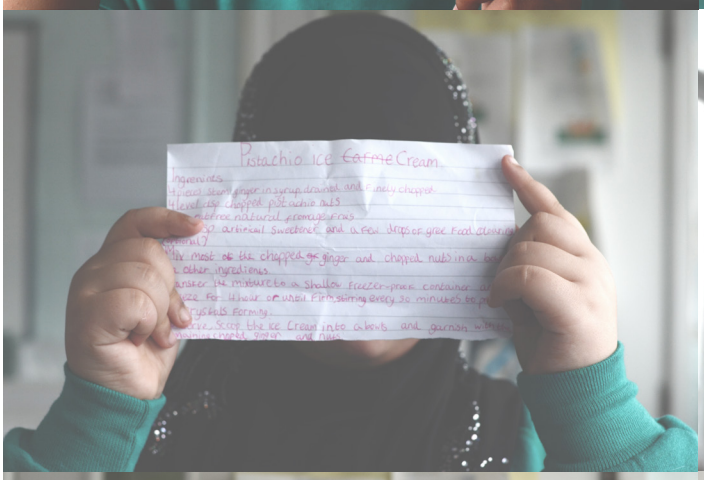
The project aspires to design a community center that brings people together. A place that holds knowledge of food, so we could understand what goes into our body as part of understanding ourself.

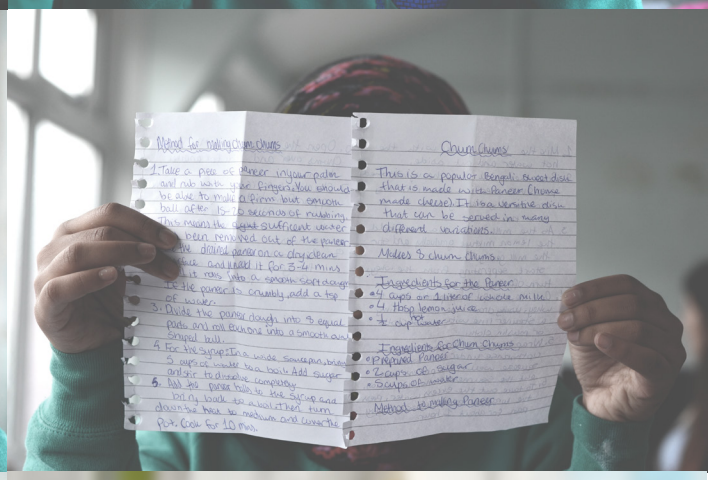

Method for making Chum Chums
Chum Chums
This is a popular Bengali sweet dish that is made with Paneer (house made cheese). It is a versatile dish that can be served in many different variations.
Makes 8 chum chums.
Ingredients for the Paneer
• 4 cups or 1 litre of whole milk
• 4 tbsp lemon juice
• ½ cup water
Ingredients for Chum Chums
• Prepared Paneer
• 2 cups of sugar
• 2 cups of water
Method to make Paneer


BALTI CHICKEN
1 lb chicken
1 medium onion
½ tea spoon fresh ginger
½ tea spoon fresh garlic
2/3 green chilli
2 tea spoon green fresh coriander
3 medium chopped tomatoes
½ tea cup of oil (vegetable)
1 tea spoon kalonji
½ tea spoon salt
½ turmeric (HALDI) tea spoon


Kheer (rice pudding)
You will need:
*Half glass of rice (any rice)
*a saucepan
*milk
*cardamom (for taste)
*2 tbs Sugar (Then add a little for more taste)
First fill the saucepan not all to the top bring to a boil and add rice when boiled put heat to low and simmer till rice is soft and mushy if water reduces and rice is not cooked you can add more water. When it is cooked add sugar and if you want more add to taste and open cardamom pods and add seeds only.


Make chaul — Sweet rice
buy 1kg of white plain rice then
Put water in a bowl and


Pistachio ice Cream
Ingredients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• 4 cups or 1 litre of whole milk
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• 2 cups of sugar
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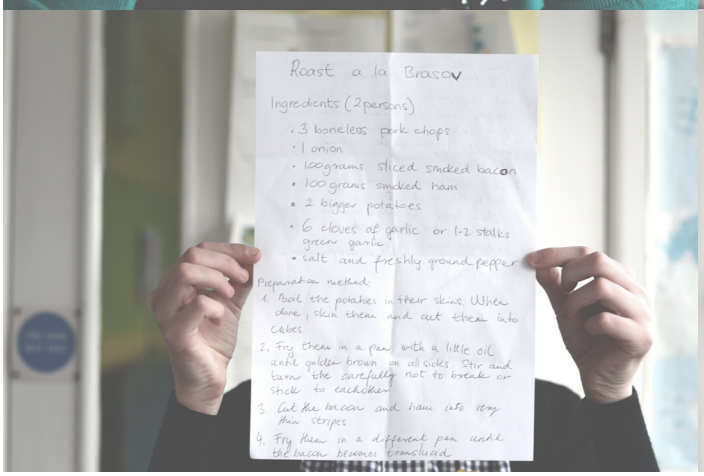
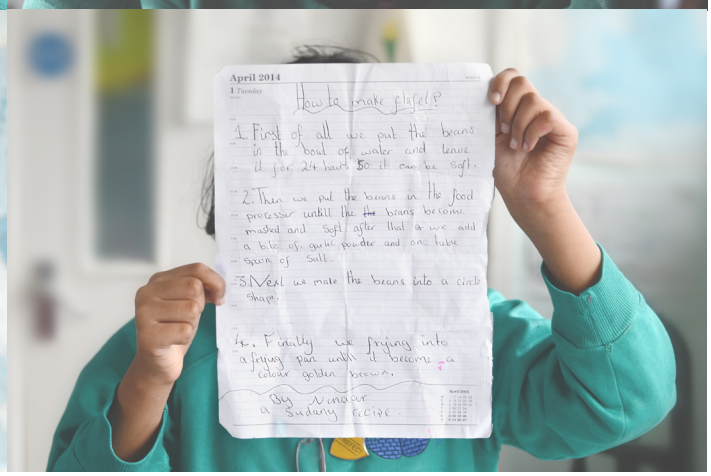
Method to make Paneer


Roast a la Brasov
Ingredients (2 persons)
• 3 boneless pork chops
• 1 onion
• 100 grams sliced smoked bacon
• 100 grams smoked ham
• 2 bigger potatoes
• 6 cloves of garlic or 1-2 stalks green garlic
• salt and freshly ground pepper
Preparation method:
1. Boil the potatoes in their skins. When done, skin them and cut them into cubes
2. Fry them in a pan with a little oil until golden brown on all sides. Stir and turn the carefully not to break or stick to each other
3. Cut the bacon and ham into very thin stripes
4. Fry them in a different pan until the bacon becomes translucid.


April 2014
How to make ghafel?
1. First of all we put the beans in the bowl of water and leave it for 24 hours so it can be soft.
2. Then we put the beans in the food processor until the beans become mashed and soft after that we add a bite of garlic powder and one tube spoon of salt.
3. Next we make the beans into a circle shape.
4. Finally we frying into a frying pan until it becomes a colour golden brown.
By Nimour
a Sudany recipe.

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meaning "pick me up" or "lift me up"

ENTRÉE

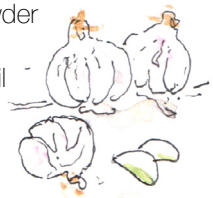
A DISH SERVED BEFORE THE MAIN COURSE, OR BETWEEN TWO PRINCIPAL COURSES OF A MEAL

FALAFEL

deep-fried Middle Eastern patty made of chickpeas, fava beans

INGREDIENT

Beans
Garlic powder
Salt
Cooking oil



COOKING STEP

1 Put the beans in the bowl of water and leave it for 24hours so it can be soft.

2 Put the beans in the food processor until the beans become mashed and soft after that we add a bit of garlic powder and one table spoon of salt

3 Make the beans into a circle shape

4 Fry until it becomes a colour golden brown

Pakoras are popular across Pakistan, where they generally resemble those found in India. They are sometimes served in a yoghurt based curry (salan), as a main dish, pakora Karhi, rather than as separate snacks

POTATO PAKORA

Vegetable that is deep fried is suffixed with bajji

INGREDIENT

4 medium potatoes
1 cup of cream flour
1 big onion
1 green chilli (chopped)
1/2 tsp of tumeric powder
1 tsp of cumin seeds
1 tsp of salt
1 tsp of chopped corriander
1 egg
2 tbs of water
3 cups of oil

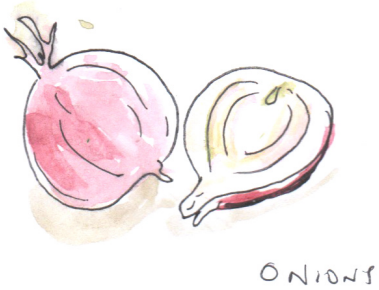
(portion of 20)

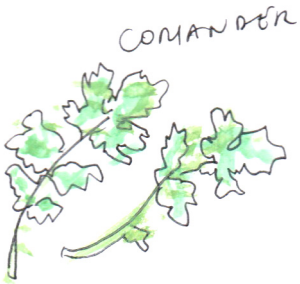
COOKING STEP

1 Put all the ingredients into a medium size bowl and mix

2 Heat the frying oil in the frying pan, and while it is heating, shape the mixture into the shape you want them to be

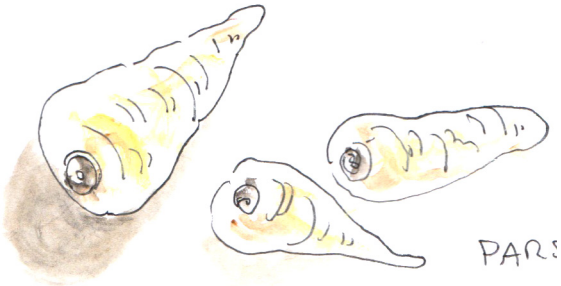
3 Next put 10 of the pakoras into the pan until they are golden brown, then put in other batch and do the same. They are ready to serve





MAIN COURSE

PRIMARY DISH IN A MEAL CONSISTING OF SEVERAL COURSES. IT USUALLY FOLLOWS THE ENTREE



Barnby Sweet:
You will need:
Stone, tea Stone, Sorose Pun.
Barnyday recipe

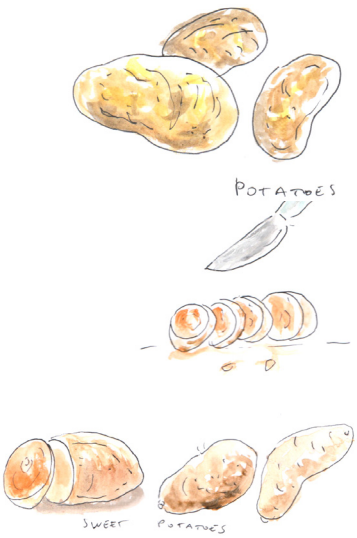
The word "biryani" is derived from Persian language. One theory is that it originates from "birinj", the Persian word for rice. Another theory is that it derives from "biryan" or "beriyan" (to fry or roast)

ROOT VEGETABLE BIRYANI

indian dish consists of spices, rice and meat or vegetables

INGREDIENT

1 onion
2 medium potatos, peeled and chopped
2 medium sweet potatos peeled and chopped
1 swede, peeled and chopped
2 garlic doves, peeled and crushed
4 carrots, peeled and sliced
4 medium parsnips, peeled and sliced
1 tbsp medium curry powder
1tbsp chat masala
350g died rice
chopped coriander to serve



COOKING STEP

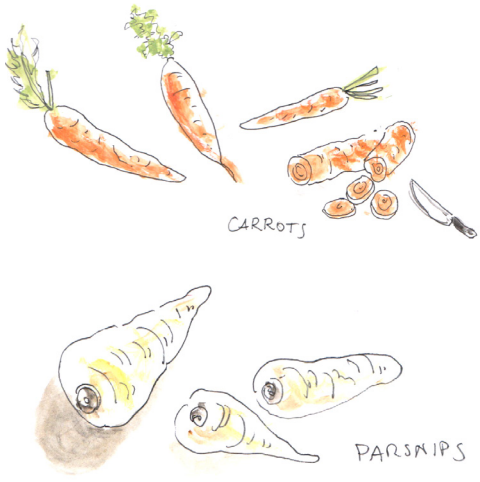
1 Place the onion, potatos, swede, garlic, carrots and parsnips in a large pan

2 Cover with 900ml of boiling water, bring to boil, reduce the heat and simmer for 15 min

3 Add the curry powder and chat masala, stir and cook for further 2 minutes

4 Add the rice and stiring often, cook for 20 min until the rice is cooked and the liquid has been absorbed

5 Serve sprinkled with chopped coriander



The word pakoṛā is derived from Sanskrit pakvavaṭa-, a compound of pakva 'cooked' and vaṭa 'a small lump' or its derivative vaṭaka 'a round cake made of pulse fried in ghee'

CHICKEN PAKORA

deep fried batter with chicken

INGREDIENT

350g bonless chicken cut into strips
½ cup flour
garlic past 1 small tea spoon
fresh coriander
1 tbl spoon salt to taste
½ red chilli powder
½ tea spoon garam masala
½ teaspoon huldi powder
2 chopped green chilli
½ tea spoon coriander powder

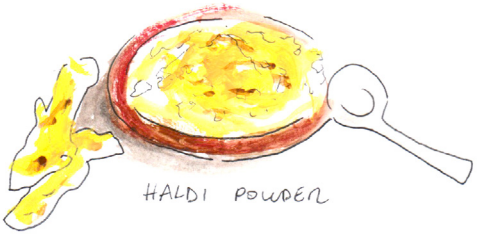
COOKING STEP

1 Place all the ingredients into a bowl

2 Add ¼ cup of water and mix together

3 Once the mixture is all mixed together and ready deep fry in a deep fryer

4 Cook until they are golden brown



ROAST A LA BRASOVRICEZ

roasted boneless pork chop

INGREDIENT

3 boneless pork chops
1 onion
100 grams sliced smoked bacon
100 grams smoked ham
2 bigger potatos
6 cloves of garlic or 1 -2 stalks green garlic
salf and freshly ground pepper

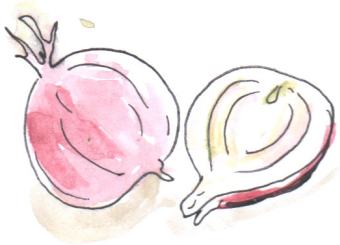
COOKING STEP

1 Boil the potatos with their skin on

2 When its cooked, skin them and cut then into cubes

3 Fry them in a pan with a little oil until golden brown

POTATOES



ONIONS

GARLIC

'Balti' food is named after the pot in which it is cooked. That origin of the word is to do with the Urdu and Hindi word Balty, which means "bucket."

BALTI CHICKEN

curry served in a thin, pressed steel wok-like "balti bowl"

INGREDIENT

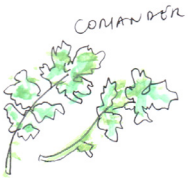
1 chickem
1 medium onion
1 fresh ginger
2 green chilli
2 tbs corriander
3 medium chopped tomatoes
3/4 teacup regular olive oil
1 tsp garam masala
1 tsp salt
1/4 tsp tumeric

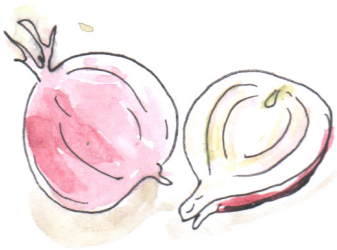
COOKING STEP

1 Chop the onions and cook them with garlic and wait until it is light brown

2 Put the chopped tomatoes, chicken and salt, garam masala, green chilli, corriander. Fry in medium heat.

3 Every 5 minutes, check if the water has dried and stir for 15-20 minutes





DESSERT

TYPICALLY SWEET COURSE THAT CONCLUDES AN EVENING MEAL

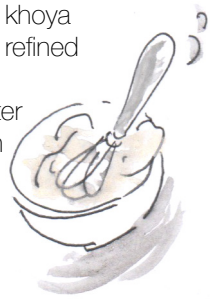
a culinary style originating in Bengal, a region in the eastern part of the Indian subcontinent, which is now divided between Bangladesh and West Bengal

BANGLAY

subtle *(yet sometimes* ***fiery****) flavours*

INGREDIENT

2 cups sugar
1/2 cup semolina / rava
7-8 strains saffron
700 grams khoya
400 grams refined cooking oil
2 cups water
1 teaspoon cardamon powder



COOKING STEP

1 Mix the semolina with khoya thoroughly to make dough. Keep dough over a bowl full of water for 1 hour .This helps in making Gulab Jamun light and spongy

2 After one hour make homogeneous dough and then separate them into small round balls as shown in the image

3 For the sugar syrup add two cups of water and the sugar and let it simmer

4 Add Cardamom powder and Saffron to it

5 Take oil / ghee in fry pan and Fry the dough balls. Fry carefully as they are very delicate. Fry till they attains golden brown color. Immediately put them in Sugar syrup and let them soak

MANGO SORBET

frozen sweetened water with flavoring

INGREDIENT

305g fresh mango, peeled and stoned, plus slices to garnish
2-3 tbsp artificial sweetener
175g pot vanilla Muller light yogurt

COOKING STEP

1 Place the mango flesh in a food processor with the sweetener and yogurt. Blend until smooth

2 Pour into a freezer – proof container

3 Freeze for 2 -3 hours or until the sides and the base of the sorbet have started to set but center is still liquid

4 Beat the mixture with a fork and then return to the freezer for 4 -5 hours or until firm, beating every 30 – 40 min to break up ince crystals

5 Transfer the sorbet to fridge for 10 – 15 mintures before scooping into bowls

6 Serve garnished with fresh mango slices

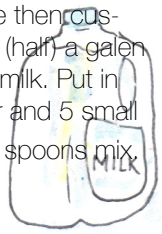
METE CHAVAL - SWEET

opague grain of rice

INGREDIENT

Buy 1 kg of white plain rice then put water in a bowl .

Buy 4 bt of cake then custard flour. Halph (half) a galen of milk. Boil the milk. Put in the custard flour and 5 small spoons or large spoons mix.



COOKING STEP

Roti – chapatti

1 Put water and flour in a bowl.

2 Sprinkles a pinch of salt and mix

Custard

1 Get a large spoon

2 Medium size bowl

3 5 spoon of sugar

4 Stir and mix on low heat

Porabari in Tangail District, Bangladesh, has been famous for about 150 years for a type of chamcham that originated with Raja Ramgore, originally of Balia district in Uttar Pradesh.[1] This sweet has an oval shape and brownish colour

CHUM CHUMS

sweet dessert in an oval shape, garnished with coconut flakes

INGREDIENT

paneer
4 cups (1l) of whole milk
4 tbsp lemon juice
½ cup of hot water

chum chums
prepared paneer
2 cups of sugar
scups of water

COOKING STEP

1 Mix the lemon juice with the hot water and put aside

2 Boil the milk in a heavy bottomed pan over medium heat, stirring occasionally making sure not to burn the milk

3 As the milk comes to a boils and the lemon mixture gradually and stir the milk gently. The curd will start separating from the whey, turn off the heat

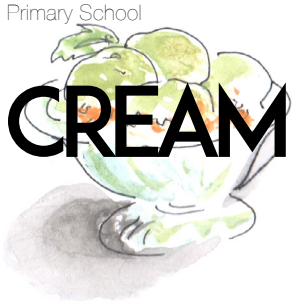
4 Once the milk fat has separated from the whey, drain the whey using a strainer line with cheese cloth or muslin cloth

5 Wrap the curd in a muslin cloth, rinse under cold water and squeeze well. This process takes out the sourness from the lemon

6 To take out the excess water, press the wrapped paneer under a heavy pan for about 1 hour

" My dad used to be a chef, so we make pistachio ice cream together. Sometimes mango sorbet too. I like this, it's so green", student of Grangetown Primary School

PISTACHIO ICE CREAM



ice cream flavor made with pistachio nuts or flavoring

INGREDIENT

4 pieces *stem ginger* in syrop drained and finely chopped

4 dsp *chopped pistachio*

500g fatfree *natural fromage frais*

2 -3 table spoons *artificial sweetener*

few drops of *green food colouring*

GINGER

(STEMS)

PISTACHIO

COOKING STEP

1 Mix most of the chopped ginger and chopped nuts in a bowl with the other ingredients

2 Transfer the mixture to a shallow freezer proof container and freeze for 4 hours or until firm, stiring every 30 minutes to prevent ice cristals forming

3 To serve, scoop the ice cream into bowls and garnish with the remaining chopped ginger and nuts

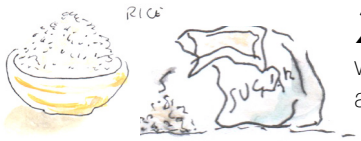
it is flavoured with cardamom, raisins, saffron, cashew nuts, pistachios or almonds. It is typically served during a meal or as a dessert.

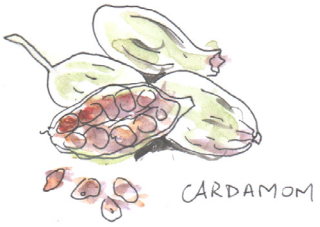
KHEER (RICE PUDDING)

south Asian rice pudding made by boiling rice, broken wheat, tapioca, or vermicelli with milk and sugar

INGREDIENT

Half glass of rice (any rice)
A sauce pan
Milk
Cardamom
2tbs sugar





COOKING STEP

1 Fill the sauce pan, not all to the top bring to a boil and add rice. When boiled put low heat and simmer till rice is soft and mushy. If the wate reduced and rice is not cooked. You can add more water

2 When it is cooked add sugar and if you want more flavour, open cardamom pools and add seeds only

3 Stir then add milk enough to cover rice, bring to boil then lower heat and stir

4 Put heat up again to this, three times stirring occasionally

5 When kheer is done leave it to cool

6 You can have kheer warm of cold. You can also add broke pieces of almonds and pistachios and serve

1 egg
2 milk
3 flower
4 sugar
5 butter
6 oil

The history of chocolate cake goes back to 1764, when Dr. James Baker discovered how to make chocolate by grinding cocoa beans between two massive circular millstones

CHOCOLATE CAKE

cake flavored with melted chocolate or cocoa powder

INGREDIENT

v
Egg
Milk
Flour
Sugar
Butter
Oil

ladyfingers (Italian: Savoiardi, [savo?jardi]) dipped in coffee, layered with a whipped mixture of eggs, sugar, and mascarpone cheese, flavoured with cocoa

TIRAMISU

meaning "pick me up" or "lift me up"

INGREDIENT

200 gr mascarpone cheese
50 gr dark chocolate
2 tbsp coffee
6-7 lady fingers
1 bsp cacao
2 eggs
1-5 tbsp powdered sugar

COOKING STEP

1 Seperate egg yolks, add sugar and mascarpone, beat until light and creamy

2 Put coffee and cacao in the batter

3 Then quickly dip the fingers in the cold coffee top with 2 tbsp of cacao-mascarpone mixture

4 Then one lady finger, and 2 tbsp of coffee-mascarpone mixture, finish it with dust of chocolate. Repeat it until it is few layers and done

CONTENT

ST. PAUL'S PRIMARY SCHOOL

(PAGE 37 - 38)
Carrot and corriander
A flavoursome healthy soup with fresh and ground coriander

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Leek and Potato soup
Leek and potato soup is a classic British recipe

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Tomato Soup

(PAGE 43 - 44)
Raspberry ripple ice
A favourite in Great Britain

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Vanilla and Raspberry
A summer treat

(PAGE 47 - 48)
Mashed Potato
A dish prepared by mashing boiled potatoes

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Strawberry Ice Cream
Perfect for summer

(PAGE 51 - 52)
Chicken and Chorizo rice
Flavoured with Spanish sausage and slow-cooked with rice

(PAGE 53 - 54)
Hotpot
One of the great stews of the world

A flavoursome healthy soup with fresh and ground coriander

CARROT & CORIANDER

Serve with cheese and onion bread for a warming supper or lunch.

INGREDIENTS

1 tbsp vegetable oil
1 onion, chopped
1 potato, chopped
450g carrots, peeled and chopped
1.2 vegetable or chicken stock
Handful coriander (about half a supermarket packet)

COOKING STEPS

1 Heat oil in a large pan, add the onion, then fry for 5 mins until softened. Stir in the ground coriander and potato, then cook for 1 min.

2 Add the carrots and stock, bring to the boil, then reduce the heat. Cover and cook for 20 mins until the carrots are tender.

3 Tip into food processor with the coriander then blitz until smooth (you may need to do this in two batches). Return to pan, taste, add salt if necessary, then reheat to serve.

Leek and potato soup is a classic British recipe

LEEK & POTATO SOUP

It is also known as Vichyssoise, and is believed to have originated in France

INGREDIENTS

1 tbsp of vegetable oil
1 onion, sliced
225g potatoes, cubed
2 medium leeks, sliced
1.2 l vegetable stock
150 ml double cream or crème fraiche
Salt and freshly ground pepper

COOKING STEPS

1 Heat the oil in a large pan and add the onions, potatoes and leeks. Cook for 3-4 mins until starting to soften.

2 Add the vegetable stock and bring to the boil. Season well and simmer until the vegetables are tender.

3 Whizz with a hand blender or in a blender until smooth. Reheat in a clean pan, stir in the cream or crème fraiche, heat through and serve.

TOMATO SOUP

It is also known as Vichyssoise, and is believed to have originated in France

INGREDIENTS

1-1.25kg ripe tomatoes
1 medium onion
1 small carrot
1 celery stick
2 tbsp olive oil
2 tbsp tomato puree
Pinch of sugar
2 bay leaves
1.2l hot vegetable stock (made with boiling water and 4 rounded tsp bouillon powder or 2 stock cubes)

COOKING STEPS

1 Firstly, prepare your vegetables. You need 1-1.25kg ripe tomatoes. If the tomatoes are on their vines, pull them off. The green stalky bits should come off at the same time, but if they don't, just pull or twist them off afterwards. Throw the vines and green bits away and wash the tomatoes. Now cut each tomato into quarters and slice off any hard cores (they don't soften during cooking and you'd get hard bits in the soup at the end). Peel 1 medium onion and 1 small carrot and chop them into small pieces. Chop 1 celery stick roughly the same size.

2 Spoon 2 tbsp olive oil into a large heavy based pan and heat it over a low heat. Hold your hand over the pan until you can feel the heat rising from the oil, then tip in the onion, carrot and celery and mix them together with a wooden spoon. Still with the heat low, cook the vegetables until they're soft and faintly coloured. This should take about 10 mins and you should stir them two or three times so they cook evenly and don't stick to the bottom of the pan.

3 Holding the tube over the pan, squirt in about 2 tbsp of tomato puree, then stir it around so it turns the vegetables red. Shoot the tomatoes in off the chopping board, sprinkle in a good pinch of sugar and grind in a little black pepper. Tear 2 bay leaves into a few pieces and throw them into the pan. Stir to mix everything together, put the lid on the pan and let the tomatoes stew over a low heat for 10 mins until they shrink down in the pan and their juices flow nicely. From time to time, give the pan a good shake – this will keep everything well mixed.

4 Slowly pour in the hot stock, stirring at the same time to mix it with the vegetables. Turn up the heat as high as it will go and wait until everything is bubbling, then turn the heat down to low again and put the lid back on the pan. Cook gently for 25 mins, stirring a couple of times. At the end of cooking the tomatoes will have broken down and be very slushy looking.

5 Remove the pan from the heat, take the lid off and stand back for a few seconds or so while the steam escapes, then fish out the pieces of bay leaf and throw them away. Ladle the soup into your blender until it's about three quarters full, fit the lid on tightly and turn the machine on full. Blitz until the soup's smooth (stop the machine and lift the lid to check after about 30 seconds), then pour the pureed soup into a large bowl. Repeat with the soup that's left in the pan. (The soup may now be frozen for up to 3 months. Defrost before reheating.)

6 Pour the pureed soup back into the pan and reheat it over a medium heat for a few minutes, stirring occasionally until you can see bubbles breaking gently on the surface. Taste a spoonful and add a pinch or two of salt if you think the soup needs it, plus more pepper and sugar if you like. If the colour's not a deep enough red for you, plop in another teaspoon of tomato puree and stir until it dissolves, Ladle into bowls and serve. Or sieve and serve chilled with some cream swirled in.

RASPBERRY RIPPLE ICE

A favourite in Great Britain

INGREDIENTS

250g raspberries, plus extra to serve
225g caster sugar
2 large eggs plus 4 egg yolks
600ml double cream
Sliced mango, sprinkles, or cones, to serve

COOKING STEPS

1 Place the raspberries and 2 tbsp of the sugar in a small pan. Cook on a medium heat until sugar dissolves. Simmer for 5 mins until thickened, then push through a sieve into a bowl and discard the seeds left in the sieve.

2 Place the eggs, egg yolks and remaining sugar in a bowl. Whisk with an electric whisk to combine, then place over a pan of gently simmering water – make sure the bowl isn't actually touching the water. Beat with the electric whisk for 3-4 mins until thick and pale. Remove from heat and continue beating until cool.

3 In another bowl, whisk the cream until it forms soft peaks, then gently fold into the cool egg mix until just combined. Pour the mix into a shallow container or dish that can be frozen.

4 Gently swirl the raspberry coulis through, cover with cling film and freeze for at least 6 hrs. Serve scoops in bowls with sliced mango and extra raspberries, or scoop into cones and top with sprinkles for the kids.

" These are my favourite, I bake them at home all the time with my mummy", student of St Paul's Primary School

VANILLA AND RASPBERRY

A summer treat

INGREDIENTS

1/3 cup butter, softened
½ cup caster sugar
1 egg
1 cup self-raising flour, sifted
1/3 cup milk
½ tsp vanilla extract
½ cup fresh raspberries, crushed with a fork
1/3 cup butter, softened
1 tsp vanilla extract
1 cup icing sugar
24 fresh raspberries, to decorate

COOKING STEPS

1 Preheat the oven to 160C (320F). Line a 24 mini-cupcake papers. In a medium-sized bowl, use an electric mixer on high speed to cream the butter and sugar until light and fluffy. Add the egg and mix well.

2 Add the flour, milk and vanilla, and beat with an electric mixer on medium until well combined. Stir through the raspberries.

3 Divide the mixture evenly between the 24 mini-cupcake papers. Bake for 10-15 mins until well risen and firm to the touch. Allow to cool for a few mins and then transfer to a wire rack. Allow to cool fully before icing.

4 Use an electric mixer on high seed to beat the butter and vanilla until light and fluffy. Gradually beat in the icing sugar until all combined. Continue beating for 1 min.

5 Pipe evenly over each mini cupcake and decorate with raspberries.

Perfect accompanied with sausages

MASHED POTATO

A dish prepared by mashing boiled potatoes

INGREDIENTS

680G Yukon Gold potatoes, peeled and cut lengthwise into quarters
½ tsp salt
4 tbsp heavy cream
2 tbsp butter
1 tbsp milk
Salt and pepper

COOKING STEPS

1 Place the peeled and cut potatoes into a medium saucepan. Add cold water to the pan until the potatoes are covered by at least an inch. Add a half teaspoon of salt to the water. Turn the heat on to high, and bring the water to boil. Reduce the heat to low to maintain a simmer, and cover. Cook for 15 to 20 minutes, or until you can easily poke through them with a fork.

2 While the potatoes are cooking, melt the butter and warm the cream. You can hear them together in a pan on the stove or in the microwave.

3 When the potatoes are done, drain the water and place the steaming hot potatoes into a large bowl. Pour the heated cream and melted butter over the potatoes. Mash the potatoes with a potato masher. Then use a strong wooden spoon (a metal spoon might bend) to beat further. Add milk and beat until the mashed potatoes are smooth. Don't over beat the potatoes or the mashed potatoes will end up gluey. Add salt and pepper to taste.

STRAWBERRY ICE CREAM

Perfect for Summer

INGREDIENTS

500g strawberries
175g caster sugar (plus 2 tbsp)
500ml full fat milk
500ml double cream
1 vanilla pod
10 large egg yolks
2tbsp lemon juice

COOKING STEPS

1 Hull and roughly chop the strawberries, put them into a bowl and sprinkle over the 2 tbsp of caster sugar and leave them to steep and infuse with flavour.

2 Pour the milk and cream into a heavy based saucepan, and add the vanilla pod, split down the middle lengthways. Bring the pan nearly to the boil and then take it off the heat and leave to infuse for 20 minutes.

3 In a large bowl whisk the egg yolks and the sugar until thick and pale yellow. Take the vanilla pod out of the milk and cream and pour, whisking all the while, the warm liquid over the yolks. Put the cleaned out pan back on the heat and stir the custard until it thickens, then take it off the heat and pour it into a bowl to cool.

4 Puree the strawberries in a processor and when the custard is cool fold in the lemon juice and strawberry puree.

5 At this point you can either freeze the ice cream in an ice cream maker, or in a plastic tub in the freezer. If you do the latter you should whip it out every hour for 3 hours as it freezes and give it a good beating, either with an electric whisk, by hand or in the processor. That gets rid of any ice crystals that form and that make the ice cream crunchy rather than smooth.

CHICKEN & CHORIZO RICE

Flavoured with Spanish sausage and slow-cooked with rice

INGREDIENTS

1 tbsp oil
8 chicken pieces or 1 whole chicken, jointed
1 large onion, chopped
1 red pepper, deseeded and chopped into large chunks
3 garlic cloves, crushed
225g chorizo, skinned and sliced
1 tbsp tomato purée
1 tbsp thyme leaf, chopped
150ml white wine
850ml chicken stock
400g long grain rice
2 tbsp chopped parsley

COOKING STEPS

1 Heat the oil in a large flameproof casserole dish and brown the chicken pieces on all sides – you may have to do this in batches. Remove from the dish and put to one side.

2 Lower the heat, add the onion and pepper, and gently cook for 10 mins until softened. Add the garlic and chorizo, and cook for a further 2 mins until the chorizo has released some of its oils into the dish. Stir in the tomato purée and cook for 1 min more.

3 Return the chicken pieces to the dish along with the thyme, white wine and stock. Bring the liquid to a boil, cover the dish with a tight-fitting lid and lower the heat. Cook for 30 mins.

4 Tip in the rice and stir everything together. Cover, set over a low heat and cook for a further 15 mins, or until the rice is cooked and has absorbed most of the cooking liquid. Remove from the heat and leave the dish to sit for 10 mins to absorb any remaining liquid. Season to taste and scatter with parsley to serve.

One of the great stews of the world

HOTPOT

This hearty dish is perfect for a chilly winter evening

INGREDIENTS

2 tbsp olive oil
1kg neck of lamb, chopped into bite sized pieces
4 lamb kidneys, cleaned, trimmed and cut into quarters
2 onions, peeled and sliced
½ tsp salt
1tbsp plain flour
250 ml lamb stock
1 sprig fresh thyme
2 fresh bay leaves
1 tbsp Worcestershire sauce
50g butter, cut into cubes, plus extra for greasing
2 x 250 black pudding rings, outer casing removed and thickly sliced
1kg potatoes, peeled and sliced
Salt and freshly ground black pepper

COOKING STEPS

1 Preheat the oven to 180C/350F/Gas 4. Heat the olive oil in a pan ad fry the lamb pieces and kidneys for 1-2 mins on both sides, or until golden-brown all over. Remove from the pan and set aside.

2 In the same pan, cook the onions and salt for 2-3 minutes, or until the onions have softened. Stir in the flour until the onions are well coated with the flour.

3 Add the stock to the pan along with the thyme, bay leaves and Worcestershire sauce. Stir and simmer for 8-10 mins, or until thickened slightly.

4 Butter a lidded flameproof casserole dish and place a layer of potatoes (about a third) over the bottom of the dish and season with salt and freshly ground black pepper. Spoon in half of the browned lamb and kidneys, then lay over half of the black pudding slices and pour over half of the thickened stock mixture. Repeat the layering process until all of the potatoes, lamb pieces and kidneys, black pudding and stock have been used, finish with a layer of potatoes on top. Dot the potatoes with the butter, then cover with a lid.

5 Place the casserole into the oven to cook for 20 mins, then remove the lid and cook for a further 20 minutes, or until the potatoes are golden-brown on top.

6 To serve, spoon into serving bowls.

BOBBY
Help!!!

CONCLUSION

Through the workshop, we conclude that the primary kids are aware of the healthy lifestyle. Infact they have a healthy meal twice a day under the healthy program of the primary school. They are also pretty much involved in the cooking process of their dinner. However, their cooking ingredients come from a commercial supermarket. This does not allow them to investigate their food further as much as they would like to.

As students and makers of this little book, we were deeply inspired by the dedication and excitement of the kids, their creativity and freedom of imagination. They showed us a path that leads to a healthier Grangetown, more aware of the quality of its local products and more motivated to rediscover natural and genuine flavours. There is potential to propose a space that provides a deeper understanding of food as part of the environment. Food as the centre of a community, food as the focus of a place where everybody comes together to share, learn and enjoy everyday life.

"It is health that is real wealth and not pieces of gold and silver",
MAHATMA GANDHI

Garden to Kitchen

Nutrient Rich Recipes from Home Garden Produce

सत्यमेव जयते

Science for Equity Empowerment and
Development (SEED) Division,
Department of Science & Technology, Govt. of India

Vigyan Prasar
An Autonomous Organisation of the
Department of Science & Technology, Govt. of India

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Garden to Kitchen

Nutrient Rich Recipes from Home Garden Produce

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Preface

Inspite of green revolution and several National Nutrition Intervention Programmes, the prevalence of under nutrition, especially multiple micronutrient deficiencies continue to be of public health significance in India particularly in the states like Jharkhand, Bihar, West Bengal and Orissa where the population of tribals is very high. Among the micronutrient deficiencies, anaemia is most serious public health problem among children and women. Low access to micronutrient rich food is the main reason of micro-nutrient deficiency. India is passing through the phase of economic transition and while the problem of under nutrition continues to be major problem, prevalence of non-communicable diseases are becoming a very significant problem, especially in the rural & tribal areas. Fresh vegetables are store house of micro-nutrients and their sufficient daily consumption could help in the prevention of micronutrient malnutrition and certain chronic diseases such as cardio-vascular diseases and cataract. Vegetables are low cost nutritional supplements which can ameliorate this situation. Therefore, it is necessary to enhance the consumption of vegetables in diversified form in the daily diets of the people.

Fruits and vegetables start deteriorating after harvest and are available in abundance at low price at a particular time of season. Due to lack of basic infrastructures and technical knowhow, post harvest loss in fruits and vegetables is quite high. If these are appropriately processed, losses can be significantly reduced, which are important for a country like India, where per capita availability of protective food is very low. Through preservation techniques, surplus fruits and vegetables can be utilised properly and efficiently. Keeping this objective in view, this publication describing recipes for several preparations utilizing vegetables is being brought out. All these recipes are simple to prepare and do not require any special appliances. Separate chapter on preserved products of locally available fruits and vegetables has been included to enable housewives to utilize fruits and vegetables grown in their home garden or farm in an effective manner for achieving household food and nutritional security. This recipe book suits the requirements of the rural households and adapts regional Indian delicacies. Attempts have been made to widen the scope of inclusion of more portions of vegetable in daily diet. We hope rural tribal women & farmers, extension workers and others will find this information very useful for improving the nutritional quality of household diet in diversified manner.

October 2019
New Delhi

Rekha Sinha
Kinkini Dasgupta Misra

Introduction

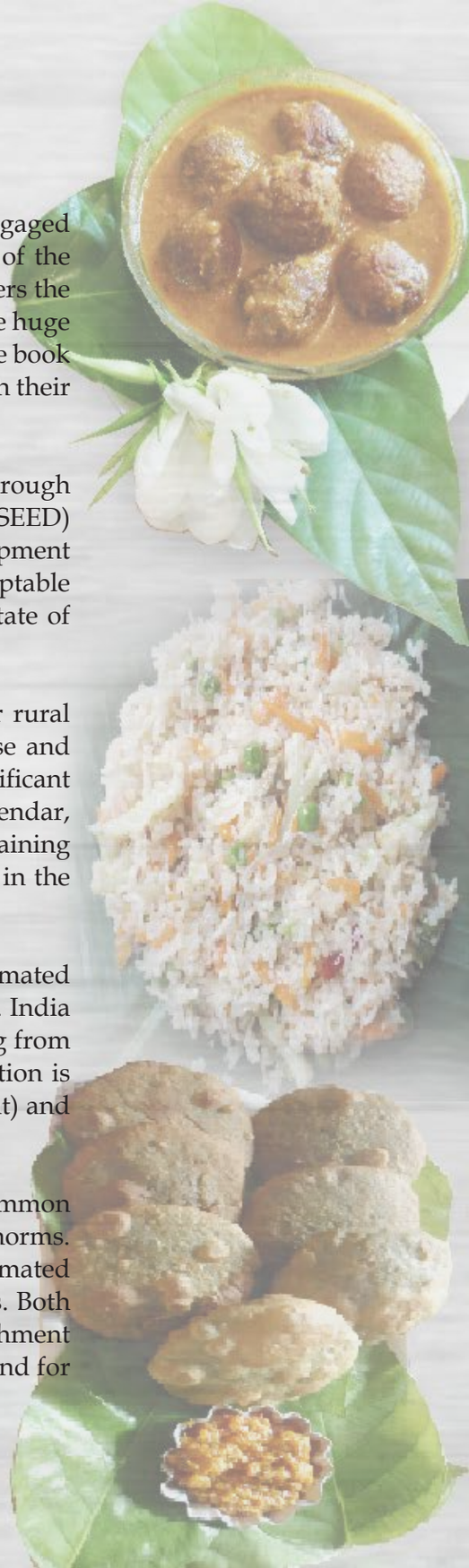
Vigyan Prasar, a national level organisation of Department of Science & Technology (DST), Government of India, engaged in science communication & popularisation, presents a recipe book 'Garden to Kitchen' to suit the requirements of the rural households. The initiative is aligned with the National Food Security Mission of Government of India and caters the need for incorporation of vegetables and fruits and daily dietary habits of the common people. In order to capture the huge knowledge resources lying scattered in various silos, it is deemed necessary to disseminate the information in a recipe book form regarding nutrient rich vegetables and fruits that can be grown in the gardens at the household level, along with their nutritional significance.

Vigyan Prasar implements the initiative of providing food as well as nutrition security to the tribal families through home gardening through a project supported and catalysed by Science for Equity, Empowerment & Development (SEED) Division of the Department of Science & Technology, Government of India. It has undertaken the project "Development of communication resources on applications of science & technologies for the home garden: Popularise locally adaptable practices for real-life gains." The recipe book has been prepared for the rural households in the tribal areas of State of Jharkhand.

The initiative aims to present an easy to use information resource on locally adaptable tools and techniques for rural households to enhance livelihood options. The objective of the initiative is to empower these women to diagnose and develop need-based preventive and remediation strategies for use in a timely manner. These contents are also significant for tribal areas of Bihar, West Bengal and Odisha. As part of this initiative, Vigyan Prasar has developed a Crop Calendar, a Compendium of vegetables and fruits, and the Recipe book to be used principally as training material. These training materials are to be utilised for providing training purpose to the agricultural extension workers, women workers in the grassroot level, Self Help Groups (SHGs), Krishi Vigyan Kendras (KVKs), and health care professionals.

Attaining food security is a matter of prime importance for India where more than one-third of its population is estimated to be poor, and as many as one-half of its children have suffered from malnourishment over the last three decades. India has a history of hunger and food insecurity in the past. After seven decades of independence, India is still suffering from the problem of food insecurity that has caused the death of people due to starvation. About 15.2% of the population is undernourished in India, 15% of children under five years are the prevalence of wasting (underweight as per height) and 38.8% of children under five years is the prevalence of stunting.

Food energy intake at the household level is now given prominence in assessing food security. It has become common practice to estimate the number of food-insecure households by comparing their calorie intake with required norms. Attaining food security is a matter of prime importance for India where more than one-third of its population is estimated to be poor, and as many as one-half of its children have suffered from malnourishment over the last three decades. Both the supply side and demand side factors have their roles in the present condition of food security and undernourishment in India. Food security is thus a multi-dimensional concept and extends beyond the product availability, and demand for food.



The problem of food security is addressed better if the production and consumption of localised crop suiting to geographical conditions are promoted. The challenge is providing food security for all, and localised self-sufficiency of localised production is the answer. Fresh vegetables are storehouses of micro-nutrient, and their sufficient daily consumption could help to prevent micronutrient malnutrition and certain chronic diseases. Vegetables have all potential of providing a low-cost nutritional supplement to ameliorate this situation and it is necessary to enhance the consumption of vegetables in a diversified form in the daily diets of the people.

Green leafy vegetables (GLVs), other vegetables and fruits are easily available. Most vegetables, particularly GLVs, are inexpensive. These foods can be grown in the backyard as home garden with very little effort and cost. Even in lean seasons like summer, they can be grown using household wastewater. Home gardens can make an important contribution to food security as an additional food source or by supplying off-season production as well as an addition to the income of the tribal families giving a livelihood to the women of tribal areas of Jharkhand.

It is imperative to find ways to eat more servings of vegetables per day to get the maximum nutritional benefits from fruits and vegetables. Keeping this in view, this vegetable based recipe book has been prepared to enable the tribal women to include more servings of vegetables in their diet in diversified ways. These recipes are attractive, palatable, affordable and yet nutritious. Ingredients which are widely available and are within reach of rural households were selected to formulate nutritionally rich healthy recipes which are region and culture-specific. The book provides the amount of calories, protein, fat and minerals contents per serving of the recipe.

Women of tribal households have been actively engaged in economic activities. They have been participating in all the modes based on resource use in the long history of humankind; namely, the gathering (including shifting cultivation), settled cultivation and industry including construction and manufacturing. But the women have not been able in making control over material assets, intellectual resources and ideology as yet in spite of constitutional provisions about raising their status, enhancing their quality of life, malnutrition, bringing about gender equality and gender justice.

Kinkini Dasgupta Misra
Vigyan Prasar

Basics of Nutrition

Nutrition is a basic human need and prerequisite to a healthy life. A balanced diet is essential from the very early stages of life for proper growth, development and to remain active. Vegetables are the most important component of a balanced diet. They are referred to as protective foods because green leafy vegetables, other vegetables and fresh seasonal fruits are the treasure of several minerals and vitamins and therefore provide protection from many diseases. They contain abundant amounts of iron, calcium, vitamin-C, folic acid, carotenoids and phytochemicals. Some vegetables like green leafy vegetables, radish, bottle gourd, cucumber, all type of gourds etc. provide low calories, whereas some others such as potato, sweet potato, tapioca and yam are rich in starch and therefore, provide energy in good amount. Hence, the vegetables can be used to increase or decrease calories in the diet.

What functions do these nutrients and special factors in vegetables perform in our body?

Iron

Iron is an essential element necessary for the formation of haemoglobin, the red pigment present in the red blood cells. Haemoglobin plays an important role in the transport of oxygen to the tissues. Reduction in haemoglobin in the blood leads to anaemia, a condition with symptoms like paleness, fatigue and increased susceptibility to infections. In green leafy vegetables, Iron is available in good quantities. But the absorption of iron is limited. To improve iron absorption, foods rich in Vitamin C must be consumed daily.

Vitamin A

This is a fat-soluble vitamin. It is necessary for clear vision in dim light, and for maintaining the integrity of epithelial tissues. In vitamin A deficiency, the white part of the eye (conjunctiva) loses its lustre and becomes dry. In severe vitamin A deficiency, the black part of the eye (cornea) gets necrosed, leading to irreversible blindness in young children. Vitamin A also has a role in maintaining resistance of the body to common infections. Carotenoids are plentiful in fruits and vegetables that are green or deep yellow/orange in colour, such as green leafy vegetables, carrots, tomatoes, sweet potatoes, papaya, and mango.

Vitamin C

Vitamin C is an essential nutrient required for healthy bones and teeth. It also promotes iron absorption. Vitamin C deficiency is characterised by weakness, bleeding gums and defective bone growth. Vitamin C is abundantly available in fresh amla, citrus fruits, guava, banana and certain vegetables such as tomatoes.

Folic acid

Folic acid is a haemopoietic vitamin essential for multiplication and maturation of red cells. Its deficiency leads to megaloblastic anaemia. Folic acid intake during pregnancy protects the foetus from developing certain congenital defects. It also promotes the birth weight of infants. Folic acid deficiency increases homocysteine levels in the blood, thereby increasing the risk of heart disease. Green leafy vegetables, legumes, nuts and liver are good sources of folates.

Non-nutritional factors in vegetables and fruits

Vegetables also provide certain non-nutritional factors of considerable health significance to the human body. Among these, dietary fibre, antioxidants and other bio-active constituents require special mention. These non-nutritional factors are required for delaying the ageing process and preventing the processes which lead to diseases such as cataract and cardiovascular diseases.

Dietary fibre

Dietary fibre delays the intestinal transit of the food consumed. Dietary fibre is important for proper bowel function and to reduce chronic constipation, diverticular diseases and haemorrhoids. The protective role of dietary fibre against various digestion related disorders has long been recognized.

Antioxidants

In the recent past, the roles of vegetables and fruits as sources of antioxidants have been receiving considerable attention. Antioxidants restrict the damage that reactive oxygen free radicals can cause to the cell and cellular components. They are of primary biological value in giving protection from certain diseases. Some of the diseases that have their origin in deleterious free radical reactions are atherosclerosis, inflammatory joint diseases, asthma, and diabetes. Raw and fresh vegetables like green leafy vegetables, carrots, fresh fruits including citrus and tomato are the source of antioxidants (free radical scavengers). The nutrients namely vitamin C and carotenoids that are present in these vegetables are also potent antioxidants.

How much should we consume?

The Expert Committee of the Indian Council of Medical Research (ICMR), considering the nutrient requirements, has recommended that every individual should consume at least 300 g of vegetables (green leafy vegetables: 50g; other vegetables: 200g; roots and tubers: 50g) daily. Besides, fresh seasonal fruits (100g) should be consumed regularly. Since the requirement of iron and folic acid are higher for pregnant women, they should consume 100g of leafy vegetables daily.

Which vegetables should be consumed?

We should consume locally available seasonal fresh vegetables. They have more micronutrients and are tasty. However, no single fruit or vegetable provides all the nutrients we need. It is important to include varieties of vegetables with different colours in the diet for vital health significance. Inclusion of commonly consumed leafy greens, tomatoes and other vegetables, apart from yellow, orange, red, deep red, purple coloured citrus fruits enrich the diets significantly.

How to prevent cooking losses?

Vitamins are lost during washing of cut vegetables and cooking of foodstuffs. However, proper methods of cooking can substantially reduce these losses. Nutrient losses occur when the vegetables are washed after cutting into pieces for cooking. Consumption of properly washed raw and fresh vegetables is always beneficial.

How do we get these foods?

Green leafy vegetables (GLVs), other vegetables and fruits are easily available. Most vegetables, particularly GLVs, are inexpensive. These foods can be grown in the backyard with very little effort and cost. Even in lean seasons like summer, they can be grown using household wastewater.

How to accommodate more servings of vegetables in a day?

To get the maximum nutritional benefits from fruits and vegetables, it is important to find ways to eat more servings of vegetables per day.

Keeping this in view, this vegetable based recipe book has been prepared to enable the housewives to include more servings of vegetables in their diet in diversified ways. These recipes are attractive, palatable, affordable and yet nutritious. Ingredients which are widely available and are within reach of rural households were selected to formulate nutritionally rich healthy recipes which are region and culture-specific. The book provides the amount of calories, protein, fat and minerals contents per serving of the recipe.

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Appetizers

Bread Pakora

Nutritive value per serving

Energy (Kcal)	**413**
Protein (g)	**9.25**
Fat (g)	**22.27**
Mineral (g)	**1.42**
Fibre (g)	**2.15**
Calcium (mg)	**96.88**
Iron (mg)	**2.39**
Carotene (µg)	**281.70**

Method

1. Boil, peel and mash potatoes.
2. Blanch chopped capsicum, beetroot, French bean and carrot.
3. Heat oil (1 dsp), add ginger, garlic paste, chopped chillies, coriander leaves and rest of the spices including salt.
4. Add potato, blanched vegetables, mix well and fry for a few minutes.
5. Divide the mixture into six equal portions.
6. Make a batter with Bengal gram flour with water.
7. Add curd, all spices including salt into the batter.
8. Trim the edges of the bread slices and cut each slice into two triangular pieces.
9. Put stuffs between two triangular pieces.
10. Dip stuffed bread slices one by one into the batter and fry them in hot oil till golden brown.
11. Serve with chutney.

Ingredients	Weight	Measure/No.
Bread	200 g	6 slices
Bengal gram flour	100 g	1 cup
Refined oil (absorbed)	50 ml	5 dsp
Curd	10 g	1 dsp
Green chilli paste	4 g	1 tsp
Coriander powder	2 g	1½ tsp
Ginger paste	2 g	½ tsp
Garlic paste	2 g	½ tsp
Red chilli powder	1 g	½ tsp
Garam masala	1 g	½ tsp
Water	100 ml	2/5 cup (appx.
Salt	to taste	to taste
For filling		
Potato	50 g	1 medium size
Capsicum	25 g	1 small size
Beet root	25 g	1 small size
French bean	25 g	5 piece
Carrot	25 g	1 small size
Mustard oil	10 ml	1 dsp
Green chilli	3 g	2 piece
Coriander leaves	2 g	Few
Ginger paste	2 g	½ tsp
Garlic paste	2 g	½ tsp
Chat masala	2 g	1½ tsp
Salt	to taste	to taste
Cooked preparation	540 g	6

Bread Pakora

Cabbage- Onion Pakora

Nutritive value per serving

Energy (Kcal)	**235**
Protein (g)	**6.59**
Fat (g)	**11.38**
Mineral (g)	**1.17**
Fibre (g)	**1.32**
Calcium (mg)	**49.77**
Iron (mg)	**2.28**
Carotene (µg)	**97.39**

Method

1. Chop vegetables.
2. Take cabbage and onion in a bowl.
3. Add flour, chopped green chilli, other ingredients except oil and mix together.
4. Divide into 8 portions.
5. Heat oil; deep-fry each portion till brown and crispy.
6. Serve with chutney.

Ingredients	Weight	Measure/No.
Cabbage	50 g	½ cup
Onion	25 g	1 small size
Gram flour	20 g	2 dsp
Rice flour	10 g	1 dsp
Oil (absorbed)	10 ml	1 dsp
Green chilli	3 g	2 piece
Ginger paste	2 g	½ tsp
Garlic paste	2 g	½ tsp
Cumin seed powder	0.50 g	¼ tsp
Carom seeds	0.50 g	¼ tsp
Red chilli powder	0.25 g	¼ tsp
Turmeric powder	0.25 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	100 g	8

Cabbage- Onion Pakora

Vegetable Momo

Nutritive value per serving

Energy (Kcal)	**230**
Protein (g)	**5.37**
Fat (g)	**3.16**
Mineral (g)	**1.57**
Fibre (g)	**2.19**
Calcium (mg)	**100**
Iron (mg)	**1.76**
Carotene (µg)	**1241**

Method

1. Make dough by mixing flour, oil, salt and keep aside for half an hour.
2. Chop vegetables and blanch for 2-3 minutes except onion and green chilli.
3. Heat oil and fry chopped onion till light golden brown. Add green chilli, blanched vegetables, ginger and garlic paste. Stir- fry for 5 minutes with covered lid.
4. Divide cooked vegetable mixture into eight equal parts.
5. Divide dough into equal parts (8), roll like poori and place fried vegetables, bring edges together by giving a shape of momo.
6. Steam for 15 minutes.
7. For chutney, grind all ingredients together.
8. Serve hot with chutney

Ingredients	Weight	Measure/No.
Refined flour	80 g	½ cup
Cabbage	50 g	½ cup
Onion	50 g	1 medium size
Carrot	25 g	1 small size
Capsicum	25 g	1 small size
Coriander leaves	25 g	4 bunch
Tomato	25 g	1 small size
Rice flour	20 g	2 dsp
French beans	15 g	5 piece
Garlic paste	5 g	1 tsp
Ginger paste	5 g	1 tsp
Oil	5 ml	1 tsp
Green chilli	2 g	1 piece
Water	75 ml	¼ cup (approx.)
Chutney		
Garlic	5 g	10 cloves
Ginger	5 g	1 piece
Lemon juice	5 g	1 tsp
Mustard oil	2.5 ml	½ tsp
Red chilli	2 g	4 piece
Salt	to taste	to taste
Cooked preparation	276 g	8

Vegetable Momo

Vegetable Spring Rolls

Nutritive value per serving

Energy (Kcal)	**199**
Protein (g)	**4.43**
Fat (g)	**5.36**
Mineral (g)	**0.61**
Fibre (g)	**0.68**
Calcium (mg)	**33.20**
Iron (mg)	**1.57**
Carotene (µg)	**263**

Method

1. Chop vegetables.
2. Heat 1 tsp oil in a karahi and fry chopped onion till light brown. Add vegetables and sauté till done.
3. Add salt, black pepper and sauces. Remove from flame.
4. Mix refined flour, corn flour, salt, water and make a batter.
5. Heat a tawa, pour oil and sprinkle water.
6. Pour a spoonful of batter, spread and cook like dosa.
7. Spread cooked vegetables evenly, roll and cut it.
8. Deep fry and serve hot with chutney.

Ingredients	Weight	Measure/No.
Refined flour	50 g	1/3 cup
Onion	40 g	1 medium size
Tomato sauce	30 g	2 tbsp
French bean	25 g	6 piece
Rice flour	25 g	5 tsp
Carrot	25 g	1 small size
Capsicum	25 g	1 small size
Beet root	15 g	Half small size
Chilli sauce	10 g	1 dsp
Soy sauce	10 g	1 dsp
Refined oil	10 ml	1 dsp
Black pepper powder	0.25 g	¼ tsp
Water (as required)	90 g	2/3 cup (appx.)
Salt	to taste	to taste
Cooked preparation	250 g	6 piece

Vegetable Spring Rolls

Vegetable Ragi Pitha

Nutritive value per serving

Energy (Kcal)	**319**
Protein (g)	**6**
Fat (g)	**7.43**
Mineral (g)	**1.61**
Fibre (g)	**2.19**
Calcium (mg)	**152.5**
Iron (mg)	**2.37**
Carotene (µg)	**251.6**

Method

1. Chop vegetables.
2. Blanch all vegetables except onion.
3. Heat oil, stir-fry chilli, onion, ginger and garlic paste.
4. Add blanched vegetables, salt and other spices.
5. Cook for 2 minutes.
6. Make dough by mixing flour with water.
7. Divide dough and fillings into six portions.
8. Roll out each dough portion into small oval shape.
9. Place fillings in centre and bring the edges together in round shape.
10. Boil water, put balls into boiling water and cook for 15 minutes.
11. Serve hot with chutney.

Ingredients	Weight	Measure/No.
Rice flour	100 g	½ cup
Ragi flour	100 g	2/3 cup
Water (as required)	300 ml	1 cup (approx.)
Fillings		
Onion	75 g	2 small size
Cabbage	(Chopped) 50 g	½ cup
Capsicum	25 g	1 small size
Carrot	25 g	1 small size
Beans	20 g	6 piece
Potato	20 g	1 small size
Oil	20 ml	2 dsp
Black pepper powder	2.5 g	1 tsp
Green chilli	2 g	1 piece
Ginger paste	2 g	½ tsp
Garlic paste	2 g	½ tsp
Salt	to taste	to taste
Cooked preparation	420 g	6

Vegetable Ragi Pitha

Vegetable Omelette

Nutritive value per serving

Energy (Kcal)	**551**
Protein (g)	**7.22**
Fat (g)	**11.7**
Mineral (g)	**0.77**
Fibre (g)	**0.38**
Calcium (mg)	**47.6**
Iron (mg)	**1.42**
Carotene (µg)	**434**

Method

1. Chop finely all vegetables and blanch except coriander leaves.
2. Beat eggs till frothy, add blanched vegetables, pepper, salt and chopped coriander leaves.
3. Heat oil in a shallow frying pan, and pour the beaten batter.
4. Spread and cook for 5 minutes.
5. Serve hot with tomato ketchup.

Ingredients	Weight	Measure/No.
Eggs	100 g	2
Onion	25 g	1 small size
Capsicum	15 g	½ small size
Carrot	10 g	½ small size
Tomato	10 g	½ small size
Beans	10 g	3 piece
Oil	5 ml	1 tsp
Green chilli	2 g	1 piece
Coriander leaves	2 g	Few
Black pepper powder	0.50 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	175 g	2

Vegetable Omelette

Potato Chat

Nutritive value per serving

Energy (Kcal)	**620**
Protein (g)	**13.5**
Fat (g)	**0.17**
Mineral (g)	**0.85**
Fibre (g)	**0.62**
Calcium (mg)	**29.87**
Iron (mg)	**0.68**
Carotene (µg)	**717.55**

Method

1. Grind chopped coriander leaves with spices and salt to prepare chutney.
2. Boil, peel and slice potatoes.
3. Pour chutney evenly on potatoes.
4. Sprinkle chat masala powder and lime juice just before serving over potatoes.

Ingredients	Weight	Measure/No.
Potato	200 g	4 medium size
Coriander leaves	20 g	1 bunch
Ginger paste	5 g	1 tsp
Chat masala	3 g	½ tsp
Lemon juice	2.5 g	½ tsp
Green chilli	2 g	1 piece
Garlic paste	2 g	½ tsp
Salt	to taste	to taste
Cooked preparation	125 g	20 slices

Potato Chat

Crunchy Poha

Nutritive value per serving

Energy (Kcal)	**506**
Protein (g)	**8.14**
Fat (g)	**29.9**
Mineral (g)	**2.28**
Fibre (g)	**2.43**
Calcium (mg)	**92.9**
Iron (mg)	**11.78**
Carotene (µg)	**309**

Method

1. Chop vegetables.
2. Soak flaked rice in water for 1 minute, strain and keep aside.
3. Heat oil (1 tsp), roast groundnut and keep aside.
4. Heat oil (3 tbsp), put mustard seed, curry leaves, chilli and fry onion till golden brown.
5. Add chopped vegetables and fry till they soften.
6. Add soaked flaked rice, salt and stir-fry for 1-2 minutes.
7. Add groundnut and serve.

Ingredients	Weight	Measure/No.
Rice flakes	150 g	1 ½ cup
Tomato	50 g	1 medium size
Oil	50 ml	5 dsp
Capsicum	30 g	1 small size
Carrot	30 g	1 small size
Onion	30 g	1 small size
Cabbage	30 g	½ small size
French bean	30 g	6 piece
Groundnut	20 g	2 dsp
Green chilli	5 g	2 piece
Mustard seed	0.50 g	½ tsp
Curry leaves	1 g	Few
Salt	to taste	to taste
Cooked preparation	225 g	2 bowl

Crunchy Poha

Upma

Nutritive value per serving

Energy (Kcal)	**575.00**
Protein (g)	**13.04**
Fat (g)	**27.45**
Mineral (g)	**1.07**
Fibre (g)	**1.65**
Calcium (mg)	**75.05**
Iron (mg)	**2.60**
Carotene (µg)	**399**

Method

1. Soak dal for 2 hours and drain the water.
2. Chop vegetables.
3. Heat oil (2 tbsp), fry groundnut and semolina separately, remove and keep aside.
4. Heat oil (2 dsp), put mustard seeds, dal and add onion, stir-fry till golden brown.
5. Add chopped vegetables and sauté for a few minutes till done.
6. Add semolina, salt and pour water and cook till the moisture is evaporated and semolina cooked.
7. Garnish with groundnut and chopped coriander leaves.
8. Serve hot.

Ingredients	Weight	Measure/No.
Semolina	150 g	¾ cup
Onion	50 g	1 medium size
Oil	50 ml	5 dsp
French bean	25 g	5 piece
Capsicum	25 g	1 small size
Cabbage	25 g	½ small size
Carrot	25 g	1 small size
Groundnut	20 g	2 dsp
Green gram dal	5 g	1 tsp
Urad dal	5 g	1 tsp
Green chilli	5 g	2 piece
Mustard seed	0.50 g	½ tsp
Water	200 ml	¾ cup (approx.)
Curry leaves	1 g	Few
Salt	to taste	to taste
Cooked preparation	415 g	2 bowl

Upma

Green Manchurian

Nutritive value per serving

Energy (Kcal)	**199**
Protein (g)	**4.43**
Fat (g)	**5.36**
Minerals (g)	**0.61**
Fibre (g)	**0.68**
Calcium (mg)	**33.20**
Iron (mg)	**1.57**
Carotene (µg)	**263**

Method

1. Chop vegetables.
2. Add flour, pepper powder, salt, sauce to chopped vegetables, mix and make ten balls.
3. Heat oil and deep-fry balls in oil and keep aside.
4. Cook spinach in a pressure cooker and make a smooth paste.
5. Heat oil, fry ginger and garlic paste.
6. Add tomato puree and cook for 2 minutes.
7. Add tomato sauce, spinach paste, spices, salt and cook till the gravy is slightly thick.
8. Deep Dip balls into gravy and serve hot.

Ingredients	Weight	Measure/No.
For gravy		
Spinach(chopped)	125 g	1¼ cup
Tomato puree	50 g	½ cup
Tomato sauce	30 g	2 tbsp
Oil	10 ml	1 dsp
Garlic paste	2 g	½ tsp
Ginger paste	2 g	½ tsp
Green chillies	2 g	1 piece
Red chilli powder	0.50 g	¼ tsp
Black pepper powder	0.25 g	¼ tsp
Salt	to taste	to taste
For manchurian balls		
Tomato sauce	30 g	2 tbsp
Cabbage	25 g	¼ small size
Carrot	25 g	1 small size
Onion	25 g	1 small size
Corn flour	20 g	2 dsp
Refined flour	20 g	2 dsp
Refined oil (absorbed)	20 ml	2 dsp
Capsicum	15 g	½ small size
French bean	15 g	4 piece
Soy sauce	5 g	1 tsp
Chilli sauce	5 g	1 tsp
Black pepper powder	0.25 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	380 g	10 balls (2 bowl)

Green Manchurian

Vegetable Chilli

Nutritive value per serving

Energy (Kcal)	**161**
Protein (g)	**4.26**
Fat (g)	**0.97**
Mineral (g)	**1.43**
Fibre (g)	**2.26**
Calcium (mg)	**63.82**
Iron (mg)	**2.50**
Carotene (µg)	**773.18**

Method

1. Chop vegetables.
2. Divide chopped capsicum and onion in two parts.
3. Make a thick mixture of pouring consistency paste by mixing flour, half chopped capsicum, onion, salt and other vegetables with sufficient water. Divide the mixture into 16 balls.
4. Deep-fry balls in hot oil.
5. Shallow-fry remaining half chopped capsicum, onion, green chilli, ginger-garlic paste and add salt.
6. Add fried balls in it.
7. Mix sauce and stir-fry for 2 minutes.
8. Serve hot.

Ingredients	Weight	Measure/No.
Capsicum	100 g	1 big size
Carrot	50 g	1 medium size
Cabbage	50 g	½ small size
French bean	50 g	10 piece
Onion	50 g	1 medium size
Tomato sauce	50 g	3 tbsp
Refined flour	30 g	2 tbsp
Corn flour	30 g	2 tbsp
Oil (absorbed)	30 ml	2 tbsp
Garlic paste	5 g	1 tsp
Ginger paste	5 g	1 tsp
Soy sauce	5 g	1 tsp
Chilli sauce	5 g	1 tsp
Green chilli	2.50 g	2 piece
Salt	to taste	to taste
Cooked preparation	525 g	16 balls

Vegetable Chilli

Soup and Raita

Mixed Vegetable Soup

Nutritive value per serving

Energy (Kcal)	**56**
Protein (g)	**1.94**
Fat (g)	**0.48**
Mineral (g)	**0.50**
Fibre (g)	**0.89**
Calcium (mg)	**29.30**
Iron (mg)	**0.80**
Carotene (µg)	**446.35**

Method

1. Finely chop all vegetables.
2. Heat oil, stir-fry chilli, onion, carrot, capsicum and bean till soft.
3. Add garlic and ginger paste, stir for a minute and add salt.
4. Add water and bring to a boil.
5. Allow the vegetables to simmer with lid for 20 minutes, stir occasionally.
6. Add little water to corn starch and make a smooth paste by stirring.
7. Add starch paste to simmering vegetable and simmer for a few minutes.
8. Season with pepper powder and sauce.
9. Add coriander leaves and serve hot.

Ingredients	Weight	Measure/No.
Carrot	20 g	1 small size
Tomato	20 g	1 small size
Onion	20 g	1 small size
Corn starch	20 g	2 dsp
Cabbage	10 g	small piece
Capsicum	10 g	½ small size
French beans	10 g	4 piece
Oil	10 ml	1 dsp
Tomato sauce	5 g	1 tsp
Coriander leaves	5 g	1 bunch
Soy sauce	3 g	½ tsp
Garlic paste	2 g	½ tsp
Ginger paste	2 g	½ tsp
Chilli sauce	2 g	½ tsp
Green chilli	2 g	1 piece
Black pepper powder	0.50 g	¼ tsp
Water	500 ml	2 cup (approx.)
Salt	to taste	to taste
Cooked preparation	170 ml	2 bowl

Mixed Vegetable Soup

Mixed Vegetable Raita

Nutritive value per serving

Energy (Kcal)	**80**
Protein (g)	**3.14**
Fat (g)	**3.12**
Mineral (g)	**0.94**
Fibre (g)	**0.40**
Calcium (mg)	**133.7**
Iron (mg)	**0.53**
Carotene (µg)	**249**

Method

1. Chop onion, tomato, chilli and coriander leaves.
2. Boil potatoes and cut them into small pieces.
3. Blend curd separately.
4. Add chopped vegetables, boiled potatoes and other ingredients.
5. Garnish with coriander leaves and serve.

Ingredients	Weight	Measure/No.
Curd	150 g	3/4 cup
Potato	50 g	1 medium size
Onion	25 g	1 small size
Tomato	25 g	1 small size
Coriander leaves	5 g	Few
Green chilli	2 g	1 piece
Roasted cumin powder	0.50 g	¼ tsp
Red chilli powder	0.50 g	¼ tsp
Salt	to taste	to taste
Black salt	to taste	to taste
Cooked preparation	258 g	2 bowl

Mixed Vegetable Raita

Cucumber Raita

Nutritive value per serving

Energy (Kcal)	**38**
Protein (g)	**1.88**
Fat (g)	**2.17**
Mineral (g)	**0.61**
Fibre (g)	**0.35**
Calcium (mg)	**85**
Iron (mg)	**46**
Carotene (µg)	**105.46**

Method

1. Grate cucumber.
2. Blend curd.
3. Add salt, black salt, cumin seed and chilli powder.
4. Add grated cucumber, chopped green chillies and mix properly.
5. Garnish with coriander leaves and serve.

Ingredients	Weight	Measure/No.
Curd	100 g	½ cup
Cucumber	100 g	2 medium size
Coriander leaves	2.5 g	Few
Green chillies	2 g	1 piece
Roasted cumin powder	0.50 g	¼ tsp
Red chilli powder	0.50 g	¼ tsp
Salt	to taste	to taste
Black salt	to taste	to taste
Cooked preparation	200 g	2 bowl

Cucumber Raita

Rice and Parantha

Vegetable Pulao

Nutritive value per serving

Energy (Kcal)	**287**
Protein (g)	**4.51**
Fat (g)	**15.65**
Minerals (g)	**0.89**
Fibre (g)	**1.47**
Calcium (mg)	**60.2**
Iron (mg)	**1.38**
Carotene (µg)	**316.8**

Method

1. Wash rice and soak for an hour. Drain the water just before cooking.
2. Soak soy chunks in warm water for about 15 minutes and squeeze out excess water.
3. Chop vegetables.
4. Heat oil (1 tbsp) in a thick pan, add bay leaves, cumin seeds, cinnamon, cloves and cardamom, allowing enough time for individual ingredients to turn brown.
5. Add vegetables and fry till golden.
6. Add drained rice and fry for 2-3 minutes.
7. Add salt, sugar, soy chunks and water (double the amount of rice) and bring to boil.
8. Lower heat to medium low, stir and cover the pan with a lid. It will take 10-15 minutes for the rice to get cooked.
9. Serve hot with curry and pickle.

Ingredients	Weight	Measure/No.
Rice	60 g	¼ cup
Carrot	30 g	1 small size
Onion	50 g	1 medium size
Capsicum	30 g	1 small size
Cauliflower	25 g	¼ cup
Peas	25 g	¼ cup
Oil	15 ml	1 tbsp
Soy chunks	10 g	10 piece
Green chillies	2 g	1 piece
Cumin seed	0.50 g	¼ tsp
Cinnamon	0.50 g	1 small piece
Cloves	0.25 g	2 piece
Cardamom	0.50 g	1 piece
Sugar	0.25 g	½ tsp
Bay leaves	1 piece	1 piece
Salt	to taste	to taste
Water	120 g	½ cup (approx.)
Cooked preparation	360 g	2 bowl

Vegetable Pulao

Green Pulao

Nutritive value per serving

Energy (Kcal)	**231**
Protein (g)	**5.10**
Fat (g)	**8.19**
Mineral (g)	**1.67**
Fibre (g)	**1.73**
Calcium (mg)	**76.7**
Iron (mg)	**1.81**
Carotene (µg)	**3157**

Method

1. Wash rice and soak for an hour. Drain the water just before cooking.
2. Soak soy chunks in warm water for about 15 minutes and squeeze out excess water.
3. Chop vegetables.
4. Blanch chopped spinach in boiling water for 2 minutes. Cool and grind to a fine paste.
5. Heat oil (1 tbsp) in a thick pan, add bay leaves, cumin seeds, cinnamon, cloves and cardamom, allowing enough time for individual ingredients to turn brown.
6. Add vegetables and fry till golden.
7. Add drained rice and fry for 2-3 minutes.
8. Add spinach paste, soy chunks, salt, sugar and water (double the amount of rice) and bring to boil.
9. Lower heat to medium low, stir and cover the pan with a lid. It will take 10-15 minutes for the rice to get cooked.
10. Serve hot with seasoned curd and pickle.

Ingredients	Weight	Measure/No.
Spinach	100 g	1 cup
Rice	60 g	¼ cup
Carrot	30 g	1 small size
Onion	50 g	1 medium size
Capsicum	30 g	1 small size
Cauliflower(chopped)	25 g	¼ cup
Peas	25 g	¼ cup
Oil	15 ml	1 tbsp
Soy chunks	10 g	10 piece
Green chillies	2 g	1 piece
Cumin seeds	0.50 g	¼ tsp
Cinnamon	0.50 g	1 small piece
Cloves	0.25 g	2 piece
Cardamom	0.50 g	1 piece
Sugar	0.25 g	½ tsp
Bay leaves	1 piece	1 piece
Salt	to taste	to taste
Water	120 g	½ cup (approx.)
Cooked preparation	360 g	2 bowl

Green Pulao

Red Pulao

Nutritive value per serving

Energy (Kcal)	**239.67**
Protein (g)	**4.95**
Fat (g)	**7.89**
Minerals (g)	**1.06**
Fibre (g)	**1.88**
Calcium (mg)	**49.35**
Iron (mg)	**1.84**
Carotene (µg)	**367.17**

Method

1. Wash rice and soak for an hour. Drain the water just before cooking.
2. Soak soy chunks in warm water for about 15 minutes and squeeze out excess water.
3. Chop vegetables.
4. Grind beetroot to a fine paste.
5. Heat oil (1 tbsp) in a thick pan, add bay leaves, cumin seeds, cinnamon, cloves and cardamom, allowing enough time for individual ingredients to turn brown.
6. Add vegetables and fry till light golden.
7. Add drained rice and fry for 2-3 minutes.
8. Add beetroot paste, soychunks, salt, sugar and water (double the amount of rice) and bring to boil.
9. Lower heat to medium low, stir the pulao and cover the pan with a lid. It will take 10-15 minutes for the rice to get cooked.
10. Serve hot with seasoned curd and pickle

Ingredients	Weight	Measure/No.
Beetroot	100 g	1 big size
Rice	60 g	¼ cup
Carrot	30 g	1 small size
Onion	50 g	1 medium size
Capsicum	30 g	1 small size
Cauliflower	25 g	¼ cup
Peas	25 g	¼ cup
Oil	15 ml	1 tbsp
Soy chunks	10 g	10 piece
Green chillies	2 g	1 piece
Cumin seed	0.50 g	¼ tsp
Cinnamon	0.50 g	1 small piece
Cloves	0.25 g	2 piece
Cardamom	0.50 g	1 piece
Sugar	0.25 g	½ tsp
Bay leaves	1 piece	1 piece
Salt	to taste	to taste
Water	120 g	½ cup (approx.)
Cooked preparation	400 g	2 bowl

Red Pulao

Paustic Missi Roti

Nutritive value per serving

Energy (Kcal)	**178**
Protein (g)	**6.39**
Fat (g)	**1.20**
Minerals (g)	**1.62**
Fibre (g)	**1.47**
Calcium (mg)	**74.7**
Iron (mg)	**2.57**
Carotene (µg)	**653.38**

Method

1. Make dough by mixing wheat flour, ragi flour, besan with chopped spinach, carrot and other ingredients.
2. Cover with a wet cloth and keep for 30 minutes.
3. Divide into small balls (6), roll and place on a hot tawa and let it remain for a few seconds.
4. Turn it and wait till the side of roti has a few brown marks. Turn and pat with a piece of cloth to puff. Puffing can also be done by placing the roti on live charcoal.
5. Serve hot with pickle.

Ingredients	Weight	Measure/No.
Wheat flour	100 g	¾ cup
Besan	25 g	5 tsp
Ragi flour	25 g	5 tsp
Spinach (chopped)	25 g	¼ cup
Carrot	25 g	1 medium size
Ginger paste	2 g	½ tsp
Garlic paste	2 g	½ tsp
Green chillies	2 g	1 piece
Carom seeds	0.50 g	½ tsp
Black cumin seeds	0.25 g	¼ tsp
Water	90 ml	¾ cup
Salt	to taste	to taste
Cooked preparation	260 g	6

Paustic Missi Roti

Paustic Palak Parantha

Nutritive value per serving

Energy (Kcal)	**310**
Protein (g)	**6.4**
Fat (g)	**2.02**
Minerals (g)	**1.59**
Fibre (g)	**1.23**
Calcium (mg)	**35.95**
Iron (mg)	**2.69**
Carotene (µg)	**729.35**

Method

1. Chop green chillies.
2. Add oil (1 dsp), chopped spinach and other ingredients into wheat flour and make a dough.
3. Cover dough with wet cloth and keep it aside for 30 minutes.
4. Divide the dough into 4 equal balls, roll it and place on a hot tawa and wait till slightly cooked.
5. Turn and wait till brown marks appear.
6. Apply some oil, turn and shallow-fry from both sides.

Ingredients	Weight	Measure/No.
Wheat flour	100 g	¾ cup
Oil	30 ml	2 tbsp
Spinach(Chopped)	25 g	¼ cup
Green chillies	3 g	2 piece
Ginger paste	2 g	½ tsp
Lemon juice	2 ml	½ tsp
Coriander powder	0.50 g	¼ tsp
Garam masala	0.50 g	¼ tsp
Water	50 ml	1/5 cup
Salt	to taste	to taste
Cooked preparation	155 g	4

Paustic Palak Parantha

Stuffed Cauliflower Parantha

Nutritive value per serving

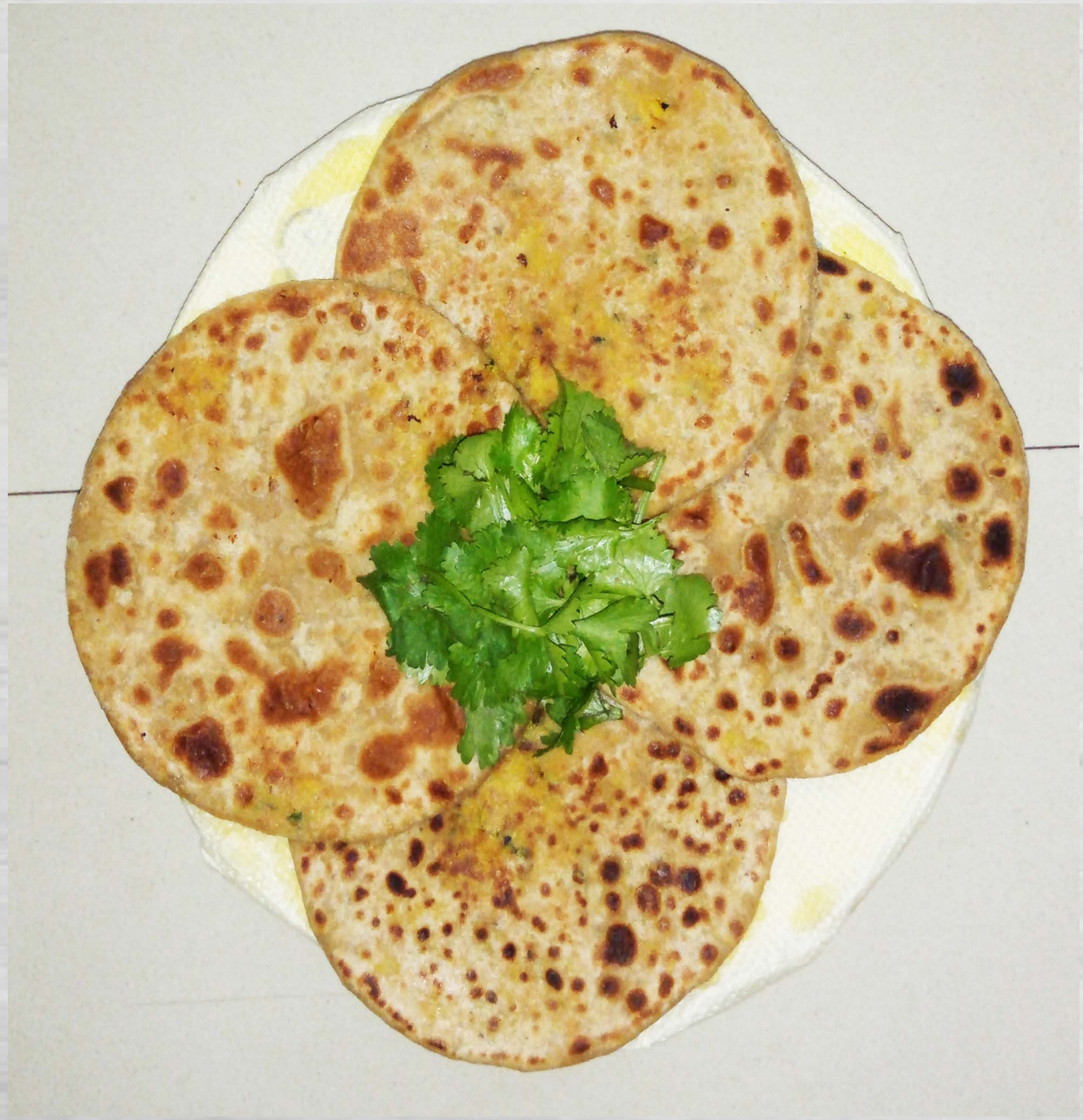
Energy (Kcal)	**255**
Protein (g)	**8.40**
Fat (g)	**7.49**
Minerals (g)	**2.26**
Fibre (g)	**2.38**
Calcium (mg)	**55.9**
Iron (mg)	**3.80**
Carotene (µg)	**113**

Method

1. Chop green chilli and coriander leaves.
2. For filling heat 1 tsp oil, sauté grated cauliflower, add all spices and salt.
3. Knead wheat flour into smooth dough and keep aside for half an hour.
4. Divide dough and fillings into four portions.
5. Roll out each dough portion into a small roti, place about one portion of stuffing in the centre, bring the edges together and press firmly.
6. Roll the stuffed dough into a parantha and shallow fry smearing oil.
7. Let both sides of the parantha turn golden brown.
8. Serve hot with curd or pickle.

Ingredients	Weight	Measure/No.
Wheat flour	100 g	3/4 cup
Grated cauliflower	170 g	1 cup
Oil	15 ml	1 tbsp
Green chillies	4 g	2 piece
Ginger paste	2 g	½ tsp
Coriander leaves	2 g	A few
Turmeric powder	0.50 g	¼ tsp
Carom seeds	0.25 g	½ tsp
Black cumin seeds	0.25 g	½ tsp
Lemon juice	0.25 ml	¼ tsp
Water (as required)	90 ml	1/3 cup (aprx.)
Salt	to taste	to taste
Cooked preparation	236 g	4

Stuffed Cauliflower Parantha



Stuffed Radish Parantha

Nutritive value per serving

Energy (Kcal)	**268**
Protein (g)	**6.88**
Fat (g)	**9.87**
Minerals (g)	**1.94**
Fibre (g)	**2.12**
Calcium (mg)	**61.22**
Iron (mg)	**3.67**
Carotene (µg)	**90.2**

Ingredients	Weight	Measure/No.
Grated radish	170 g	1½ cup
Wheat flour	100 g	3/4 cup
Water	90 ml	1/3 cup approx
Oil	20 ml	1 tbsp
Green chillies	4 gm	2 piece
Coriander leaves	2 g	Few
Ginger paste	2 g	½ tsp
Turmeric powder	0.50 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	210 g	4

Method

1. Knead wheat flour into smooth dough, cover it with a damp cloth and keep it aside.
2. For filling mix chopped chillies, coriander leaves, ginger paste, turmeric powder and salt into grated radish.
3. Divide the dough and fillings into four small portions.
4. Roll out each dough portion into a small roti, place a portion of stuffing in the centre, bring the edges together and press firmly.
5. Roll the stuffed dough into a paratha and shallow-fry smearing oil.
6. Let both the sides of the paratha turn golden brown.
7. Serve hot with curd and pickle.

Stuffed Radish Parantha

Vegetable Rawa Chilla

Nutritive value per serving

Energy (Kcal)	**256**
Protein (g)	**6.9**
Fat (g)	**6.8**
Minerals (g)	**0.62**
Fibre (g)	**0.67**
Calcium (mg)	**85.25**
Iron (mg)	**1.34**
Carotene (µg)	**337.9**

Method

1. Chop onion, carrot, French bean, green chillies and coriander leaves.
2. Blanch chopped carrot, French bean for 3-5 minutes.
3. Mix semolina, salt and green chillies with curd and make a batter by adding water.
4. Add chopped onion, coriander leaves and blanched vegetables to the batter and mix well.
5. Heat a tawa, grease it with oil, pour a ladleful of batter on heated tawa and spread.
6. Cook for a few minutes and turn the upside down.
7. Cook for a few seconds, roll it and serve with sauce.

Ingredients	Weight	Measure/No.
Semolina	80 g	½ cup
Curd	70 g	¼ cup
French bean	25 g	6 piece
Onion	25 g	1 small size
Carrot	25 g	1 small size
Refined flour	20 g	2 dsp
Refined oil	10 ml	1 dsp
Green chillies	3 g	1 piece
Coriander leaves	2 g	Few
Water	100 ml	2/5 cup
Salt	to taste	to taste
Cooked preparation	255 g	6

Vegetable Rawa Chilla

Vegetable Ragi Chilla

Nutritive value per serving

Energy (Kcal)	**178**
Protein (g)	**3.91**
Fat (g)	**6.72**
Minerals (g)	**1.17**
Fibre (g)	**1.66**
Calcium (mg)	**118.8**
Iron (mg)	**1.70**
Carotene (µg)	**278**

Method

1. Chop vegetables and blanch for five minutes.
2. Mix ragi, besan, salt and green chilli and make batter by adding water.
3. Heat oil, add green chillies and chopped onion, stir-fry till transparent. Add blanched vegetables and stir-fry for 5 minutes with lid on.
4. Add coriander leaves to fried vegetables.
5. Divide fried vegetables into six equal portions.
6. Heat a tawa, grease it with oil, put a ladleful of batter and spread.
7. Cook for a few seconds and turn the side.
8. Spread a portion of fried vegetables over it.
9. Cook for a few seconds, roll it and serve with sauce.

Ingredients	Weight	Measure/No.
Ragi flour	70 g	1/3 cup
Carrot	50 g	1 small size
Bengal gram flour	30 g	3 dsp
Onion	25 g	1 small size
Capsicum	25 g	1 small size
Cabbage	25 g	4 of small size
Oil	15 ml	1 tbsp
Coriander leaves	2 g	Few
Ginger paste	2 g	½ tsp
Water	150 ml	½ cup (approx.)
Cooked preparation	360 g	6

Vegetable Ragi Chilla

Amaranth Puri

Nutritive value per serving

Energy (Kcal)	**180**
Protein (g)	**8.96**
Fat (g)	**25.88**
Minerals (g)	**2**
Fibre (g)	**1.66**
Calcium (mg)	**191.5**
Iron (mg)	**2.56**
Carotene (µg)	**1398**

Ingredients	Weight	Measure/No.
Amaranthus leaves(Chopped)	50 g	½ cup
Wheat flour	50 g	1/3 cup
Ragi flour	50 g	1/3 cup
Oil (absorbed)	50 ml	5 dsp
Garlic paste	2 g	½ tsp
Ginger paste	2 g	½ tsp
Carum seeds	0.25 g	¼ tsp
Black cumin seeds	0.25 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	188 g	10

Method

1. Steam amaranth leaves and grind to a fine paste.
2. Add oil (1 tbsp) to sieved flour and mix properly.
3. Add amaranth paste, ginger-garlic paste, salt, carum and cumin seeds and make a dough.
4. Cover the dough with a wet cloth and keep aside to rest.
5. Divide dough into ten equal balls and roll into small chapaties.
6. Heat oil and deep-fry each small chapatti till they puff and become slightly brown on both sides.

Notes: Palak and other seasonally available leaves can be used in place of amaranthus leaves.

Amaranth Puri

Khasti Kachauri

Nutritive value per serving

Energy (Kcal)	**698**
Protein (g)	**12.11**
Fat (g)	**48.68**
Minerals (g)	**1.57**
Fibre (g)	**0.79**
Calcium (mg)	**71.07**
Iron (mg)	**2.72**
Carotene (µg)	**1408**

Method

1. Soak dal for 2 hours, drain water completely and grind coarsely.
2. Steam spinach and grind it.
3. Add spinach paste to flour and make smooth dough.
4. Heat oil (1 tbsp), add all spices and stir for a minute.
5. Add ground dal, sugar, salt and stir-fry for 2-3 minutes.
6. Divide fillings and dough into 8 equal portions.
7. Roll out each dough portion into a small roti, place one portion of dal fillings in the centre, bring the edges together and press firmly.
8. Roll the stuffed dough into a puri.
9. Heat oil and deep fry till golden on both sides.

Ingredients	Weight	Measure/No.
Refined flour	100 g	⅔ cup
Oil (absorbed)	95 ml	⅖ cup
Black gram dhal	50 g	¼ cup
Spinach	50 g	½ cup
Red chilli powder	1 g	1 tsp
Mango powder	0.50 g	¼ tsp
Coriander powder	0.50 g	¼ tsp
Carum	0.25 g	¼ tsp
Cumin seed	0.25 g	¼ tsp
Sugar	0.25 g	¼ tsp
Garam masala	0.25 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	252 g	8

Khasti Kachauri

Curry and Kofta

Lauki Ka Kofta

Nutritive value per serving

Energy (Kcal)	**357**
Protein (g)	**5.56**
Fat (g)	**26.9**
Minerals (g)	**1.58**
Fibre (g)	**2.64**
Calcium (mg)	**74.6**
Iron (mg)	**2.98**
Carotene (µg)	**126.2**

Method

1. Grate bottle gourd, chop green chillies, tomato, onion and coriander leaves.
2. Mix grated bottle gourd, besan, rice flour, salt, turmeric and divide mixture into eight portions and make balls.
3. Fry the balls in deep oil till brown on all sides.
4. Drain and keep aside.
5. Heat 1 dsp oil and stir-fry onion till golden brown.
6. Add ginger-garlic paste and other spices including salt and fry for a few minutes.
7. Add chopped tomatoes and cook till all the moisture evaporates.
8. Add a cup of water and allow to simmer till the gravy is slightly thick.
9. Add deep fried kofta and remove from the flame.
10. Garnish with coriander leaves and serve hot.

Ingredients	Weight	Measure/No.
Bottle gourd (grated)	75 g	¾ cup
Onion	50 g	1 medium size
Tomato	50 g	1 medium size
Bengal gram flour	25 g	5 tsp
Oil	20 ml	2 dsp
Ginger paste	17 g	1 tbsp
Rice flour	10 g	1 dsp
Garlic paste	5g	1 tsp
Coriander powder	5 g	2 tsp
Cumin seed powder	2.5 g	1 tsp
Green chillies	2 g	1 piece
Red chilli powder	1 g	½ tsp
Turmeric powder	1 g	¼ tsp
Fenugreek seeds	0.50 g	¼ tsp
Black pepper powder	0.50 g	¼ tsp
Gram masala	0.25 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	336 g	8 (2 bowl)

Lauki Ka Kofta

Stuffed Capsicum

Nutritive value per serving

Energy (Kcal)	**123**
Protein (g)	**4.18**
Fat (g)	**16.56**
Minerals (g)	**1.72**
Fibre (g)	**4.78**
Calcium (mg)	**136.78**
Iron (mg)	**2.88**
Carotene (µg)	**1151**

Method

1. Chop vegetables except capsicum and potato.
2. Cut capsicum into halves and scoop.
3. Boil potato and mash it.
4. Heat oil (1 tbsp), add asafoetida, chopped onion, garlic and fry till golden brown.
5. Add green chilli, carrot, spices and salt.
6. Add mashed potato and stir-fry till oil separates.
7. Fill capsicum halves with cooked vegetables.
8. Either bake them in an oven or fry on slow fire in a pan by applying oil (1 tbsp) with heavy cover.
9. Serve hot.

Ingredients	Weight	Measure/No.
Capsicum	200 g	2 big size
Potato	100 g	2 medium size
Carrot	50 g	1 medium size
Oil	30 ml	2 tbsp
Onion	20 g	1 small size
Coriander powder	10 g	1 dsp
Garlic paste	5 g	2 tsp
Cumin powder	5 g	2 tsp
Coriander leaves	5 g	1 bunch
Green chillies	2 g	1 piece
Red chilli powder	0.50 g	¼ tsp
Turmeric powder	0.50 g	¼ tsp
Asafoetida	0.25 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	345 g	4 piece

Stuffed Capsicum

Stuffed Bitter gourd

Nutritive value per serving

Energy (Kcal)	**220**
Protein (g)	**3.33**
Fat (g)	**17.32**
Minerals (g)	**1.28**
Fibre (g)	**2.51**
Calcium (mg)	**76.83**
Iron (mg)	**1.88**
Carotene (µg)	**155.73**

Method

1. Wash and chop onion.
2. Cut bitter gourd longitudinally into half without separating, scoop and boil for a few minutes.
3. Heat oil (3 tbsp), fry onion, garlic and ginger paste till golden brown.
4. Add all spices, salt and fry till cooked.
5. Stuff cooked mixture into bitter gourd.
6. Fry (shallow) stuffed bitter gourd on slow fire in a heavy pan with lid.

Ingredients	Weight	Measure/No.
Bitter gourd	330 g	4 medium size
Onion	200 g	4 medium size
Oil	65 ml	¼ cup
Coriander powder	15 g	1 tbsp
Garlic paste	15 g	1 tbsp
Cumin powder	5 g	1 tsp
Ginger paste	5 g	1 tsp
Mango powder	1.50 g	1 tsp
Turmeric powder	0.50 g	¼ tsp
Black pepper	0.50 g	¼ tsp
Red chilli powder	0.50 g	¼ tsp
Fenugreek seeds	0.50 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	330 g	4

Stuffed Bitter gourd

Stuffed Tomato

Nutritive value per serving

Energy (Kcal)	**154**
Protein (g)	**2.11**
Fat (g)	**10.63**
Minerals (g)	**0.97**
Fibre (g)	**1.79**
Calcium (mg)	**83.77**
Iron (mg)	**1.23**
Carotene (µg)	**629.95**

Method

1. Scoop the tomato.
2. Boil potato and mash it.
3. Chop vegetables and blanch.
4. Heat oil (2 tbsp), add chopped onion, garlic and fry till golden brown.
5. Add blanched vegetables, green chillies, other spices and salt.
6. Add potato and stir-fry till oil separates.
7. Fill the tomato with the fried vegetables.
8. Either bake them in an oven or shallow-fry on slow flame in a heavy pan with lid.

Ingredients	Weight	Measure/No.
Tomato	300 g	4 big size
Potato	100 g	2 medium size
French bean	50 g	10 piece
Carrot	50 g	1 medium size
Onion	50 g	1 medium size
Oil	40 ml	4 dsp
Coriander powder	5 g	1 tsp
Cumin seed powder	5 g	2 tsp
Chat masala	5 g	1½ tsp
Coriander leaves	5 g	1 bunch
Green chillies	2 g	1 piece
Red chilli powder	0.50 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	345 g	4

Stuffed Tomato

Baigan ki Kalonji

Nutritive value per serving

Energy (Kcal)	**260**
Protein (g)	**2.92**
Fat (g)	**23.9**
Minerals (g)	**0.67**
Fibre (g)	**2.17**
Calcium (mg)	**45.47**
Iron (mg)	**1.44**
Carotene (µg)	**104.19**

Method

1. Slit brinjal into two half without separating.
2. Grind garlic, ginger and green chilli to a fine paste.
3. Grind coriander, mustard, fennel, cumin and fenugreek seeds to a fine powder.
4. Apply some masala on brinjal.
5. Heat oil and shallow fry brinjal with lid till done.
6. Heat remaining oil and add asafoetida, carom seed and allow it to splutter for few seconds. Add all wet and dried masala and cook till oil gets separated.
7. Add water to masala and boil for a few minutes.
8. Add fried brinjal to gravy and let it simmer for a few seconds.
9. Remove from the fire and sprinkle coriander leaves.

Ingredients	Weight	Measure/No.
Brinjal	250 g	4 piece
Mustard oil	45 ml	3 tbsp
Garlic	10 g	10 cloves
Coriander seed	5 g	1 tsp
Coariander leaves	5 g	1 bunch
Ginger	5 g	½ inch
Green chillies	5g	2 piece
Mustard seed	5 g	1 tsp
Fennel	2 g	1 tsp
Red chilli powder	2 g	½ tsp
Cumin seed	1 g	½ tsp
Mango powder	2 g	½ tsp
Fenugreek seed	1 g	¼ tsp
Turmeric	1 g	¼ tsp
Carom seed	0.55 g	¼ tsp
Garam masala	0.50 g	¼ tsp
Asafoetida	0.25 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	347 g	2 bowl

Baigan ki Kalonji

Kurkuri Bhindi

Nutritive value per serving

Energy (Kcal)	**154**
Protein (g)	**2.27**
Fat (g)	**12.93**
Minerals (g)	**0.60**
Fibre (g)	**0.90**
Calcium (mg)	**44.96**
Iron (mg)	**0.68**
Carotene (µg)	**39.8**

Ingredients	Weight	Measure/No.
Lady's finger	125 g	10 piece
Oil (absorbed)	30 ml	2 tbsp
Gram flour	10 g	1 dsp
Red chilli powder	0.50 g	¼ tsp
Amchur powder	0.25 g	¼ tsp
Garam masala	0.25 g	¼ tsp
Turmeric powder	0.25 g	¼ tsp
Salt	to taste	to taste
Cooked preparation	75 g	40

Method

1. Cut lady's finger lengthwise into four pieces.
2. Spread these pieces on tray.
3. Sprinkle salt, chilli powder, garam masala, amchur powder and mix gently.
4. Sprinkle gram flour and spread it evenly.
5. Heat oil and fry small portions till brown and crisp.
6. Serve hot.

Kurkuri Bhindi

Sweets and Dessert

Gajar Ka Laddoo

Nutritive value per serving

Energy (Kcal)	**228**
Protein (g)	**1.84**
Fat (g)	**13.98**
Minerals (g)	**1.56**
Fibre (g)	**1.53**
Calcium (mg)	**103**
Iron (mg)	**1.33**
Carotene (µg)	**2382**

Ingredients	Weight	Measure/No.
Carrots	250 g	3 big size
Sugar	50 g	5 dsp
Coconut powder	20 g	2 dsp
Ghee	15 g	1 tbsp
Cardamom	0.25 g	¼ tsp
Cooked preparation	210 g	9

Method

1. Grate carrots.
2. Heat ghee, add carrots and stir-fry till golden.
3. Add sugar and cook while stirring frequently till ghee separates.
4. Add cardamom and coconut powder.
5. Allow the mixture to cool a little so that the mixture can be handled.
6. Take about 25 g of the portion and press between palms to make a laddoo.

Gajar Ka Laddoo

Gobhi Ki Kheer

Nutritive value per serving

Energy (Kcal)	**744.33**
Protein (g)	**24.32**
Fat (g)	**42.93**
Minerals (g)	**5.23**
Fibre (g)	**1.36**
Calcium (mg)	**1094**
Iron (mg)	**3.04**
Carotene (µg)	**270.24**

Ingredients	Weight	Measure/No.
Milk	500 ml	2 cup
Cauliflower (grated)	100 g	½ cup
Sugar	20 g	2 dsp
Refined oil	10 ml	1 dsp
Raisins	10 g	10 piece
Cardamom powder	0.25 g	¼ tsp
Cooked preparation	260 g	1cup

Method

1. Grate and blanch cauliflower.
2. Heat oil and sauté grated cauliflower.
3. Add milk and cook while stirring frequently till done.
4. Add dry fruits and cook for 2 minutes.
5. Remove from fire and add sugar.
6. Allow it to cool and serve.

Gobhi Ki Kheer

Lauki Ka Halwa

Nutritive value per serving

Energy (Kcal)	**352**
Protein (g)	**4.73**
Fat (g)	**11.21**
Minerals (g)	**3.09**
Fibre (g)	**3.85**
Calcium (mg)	**63.8**
Iron (mg)	**4.55**
Carotene (µg)	**20.25**

Ingredients	Weight	Measure/No.
Bottle gourd (grated)	450 g	1 medium size
Sugar	70 g	¼ cup
Ghee	15 ml	1 tbsp
Coconut powder	5 g	1 tsp
Cardamom	0.50 g	¼ tsp
Cooked preparation	140 g	2 bowl

Method

1. Grate bottle gourd.
2. Heat ghee and fry grated bottle gourd.
3. Allow to simmer for 20 minutes, covered with lid, stir occasionally.
4. Add sugar, cardamom powder and stir-cook till ghee starts separating from the mixture.
5. Cool it, sprinkle coconut powder and serve.

Lauki Ka Halwa

Preserved Products

Pickles

Mixed Vegetable Pickle

Ingredients	Weight/ Measure
Cauliflower	500 g
Turnip	250 g
Carrot	500 g
Green pea	500 g
Unripe papaya	1 Kg
Beans	250g
Radish	500g
Capsicum	500g
Oil	500 ml
Salt	400 g
Red chilli powder	2 tbsp
Fennel	1tsp
Mustard seed	150 g
Ginger	250 g
Garlic	250 g
Fenugreek	1tsp
Turmeric	3tbsp
Vinegar	1 cup
Ajwain	1 tsp
Mangrella	1 tsp
Asafoetida	½ tsp

Prepared Product: 4.5 Kg

Method

1. Wash all vegetables and cut into small cubes.
2. Blanch all vegetables except ginger and garlic for 2-3 minutes.
3. Dry in the sun for 2-3 hour.
4. Roast fenugreek, fennel and grind coarsely.
5. Heat oil to the smoking point, add asafoetida and put off the fire.
6. Add all spices, chopped ginger, garlic, vinegar, oil, salt to vegetables. Add cooled oil to the vegetables and mix properly.
7. Keep in sun for 4-5 days.
8. Pack pickles in dry jar and store at dry place.

Mixed Vegetable Pickle

Tomato Pickle

Ingredients	Weight/ Measure
Tomato	1 kg
Vinegar	1 cup
Oil	200 ml
Green chilli	100 g
Salt	60 g
Mustard seeds	60 g
Garlic	50 g
Ginger	50 g
Fenugreek seed	½ tsp
Turmeric powder	½ tsp
Curry leaves	Few
Red chilli powder	2 tsp

Prepared Product: 1 Kg

Method

1. Wash tomatoes and cut into four pieces.
2. Grind mustard seeds to a fine powder.
3. Grind garlic and ginger with vinegar.
4. Heat oil, put fenugreek seed and allow spluttering for a few seconds.
5. Add curry leaves, garlic-ginger paste and fry for 10 minutes.
6. Add chopped green chilli, red chilli powder, mustard powder and turmeric to fried mixture.
7. Add tomatoes and cook till oil separates.
8. Add vinegar and cook for 5 minutes.
9. Fill in bottle and seal it.

Tomato Pickle

Mango Pickle

Ingredients	Weight/ Measure
Mango slices	1 kg
Fenugreek seeds	100 g
Salt	150 g
Black cumin seeds	10 g
Red chilli powder	25 g
Black pepper	20 g
Fennel seeds	50 g
Turmeric powder	25 g
Mustard oil	500 ml

Prepared Product: 1 Kg

Method

1. Select healthy, under ripe mangoes.
2. Wash the mangoes, cut into pieces.
3. Spread the pieces on clean cloth till surface moisture evaporates.
4. Roast the spices lightly and grind coarsely.
5. Add salt and spices to mango pieces and mix thoroughly.
6. Fill it in dry, sterilised jar and pour mustard oil in the jar.
7. Store in a cool dry place.

Mango Pickle

Jack Fruit Pickle

Ingredients	Weight/ Measure
Jackfruit	1 kg
Ginger	100 g
Garlic	100g
Mustard seed	50 g
Fennel (roasted)	25g
Carum seeds	10 g
Salt	125 g
Red chilli powder	25 g
Turmeric powder	20 g
Mustard oil	½ kg
Vinegar	1 cup

Prepared Product: 800 g

Method

1. Select tender jack fruit for pickle making.
2. Peel the outer rind with a stainless steel knife after applying oil/ fat on its surface to avoid sticking.
3. Cut the fruit into small pieces of 2-3 cm size. Blanch the pieces into boiling water for 5 -6 minutes.
4. Spread the blanched pieces on a clean cloth in the sun till surface moisture evaporates.
5. Peel garlic and ginger and grind to a fine paste with vinegar.
6. Grind mustard seeds and roasted fennel coarsely.
7. Heat oil in a karahi. Add ginger- garlic paste and fry for 5 minutes. Add all spices, salt and fry for 1-2 minute.
8. Remove from the flame. Add blanched jackfruit pieces, remaining vinegar and mix thoroughly.
9. Fill in dry clean jar and keep in the sun for one week.
10. The pickle gets ready in 10-15 days.

Jack Fruit Pickle

Ole Ka Pickle

Ingredients	Weight/ Measure
Ole	1kg
Ginger	200g
Peeled garlic	200g
Green chillies	100g
Mustard powder	25g
Roasted coriander powder	10g
Roasted fenugreek powder	5g
Roasted cumin powder	5g
Roasted fennel powder	5g
Ajwain	½ tsp
Mangrealla	½ tsp
Haldi powder	20g
Oil	½ litter
Vinegar	1 cup
Salt	125g

Prepared Product: 1.25 Kg

Method

1. Peel and grate ole and ginger.
2. Chop green chillies and garlic into fine pieces.
3. Heat oil to the smoking point; add hing and put off the fire.
4. Add all spices, salt, vinegar, chopped green chilli, garlic and cooled oil to grated ole and ginger and mix thoroughly.
5. Keep in the sun for one week.
6. Fill the pickle in a dry and sterilized jar.

Ole Ka Pickle

Green Chilli - Ginger Pickle

Ingredients	Weight/ Measure
Green chillies	1 kg
Ginger	500 g
Lemon Juice	150 g
Salt	150 g
Vinegar	10 ml

Prepared Product: 1.5 Kg

Method

1. Wash green chillies thoroughly and spread on a clean cloth till water evaporates.
2. Slit chillies lengthwise.
3. Peel and cut ginger into slices and spread it on a clean piece of cloth till the moisture evaporates. Add lemon juice, salt and vinegar to green chillies and ginger slices.
4. Fill it in a clean jar and keep in the sun for 5-6 days.

Green Chilli - Ginger Pickle

Stuffed Red Chillies Pickle

Ingredients	Weight/ Measure
Red chillies	1 kg
Amchur	50 g
Mustard oil	250 ml
Salt	100 g
Cloves	2 g
Cinnamon	2 g
Cumin seeds	2 g
Mustard seeds	20 g
Black Cardamom	1 g

Method

1. Select sound, fully developed and big sized red chillies.
2. Wash red chillies thoroughly and spread on a clean piece of cloth till the moisture evaporates.
3. Remove the stalk and separate the seeds.
4. Roast and grind all the spices.
5. Heat some oil; add spices, salt and seeds. Fill the mixture into chillies thoroughly and transfer it in jars.
6. Keep in sun for 3-4 days. Pour remaining oil on chillies.

Stuffed Red Chillies Pickle

Amla Pickle

Ingredients	Weight/ Measure
Amla	1 kg
Mustard oil	250 ml
Salt	150 g
Red chilli powder	2 tsp
Turmeric powder	2 tsp
Black cumin seed	2 tsp
Fenugreek seeds	25 g
Mustard seeds	50 g
Fennel seeds	25 g

Prepared Product: 1.25 Kg

Method

1. Select fully mature, healthy amlas. Wash them thoroughly under running water.
2. Blanch in boiling water for 5-6 min.
3. Drain away the water and spread on a muslin cloth till the moisture evaporates.
4. Roast fenugreek seeds, black cumin seeds, fennel seeds slightly and grind separately to a fine powder.
5. Put mustard oil in a pan. Allow it to heat. Add a pinch of salt and a few drops of water to produce foam. This evaporates the raw flavour of mustard oil.
6. Add all the spices and fry for 2-3 min.
7. Add amlas and salt; mix them thoroughly and fry for 2-3 min.
8. Allow it to cool.
9. Fill in the dry and sterilised jar.
10. Keep the jar under the sun for 5-6 days. Shake the jar occasionally.

Amla Pickle

Lemon Pickle (Sweet & Sour)

Ingredients	Weight/ Measure
Lemon	1 kg
Sugar	500 g
Salt	150 g
Black salt	50 g
Carum seeds	15 g
Black pepper	10 g
Cumin seeds	10 g
Cloves	02 g
Cinnamon	02 g

Prepared Product: 1.25 Kg

Method

1. Select fully ripe lemons and wash thoroughly.
2. Spread on a muslin cloth and allow them to dry.
3. Cut all the lemons in four parts keeping the bottom attached.
4. Roast spices slightly and grind separately to a coarse powder.
5. Add salt, sugar, roasted spices to lemon cuts and mix properly.
6. Pour the pickle in clean, dry and sterilised jar.
7. Keep it in the sun for 7-8 days.

Lemon Pickle (Sweet and Sour)

Green Chilli Pickle

Ingredients	Weight/ Measure
Green chillies	1 kg
Mustard seeds	50 g
Salt	50 g
Cumin seeds	25 g
Fennel seeds	25 g
Turmeric powder	50 g
Mustard oil	25-30 ml
Lime juice	20 ml

Prepared Product: 1.2 Kg

Method

1. Wash the green chillies thoroughly and spread on a clean cloth till water evaporates.
2. Slit chillies lengthwise.
3. Roast fenugreek seeds, fennel seeds slightly and grind coarsely. Also grind mustard seeds separately.
4. Heat oil in a pan, add spices and fry for 2-3 min. add salt and mix thoroughly.
5. Fill chillies with masala.
6. Fill in the clean, dry and sterilised jar. Pour lemon juice and shake well.

Green Chilli Pickle

Bamboo Shoot Pickle

Ingredients	Weight/ Measure
Tender bamboo shoots	1 kg
Salt	100 g
Mustard oil	300 ml
Fenugreek seeds	20 g
Tamarind powder	30 g
Fennel seeds	40 g
Red chilli powder	15 g
Mustard seeds	30 g
Vinegar	1tbsp

Prepared Product: 1 Kg

Method

1. Cut bamboo shoots into small pieces.
2. Boil chopped bamboo shoots 3-4 times by changing water.
3. Spread boiled bamboo shoots on a clean cloth in sun for 2-3 hours.
4. Roast fenugreek, fennel seeds till it starts to splutter. Let it cool down.
5. Now grind roasted fenugreek, fennel, mustard seeds separately into coarse powder.
6. In a mixing bowl, add the bamboo shoots, ground spices, vinegar, salt and mustard oil. Mix all together nicely.
7. Transfer the mixture in a sterilized jar and keep in the sun for 7-8 days.

Bamboo Shoot Pickle

Mahua Ka Pickle

Ingredients	Weight/ Measure
Dried Mahua flower	500 g
Tamarind paste	200 g
Mustard oil	100 ml
Acetic acid	½ tsp
Red chilli powder	1 tsp
Roasted fenugreek seed powder	1 tsp
Roasted cumin seed powder	1 tsp
Mustard powder	2 tsp
Hing	½tsp
Fennel seed	½tsp
Salt	70 g

Prepared Product: 1.25 Kg

Method

1. Soak dried Mahua flower in water for overnight
2. Blanch soaked mahua flower in 2% citric acid solution for 5-6 minutes.
3. Drain the water and spread on a clean piece of cloth till moisture evaporates.
4. Heat oil and put hing; add all spices, salt and stir fry for 1-2 minutes.
5. Add acetic acid and transfer the content to a clean and dry jar and keep it in the sun for 3-4 days.

Mahua Ka Pickle

Preserved Products

Jam and Jelly

Guava Jelly

Ingredients	Weight/ Measure
Guava	1 kg
Citric acid	½ tsp
Sugar	as required
Water	1 litre
Prepared product	2 bottle

Test of Pectin

Take two teaspoonfuls of cooked fruit extract and add gently four spoons of methylated spirit or alcohol and shake a little. The pectin present in the extract will jell. If one thick clot is formed, sugar equal or 3/4th of the weight of the juice is to be added and the juice is considered rich in pectin. If clot breaks up into two or three pieces, the pectin content is medium and 2/3rd or 3/4th to 1/2 amount of sugar by weight is to be added. If the pectin test indicates below medium pectin (very thin gelatine air mass) the extract should be heated to concentrate pectin, till it gives a test for good or medium pectin. Synthetic pectin, if needed can also be added.

Method

1. Select just ripe guava, wash and cut them into thin pieces.
2. Add water to cover up the fruit slices well.
3. Add citric acid and simmer over slow flame for about half an hour.
4. Crush and press while cooking, stain the extract. Again boil the residue after adding a little amount of water.
5. Strain and mix it with earlier extract.
6. Filter the extract through thick cloth without squeezing.
7. Allow it to stand overnight to make it clear.
8. Perform the pectin test for determining the amount of sugar to be added.
9. Put the extract on fire.
10. Cook quickly, till the end point is reached or the temperature reaches to 105.5^0 C.
11. Remove scum quickly near the end point. Add flavour, edible colour, if desired. Strain, if needed, through muslin cloth.
12. Pour in clean dry wide- mouthed jars.

End Point Test

End point of jams and jellies can be determined by sheet test or drop test.

Sheet test: when the product becomes sufficiently thick in consistency, dip a spoon into it and let the product run off the sides of the spoon. Allow it to cool, if the product falls off in the form of a sheet instead of flowing in a single stream, it means that the end point has reached and the product is ready for filling into containers. Otherwise continue cooking till the sheet test is satisfactory.

Drop test: Pour a drop of concentrated product in a plate containing water. If it settles down without disintegration, the end point is reached.

Guava Jelly

Tomato Jam

Ingredients	Weight/ Measure
Tomato	1 kg
Sugar	750 g
Pectin	10 g
Citric acid	½ tsp
Prepared Jam	2 bottle

Method

1. Boil tomato slices and extract puree through a stainless steel strainer to separate the seeds and skins.
2. Add sugar to puree, boil and strain once again.
3. Concentrate the mixture.
4. Add citric acid and pectin when mixture started thickening.
5. When the mass has become sufficiently thick in consistency, dip a spoon into it and let the product run off the sides of the spoon. If, on cooling, the product falls off in the form of a sheet instead of flowing in a single stream it means that jam is ready,
6. Pour the hot jam into clean dry jars or bottles.

Tomato Jam

Mixed Fruit Jam

Ingredients		Weight/ Measure
Pineapple	Peeled and chopped	250g
Guava		250 g
Mango		250g
Banana		250g
Sugar		750g
Citric acid		3-4 g
Water		250 ml
Prepared Jam		2 bottle

Method

1. Wash pineapple, guava and mango, remove the peel and cut into small pieces.
2. Peel banana and cut into slices and mix with above mixture.
3. Add water and citric acid, cook till it becomes soft.
4. Crush while boiling so that it turns into a uniform thick mass.
5. Add sugar, stir continuously and simmer for 1-2 minutes.
6. Cook rapidly till end point is reached.
7. Add desired colour.
8. Pour the hot jam into clean jars and cover properly.

Mixed Fruit Jam

Preserved Products

Sauce / Ketchup and Chutney

Tomato Ketchup

Ingredients	Weight/ Measure
Tomato	2 kg
Onion	100 g
Ginger	50 g
Garlic	20 g
Garam masala	15 g
Red chilli powder	20 -25 g
Salt	10 g
Sugar	100-150 g
Acetic acid	2 tbsp
Sodium benzoate	1 g/kg cooked preparation

Prepared Product: 1 Kg

Method

1. Select fully ripe deep red colored tomatoes.
2. Cook tomato, onion, red chilli powder, garlic and ginger in pressure cooker till one or two whistle.
3. Strain puree through stainless steel strainer to separate the skins and seeds. Discard the seeds and skins.
4. Add about 1/3 rd of sugar
5. Tie garam masala in a muslin cloth and immerse into pulp.
6. Cook pulp till it reduces to one third of its original mass.
7. Take out garam masala bag and squeeze it properly to extract the juice and flavour of spices.
8. Remove the muslin bag; add acetic acid, salt and remaining sugar.
9. Cook it till the finished product is of desired consistency.
10. Test consistency of Ketchup by pouring a little sample on a dry plate. If water separates out, cook for some more time.
11. Remove from fire; mix sodium benzoate to a small quantity of the finished product and transfer it to the rest of the product.
12. Mix well and pour the product into clean and dry bottles while hot and seal.

Tomato Ketchup

Chilli Sauce

Ingredients	Weight/ Measure
Green chilli	1 kg
Unripe Papaya	1 kg
Ginger	200 g
Garlic	200 g
Vinegar	2 litre
Sugar	150 g
Salt	120 g
Cardamom powder	5 g
Turmeric powder	2 tsp
Dalchini powder	½ tsp

Prepared Product: 3.5 Kg

Method

1. Peel ginger, garlic and unripe papaya.
2. Cut papaya into medium size.
3. Grind ginger and garlic with vinegar to a fine paste.
4. Cook papaya, chilli, ginger-garlic paste with turmeric powder and vinegar in pressure cooker for10 minutes and keep aside to cool.
5. Grind cooked mass and strain through stainless steel strainer.
6. Cook it on low flame.
7. Add all spices, salt, and sugar.
8. Cook it till the product is of desired consistency.
9. Pour the sauce into sterlised bottles while hot and seal.

Chilli Sauce

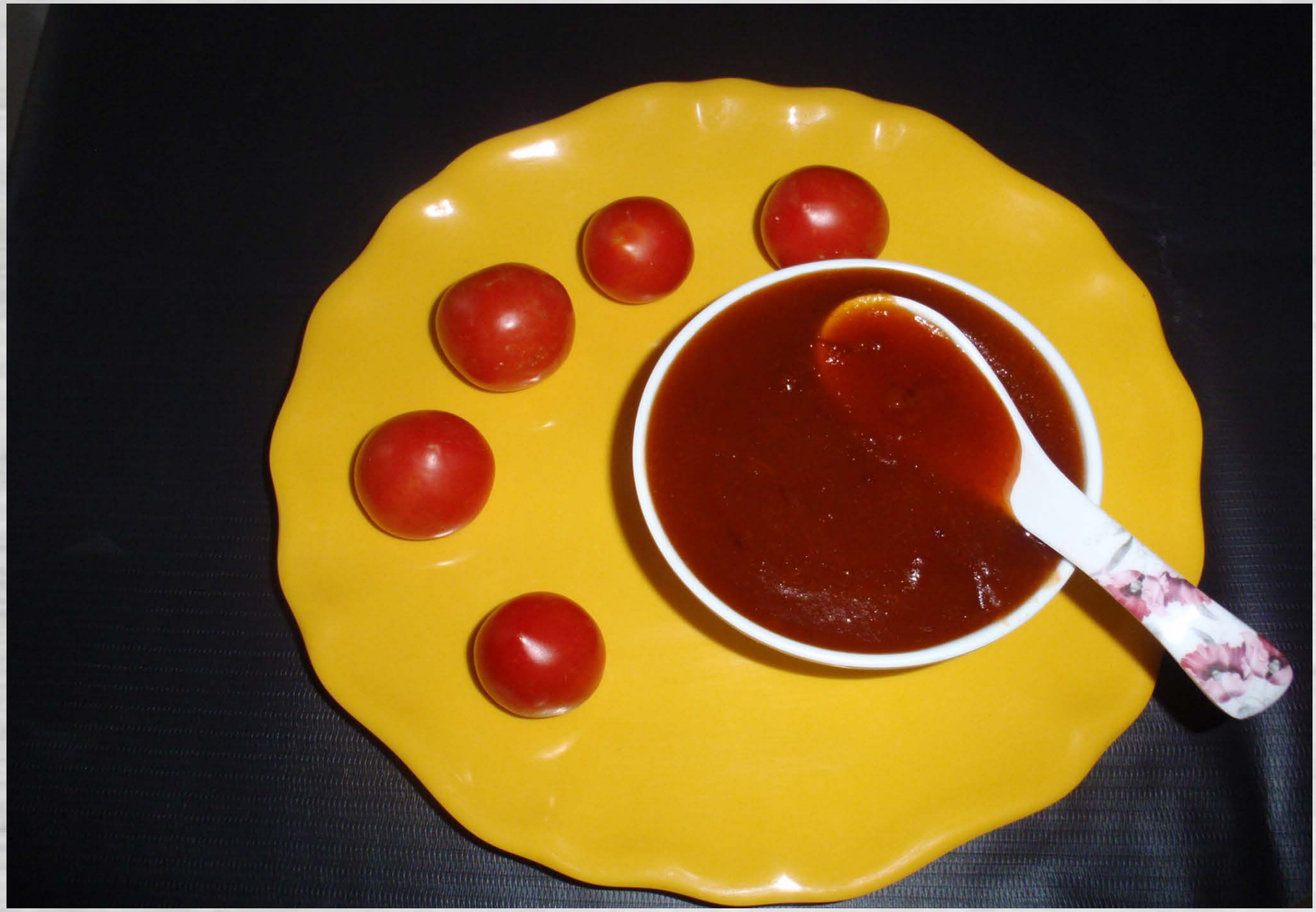
Tomato Chutney

Ingredients	Weight/ Measure
Tomato	1 kg
Sugar	750 g
Onion	100 g
Ginger	50 g
Garlic	20 g
Red chilli powder	10 g
Salt	10 g
Garam masala	7 g
Acetic acid	5 ml
Prepared Chutney	1.5 Kg

Method

1. Blanch tomato for 3-4 minutes.
2. Dip immediately in cold water.
3. Peel, mash and strain through stainless steel strainer.
4. Cook all ingredients except acetic acid till thick consistency.
5. Turn off the flame and add acetic acid.
6. Pour the chutney in clean jars and seal.

Tomato Chutney



Preserved Products

Squash

Bael Squash

Ingredients	Weight/ Measure
Bael juice	1 litter
Sugar	1½ kg
Water	1 litter
Citric acid	4 tsp
Potassium meta bisulphite	600 mg/kg of finished product

Prepared Product : 3 bottle

Method

1. Extract pulp with the help of spoon.
2. Remove seed and fiber.
3. Add double quantity of water to its weight and leave overnight.
4. Next day rub the pulp and strain the juice by passing through a stainless steel strainer.
5. Mix sugar, citric acid and water and boil. Remove scum and strain through a muslin cloth.
6. Mix juice and syrup when it is cool. Dissolve potassium meta bisulphite in small quantity of squash and add this to entire quantity.
7. Fill squash into dry sterilized bottles, leaving 2.5-3.5 cm space at the top.
8. Seal the bottle and store in cool dry place.

Bael Squash

Green Mango Squash

Ingredients	Weight/ Measure
Raw mango	1 kg
Water	1.5 kg
Sugar	1.5 kg
Salt	80g
Mint juice	4 tsp
Cumin seed powder	2 tsp
Citric acid	1 tsp
Sodium benzoate	0.6 g/kg prepared product
Green colour	200mg/kg of prepared product

Prepared Product : 4 bottle

Method

1. Peel the skin of the mango and grate.
2. Cook grated pieces with water till soft
3. Strain the juice and let it cool.
4. Take mint leaves(50g) and grind with little water and strain the juice
5. Mix sugar, citric acid and water and boil. Add salt, spices and turn off the flame. Remove scum and strain through a muslin cloth.
6. Mix both juice and syrup when it is cool. Dissolve potassium meta bisulphite, colour in small quantity of squash and add this to entire quantity.
7. Fill squash into dry sterilized bottles, leaving 2.5-3.5 cm space at the top.
8. Seal the bottle and store in cool dry place.

Green Mango Squash

Lime Squash

Ingredients	Weight/ Measure
Juice	1 liter
Sugar	1.50 kg
Water	750 ml
Colour	200mg/kg finished product
Potassium Meta bisulphite	0.6g/kg finished product

Prepared Product : 3 bottle

Method

1. Wash the fruit, cut into halves and extract the juice.
2. Strain through muslin cloth to remove seeds and coarse pulp.
3. Mix sugar and water to dissolve sugar completely, boil 2-3minutes. Strain through a muslin cloth.
4. Cool and mix with juice.
5. Dissolve preservative , colour in small quantities of squash and mix it with the prepared squash. Transfer into sterilised bottles.

Lime Squash

Litchi Squash

Ingredients	Weight/ Measure
Litchi juice	1litter
Sugar	1.25kg
Water	750 ml
Citric acid	30g
KMS	1.8g

Prepared Product : 3 bottle

Method

1. Select fully ripe litchi. Peel and remove stone.
2. Blend pulp and strain the litchi juice through a sieve.
3. Place water and sugar in a pan and stir over low heat till sugar dissolves.
4. Once it dissolves, add citric acid and bring to a boil.
5. Boil for about two minutes.
6. Take the syrup off the heat. Remove scum and strain through a muslin cloth. Let it cool.
7. Mix juice and syrup. Dissolve KMS in small quantity of squash and add this to entire quantity.
8. Fill squash into clean bottles and seal.

Litchi Squash

Preserved Products

Preserve and Candy

Amla Preserve

Ingredients	Weight/ Measure
Amla	1 kg
Sugar	1 kg
Water (for syrup)	400 ml
Citric acid	½ tsp

Prepared Product: 2 Kg

Method

1. Select large-sized fruits for making the preserve.
2. Wash the fruits in water to remove dirt, dust etc.
3. Prick them with a needle of bamboo (wood) or stainless steel. Do not use an iron needle as the fruit is rich in tannins which combine with iron salts to form blue or black compounds.
4. After pricking, place the fruit in 2 percent common salt solution.
5. Raise the strength of the salt solution progressively by 2 percent on subsequent days, until the final concentration reaches 8.0 percent.
6. Wash the fruits in water and place them in freshly prepared 8 percent brine for about a week. This treatment removes most of the astringency in the fruit.
7. Wash the fruits again. Ordinary iron equipment should not be used so as to avoid discoloration.
8. Blanch the fruits in 2 percent alum solution until they become sufficiently soft, taking care to see that the segments do not break or crack in the process.
9. Take sugar equal to half the weight of amla. Place the sugar and amla in alternate layers in a vessel and leave the mass for 24 hours. During this period the fruit would give a syrup of 36^0 - 38^0 Brix.
10. Next day, boil the mass for a few minutes and raise the strength of the syrup to 60^0 Brix by adding more sugar.
11. Citric or tartaric acid can be added to invert the sugar to prevent crystallization which can be @ 1.5-2.0 g/kg of sugar added.
12. On the third day raise the strength of the syrup to 70^0 Brix and leave the mass in the syrup for one week. After this the product will be ready for packing in jars.

Amla Preserve

Bael ka Muraba

Ingredients	Weight/ Measure
Bael pieces	01 kg
Sugar	01 kg
Water	750 ml
Citric acid	02 g

Prepared Product: 1.5 Kg

Method

1. Select half ripe Bael. Break and remove the shell. Cut into slices. Remove seeds and other gummy parts.
2. Prick them with a needle of bamboo or stainless steel.
3. After pricking, place the pieces into 2% lime solution for 3 hours.
4. Take out the pieces and wash the slices nicely with water.
5. Blanch the fruit pieces in water until they become soft.
6. Take sugar equal to half the weight of fruit pieces and dissolve in water. Add citric acid and boil the solution. Add the blanched pieces into boiling syrup and cook on low flame for ½ hour.
7. Next day remove the slices from the solution and add the other half of the sugar to the syrup and bring it to boil.
8. Add slice to the syrup and cook the pieces in the syrup till the syrup becomes thick like honey.
9. Allow the preserve to cool. Put it in clean Jars, cap it tightly and store in a cool and dry place.

Bael ka Muraba

Carrot Candy

Ingredients	Weight/ Measure
Carrot	1 kg
Sugar	1 kg
Water (for syrup)	500 ml
Citric acid	1 tsp

Prepared Product: 450 g

Method

1. Select tender carrots of medium size.
2. Scrape off the outer peel of the carrots and wash thoroughly.
3. Remove the head and tail of carrots. Keep carrots whole or cut length wise. Prick the carrots extensively with stainless steel fork.
4. Boil the slices or whole carrots in water till they become soft and drain out the water.
5. Take sugar equal to half the weight of carrot. Prepare syrup by dissolving sugar into equal quantity of water. Add 2-3 g of citric acid. Immerse prepared fruit in 50% sugar syrup
6. Next day, boil the syrup by taking out pieces for a few minutes and raise the strength of the syrup to 60^0 Brix by adding more sugar. Add pieces and leave overnight.
7. On the third day raise the strength of the syrup to 70^0 Brix (corresponds to syrup of 2-3 consistency) and leave the mass in the syrup for 48 hour.
8. Boil the syrup after removing the pieces for 3-4 minutes. Add pieces.
9. Next day drain off the syrup.
10. Dry the candy at room temperature or in the sun for 4-5 hours.
11. Pack in airtight glass jars.

Carrot Candy

Petha Candy

Ingredients	Weight/ Measure
Petha pieces	1 kg
Sugar	1 kg
Water	300 ml
Citric acid	1.5 g

Prepared Product: 600 g

Method

1. Select ripe and fully mature petha.
2. Peel it and remove the seeds.
3. Cut longitudinally into large pieces.
4. Prick the slices with stainless steel fork.
5. Soak the pricked slices overnight in 2-3% lime water. Lime hardens the tissues.
6. Drain out lime water; wash the pieces with water.
7. Prepare 1-2% alum solution. Add a small quantity of potassium metabisulhite to the solution. Bring the solution to boil and blanch the pieces till they become tender. The chemical cleans the fruit and makes it perfectly white.
8. Drain off the water, wash and spread the boiled slices on a clean cloth to remove excess of water.
9. Place the prepared pieces of fruit in alternate layers with half of the sugar in a vessel and keep for24 hours. The pieces will give out sufficient water to dissolve the sugar. Add 300 ml of water, if required.
10. Next day, remove the slices from the solution and add the other half of the sugar to the syrup and bring it to boil.
11. Cool the syrup, add citric acid and dissolve completely.
12. Add the pieces to the syrup and boil for about five minutes and keep it over night.
13. Next day take out the pieces and again boil the syrup till it becomes thick.
14. Cool the syrup, add the pieces and allow these to remain in the syrup for two days.
15. Again take out the pieces from syrup and boil the syrup till it spins two threads .Add the pieces into the prepared syrup.
16. Next day repeat the process once again and continue boiling till the syrup attains 3-4 thread consistency. Leave for 2-3 days.
17. Drain off the syrup.
18. Dry the candy at room temperature or in the sun for 4-5 hours.

Petha Candy

Preserved Products

Vadian

Cabbage- Tomato Vadian

Ingredients	Weight/ Measure
Tomato	500 g
Black gram dal	1 kg
Cabbage	500g
Cumin seed powder	1 tsp
Black Peeper powder	1 tsp gm
Red chilli powder	01 tsp
Green chilli paste	50 g
Ginger paste	50 g
Prepared Bari	930 g

Method

1. Chop cabbage and tomatoes finely.
2. Clean and soak dal overnight.
3. Grind dal coarsely with tomato juice.
4. Add all spices, chopped tomatoes and cabbage to the paste
5. Mix till it becomes light.
6. Take handful of mixture and drop into small lumps/ balls on a greased polythene sheet or cloth in sun.
7. Dry for 3-4 days turning them upside down.
8. Pack in air-tight tins or polythene bags.

Cabbage- Tomato Vadian

Radish-Tomato Vadian

Ingredients	Weight/ Measure
Radish	01 kg
Tomato	½ kg
Black gram dal	1 kg
Green chilli paste	50 g
Ginger paste	50 g
Zeera powder	½ tsp
Black peeper power	½ tsp
Red chilli powder	01 gm
Garam Masala	½ tsp
Prepared products	920 g

Method

1. Clean and soak dal overnight
2. Grate radish and chop tomato finely
3. Grind dal coarsely with tomato juice
4. Add grated radish, chopped tomatoes and all the spices to ground paste
5. Mix the paste till it becomes light
6. Take handful of mixture and drop into small lumps/ balls on a greased polythene sheet or cloth in sun
7. Dry for 3-4 days turning them upside down.
8. Pack in air-tight tins or polythene bags.

Radish-Tomato Vadian

Bathua Vadian

Ingredients	Weight/ Measure
Bathua	500 g
Lentil dal	1 kg
Cumin seed powder	1 tsp
Pepper powder	1 tsp
Red chilli powder	2 tsp
Garam masala	½ tsp
Prepared Bari	910g

Method

1. Clean and Soak dal overnight.
2. Clean and pluck tender twigs of bathua discarding fibrous part. Cut twigs into approximately 1 inch length pieces. Wash and spread on clean cloth to remove excess of water.
3. Make bundles of bathua consisting 5-6 pieces per bundle.
4. Grind dal coarsely with very little water.
5. Add all the spices to ground paste.
6. Mix the paste till it becomes light.
7. Apply dal paste evenly all over each bundle.
8. Dry for 3-4 days turning them upside down.
9. Pack in air-tight tins or polythene bags.

Bathua Vadian

Glossary

Glossary

Amaranth leaves: Lal sag

Asafoetida: Hing

Bay leaf: Tejpta

Bengal gram flour, gram flour: Besan

Black gram: Urd dal

Black pepper: Kalimirch

Black salt: Kala namak

Cardamom: Illayachi

Carum seed: Ajwain

Cinnamon: Dalchini

Cloves: Laung

Coconut powder: Nariyal powder

Coriander: Dhaniya

Cumin seed: Jeera

Fenugreek: Methi

French bean: Bean

Green gram: Moong dal

Mango powder: Amchur powder

Ragi: Madua

Refined flour: Maida

Rice flakes: Chura

Scented long grain rice: Basmati rice

Semolina: Suji or rawa

Soya chunks: Soyabean badi

Spinach: Palak

Split legume: Dal

Glossary of terms used in food preparation

Beat: Move an instrument back and forth to blend ingredients together to achieve a smooth texture.

Blend: Mixing two or more ingredients so completely that they lose their separate identities.

Grate: Cutting into fine pieces.

Chop: Cut into no specified shape.

Mix: Combine ingredients in such a way that the parts of each ingredient are evenly dispersed in the total product.

Blanch: To precook by heating in boiling water or steam in order to inactivate enzymes and shrink some foods for freezing, drying or canning. To aid in removal of skin from nuts, fruits and vegetables.

Grind: Cut ingredients into fine paste with grinder.

Sauté: To brown or cook in a small amount of fat.

Simmer: Cooking foods in a pan with a well-fitting lid at temperature just below the boiling point (82- 99°C) of the liquid in which they are immersed.

Batter: Mixture of flour, liquid and other ingredients which is sufficiently soft to be beaten.

Warm: Raise temperature to 105-114°F.

Seasoning: Improving the aroma and flavour of food by adding spices and herb.

Stir: To mix food materials with a circular motion.

Whip: To beat rapidly to incorporate air and produce expansion.

Pickle: Fruit or vegetables which is preserved in vinegar, lime or oil with salt and spices.

Frying: A method of cooking in heated oil or fat.

Shallow frying: Food is fried in a shallow pan like frying pan or 'tawa' with a small amount of fat.

Deep frying: During deep frying, food is completely immersed in excess quantity of hot oil in a deep vessel like iron 'karai'.

Sterilize: To destroy microorganism by use of high temperature with steam or boiling liquid.

Appendix

Some nutrient–rich vegetables

Nutrients	Food groups	Foods	Nutrient content for 100g edible portion
Protein	Leafy vegetables	Celery, amaranth bathua leaves, spinach, rape leaves	2-6.3 g
	Leguminous vegetable	Beans, Cowpea pods, Peas, French beans	1.7-7.4 g
Beta-carotene	Leafy vegetables	Ambat chukka, coriander leaves, ponnaganti, spinach, leaves, mint, radish leaves, some other leafy vegetable like agathi, amaranth, curry leaves, gogu, colacasia leaves, beet greens, coriander leaves, mustard leaves, turnip greens	2-10 mg
	Other Vegetables	Pumpkin and green chillies	1 mg
	Yellow and orange colour-ed vegetables	Carrot, tomato	0.35-1.8 mg
Folic acid	Green leafy vegetables	Amaranth, ambat chukka, mint and spinach	120 µg
Iron	Green leafy vegetable	Amaranth, bangalgram leaves, cauliflower greens and rad-ish leaves	18-40 mg
Calcium	Green leafy vegetables	Amaranth, cauliflower greens, curry leaves, knol-khol leaves	500-800 mg
		Agathi	1130 mg
		Colocasia leaves	1540 mg
Vitamin C	Green leafy vegetables	Agathi, cabbage, coriander leaves, drumstick leaves, knol-khol greens	120-220 mg
	Other vegetables	Capsicum	137 mg
		Green chillies	117 mg
Fibre	Leafy vegetables	Lettuce, mustard leaves, rape leaves, spinach, susni, cab-bage, cauliflower, amaranth, colocasia leaves (dried)	0.6-16 g
	Root vegetables	Onion, potato, carrot, ginger, yam, sweet potato, beet-root	0.4-1.3 g
	Other vegetables	Cucumber, plantain green, brinjal, jackfruits, drumstick	0.4-4.8 g
Riboflavin	Leafy vegetables	Amaranth, carrot leaves, colocasia leaves, curry leaves, fen-ugreek leaves, gogu, mint, radish leaves and spinach	0-25 mg

Low calorie vegetables and fruits (20 Kcal)

Name of the vegetables	Kcal/100gm
Leafy vegetables	
Amaranth (stem)	19
Spinach stalk	20
Roots and tubers	
Radish table	16
Radish white	17
Other vegetables	
Ash gourd	10
Bottle gourd	12
Cluster beans	16
Colocasia stem	18
Cucumber	13
Kovai	18
Parwal	20
Ridge gourd	17
Snake gourd	18
Fruits	
Musk melon	17
Water melon	16
Orange juice	9
Tomato ripe	20

Source: Nutritive value of Indian Foods, 2009

Vegetables and fruits with high calorie value (≥ 100 Kcal)

Name of the vegetables	Kcal/100gm
Leafy Vegetables	
Colocasia leaves (dried)	277
Curry leaves	108
Chakunda (dried)	292
Rape leaves (dried)	297
Tamarind leaves	115
Roots and tubers	10
Arrow root flour	334
Sweet potato	120
Tapioca	157
Yam ordinary	111
Yam wild	110
Other vegetables	20
Beans, scarlet runner	158
Jack fruit, seeds	133
Karonda (dry)	364
Lotus stem (dry)	234
Sundakai (dry)	269
Water chestnut (fresh)	115
Water chestnut (dry)	330
Fruits	
Apricot (dry)	306
Avocado pear	215
Banana	116
Bael fruit	116
Currants, red	316
Dates (dried)	317
Dates fresh	144
Mahua (ripe)	111
Raisins	308
Seetaphal	104
Wood apple	134

Source: Nutritive value of Indian Foods, 2009

Weights and Measures

Approximately

1 tsp = 5 ml
1 dsp = 10 ml
1 tbsp = 15 ml
1 cup = 250 ml

Nutritive Value: The nutritive value of each preparation (per serving) is calculated using the information on dietary nutrients given in the publication 'Nutritive value of Indian Foods' (2009).

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Losing weight

Getting started - Week 1

Develop healthier eating habits, be more active, and get on track to start losing weight with this easy-to-follow NHS Choices 12-week guide.

If people are overweight, it's usually because they eat and drink more calories than they need. This guide will help you to reduce the number of calories you consume.

This will help you to work towards losing weight at a safe and sustainable rate of 0.5kg to 1kg (1lb to 2lbs) a week. For most men, this will mean consuming no more than 1,900kcal a day, and for most women, 1,400kcal. You can also get your own personal calorie target using the BMI calculator.

This is the first of 12 weekly information guides, which are full of diet, healthy eating and activity advice. Each pack includes a food and activity chart to help you to track your progress. Print out the chart and stick it somewhere you can see it, such as on your fridge.

Before starting, visit nhs.uk/weightloss to check your BMI, use our calorie counter and sign up for weight loss email support.

Is this for me?

This guide is intended for use by healthy adults with a body mass index (BMI) of 25 and over. It is not suitable for children or pregnant women. If you have any medical condition you should consult your GP before starting. Find out if you need to lose weight using the BMI healthy weight calculator at nhs.uk/bmi

Set your target

If you find it hard sticking to the plan's daily calorie limit of 1,900kcal for a man and 1,400kcal for a woman, use our BMI healthy weight calculator to get your own personal daily calorie target.

Week 1

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Losing weight

Getting started - Week 1

Welcome to Week 1 of your weight loss journey and well done for taking the first steps to a healthier lifestyle.

Over the next 12 weeks we're going to help you make healthier choices to help you lose weight and keep it off.

From today, we'll help you stick to a daily calorie intake: 1,900kcal for men and 1,400kcal for women.

We'll be with you every step of the way, helping you achieve real change, picking you up when you stumble and celebrating your successes.

Laura's diary

Week 1

I've been on all sorts of diets and have learned there's no miracle cure. But losing weight doesn't need to be complicated. If you learn to keep an eye on the calories you're eating and those you burn off during physical activity you're halfway there. Don't forget to track your food and drink using our calorie counter. Spend some time thinking about your meals in advance. If you know what you're having each day you'll spend less time thinking about food and you're less likely to snack on impulse buys.

Your actions for Week 1

- Record your weight and waist size in the food and activity chart
- Stick this week's chart on your fridge and update it at the end of each day
- Plan your meals using our Meal Mixer at https://mealmixer.change4life.co.uk/
- Use our calorie counter to track your calories at nhs.uk/caloriecount
- Sign up to the weight loss forum for support and information at nhsweightloss.healthunlocked.com

Did you know?

Research shows that it takes about 12 weeks on average to form new habits.

By sticking to this routine for three months, healthy eating and regular exercise will become habits, which are key to losing weight and keeping it off.

✓

Week 1

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Fill up with fibre

Eating food with lots of fibre will help you feel full for longer, so you're more likely to stick to your calorie limit.

Fibre keeps your bowels healthy and can help reduce cholesterol. Most people in the UK eat only about 18g of fibre a day, but should aim to eat at least 30g.

Increase your fibre intake gradually, though, as a sudden increase can cause cramp and constipation. And make sure to drink plenty of water - aim for 1.2 litres a day - to avoid cramp and constipation.

Here are some easy ways to boost the fibre in your snacks and meals:

Breakfast

Adding some fibre to your breakfast can help you stay feeling full until lunch and reduce the urge for a mid-morning snack.

- Swap white bread for wholemeal or wholegrain varieties.
- Swap sugary cereals for high-fibre cereals such as wholegrain wheat cereals, unsweetened muesli, or porridge oats, and don't forget to check the salt content.

Lunch and dinner

Vegetables are a good source of fibre, so try swapping some of the things on your plate for more veg. Aim for two portions of veg on your plate at dinner.

- Swap white rice and pasta for wholemeal versions – simply doing this can double the amount of fibre you've eaten.
- Add pulses – beans, lentils and peas – into your meals. They're a cheap, low-fat source of fibre, protein, vitamins and minerals. Add pulses to soups, casseroles, rice and pasta, or serve baked beans (choose reduced-salt and sugar varieties) on wholemeal toast.

Snacks

Stock up on healthier snacks containing fibre such as:

- Fruit – fresh, canned or frozen. Don't forget to eat the skin on fruits such as apples and pears.
- Veg sticks – carrot, celery or cucumber sticks or a packet of sugar snap peas. You can enjoy these low-calorie snacks if you feel hungry in between your meals.
- Reduced-fat hummus. For a bit of variety, dip your veg sticks, wholegrain crispbreads or pitta bread in a tub of reduced-fat hummus. You'll get the fibre from both the veg and the bread.
- Air-popped, plain popcorn. Homemade is best, to avoid the high fat, sugar or salt content in some commercial brands. Don't add any sugar or butter.

Food with fibre

6 apricots: 4g

1 medium orange: 3g

1 medium apple: 2g

2 slices of wholemeal bread: 4.2g

1 medium jacket potato: 5g

90g of peas: 4g

90g of spinach: 2g

200g of new potatoes: 3g

30g of chickpeas: 1.5g

135g of sweetcorn: 2g

165g of baked beans: 5g

220g of brown spaghetti: 8g

180g of brown rice: 1.5g

1 large wholemeal pitta bread: 5g

Protein sources

Protein can also help you feel fuller for longer. Choose low-fat protein sources, such as:

- beans, peas and lentils
- fish
- lean cuts of meat
- skinless white-meat poultry
- lower-fat dairy products (milk, cheese, yoghurt)
- eggs
- tofu
- Quorn

nhs.uk

Portion distortion

No matter how healthily you eat, you can still put on weight if you're eating too much.

Food portion sizes today are far bigger than they were 30 years ago, which means we're consuming a lot more calories than we realise.

In fact, many of us no longer know what makes a normal portion – a problem known as portion distortion.

Regain some portion control with these six simple tips:

• Eat with smaller plates and bowls. You'll have a smaller portion and still feel satisfied.

• Aim for two portions of veg on your plate. This helps to cover your plate with low-calorie filling food, leaving less room for higher-calorie ingredients. Use the eatwell plate to help you get the balance right. Go to nhs.uk/eatwell-plate.

• Eat slowly. It takes about 20 minutes for your stomach to tell your brain you're full. When you eat fast, it's easy to overeat.

• Turn off the TV. Eating in front of the TV can mean you eat more without noticing or enjoying your food.

• Weigh your food. Use kitchen scales to weigh your ingredients before you cook. This will help you stick to the suggested serving sizes.

Your meal guide

You need to keep an eye on your portions to help you meet the calorie target for your day's meals.

Women (allowance 1,400kcal)

- Breakfast: 280kcal
- Lunch: 420kcal
- Dinner: 420kcal
- Other food and drink: 280kcal

Men (allowance 1,900kcal)

- Breakfast: 380kcal
- Lunch: 570kcal
- Dinner: 570kcal
- Other food and drink: 380kcal

The calorie allowance at meal times includes any drinks or desserts you have. If you eat more for your breakfast, lunch or evening meal, you may need to drop a snack later in the day to stay on track.

Eating out

- Avoid appetisers including bread, nuts or olives
- Stay clear of 'supersize' or 'go large' options
- If you're having dessert, share it and go for fruit-based options
- Choose a starter instead of a main course
- Stop eating before you feel full

Recipe inspiration

The Change4Life Meal Mixer is full of easy, calorie-counted recipes for all your meals and snacks. You can download them and email yourself a shopping list of ingredients. Plus, there's a free app, too!
https://mealmixer.change4life.co.uk/

NHS
nhs.uk

Week 1 food and activity chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food	**Food**	**Food**	**Food**	**Food**	**Food**	**Food**
Total calories:	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*
Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*
Your 5 a day	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**
Activity	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**
Total minutes:	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*
Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins
Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins

Weekly summary

Start of the week

Weight	Waist
kg/lbs	cms/in

Aerobic exercise: 10 mins | 30 mins | 60 mins | 90 mins | 120 mins | **150 mins +**

Your weight loss tracker - Record your weight and waist size at the start and end of each week to help you stay on track

1 session on 2 or more days a week

Strength exercise: mon | tues | wed | thurs | fri | sat | sun

End of the week

Weight	Waist
kg/lbs	cms/in

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Week 1 food and activity chart

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food							
Total calories:	1,363	1,391	1,516	1,305	1,357	1,710	1,309
	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗
Oops! Unplanned snacks or drinks		crisps 171cal	2x choc diges 172cal		kit kat 107cal	glass of wine 130cal	
						ginger cake 147cal	
Your 5 a day	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
Activity							
Total minutes:	15	15	75	15	60	40	60
Aerobic exercise (mins)	walk 15	walk 15	walk 15	walk 15	zumba 60	swim 20	walk 60
	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗
Strength exercise (mins)			yoga 60			gardening 20	
	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗	✓ ✗

SAMPLE

Weekly summary

Start of the week	
Weight	Waist
172lbs	44in
kg/lbs	cms/in

Aerobic exercise: 10 mins ☐ 30 mins ☐ 60 mins ☐ 90 mins ☐ 120 mins ☐ 150 mins + ✓

Your weight loss tracker - Record your weight and waist size at the start and end of each week to help you stay on track

1 session on 2 or more days a week

Strength exercise: mon ☐ tues ☐ wed ✓ thurs ☐ fri ☐ sat ✓ sun ☐

End of the week	
Weight	Waist
170lbs	44in
kg/lbs	cms/in

NHS
nhs.uk

Losing weight

Getting started - Week 2

You've made it to Week 2 – well done! Becoming more aware of where calories are in your meal may be challenging, but stick with it; it gets easier.

From this week, we'd like you to start increasing your activity levels to help support your weight loss.

We've got tips to help you do this gradually but if you want a bit of structure, why not try our Couch to 5K running plan and Strength and Flex workout, which are both suitable for beginners.

Laura's diary

Week 2

I hadn't done any exercise for 10 years when I came across the Couch to 5K plan. When I saw that week 1 involved running for only a minute at a time, I felt relieved that someone understood my limitations, and the walking intervals made it feel less scary. I didn't find it easy but it was much easier than I expected. Having the structure of a plan was hugely helpful and having designated 'running days' meant I couldn't make excuses. I feel like I've taken something that I was so afraid of and I've well and truly beaten it. Not only have I conquered a fear but I've developed a new habit that I know is doing my health enormous good.

Your actions for Week 2

- Get active – try to get 150 minutes of physical activity every week from now on. If you've not done much for a while, aim to increase your activity levels gradually over the next few weeks
- Download the Couch to 5K and Strength and Flex programmes
- Plan when and where you are going to exercise and write it down
- Stick to your daily calorie intake – 1,400kcal for women and 1,900kcal for men

Did you know?

An unexpected benefit of taking on something new like physical activity is increased self-confidence and improved self-esteem.

Tackling something and achieving success in one area can produce a real mental boost, which can transfer into other aspects of life.

Week 2

nhs.uk

Dust off those trainers

Evidence shows that people who combine regular physical activity with calorie-counting are more successful at losing weight and keeping it off.

But not all of us are naturally sporty. In fact, some of us may not have done any meaningful exercise since school. This makes starting again quite daunting and it can be hard to know where to begin.

You can start small by finding ways to fit more activity into your daily life and build up from there.

Try getting off the bus one stop early and walking the rest of the way or taking the stairs instead of the lift.

But as well as being generally more active, you could start setting aside a few days during the week for more structured exercise.

Your target is at least 150 minutes of moderate activity each week.

Moderate activity will raise your heart rate and make you breathe faster and feel warmer. One way to tell if you're exercising at a moderate level is if you can still talk but you can't sing the words to a song.

Brisk walking, bike rides or swimming are great examples, but if these don't appeal and you need something more structured, you could try one of the exercise plans available on NHS Choices. These are free and can be done at home or in the local park. Crucially, they recognise the limitations of a beginner. They include:

- Couch to 5K – a nine-week running plan
- 5K+ running podcasts for Couch to 5K graduates
- Strength and Flex podcasts – a five-week workout plan
- 10-minute home workouts – quick and effective exercise routines

Get these and lots more exercise tips at nhs.uk/fitness.

Before you start, plan. Think about whether you need new trainers, where and on which days you're going to exercise, and when in the day you can fit it in. A little preparation can mean the difference between getting going and making excuses not to bother.

Whatever you choose make sure it's something you enjoy, or it may be hard to find the motivation to do it regularly.

You may feel a little bit more hungry as you step up your activity levels or start a new exercise regime.

That's normal. You're burning more calories, so your body needs to replace the energy spent during exercise.

But be careful how you refuel. A post-exercise snack high in calories could actually see you putting on weight instead of losing it. Instead, choose foods that are lower in calories but still filling, such as fruit, low-fat yoghurt or reduced-fat hummus with brown pita.

Walk more with a pedometer

Pedometers, which you can buy or download as a smartphone app, are a fun way to keep track of your walking and help you increase your activity levels gradually.

The pedometer will measure every step you take: around the house, at work, out and about, on the school run or to the park. Use the pedometer to work out your average daily steps and then start adding extra steps.

Getting started

Things people choose when they start to become more active:

- walking
- cycling
- gardening
- swimming
- dancing
- playing a sport, such as badminton, football or bowls
- stretching exercise, e.g. yoga
- going to the gym

If you have a medical condition, please seek medical advice before beginning physical activity.

nhs.uk

Tips to build activity into your day

Ten easy ways to raise your physical activity levels and burn more calories.

Walk more
Walking is one of the easiest and most effective ways of increasing your activity. Find a walking pal or join a walking group.

Take the stairs
Walk up and down stairs and escalators instead of taking the lift, or get off the lift a few floors early and use the stairs.

Take up running
Our popular Couch to 5K running plan is designed to get just about anyone running 5km in nine weeks.

Exercise in your local park
Download our Strength and Flex podcast series and get fit in five weeks.

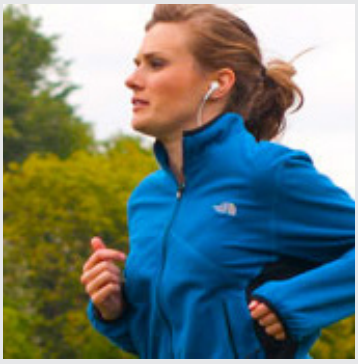
Active travel
Cycle or walk part, if not all, of your journey to work. Get off public transport a stop before your destination and walk the rest of the way.

Ditch the car
If you need to drive to work, try to park further away from your destination and walk the rest of the way.

Exercise at work
Exercise before or after work or during your lunch break. Your workplace may have a gym or you may have access to a swimming pool or squash courts.

Family fun
Be active with the family. Take your children to the swimming pool or play in the garden or park.

Green fingers
Gardening can provide a good workout. You could also add a social element by getting an allotment.



Couch to 5K

This podcast series is designed to get just about anyone running 5km in nine weeks. The plan involves three runs per week, gradually building up fitness and stamina until you can run for 30 minutes.

nhs.uk/Couchto5k

Healthier cooking

Frying adds fat to your meals. Try these healthier alternatives:

Grilling
Grilling is a quick and healthier way of cooking as it doesn't use any fat.

Poaching
Poaching is a fat-free way of cooking eggs, some meats and fish, using a pan of boiling water.

Steaming
Steaming is a fat-free way of cooking veg and fish

Boiling
Boiling doesn't require any oil and therefore adds no calories to food.

Calorie counter

Calories in common foods:

Apple: 53kcal
Orange: 62kcal
Banana: 105kcal
Six carrot sticks: 35kcal
2tbsp of hummus: 55kcal
Buttered brown toast: 115kcal
Cup of tea with semi-skimmed milk: 13kcal
Mug of coffee with semi-skimmed milk: 20kcal

Look up the calories of more foods and drinks on our calorie counter at nhs.uk/calorie-count

NHS
nhs.uk

Week 2 food and activity chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food	**Food**	**Food**	**Food**	**Food**	**Food**	**Food**
Total calories:	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*
Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*
Your 5 a day	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**
Activity	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**
Total minutes:	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*
Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins
Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins

Weekly summary

Start of the week

Weight	Waist
kg/lbs	cms/in

Aerobic exercise: 10 mins, 30 mins, 60 mins, 90 mins, 120 mins, **150 mins +**

Your weight loss tracker - Record your weight and waist size at the start and end of each week to help you stay on track

1 session on 2 or more days a week

Strength exercise: mon, tues, wed, thurs, fri, sat, sun

End of the week

Weight	Waist
kg/lbs	cms/in

NHS
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Losing weight

Getting started - Week 3

You're on Week 3 already – well done for sticking with it!

So how's it going? You may be feeling sore after your first week of exercise. But don't worry, it shouldn't last long.

If you didn't manage 150 minutes' exercise, don't panic. It's better to do some exercise than none, so build up gradually if you need to. The more you do, the easier it gets.

To help you along we've got some great tips on getting active plus healthier breakfast ideas to get your days off to a great start.

Laura's diary

Week 3

With the first week of a new exercise regime under your belt, you should be feeling pretty good about yourself.

Taking up exercise and healthier eating is a lot to think about – but I find that one becomes a great motivator for the other.

If I've been for a run, I'm much more likely to make healthier food choices so my efforts aren't wasted. When you know the physical effort it takes to burn 250kcal you'll think more carefully about how you consume them!

Your actions for Week 3

- Boost your breakfast. Read our guide and make sure you're making the most of your first meal of the day
- Remember to stick to your daily calorie intake – 1,400kcal for women and 1,900kcal for men
- Keep aiming to achieve 150 minutes of exercise this week
- Remember to plan your physical activity and log them in the chart

Did you know?

If exercising in the morning, you should get up early enough to eat breakfast. If you don't eat, you may feel sluggish or lightheaded when you exercise.

If you plan to exercise within an hour after breakfast, eat a lighter breakfast and have a healthier snack after your workout. ✓

Week 3

nhs.uk

Exercise motivation

When you start a new exercise regime it's normal to experience some soreness.

Muscles you didn't even know you had are giving you grief and it may all feel like a bit of an uphill struggle. And it's not just your body. One of the biggest barriers to getting into an exercise routine is your mind. We're creatures of habit, and if you've not done much for a while, finding the motiovation to get up and go can be a real mental battle.

But don't be discouraged. You're going through the beginner's pain barrier and after a week or two, this should be a distant memory.

If you feel your enthusiasm dipping at any point, here are our top 10 tips to boost your motivation:

1. Be realistic. Remind yourself that you want to become more active because it'll help you become healthier and lose weight. It's a crucial component of your 12-week journey.

2. Schedule it. Plan your exercise at the start of the week and put it in your diary. Planning in advance when, how and where you will exercise will increase your chances of making physical activity a normal part of your lifestyle. Even simple approaches like laying out your running kit or packing your gym bag the night before can help.

3. Pat yourself on the back. Look back at your weekly food and activity chart to remind yourself how much you've already achieved.

4. Spread the word. Share your plans and achievements with other people; you'll feel obliged to keep going!

5. Phone a friend. Find a friend or a relative to exercise with, or perhaps join a group or club. A workout buddy can provide feedback, support and entertainment – they also put pressure on you to turn up!

6. Pump yourself up. Music is a great motivator so pick your playlist, plug your headphones in and listen to your favourite workout songs while you exercise.

7. Be flexible. Change activities if you're not enjoying them. If cycling isn't doing it for you, why not go swimming or even try some fitness classes at the gym instead.

8. Remember, the hardest part of exercising is getting out of the door – so once you've passed that hurdle, it should be plain sailing.

9. Set goals. They don't need to be grand achievements. For instance, try to walk a little bit more each day, take the stairs instead of the lift or walk part of the way to work. Keeping a written record of these mini-goals can help you to see your progress over time.

10. Reward yourself. Set yourself non-food rewards for achieving stages along the way. There's nothing like an incentive to spur you on!

Non-food rewards

Try these non-food rewards to help you celebrate your weight loss progress. Examples include:

- bubble bath
- new music
- new clothes
- a trip to the cinema
- DVD box set
- massage
- haircut
- new exercise gear

For more ideas go to nhs.uk/rewards

How much activity?

To stay healthy or to improve fitness, adults should aim to do every week:

- 150 minutes of aerobic exercise, such walking, running, tennis and cycling, and
- Two sessions of muscle-strengthening activities, such as lifting weights, exercises such as push-ups and sit-ups, heavy gardening or yoga.

nhs.uk

On your marks, get set, go

These quick and healthier breakfasts are an ideal way to start your day.

1. Muesli, fruit and low-fat yoghurt
No-added-sugar muesli is a great high-fibre breakfast option, while added fruit will count towards your 5 A DAY and low-fat yoghurt provides calcium and protein.

No-added-sugar muesli 40g = 141kcal

Low-fat yoghurt 125g = 81kcal

Medium-size banana = 108kcal

Grand total = 330kcal

2. Wholegrain breakfast cereal with semi-skimmed milk
Wholegrain breakfast cereals are a good source of fibre. Choose a breakfast cereal that has been fortified with vitamins and minerals.

Two Weetabix = 117kcal

Semi-skimmed milk 200ml = 103kcal

Grand total = 220kcal

3. Boiled egg with wholemeal toast and reduced-fat spread
Eggs are a good source of protein, minerals and vitamins. Choose wholegrain or wholemeal bread.

1 large egg = 78kcal

2 thin slices of toast with reduced-fat spread = 206kcal

Grand total = 284kcal

4. Grilled mushrooms and tomatoes on a wholegrain bagel
Grilling is a quick and healthier way to cook and mushrooms and tomatoes count towards your 5 A DAY.

Wholegrain bagel = 260kcal

4 large mushrooms = 20kcal

1 large tomato = 33kcal

Grand total = 313kcal

Porridge – the breakfast hero

When you're trying to lose weight, learn to love porridge! Oats are low in calories and a good source of fibre. Make it with semi-skimmed milk and top with a tablespoon of dried fruit, such as raisins, to get one of your 5 A Day.

Porridge oats 40g = 182kcal

Semi-skimmed milk 150ml = 78kcal

Raisins 30g = 90kcal

Water 150ml = 0kcal

Grand total = 350kcal

Filling cereals full of fibre

These wholegrain cereals will fill you up and keep you feeling full. If you need extra sweetness, add a chopped banana.

1 Wholegrain wheats
2 Wholegrain raisin wheats
3 Wholewheat biscuits
4 Wholegrain oat biscuits
5 Muesli (unsweetened)
6 Porridge oats (unsweetened)

Strength and Flex

A five-week exercise plan for beginners looking to increase their activity levels. The equipment-free workouts are gentle and easy to follow and can be done indoors or out.

nhs.uk/strength-and-flex

NHS
nhs.uk

Week 3 food and activity chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food	**Food**	**Food**	**Food**	**Food**	**Food**	**Food**
Total calories:	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*
Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*
Your 5 a day	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**
Activity	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**
Total minutes:	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*
Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins
Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins

Weekly summary

Start of the week

Weight	Waist
kg/lbs	cms/in

Aerobic exercise: 10 mins | 30 mins | 60 mins | 90 mins | 120 mins | **150 mins +**

Your weight loss tracker - Record your weight and waist size at the start and end of each week to help you stay on track

1 session on 2 or more days a week

Strength exercise: mon | tues | wed | thurs | fri | sat | sun

End of the week

Weight	Waist
kg/lbs	cms/in

NHS
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Losing weight

Getting started - Week 4

You're four weeks into your journey – keep going! This week we'll be tackling food cravings and snack temptation.

If you've increased your activity levels, you may feel like a snack or two to keep you going between meals. There's actually nothing wrong with snacking if you're hungry but avoid grazing.

A healthier snack will help you beat your cravings and keep your energy levels up between meals. Our 100-calorie healthier snacks will help you keep on top of your calories and keep temptation at bay.

Laura's diary

Week 4

I don't know about you but I find it hard not to snack between meals, especially when I've been exercising that day.

My go-to snacks include flavoured rice cakes, low-fat yoghurt and fruit, low-fat cottage cheese and oatcakes.

To avoid snacking on unhealthy foods, I don't have any biscuits, chocolate, sweets or other high-calorie junk foods at home.

I try to plan my snacks for each day of the week, and look up the calories online beforehand so I don't have to do it each day.

I try not to fight the urge to snack because I know it'll turn into a craving for some high-calorie comfort food.

Your actions for Week 4

- To avoid temptation, plan your snacks for each day of the week. If you work, take a day's portion along with you
- Don't forget your daily calorie intake – 1,400kcal for women and 1,900kcal for men
- Keep moving! If you didn't manage 150 minutes last week, try to achieve it this week
- Look for easy ways to burn calories as part of your daily routine. Check out the tips in this pack

Did you know?

Some people need a snack between meals to maintain energy levels, especially if they are very active.

Choosing fruit or vegetables instead of crisps, chocolate and other high-calorie snacks will help you replace lost energy without putting on weight.

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nhs.uk

Workplace diet traps

We spend on average about a third of our day at work, so it makes sense to give what we eat during working hours some careful consideration.

All too often our workload, stress, tiredness, lack of time and temptation combine to derail our best intentions.

With a bit of planning, you can use snacks and lunch to keep your diet on track, your energy levels up and even save a bit of money.

Here are 10 tips to make workplace eating healthier for you:

Eat breakfast
This should be your mantra. A healthier breakfast will set you up for the day and stop you becoming hungry before lunch. If you're not hungry before leaving home, have breakfast at work.

Bring your own
Home-cooked food is often lower in calories and fat and cheaper than food bought on the high street. If sandwiches aren't your thing, you could cook extra in the evenings and take the leftovers to work, saving you money.

Drink water
Drinking water regularly may help keep hunger pangs in check. You should aim to drink about six to eight glasses (1.2 litres) of fluid every day.

Plan your snacks
Keep a healthier snack within reach, such as fruit, veg (e.g. carrot sticks and reduced-fat hummus dip) or homemade popcorn (without fat, sugar or salt).

Go for wholegrain
When making sandwiches, go for wholegrain bread, which is more filling than white bread, and will keep you feeling fuller for longer. Wholemeal pitta bread and bagels are alternatives to brown loaf bread.

Go 'low mayo'
Mayonnaise is about 80% fat, and a just few dollops will turn a healthier meal into an unhealthy one. Try lower-fat mayo, reduced-fat hummus, tzatziki or tomato salsa.

Work on your 5 A DAY
A snack is a good opportunity to increase your intake of fruit and vegetables. To count towards your 5 A DAY, each portion of fruit or veg should be 80g.

Swap crisps
If you have a bag of crisps at lunch, go for oven-baked crisps, which can contain up to 70% less fat than regular crisps, or a plain rice cake.

Go lean
Instead of fatty sarnie fillings such as sausages or bacon, go for lean meats, such as turkey or chicken, tuna and salmon or a hard-boiled egg. Remember to go easy on the mayo!

Make soup
Lower-calorie vegetable-based soups are a great way of filling you up and boosting your 5 A DAY intake. Make a batch on the weekend for use during the week.

100-calorie snacks

Try these 100kcal snacks; round figures are simple to track:

- 3 rye crispbreads with 1 table-spoon of reduced-fat soft cheese
- 8 tbsp of salsa and carrot sticks
- 3 tbsp reduced-fat hummus and celery sticks
- 5 tbsp tzatziki and cucumber sticks
- 3 cups air-popped plain popcorn
- 1 thin slice wholemeal toast with 1 teaspoon of peanut butter
- 1 cup of low-calorie instant hot chocolate

For more ideas, read 10 surprising 100 calorie snacks at nhs.uk/100-calorie-snacks.

Burn as you go

Turn your daily routine into an opportunity to get active, feel healthier and burn off some extra calories:

- Get off the bus a stop early
- Go for a brisk walk at lunchtime
- Forget the lift, take the stairs
- Leave the car, walk instead
- Do a daily grocery shop on foot

nhs.uk

Food cravings

However good our intentions, when a food craving strikes it can be a real test of our willpower.

There is debate about why we have cravings. They can be caused by our emotions and by such things as such as stress, boredom, habit or insecurity. Use these tricks to help combat cravings:

Don't go hungry
Hunger can make cravings worse. Keep your energy levels topped up with some healthier high-fibre snacks.

Drink water
Some people find water helps to calm cravings. Because water is filling, it can trick your body into thinking it's satisfied. Hot drinks can work too.

Find a distraction
Find an activity to take your mind off your craving. Go for a walk, have a bath, call a friend, listen to music.

Chew some gum
Some people find chewing sugar-free gum curbs their appetite. But don't overdo it as chewing more than 20 sticks of gum over a day can make you ill.

Brush your teeth
Brush your teeth with toothpaste. Once your mouth is minty clean and fresh, some people find it helps to get rid of a craving.

Reduce temptation
You're less likely crave unhealthy foods if they're not readily available – so avoid buying them!

Set a time limit
Cravings are fleeting. Try holding off for 30 minutes and find something to distract you in the meantime. Chances are, your urge will pass once the time's up.

Have a small portion
If the desire just won't go away, give in, but do it the smart way: have a small portion and reduce your calorie intake later to stay on track.

Craving swaps

Try these healthier alternatives – but remember to still count the calories:

SWAP crisps FOR pretzels

SWAP chocolate FOR dates

SWAP fried chips FOR oven chips

SWAP fizzy drinks FOR diet versions

SWAP deep pan pizza FOR thin crust

SWAP sweet and sour FOR stir-fry

SWAP sweets FOR raisins

Super soups

Soup is filling, tasty and can be low in fat. Make a batch at the weekend and store it in portions for lunches during the week. Why not try:

- Mexican bean and tomato: 117kcal
- Chunky chicken and sweetcorn: 244kcal
- Carrot soup: 103kcal

For the recipes, see the Change4Life Meal Mixer at nhs.uk/c4lrecipefinder

How to stretch

Learn how to stretch and cool down after a run or workout to gradually relax, improve flexibility and reduce soreness. This routine should take about five minutes.

nhs.uk/stretch

NHS
nhs.uk

Week 4 food and activity chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food	**Food**	**Food**	**Food**	**Food**	**Food**	**Food**
Total calories:	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*
Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*
Your 5 a day	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**
Activity	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**
Total minutes:	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*
Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins
Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins

Weekly summary

Start of the week

Weight	Waist
kg/lbs	cms/in

Aerobic exercise: 10 mins | 30 mins | 60 mins | 90 mins | 120 mins | **150 mins +**

Your weight loss tracker - Record your weight and waist size at the start and end of each week to help you stay on track

1 session on 2 or more days a week

Strength exercise: mon | tues | wed | thurs | fri | sat | sun

End of the week

Weight	Waist
kg/lbs	cms/in

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Losing weight

Getting started - Week 5

You've made it to Week 5! You're on a roll!

So far we've focused on food, but most of what we drink also contains calories so it's a good idea to make sure you're keeping a close eye on those liquid calories.

If you've ever wondered why you've not been losing weight even after sticking to a strict eating regime, now's the time to see if that regular latte, flavoured water or evening tipple is sabotaging your best efforts to lose weight.

Laura's diary

Week 5

This week, it's all about reassessing what you are drinking. I ditched the lattes when I realised how calorific they are.

White coffee may seem boring at first but your taste buds soon adapt and I've never gone back. Alcohol is not your friend either.

Did you know a small glass of wine has the same calories as a piece of chocolate? When I realised this, I started to reconsider and think of it a treat rather than 'just a drink'.

Your actions for Week 5

- Track your drinking with our apps and tools at nhs.uk/alcohol
- If you're a cappuccino or latte drinker, try switching to a black or white coffee
- Try skimmed milk instead of semi-skimmed milk for a week
- Stick to your calorie limit – 1,400kcal for women and 1,900kcal for men
- You should be doing 150 minutes of activity by now. If not, get some inspiration at nhs.uk/fitness

Did you know?

The key to weight loss success is not to expect too much, too soon. Make changes to your diet and activity levels you can live with.

If your changes are too drastic, it will feel like a struggle. If you fall off the wagon, you may return to old habits and regain weight.

nhs.uk

Calories in alcohol

Did you know a standard glass of wine contains as many calories as a small chocolate and a pint of lager has as many calories as a packet of crisps?

The problem is, most of us just don't think of alcohol as being calorific. So, while we might go easy on the single cream when eating desserts, we wouldn't think twice about knocking back a couple of pints. In fact, the calorie content of two pints is similar to that of a full glass of single cream.

With this in mind, it's easy to understand how excess alcohol intake can easily contribute to gaining weight.

Two large glasses of white wine, totalling 360kcal, will provide a woman with nearly a fifth of her daily calorie allowance.

A beer-drinker knocking back just five pints a week would add a whopping 44,200kcal over a year, equivalent to 221 doughnuts.

Alcohol contains lots of calories – seven calories a gram in fact, almost as many as a gram of fat. And, of course, additional calories can be present in added mixer drinks.

Many drinkers add to their liquid calorie count by having snacks, such as crisps, nuts or pork scratchings, with their tipple, not to mention a hangover-induced fry-up the morning after, which can add an extra 450kcal.

Tips to avoid weight gain

- Stick to your daily recommended units. Men shouldn't regularly drink more than 3-4 units of alcohol a day. Women should not regularly drink more than 2-3 units a day. As a guide, a pint of lager and a 250ml glass of wine both contain 3 units of alcohol.
- Alternate an alcoholic drink with a diet soft drink or water – this will help to prevent you becoming dehydrated.
- Choose drinks with a lower ABV (alcohol by volume) instead of your usual tipple. There's an increasing range of lower alcohol choices available and most also have fewer calories.
- Don't drink on an empty stomach, as this can lead to snacking. If you do snack while drinking, avoid high-calorie snacks such as crisps, pork scratchings chips. Try lighter options such as pretzels, plain popcorn or oven-baked crisps.
- Drinking in rounds can mean you end up drinking more than you intended. Opt out and drink at your own pace.
- Try cutting down with a friend, as you'll be more likely to stick to it with moral support.
- Eat a healthier dinner before you start drinking. Order or cook before you start drinking so you're not tempted to go for the less healthy options.
- Avoid 'binge drinking'. Drinking a large amount of alcohol over a short period of time may be significantly worse for your health than frequently drinking small quantities.

How calorific is your tipple?

- A pint of 5% strength beer = a packet of McCoys salted crisps (170kcal)
- A standard glass (175ml) of 12% wine = one Cadbury Heroes miniature bar (126kcal)
- A double measure (50ml) of 17.5% fortified wine = one Asda bourbon biscuit (65kcal)
- A glass (50ml) of (17%) cream liqueur = a Milky Way bar (118kcal)
- A standard bottle (330ml) of 5% alcopop = three Lees teacakes (237kcal)

Drink swaps

- SWAP a pina colada FOR a mojito and save 326kcal
- SWAP a pint of lager FOR lager shandy and save 100kcal
- SWAP double rum & coke FOR single vodka, lime & soda and save 107kcal
- SWAP a large glass of white wine FOR a white wine spritzer with soda and save 35kcal

nhs.uk

Think before you drink

It's not just alcohol, non-alcoholic drinks from lattes to colas can also lead your calorie count to creep up.

What you drink should not be overlooked when trying to lose weight. Drinking too many sugar-sweetened drinks can contribute to weight gain.

So what are the common offenders and where could you be going wrong?

Coffee:

Getting a caffeine fix could give you 193kcal or more in one hit if you opt for cappuccino or mocha. Switch to black or white coffee instead.

Fruit juice and smoothies:

You might feel virtuous guzzling these but watch out. A small glass of cranberry or apple juice racks up nearly 100kcal and a small 250ml yoghurt-based smoothie can be about 136kcal. Go for fruit-only smoothies instead. Although fruit juice counts towards

your 5 A DAY, you may find eating pieces of fruit more filling.

Fizzy drinks:

Lemonade or cola is not only bad for our teeth but it can provide 140kcal in just one can. Switch to diet versions and think of it as a one-off treat.

Experimenting with some interesting flavour combinations can help make it feel less like you're depriving yourself so you'll stick with it – research shows that our tastebuds can be retrained over time to enjoy far less sugar in drinks (or no sugar at all).

Liquid calories

Per 250ml serving:

Cola drink: 105kcal

Mocha: 193kcal

Cappuccino: 110kcal

Chocolate milkshake: 195kcal

Smoothie: 136kcal

Pure orange juice: 122.5kcal

Pomegranate juice: 170kcal

Pure apple juice: 117kcal

Caffeinated energy drink: 112.5kcal

Note that 150ml of pure unsweetened fruit juice can provide one of your 5 A Day.

Minty lemonade recipe

Make a refreshing, lower-calorie alternative to sugary canned drinks:

- large handful fresh mint leaves
- juice of 6 lemons and zest of 3
- 3 tbsp sugar
- sparkling mineral water

1. Tear the mint leaves to release the flavour
2. Add the mint to a jug with the juice, zest and sugar
3. Top up with sparkling water
4. Chill in the fridge

Serves 4 at 46kcals per serving

Home cardio workout

Burn calories, lose weight and feel great with our 10-minute home cardio workout routines. An ideal workout if you're short on time and need to fit in a bit of exercise without too much fuss.

nhs.uk/cardio-workout

NHS
nhs.uk

Week 5 food and activity chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food	**Food**	**Food**	**Food**	**Food**	**Food**	**Food**
Total calories:	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*
Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*
Your 5 a day	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**
Activity	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**
Total minutes:	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*
Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins
Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins

Weekly summary

Aerobic exercise: 10 mins | 30 mins | 60 mins | 90 mins | 120 mins | **150 mins +**

1 session on 2 or more days a week

Strength exercise: mon | tues | wed | thurs | fri | sat | sun

Start of the week

Weight	Waist
kg/lbs	cms/in

Your weight loss tracker - Record your weight and waist size at the start and end of each week to help you stay on track

End of the week

Weight	Waist
kg/lbs	cms/in

NHS
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Losing weight

Getting started - Week 6

Congratulations! You've reached the halfway stage of this guide.

There may have been bumps in the road but you've shown the determination to continue the journey. By sticking with it over the weeks, you've shown a real desire to change.

We're rooting for you. You can do it.

Use this midway point to review your routine to make sure there's nothing holding you back from losing weight.

Your actions for Week 6

- Tell family and friends how you're doing – you might even inspire them to join you
- Plan a non-food reward for when you get to 12 weeks. See what others chose on the next page
- Use our online weight loss forum to let other people know how you're getting on

Laura's diary

Week 6

Well done. If you've got this far and have stuck to the advice you should be feeling really pleased and proud of yourself.
And it's that mental boost that you need to push yourself on to further success.
Spend some time thinking about areas where you're struggling and come up with your own list of actions for overcoming them.
A lifestyle change like this has to be an active process. The more you invest in it, the more you'll achieve.

Did you know?

Setbacks are normal when trying to change habits of a lifetime. Accept this, and it will help you have the right attitude to get back on track when a slip-up does occur.

Plan ahead how you will cope with potential bumps on the road, such as a meal out or a party.

Week 6

NHS
nhs.uk

Weight loss pitfalls

Are you struggling to lose weight? Find out what could be tripping you up. Here are some of the most common weight loss traps and some quick fixes.

Skipping breakfast
Skipping breakfast can lead to unplanned and unhealthy mid-morning snacking or bingeing at lunchtime.

Fix: go for breakfasts containing fibre, such as wholegrain bread or porridge.

Skipping meals
Skipping any meal is a bad idea. It may reduce your calorie intake for a brief period, but you'll be much hungrier later on and more likely to overeat.

Fix: eat regularly and don't starve from one meal to the next. Have some healthier snacks handy just in case.

Losing track of your calories
A cafe latte, a handful of crisps, a piece of chocolate, a biscuit ... mindless munching can easily sabotage an otherwise well-planned diet.

Fix: make a note of every bite to stay within your calorie allowance.

Unhealthy snacking
High-calorie snacks will do your waistline no favours, but healthier snacks can help you control hunger and keep your energy levels up.

Fix: choose snacks with fibre such as fruit, veg and wholegrain food.

Lapping up low-fat
'Low-fat' or 'fat-free' doesn't always mean low calorie.

Fix: always check food labels for fat, sugar and calorie content.

Drinking too many calories
Some fancy coffees, sweet fizzy drinks, smoothies and alcoholic drinks can pack a calorie punch.

Fix: go for water (still or sparkling) with a slice of lemon, tea or coffee with reduced-fat milk, or herbal tea.

Weighing yourself too often
Your weight can fluctuate from day to day, so weighing yourself daily may not give a true picture of your weight loss.

Fix: weigh yourself once a week and use other goals to measure progress.

Setting unrealistic goals
Thinking you'll lose half a stone (3kg) in your first week is probably setting yourself up for failure. A realistic goal is vital to successful dieting.

Fix: smaller goals are the building blocks to weight loss success.

Gaining weight from exercising
Take care not to cancel out the calories you've burned during exercise by eating more afterwards or you might end up putting on weight.

Fix: for a low calorie post-workout snack, read 10 suprising 100 calorie snacks at nhs.uk/100-calorie-snacks.

Oversized portions
This is a common reason why people struggle to lose weight.

Fix: use smaller plates and stop eating before you feel full.

Take the Week 6 MoT test

It's time to take stock of your progress and highlight any problems. Are you:

- Carefully recording all calories? ☐
- Weighing food when cooking? ☐
- Watching your drinking? ☐
- Reading food and drink labels? ☐
- Exercising 150 minutes a week? ☐
- Getting your 5 A DAY? ☐
- Having breakfast every day? ☐

If you didn't tick all the boxes then think about why and find a fix.

Non-food rewards

Tried and tested non-food rewards to help you celebrate your progress:

- new music
- new pair of jeans
- new running shoes
- trip to the movies
- a DVD box set
- a day at a health spa
- a cooking class
- a day off work

For more ideas, read Non-food rewards for losing weight at nhs.uk/rewards

nhs.uk

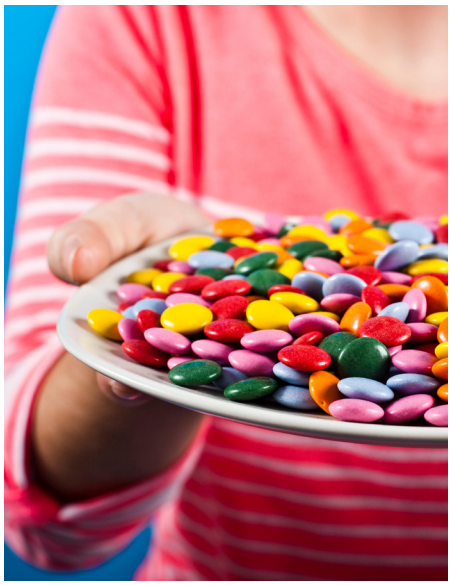
Resisting peer pressure

In a perfect world, family and friends would do nothing but encourage you during your 12 weeks.

In reality, it's not always like that. You may have had a friend tell you, "just one more drink won't hurt" or a partner say, "forget the gym tonight, let's go out for dinner" or a parent who urges you to have another slice of their homemade cake.

It's probably well-meaning. But that doesn't help when it comes to sticking to your daily calorie allowance. Here are seven ways to resist peer pressure:

- Get home support. Tell your family how much you value their support. The more involved they feel, the more sensitive they're likely to be.
- Ask those around you not to offer you your favourite treats so you don't give in to temptation.
- Plan evenings out in advance to adjust your calorie intake during the day so you don't go over your daily allowance.



- Avoid "rounds" at the pub. They can force you to keep up with your friends' drinking. Sit them out and buy your own drinks.
- If you're eating out, decide beforehand what you'll eat. Many restaurants display menus online.
- Learn to say no. It's not unfriendly to refuse unwanted food or drink offered by loved ones. Be polite but firm.
- Celebrate your success. When you hit a target, let everyone know so they see how much it means to you.

Diet-friendly socialising

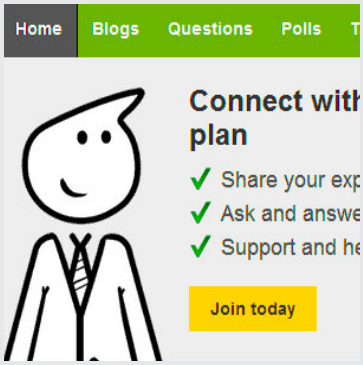
Here are some ways to spend time with friends to take your mind off food:

- A country walk
- The cinema (take your own low-calorie popcorn!)
- Bowling
- A bike ride and (low-calorie) picnic
- Roller-skating
- A game of Frisbee or football on the park
- A day at a spa

Weight loss tips for parents

Cooking for children can derail your diet so try these tips:

- Plan family meals ahead of time. If necessary, include a child-friendly option alongside your own healthy meal
- Don't 'supersize' your children's meals. That way, there'll be fewer leftovers to graze on. Good portion control can benefit the whole family



Weight loss forum

Connect with other people following the weight loss plan. Use the forum to share your experiences, ask and answer questions about losing weight, and help others on their journey.

nhsweightloss.healthunlocked.com

NHS
nhs.uk

Week 6 food and activity chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food	**Food**	**Food**	**Food**	**Food**	**Food**	**Food**
Total calories:	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*
Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*
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Total minutes:	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*
Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins
Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins

Weekly summary

Start of the week

Weight	Waist
kg/lbs	cms/in

Aerobic exercise: 10 mins, 30 mins, 60 mins, 90 mins, 120 mins, **150 mins +**

Your weight loss tracker - Record your weight and waist size at the start and end of each week to help you stay on track

1 session on 2 or more days a week

Strength exercise: mon, tues, wed, thurs, fri, sat, sun

End of the week

Weight	Waist
kg/lbs	cms/in

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Losing weight

Getting started - Week 7

Welcome to Week 7. Well done, you're on the home straight!

Stick with it, each week is another week of developing healthier habits and skills that you can use at home or away.

After six weeks following this guide, you should be feeling more confident with the idea of eating out.

From Italian to Thai, our eating out tips and healthier meal swaps will help you to enjoy a guilt-free lower-calorie meal out.

Laura's diary

Week 7

When you're trying to lose weight, eating out, whether for lunch or dinner, can be a challenge. There are just so many temptations and pitfalls. It's not always easy to make healthier choices. This week's tips will help your decision-making. When I go to the restaurant with friends I try to look at the menu in advance and think about the healthiest options and calorie content. I'll keep to my normal daily meal routine, that way I won't arrive at the restaurant completely ravenous which in my case always leads to bad choices.

Your actions for Week 7

- Armed with this week's advice, why not suggest a meal out with friends or family?
- Look at your last six food and activity charts to go over your progress and identify any trends you need to keep working on
- Try our 10-minute home toning workout – and try to do at least 150 minutes of activity this week
- Keep counting those calories and stick to your daily limit

Did you know?

It takes approximately 20 minutes for the stomach to tell the brain that it is full, so eat slowly and stop eating before you feel full.

To avoid overeating, use smaller plates and bowls. This will help you get used to smaller portions without going hungry.

Week 7

nhs.uk

Dining out

Going out for a meal? Don't panic. We've got you covered. Our tips will help you enjoy the occasion without breaking the calorie bank.

Read the menu online

If you know which restaurant you're going to, look up their menu online to work out the lower-calorie options and figure out your expected calorie intake. Planning ahead like this will help you make better choices and avoid temptation.

Don't skip a meal

Don't skip breakfast or lunch to build calorie credits for your evening out. Stick to your daily meal routine to keep your appetite under control throughout the day. If you go over your calorie allowance, don't worry: simply reduce your calorie intake the following days.

Stick to one course

It's perfectly acceptable to have just a main course. And don't feel the need to finish your plate. Try to stop eating before you feel overly full. If you can't resist having a starter or a dessert, find someone to share it with.

Downsize your portions

To avoid eating too much, order a starter and a side dish as your main course instead of one of the larger mains on the menu.

Avoid deep-fried

Avoid food that is deep or shallow fried, battered, pan-fried, marked as 'crispy' or with pastry. These are high in fat. Instead, look out for grilled, roasted, poached, steamed or baked dishes.

You say tomato

Avoid cheese, cream or butter-based sauces, which are high in fat and pack a calorie punch. Instead, go for tomato or other vegetable-based sauces.

Beware of high-calorie salads

Watch out for high-calorie toppings such as croutons, cheese, bacon and nuts. Ask for salad dressing on the side and add only as much as you need.

Take your time

Eat slowly, enjoy every mouthful. You'll feel satisfied before you feel full and have more chance to take part in the conversation and enjoy the atmosphere.

Share dessert

Go for healthier options such as fruit-based desserts, including crumble. If you can't resist a decadent dessert, share it with a friend.

Don't drink your calories

Alcohol and sugary soft drinks can be high in calories. Go for water or sugar-free drinks.

Healthier side dishes

Fill up on veggie sides. If cooked, go for steamed or boiled. A portion is 80g for your 5 A DAY.

- Broccoli
- Mixed leaf salad
- Carrots
- Beans
- Mushrooms
- Kale
- Watercress
- Spinach
- Cabbage

How many calories?

While many menus now list calories, it's not always possible to work out the calorie content in a restaurant or takeaway meal. These tips may help:

- Choose sauce-free dishes, such as grilled meat, baked fish or tandoori dishes. Some sauces and dressings can push up a dish's calorie content
- Ask what's in a dish or how it's been cooked – the restaurant should be happy to tell you
- If you aren't sure, ask for a dish to come without a 'suspect' item
- Try to keep track of exactly what you eat and the amount so you can tot up the calories accurately

nhs.uk

Fabulous foreign food

Tips to help you select lower-calorie options when you fancy something a little more exotic.

Italian

Avoid cheese and cream-based pasta sauces, such as alfredo or carbonara.

Thumbs up: thin pizzas with veg toppings, tomato-based sauces, vegetable-based soups, grilled dishes.

Thumbs down: cheesy and meaty pizzas, salami, creamy sauces, garlic bread, lasagne.

Chinese

Chinese food can be low-calorie. Just avoid sweet sauces and anything fried or deep-fried.

Thumbs up: stir-fries, steamed dumplings, steamed veg, plain boiled rice, steamed fish or chicken.

Thumbs down: anything deep-fried or sweet and sour, prawn toast, spring rolls, egg fried rice.

Thai

Thai food is great as it tends to feature lots of steamed or stir-fried vegetables.

Thumbs ups: salads, stir-fries, steamed rice, broth soups.

Thumbs down: coconut milk dishes, fried rice, peanut sauce, crispy noodles.

Indian

In spite of its reliance on frying, there are plenty of healthier choices.

Thumbs up: tomato-based sauces, tandoori dishes, plain or basmati rice.

Thumbs down: bhajis, poppadoms, creamy curries, pilau rice, naan bread.

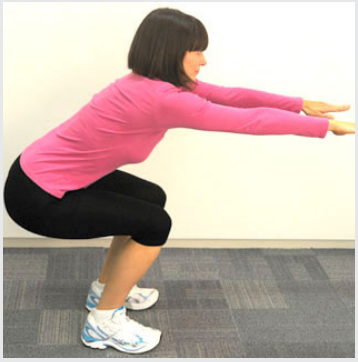
Restaurant tips

- Banish the buffet: it's hard to control your portion size at an all-you-can-eat buffet. It's a real test of willpower and the food tends to be less than healthy. The solution? Avoid them completely!
- Order less: there's no need to cry off takeaways when trying to lose weight, but portion control is key. Try to avoid ordering more food than your need.
- Plain and simple: steer clear of creamy sauces and meals with lots of cheese.

When in Blighty

British favourites such as fish and chips, pub meals and traditional breakfasts can easily blow your calorie budget. Avoid fried foods, ploughman's lunch and pastry-based foods such as Cornish pasties and steak and kidney pie. Thin-cut chips and roast potatoes are also a no-no.

Instead, try lean meat, grilled salmon or white fish. And for side dishes, stick to jacket potatoes, steamed vegetables and salad.



10-minute home toning

Firm up your bum, abs, legs and arms with this 10-minute home toning workout - ideal if you're short on time and need exercise without too much fuss.

nhs.uk/toning

NHS
nhs.uk

Week 7 food and activity chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food	**Food**	**Food**	**Food**	**Food**	**Food**	**Food**
Total calories:	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*
Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*
Your 5 a day	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**
Activity	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**
Total minutes:	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*
Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins
Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins

Weekly summary

Start of the week

Weight	Waist
kg/lbs	cms/in

Aerobic exercise: 10 mins, 30 mins, 60 mins, 90 mins, 120 mins, **150 mins +**

Your weight loss tracker - Record your weight and waist size at the start and end of each week to help you stay on track

1 session on 2 or more days a week

Strength exercise: mon, tues, wed, thurs, fri, sat, sun

End of the week

Weight	Waist
kg/lbs	cms/in

NHS
nhs.uk

Losing weight

Getting started - Week 8

Week 8 and you're doing great.

We all know we should eat more fruit and veg, which is especially helpful when trying to manage your weight. They contain fibre, vitamins and minerals. We should eat at least five portions of different fruit and veg a day.

Salads are often seen as the perfect dieter's food. But not all salads are as innocent as they seem. Find out what lurks beneath those healthy-looking green leaves and could be spoiling your diet.

Laura's diary

Week 8

Calorie counting has made me a much more creative cook and has led to me experimenting with a wider range of fruit and veg.
Asian recipes are particularly versatile. Tomato-based curries and marinades deliver a variety, flavour and freshness that's hard to beat.
Crucially they tend to rely much less on the sorts of ingredients that send calorie values rocketing, like cheese.
I really recommend investing in some fresh and dried spices and to give it a go.

Your actions for Week 8

- Plan to have at least two portions of veg with every evening meal this week
- Try some of our homemade salad ideas and experiment with your own
- Try to plan three 30-minute lunchtime walks this week. Your lunch break is an opportunity to get active
- Stick to your calorie and exercise targets

Did you know?

Products carrying a 5 A DAY message can be misleading. '5 A DAY' logos have been appearing on food high in sugar, salt and fat such as biscuits and fizzy drinks.
Always check the label for the full list of ingredients and look for the Department of Health's official 5 A DAY logo.

Week 8

nhs.uk

Eat more vegetables

Getting into the habit of eating more veg can help you lose weight and keep it off. There are so many ways to pack more veg into your favourite meals.

We all know that vegetables contain fibre, vitamins and minerals. But what have they got to do with losing weight?

Because they contain fibre, vegetables fill you up without packing a big calorie punch (depending on how they are cooked of course).

So, make veg a big part of your efforts to lose weight, and you can eat filling, satisfying meals – and avoid between-meal hunger pangs – without exceeding your daily calorie allowance.

Try these 10 tips to fit more vegetables into your diet:

- Aim to make your meal more filling by adding vegetables, and then cut back on another, high-calorie ingredient or food, or simply eat less. This way, you can feel full while eating fewer calories.
- Add beans, lentils and pulses to stews, bakes and salads.
- Aim for two portions of veg on your plate. If you're having shepherd's pie, have some peas with it too. Add carrots and broccoli to a roast dinner.
- Eat more salad or vegetable-based dishes. One meal can provide several portions of your 5 A DAY. For protein, you could add a boiled egg, chicken slices or cooked lentils. For example, start with some lettuce and add sliced tomatoes, red onion, apples, pears, celery, cooked beetroot, grated raw carrot and a hard-boiled egg.
- Have vegetables as snacks. Baby carrots, radishes, and sugar snap peas all make ideal snack food. They're convenient, easy to pack in handy portions and they require very little preparation.
- Swap sauces based on cheese or cream – on pasta, rice or a baked potato – for tomato or vegetable-based sauces. Throw in some kidney beans or chickpeas to make the sauce extra filling. These same ingredients can make a filling vegetable or bean-based soups as well.
- Add some crunch to your lunchtime sandwiches with lettuce, tomatoes, cucumber or grated carrot. This will help fill you up.
- Stock up on frozen vegetables. They're quick and easy to prepare in the microwave or on the hob. You can choose single vegetables – such as peas, carrots, green beans or cauliflower – or mixed veg.
- Cooked breakfast? Swap a fried tomato or mushroom for a grilled tomato or mushroom. Or, try an omelette stuffed with onion and peppers.
- Add green, leafy veg to soups or stews. Veg such as kale or swiss chard are loaded with calcium and iron. This is a really easy way to incorporate them into your meals.

5 A DAY portion sizes

A portion of fruit or veg is 80g. Fresh, frozen, tinned and juiced fruit and veg all count towards your 5 A DAY. Use the rough guide below to work out whether you're eating your 5 A DAY:

- Half a grapefruit
- An apple
- 2 plums or satsumas
- 3 heaped tablespoons of peas, sweetcorn, beans or pulses
- 2 broccoli spears
- A dessert bowl of salad leaves

A 5 A DAY portion of dried fruit is around 30g. This is about one heaped tablespoon of raisins.

Not one of your 5 A DAY

They may be vegetables but they do not count towards your 5 A DAY.

- Potatoes – including jacket potatoes, chips and crisps
- Yams
- Cassava
- Plantain

nhs.uk

Make the most of salads

Salads can be your best friend when trying to lose weight but beware of calorie-laden toppings.

A typical green salad of green leaves, tomatoes and cucumbers is low in calories, salt and fat and high in nutritional value.

However, toppings such as croutons, bacon bits, cheese, breaded chicken and creamy dressings will turn an innocent-looking salad into a dieter's nightmare.

The golden rule with salads: avoid fatty toppings, always ask for the dressing on the side and avoid mayonnaise or cream-based dressings.

Salad dressings

Salad dressings are almost always high in calories. A single serving (two tablespoons) of mayonnaise is 220kcal; a mayo-based Thousand Island dressing is 194kcal and blue cheese dressing is 228kcal.

- Try making your own lower-fat and lower-calorie dressings out of fruit juices. Or make a healthier vinaigrette with olive oil and vinegar or fresh lemon juice.
- Take care when buying commercial lower-fat salad dressings – while they may be low in fat, they can often be high in sugar. Always check the nutrition information on the label.
- If you're in a restaurant or cafe, ask for the dressing to be served on the side and add only as much as you need.
- Give a wide berth to salads such as Caesar, Waldorf, coleslaw and some pasta and potato salads, all of which are generally soaked in mayonnaise.

3 lower-calorie salad dressings

Orange-balsamic (82kcal)
- 1 tbsp dijon mustard
- 2 tbsp balsamic vinegar
- Juice of 1 large orange

French dressing (88kcal)
- 1 clove garlic minced
- 2 tbsp red wine vinegar
- 1 tbsp dijon mustard
- 1 tbsp honey

Ranch-style dressing (51kcal)
- 1-2 cloves garlic, crushed
- 3 tbsp fat-free natural yoghurt
- Juice of 1 large lemon
- 2 tbsp red wine vinegar

Lower-calorie salad toppings

Add a burst of flavour with these 50kcal salad toppings:

- 1 tbsp toasted sunflower seeds
- 1 tbsp toasted pine nuts
- 1 tbsp toasted pumpkin seeds
- A handful of chopped grapes
- 1 tbsp of chopped toasted walnuts

5 A DAY

Find out about fruit and veg portion sizes with our 5 A DAY guides, including a downloadable illustrated poster and a portion size guide for a range of fruit and veg, including tinned and dried.

nhs.uk/5ADAY

NHS
nhs.uk

Week 8 food and activity chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food	**Food**	**Food**	**Food**	**Food**	**Food**	**Food**
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Weekly summary

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1 session on 2 or more days a week

Strength exercise: mon, tues, wed, thurs, fri, sat, sun

End of the week

Weight	Waist
kg/lbs	cms/in

NHS
nhs.uk

Losing weight

Getting started - Week 9

Good going – you've made it to Week 9! We hope keeping track of your calories is becoming easier.

If you started the Couch to 5K running plan on Week 2, you should be just one week from graduation!

If you're still working towards 150 minutes of activity a week, keep going! We know you can do it! Just keep doing a little bit more each week. Let's give it a big push this week. The key is to do something you enjoy that can fit into your routine.

Laura's diary

Week 9

How's the exercise regime going? Whether you're struggling or you've taken to it like a duck to water, I can't recommend the forums enough. They are truly inspiring and full of people who've found their own way of making it work for them. Exercise is a really important habit to learn – not just for the purposes of this 12-week guide but for the rest of your life.
Think about ways you can support yourself in achieving this goal. Would pairing up with a friend help, for instance?

Your actions for Week 9

- Go to the weight loss forum to find out what other people are doing to raise their activity levels
- If you're lacking motivation, use What's Your Sport to find out what activity suits you best
- Have a go at this week's recipe, which should satisfy any sweet cravings. If it's not your cup of tea – research some different lower-calorie recipes

Did you know?

Regular strength exercises, such as weight training, push-ups or heavy gardening, can boost weight loss.

Strength exercises build muscles and muscles burn more calories than other body tissue, including fat, even when you're not moving.

nhs.uk

What's stopping you?

Whatever it is that's stopping you from getting more active, it might not be as much of a barrier as you think.

Here are some common reasons why we might avoid exercise and how to overcome them.

'I don't have time'

Achieving 150 minutes of physical activity a week is easier than you think. It doesn't have to be structured exercise, like running or swimming. Walking to work, to the shops or the kids to school, gardening or taking the stairs all count. The easiest way is to work physical activity into your daily routine.

'I'm too tired'

It's not unusual to feel drained at the end of the day but exercise will relieve your tiredness and actually make you feel more energetic. With time, an exercise regime will also build your stamina, reducing feelings of lethargy.

'I don't have the willpower'

Many people give up on their exercise regime soon after starting it. One of the best ways to stay motivated is to keep an exercise diary or exercise with a friend. Goal-setting can also be fantastic for keeping you motivated and working towards a target that suits you.

'I don't like exercise'

Memories of school PE may still colour your judgement but there are so many ways of getting active, and enjoying it. For example, if competitive sport was your worst nightmare, focus on a solitary activity such as walking, running, yoga or swimming.

'It's hard work'

Starting slowly and building up gradually are the key to enjoying exercise. The Couch to 5K or Strength and Flex podcast series are just the ticket. They are both designed to let your confidence grow along with your stamina and strength.

'The weather is too bad'

Many people find running in the rain invigorating. Learn to love the weather; it's bracing with the wind behind you and it can be fun splashing through puddles.

'I've missed a session. I'll never get back on track'

No one sails through never missing an exercise session. Just get your kit on and bear in mind you're not back starting from scratch. The key is to rewind a bit. For example, if you've completed Couch to 5K but haven't run for a while, pick it up at Week 5 or 6.

'I'll look stupid'

It can be hard to get active in public if you're out of shape or not used to exercise. But you can overcome this. Start off exercising at home or plan to run when no-one's about. Your confidence will soon grow.

Exercise ideas

Gym not your thing? Try one of these to get your heart rate going:

- At home: DVD workouts, Strength and Flex, 10-minute workouts
- Outdoor: Walking, gardening, bowls
- Solitary: Pilates, yoga, tai chi, swimming, running, rollerblading
- With a friend: Badminton, dance classes, Zumba
- With family: Park football, rounders, Frisbee, hiking

Burn time?

How long does it take a 70kg person running at 6mph to burn off the calories in the following foods?

- Buttered brown toast - 10mins
- 2 Hob Nob biscuits - 12mins
- Cheese and onion crisps - 16mins
- Plain bagel - 18mins
- Chicken korma with rice (300g) - 39mins

nhs.uk

Have your cake and eat it?

If all you can think about is chocolate, biscuits or crisps, here are some lower-calorie substitutes.

Beware that although lower in calories, some of these swaps can still be high in sugar. Also, lower-calorie should not be taken as a licence to indulge.

Crisps – swap for lower-fat, lower-salt oven-baked crisps, which contain up to 70% less fat than standard varieties.

Pork scratchings – try swapping for homemade air-popped, plain popcorn.

Ice-cream – opt for lower-fat frozen yoghurt, or try sorbet made from sweetened water flavoured with fruit.

Cereal bar – despite their healthy image, most cereal bars are high in sugar and fat. Look out for bars that are low in sugar, fat and salt.

Chocolate – swap for a lower-calorie hot instant chocolate drink. You can also get chocolate with coffee and chocolate with malt varieties.

Biscuits – swap for oat cakes, oat biscuits or unsalted rice cakes, which contain fibre.

Sweets – try dried fruit such as raisins, sultanas, dates, apricots or figs, which all count towards your 5 A DAY.

Cake – swap for a plain currant bun, fruit scone or malt loaf. Avoid toppings like butter, icing, jam or cream.

Sugary fizzy drinks – try mixing sparkling water with unsweetened fruit juice, which counts towards your 5 A DAY, or choose a lower-calorie diet variety.

Fruit banana bran cake

Try this filling cake, which has just 132kcal per slice

- 100g low sugar bran flakes
- 250ml semi-skimmed milk
- 75g apricots, chopped
- 50g sultanas
- 40g soft brown sugar
- 150g self-raising flour
- 2 eggs, beaten
- 1 banana, mashed

Combine bran, milk, apricots and sultanas. Leave to soak for 1 hour. Preheat the oven to 180C. Line a loaf tin with greaseproof paper. Add sugar, flour, eggs and banana to the mixture and stir. Spoon into the tin and bake for 50-55 minutes on the middle shelf of the oven.

Snack rogues gallery

- Fully loaded nachos (pub meal): 924kcal
- Pork scratchings (100g): 621kcal
- Roasted and salted peanuts (50g): 300kcal
- Garlic bread (2 slices): 209kcal
- Wasabi peas (59g): 197kcal
- Salt and vinegar crisps (35g packet): 181kcal

Find your ideal sport

Find out what activity you're best suited to with What's your sport? It uses games and quizzes to assess your personality, skills and reflexes to match you up with your ideal activity.

nhs.uk/findyoursport

NHS
nhs.uk

Week 9 food and activity chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
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Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins

Weekly summary

Start of the week

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End of the week

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kg/lbs	cms/in

NHS
nhs.uk

Losing weight

Getting started - Week10

Well done on reaching Week 10. Great work!

Working towards a goal isn't always easy; sometimes life just gets in the way. When we feel depressed, angry, bored or stressed, we often turn to food to feel better. Identifying your comfort eating triggers is the first step in breaking the bond between your feelings and food.

Did you try to build in some of the activity ideas we suggested last week? If you didn't, why not give some of the tips a go this week?

Your actions for Week 10

- If you're about to finish Couch to 5K then get on the forum at couchto5k.healthunlocked.com and shout about it! You can claim your C25K Graduate badge there too
- If you use public transport to get to work, try to fit a 20-minute walk into your journey every day of the week
- Is stress or feeling down causing you to overeat? If you think it might be, visit the Moodzone at nhs.uk/moodzone

Laura's diary

Week 10

Last week we encouraged you to focus a bit more on exercise.
If you took up the Couch to 5K challenge in Week 2 this is your big week. Go for it!
It's amazing how much having a goal can help motivate you.
Furthermore, achieving that goal can be hugely rewarding and can help build your confidence, which will feed into other areas of life.
Spend some time this week planning your next goal and how you can achieve it.

Did you know?

You're more likely to fall off the diet wagon at the end of the week. Research suggests that we tend to eat more on Fridays and Saturdays than at any other time of the week.

Avoid undoing all your good work by sticking to the advice every day.

Week 10

nhs.uk

How are you getting on? Tips for diet success

You've been following this advice for almost 10 weeks, and it won't always have been easy. Here are a few tips to keep you motivated.

'Help – I've blown it'

Fix: Expect setbacks

It's to be expected that you give in to temptation once in a while, but don't let that become an excuse to give up on trying to lose weight. So, if you had a slice of chocolate fudge cake at work today, pick yourself up, put it behind you, move on and get back on the wagon straight away.

'Help – I still get hunger pangs'

Fix: Fill up on fibre

There is no need to feel hungry when trying to lose weight. Check that you're sticking to your daily calorie limit. Don't be tempted to consume less than that. Fill up on low-calorie fibre-rich foods as much as you can. They're best for staving off hunger pangs and helping you ßfeel full.

'Help – I don't think I can carry on'

Fix: Reward yourself.

Adopting healthier habits can sometimes feel like hard work. Try setting yourself a series of mini-goals as you progress through your weight loss journey. A mini-goal can be whatever you want it to be. It doesn't have to be weight-related. Every time you achieve a mini-goal, treat yourself with a non-food reward.

'Help – I've lost weight but not inches'

Fix: Be patient

Everyone's body-fat distribution is different, so the inches come off a little differently too. Initially, you may lose weight without losing inches. Be patient, and the inches will drop off in time. You'll soon notice your clothes getting looser and your body looking slimmer.

'Help – I've stopped losing weight'

Fix: Try something new to kickstart weight loss

Perhaps you've been losing weight nicely but for the last week or so, the scales have stayed the same. It's the dreaded weight loss plateau. Don't worry, this is normal. Check that you're sticking to your calorie limit. Are you forgetting to count a snack here or there, or overdoing your portion sizes? Also, it can really help to kickstart things by doing a little more exercise, or to try a different type that challenges your body in new ways.

How to avoid temptation

- Before eating, ask yourself if you're really hungry
- Don't store junk food, such as chocolate and crisps, at home
- Stock up on healthier and lower-calorie food for when hunger strikes
- Keep yourself busy so you're not always thinking about food
- Never shop hungry. Prepare a shopping list and stick to it
- Don't ban foods. You will only crave them more

Keep a food diary

A food diary can help you identify and tackle problems such as emotional eating.

Keeping a food diary involves writing down what you ate, whether you were actually hungry, when you ate and watching for the triggers.

You can use a notebook or one of several food diary charts freely available online. Alternatively, food diaries are often included in weight loss apps on mobile devices.

nhs.uk

How to beat comfort eating

It's easy to turn to food when you're stressed, upset, or simply bored.

But you have to address so-called comfort eating to continue making progress on this guide. Emotional eating can be beaten, although it's not always easily done. In some cases, you may need professional help. As a first step, you could try these simple techniques:

Recognising comfort eating

To help spot when you're comfort eating, keep a food diary for a few days. Whenever you eat something, record your mood and how hungry you are on a scale of 1 to 10.

If you find you're eating in response to negative emotions rather than hunger, chances are you're comfort eating.

Now, make a "trigger" list: a list of the feelings and circumstances that tend to spark your comfort eating.

Dealing with comfort eating

Think about how to change or avoid the circumstances that prompt negative feelings, which in turn lead to comfort eating. If your commute to work leaves you stressed and reaching for a snack, for example, can you find a new route?

It's not always possible to avoid difficult feelings, but if you find yourself snacking or craving certain food, it can help to follow a routine.

Ask yourself: am I really hungry, or is this comfort eating? Then, wait 30 minutes before eating. Often, you'll realise that it is really emotional comfort, not food, that you need.

10 comfort eating triggers

Once you've identified what sets off your comfort eating, you can start to tackle it. Here are 10 common triggers:

- Work stress
- Loneliness
- Money worries
- Bad weather
- Tiredness
- Arguments with your partner
- Boredom
- Sadness
- Unemployment
- Health problems

Non-food comfort fixes

- Take your mind off food with some reading
- Listen to a favourite song
- Write down a fun thing you're going to do today, or this week
- Watch a movie
- Phone a friend
- Go for a walk
- Clean the car
- Have a bath
- Surf the web
- Do some breathing exercises
- Do some exercise

Legs, bums and tums

Tone up, firm up and burn fat from your tummy, hips, thighs and bottom with this 10-minute legs home workout. This exercise routine counts towards your 150 minutes of activity a week.

nhs.uk/bumsandtums

NHS
nhs.uk

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NHS
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Losing weight

Getting started - Week 11

A big hurrah for reaching Week 11. You're a star!

If you began Couch to 5K in Week 2, you will have completed the plan last week. Well done. To keep going, download our 5K+ running series.

If you've been exercising and eating well but have stopped losing weight, you may have hit a weight loss plateau. Don't worry, it's common. This week we'll tell you what causes your weight loss to stall and explain how to deal with it.

Laura's diary

Week 11

Congrats to all you Couch to 5K graduates. Doesn't it feel fantastic?
For me, graduating was a real turning point. It not only totally changed my attitude to exercise but it really boosted my confidence.
For those of you still struggling, redoubling your efforts on the exercise front could be just what you need to get over a weight loss plateau. Also, try to be rigorous when you're recording calories. If an extra few are slipping through the net, they could be halting your progress.

Your actions for Week 11

- If you finished Couch to 5K, take your running to the next level with the 5K+ running podcasts
- To inject some fun into your weekly physical activity, why not recruit an exercise buddy?
- Cook a healthier meal for friends in Week 12. It's a chance to share what you've learned, and celebrate what you've achieved

Did you know?

It's a myth that you can burn body fat from just one area at a time. When you lose weight, the fat loss occurs throughout the body.

You can tone specific areas – such as your abs – but without weight loss, it will still be underneath a layer of fat.

Week 11

nhs.uk

Weight loss plateau

You've been eating healthier food and exercising but you've stopped losing weight? It could mean you've hit the dreaded 'weight loss plateau'.

Before you get too discouraged, you should know that it's normal for weight loss to slow and even stall for a while.

That is because your body has adapted to your current programme, and has learned to cope with the same energy demands while burning fewer calories.

Perhaps it's time to review your current programme and see if you need to shake things up a little.

Here are 10 ways to deal with a weight loss plateau.

Hang in there

If you're burning more calories than you take in then sooner or later you will continue to lose weight. You may still be losing weight but it's too small to register on the scales yet.

It's not all about weight

You may have stopped losing weight but it's only temporary. Think about all you've achieved – you've brought your weight under control, you're eating healthier and feeling more energetic.

Calorie creep

One of the most common reasons for weight loss slowing is that your calorie intake can start to creep up again over time. Check your portion sizes haven't increased and make sure your calorie counting is accurate.

Start exercising

Regular exercise is one of the best ways of shifting those extra stubborn pounds that diet alone can't budge. Find something you enjoy and that you can fit into a routine.

Step it up

Your body adapts quickly to a new exercise programme and learns to produce the same effort while burning fewer calories. You may need to step it up.

Try something new

Try different activities to work other muscles. Not only will change keep you motivated, new exercises will force your body work harder than it's used to.

Be strong

Muscles are very good at burning calories. Regular muscle-strengthening activities, including heavy gardening and weightlifting, will give your weight loss a boost.

Reboot your motivation

If your motivation is flagging, think back to the start of the programme and your reasons for losing weight. Also, ask friends and family for support.

Do you still need to lose weight?

Check your BMI to see if you're a healthy weight. If so, it shows you're already a different person even without further weight loss.

See your GP

Your GP can do tests to rule out any conditions that could be causing your weight loss plateau as well as discuss other weight loss advice.

Diet-friendly dinner party

Entertaining friends at home is a great way to keep control of what's on the menu and avoid temptation. Try this meal plan:

Starter – Mexican bean and tomato soup (117kcal)

Main – Prawn jambalaya (323kcal)

Dessert – Lemon and raspberry trifle (188kcal)

Grand total = 628kcal

See the Change4Life Meal Mixer for these recipes and many more at nhs.uk/c4lrecipefinder.

Cooking with oil

Oil is a calorie heavyweight, so watch how much you use when cooking. A tablespoon of vegetable oil contains about 120kcal. Just a few more tablespoons of oil - and that includes healthier oils such as olive oil - can add hundreds of calories to your meal. Always measure cooking oil rather than pouring it from a container: this will help you to use less.

nhs.uk

Ways to get fit for free

The secret to getting fit for free is to use every opportunity to be active.

Armed with a bit of get-up-and-go and good planning, you can be fitter than ever without spending a penny.

Walking
Research shows that people who fit moderate activity, such as walking, into their daily life burn more calories than those making weekly visits to the gym.

Cycle to work
Cycling to work is one of the easiest ways of fitting exercise into your day. It also saves you money on travel costs.

Park games
Park games such as 'It' are ideal for all the family to get active together and burn calories while having fun.

Skipping
Skipping can be done anywhere at any time. The average person will burn up to 200kcal skipping for 15 minutes.

Trim trails
Trim trails are made up of simple pieces

of exercise equipment dotted around parks and recreation areas.

Green Gyms
Work up a sweat digging, planting and path-clearing at one of 95 free Green Gyms around the country run by The Conservation Volunteers.

Park football
Provided you can work up the bottle to join a group of strangers for a kick about, football is both an excellent way to get fit and to make friends.

Mall walking
Aimed at people who don't normally walk very much, 'mall walking' is brisk walking through shopping centres.

Contact your local authority
Your local leisure centre may offer initiatives such as free classes to encourage people to get in shape.

Couch to 5K+

Take your running to the next level with podcasts designed for Couch to 5K graduates. Each podcast provides a structured run with music and coaching to develop your technique, speed and stamina.

nhs.uk/Couchto5K-plus

Calorie burn league table

The more energetic the activity, the more calories you burn. As a guide, here's what someone weighing 70kg would burn in 60 minutes:

- brisk walking (3.5mph): 266kcal
- breaststroke: 700kcal
- badminton: 315kcal
- cycling (12mph): 560kcal
- running (6mph): 700kcal
- park football: 490kcal
- aerobics class: 455kcal
- yoga (hatha): 175kcal

Chock horror!

How long does it take to burn off the calories in a Snickers bar (319kcal)? You might be surprised:

- Running (6mph): 28min
- Cycling (12-14mph): 35min
- Park football: 39min
- Breaststroke swim: 28min
- Walking (3mph): 84min

These times are based on a person weighing 70kg. Lighter people will take longer to burn off the same number of calories

NHS
nhs.uk

Week 11 food and activity chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food	**Food**	**Food**	**Food**	**Food**	**Food**	**Food**
Total calories:	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*	*Total calories:*
Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*	Oops! *Unplanned snacks or drinks*
Your 5 a day	Your 5 a day	Your 5 a day	Your 5 a day	Your 5 a day	Your 5 a day	Your 5 a day
Activityv	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**
Total minutes:	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*
Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins	Aerobic exercise mins
Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins	Strength exercise mins

Weekly summary

Aerobic exercise: 10 mins | 30 mins | 60 mins | 90 mins | 120 mins | **150 mins +**

1 session on 2 or more days a week

Strength exercise: mon | tues | wed | thurs | fri | sat | sun

Start of the week

Weight	Waist
kg/lbs	cms/in

Your weight loss tracker - Record your weight and waist size at the start and end of each week to help you stay on track

End of the week

Weight	Waist
kg/lbs	cms/in

NHS
nhs.uk

Losing weight

Getting started - Week 12

Congratulations on reaching Week 12. You've done it!

Over these past three months you've worked hard to adopt new healthier habits. As you'll have discovered, old habits are hard to break. Whether you've reached your target weight or want to keep going, this week you have something to celebrate.

But this isn't the end, it's just the start of your new healthier lifestyle. You've achieved so much – there's no going back now. Keep going!

Laura's diary

Week 12

If you've got this far and if you've stuck to the guide, congratulations! You should be really proud of what you've achieved.

You've not only taken big steps towards improving your physical health but you will be reaping the rewards of testing your willpower and really achieving something that no one else could give you. The key is to treat this as the beginning. It's no use going back to old habits. Keep up the good work, keep working on what you find difficult and be proactive in helping yourself progress.

Your actions for Week 12

- You promised yourself a non-food reward if you finished the course. So go on and treat yourself – you deserve it!
- You've learnt a lot – share your success and your tips on the weight loss forum
- Keep using the food and activity chart for as long as you want to continue losing weight or to maintain your current healthy weight

Did you know?

Studies show that reducing your time sitting down will help you lose weight. Not only should you do more structured exercise, like running or cycling, you should try to be more active generally.

That means spending less time sitting in front of the TV, using a computer or using the car for short journeys. ✔

Week 12

nhs.uk

Your next challenge: keeping the weight off

If you've achieved your target weight over these last 12 weeks, well done, but the journey doesn't end here.

Weight management is a lifelong commitment but you're over the hardest part. The longer you stick to your new lifestyle, the more normal it will feel.

Our advice about how to lose weight in this 12-week guide can also help you to better manage your weight in the long term.

Below are some of the common features among people who have lost weight and have been successful at keeping it off:

Stick to lower-calorie eating

In studies of people who have lost weight and kept it off for at least a year, most continued to eat a diet lower in calories than before their diet.

Keep planning ahead

Maintain your healthier eating habit regardless of changes in your routine, such as eating out, weekends or holidays. By planning ahead, you're less likely to slip up.

Eat breakfast

Research shows that breakfast can help people control their weight. Having breakfast can help you avoid getting too hungry and snacking later on.

Stay active

Studies show that people who've lost weight and kept it off typically do 60 to 90 minutes of physical activity most days of the week while not overeating.

Keep using the chart

Keep using the food and activity chart and calorie counter to stay in control of your calories and exercise. They will help prevent your calorie count from creeping back up.

Watch your weight

Weigh yourself regularly, for example once a week, to help you stay on track and correct small weight gains before they become serious relapses.

Get support

Get family and friends to support your new healthier lifestyle, whether it's by helping you make healthier food choices or getting active and doing some exercise with you.

Stay consistent

Stick to your eating and activity plan seven days a week. Don't be tempted to ease off at the end of the week or during holidays.

Keep it interesting

Variety is the spice of life, so if you feel yourself slipping back to old ways, mix things up a bit. Buy a new healthy cookbook, sign up for a healthy cooking course or try a new activity.

Set SMART goals

For behaviour change to be long-lasting, a simple goal-setting technique called SMART can help. When setting goals, like losing weight, try to be SMART about it. SMART stands for:

- Specific: your goal should be precise, 'I will run three times this week', rather than general, 'I will exercise more'
- Measurable: your goal should be measurable
- Achievable: break down your overall goal into easy mini-goals
- Relevant: choose goals that apply to your circumstances
- Time-specific: set yourself a time scale for achieving your goal

What should I eat now?

As a guide, the average man needs about 2,500kcal and the average woman needs 2,000kcal a day to maintain their weight. If you've now reached a healthy weight, you may want to increase your calorie intake. But do it by small amounts to avoid putting on weight again and remember to keep active.

nhs.uk

More to lose? Here's how

Over these last 12 weeks, we hope you've picked up the skills to help you make healthier food choices and be more active.

If you still need to lose weight, keep using the weekly chart to track your calories and exercise.

You could also use the BMI calculator to check that the daily calorie target you've been sticking to until now is still appropriate.

Losing weight the healthy way is a gradual process. If you're feeling frustrated at the rate of your progress, believe that even a small amount of weight loss is a success in itself.

It means that you've managed to stop putting on weight and you're starting to change your lifestyle for the better. You're heading in the right direction. So well done and keep going!

Remember you're not alone. To get advice and find out how fellow

12-weekers have done on the plan, you can always visit the weight loss forum.

If you feel the need for some professional advice, your GP, practice nurse or a dietitian can help. They can help assess your diet and activity levels, set goals for change and monitor your progress.

Alternatively, try attending a local weight loss group. In some areas, you may be referred by your GP. You may also be referred to a local active health team, under the supervision of a qualified fitness trainer.

Weight loss forum

Keep using the weight loss forum to get help, support and motivation to continue losing weight or to help other 12-weekers on their own weight loss journey.

nhsweightloss.healthunlocked.com

Stick with it

Over the course of the past 12 weeks, we've helped you get into the habit of eating healthier and taking regular activity. Now you need to stick with it.

Changing habits of a lifetime isn't easy and can be quickly undone, so you'll need to remain extra vigilant over the next few weeks to embed those changes.

You'll have ups and downs, lapses, moments of weakness. We all do. But the quicker you get back on track, the smaller the impact of a slip-up will be.

Find a dietitian

Registered dietitians are experts in diet and nutrition. They can provide advice on all aspects of eating and diet. You can find one:

- by contacting your local hospital or GP surgery
- by searching for a freelance dietitian on dietitiansunlimited.co.uk, which is associated with the British Dietetic Association
- through the Health and Care Professions Council - www.hcpc-uk.org.

NHS
nhs.uk

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Your 5 a day	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**	**Your 5 a day**
Activity	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**	**Activity**
Total minutes:	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*	*Total minutes:*
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