



# Lecture: Nutrition: Food and Diet

Ref: WHO

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Web ref provided on slides  
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# **Nutrition: Food and Diet**

- A Healthy, Balanced Diet
- Healthy Diet: **Key facts**
- Healthy Diet: **Overview**
- Healthy Diet: **Maintaining a healthy diet**
- **Promoting healthy diets**
- **WHO response**
- Diet, Nutrition, and Stress

# Nutrition: Food and Diet

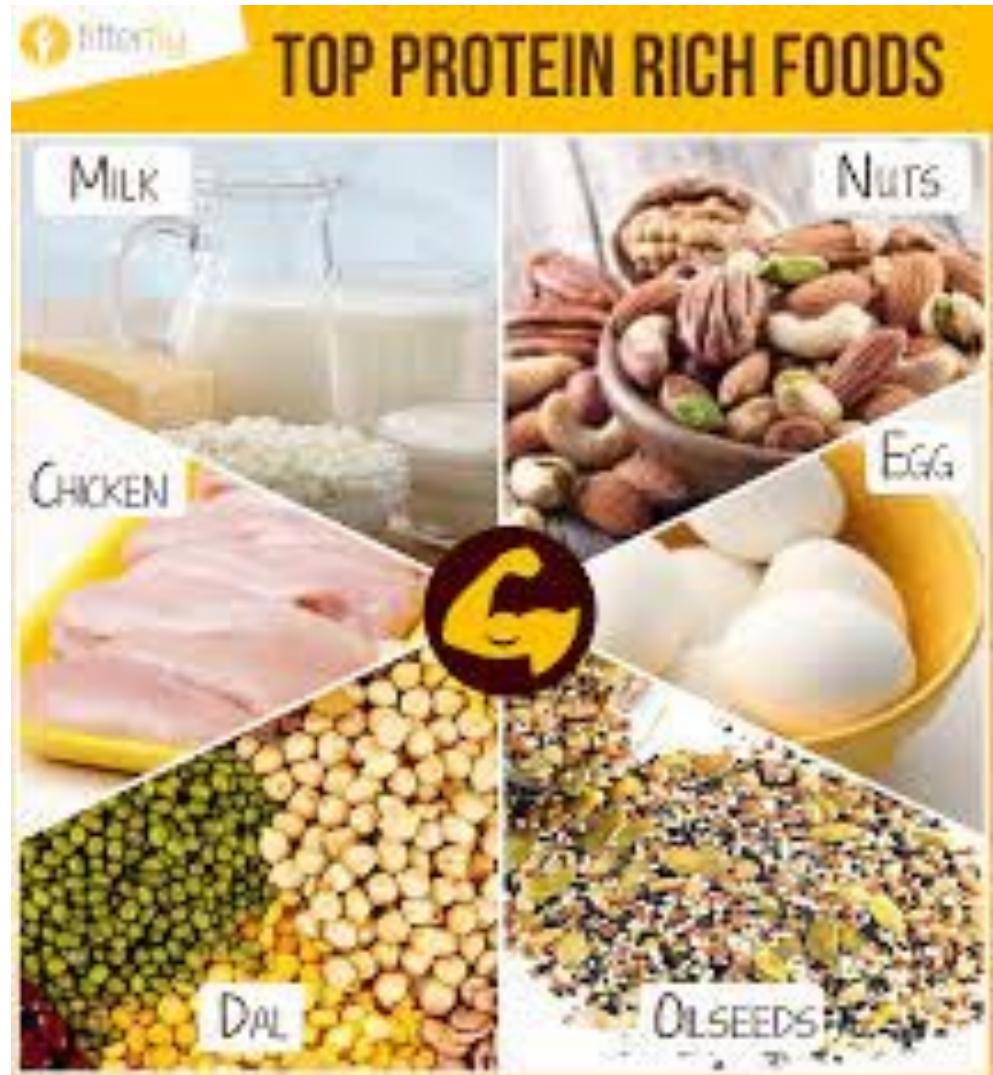
Your diet, or what you eat, has a huge impact on your general health in both mind and body. But conflicting information is everywhere about what you should eat, and it is hard to work out what's best for you.



# A Healthy, Balanced Diet

## Protein

- Protein supplies essential amino acids, the body's building blocks.
- All the organs, including the skin, are made from protein. Without adequate protein in our diet, we cannot build and replace muscle and repair any damage. We also need protein for our immune systems to work properly.
- The amount of protein you need varies by activity level and your stage of life.
- Children and pregnant women need more protein to support growth, as do those who are very active such as those doing a lot of sport, or working in active jobs.
- Good sources of protein include animal products (meat, eggs, fish, dairy products) and beans, especially soya.



# A Healthy, Balanced Diet

A Source of Fuel, usually fat or carbohydrate.

- Fats have often been cast as the villains of diet, but it is now clear that some fat is essential in the diet. Many vitamins are fat-soluble, which means that you need to eat fats to obtain them, and you also need fats to provide essential fatty acids. These are used to provide insulation, and protect organs from damage, as well as helping the heart and immune system to function effectively.

Fat

- Fats** are a much more efficient source of fuel than carbohydrate, so you need much less for the same number of calories. The current recommended balance is that fats should supply around 30 to 35% of total calories.



# A Healthy, Balanced Diet

## Carbohydrate

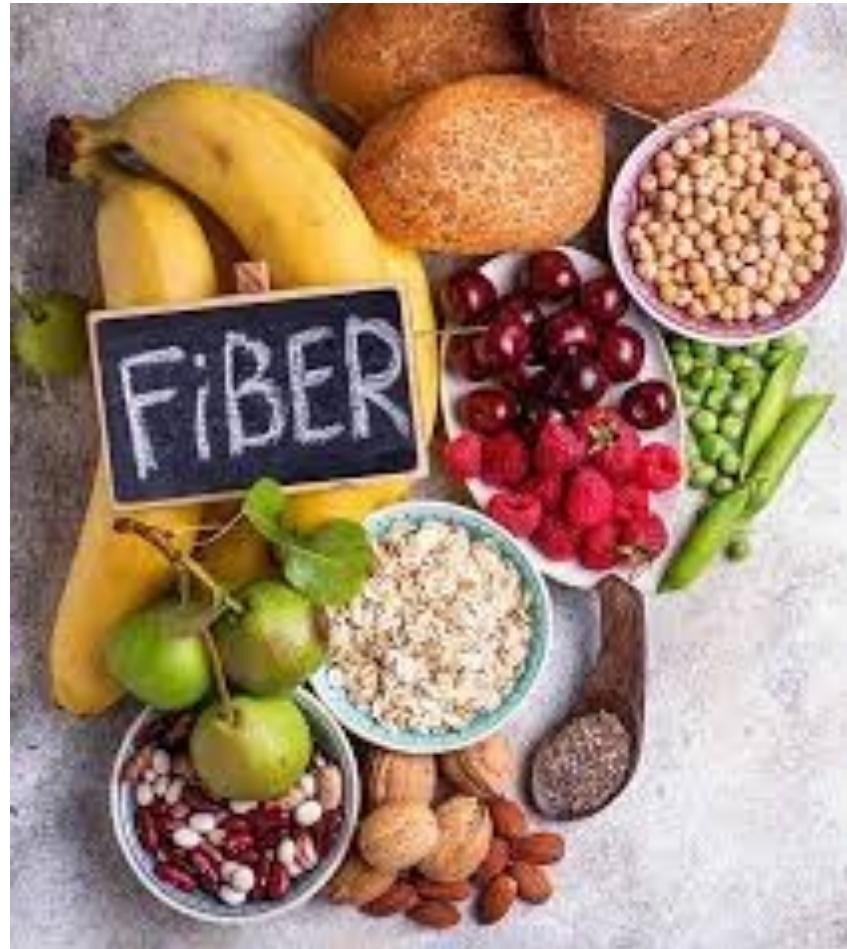
- **Carbohydrates are not** essential for life. They provide a quick and easy boost of energy for the body, but can be manufactured by the body from fats or proteins.
- Eating sugars, or simple carbohydrates, provides much faster energy release, but can cause problems with mood swings, energy spikes, and sugar 'rushes'. It is better to eat complex carbohydrates, such as grains and potatoes, as the energy release is more gradual.



# A Healthy, Balanced Diet

## Fibre (Fiber)

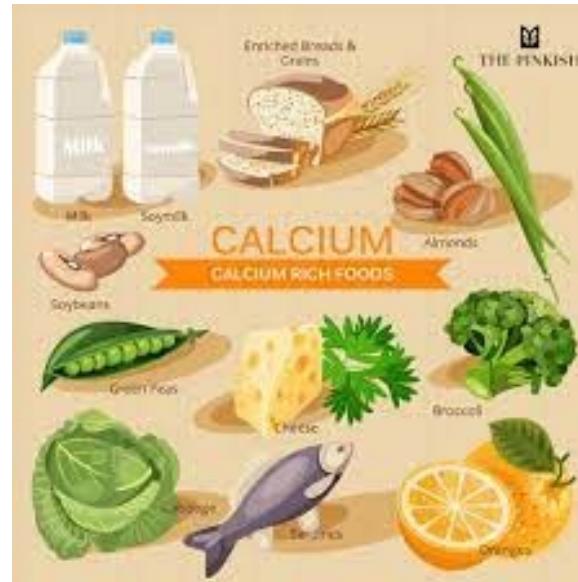
- **Fibre**, usually plant material, helps our guts to work properly. It is not digested, but passes through almost unchanged. Fibre is obtained from eating fruit and vegetables, and is one of the key reasons why we are encouraged to eat ‘five a day’.



# A Healthy, Balanced Diet

## Vitamins and Minerals

- **Vitamins and Minerals** are trace substances found in various foods. There are 13 vitamins which are essential to human life, and they are used to support multiple functions of the body. For example, Vitamin C is essential for producing and maintaining connective tissue, which holds the body together. Shortages of vitamins cause some really horrible diseases, such as scurvy (Vitamin C), rickets (Vitamin D) and spina bifida in newborn babies (folic acid, otherwise known as Vitamin B9).
- If you are eating a reasonably balanced diet, with protein, fat, complex carbohydrates and fibre, especially from fresh fruit and vegetables, you will almost certainly obtain all the vitamins and minerals that you need.



# A Healthy, Balanced Diet

Scientists have more recently concluded that the big issue is most likely to be the *amount* of food that we eat.

- Energy is measured in calories; that includes both the energy that we use for exercise and for staying alive, and the energy stored in food.
- Put simply, if the number of calories that you take in is greater than the number that you use, you will put on weight.
- There are various measures of overweight and obesity, the best-known of which is probably Body Mass Index, or BMI. This is a fairly arbitrary measure that says that your weight should be related to your height.
- There are problems with this as a measure, of course, because muscle weighs more than fat. This means that athletes tend to show up as obese on the scale. But it is a reasonable guide for most normal people.



# A Healthy, Balanced Diet

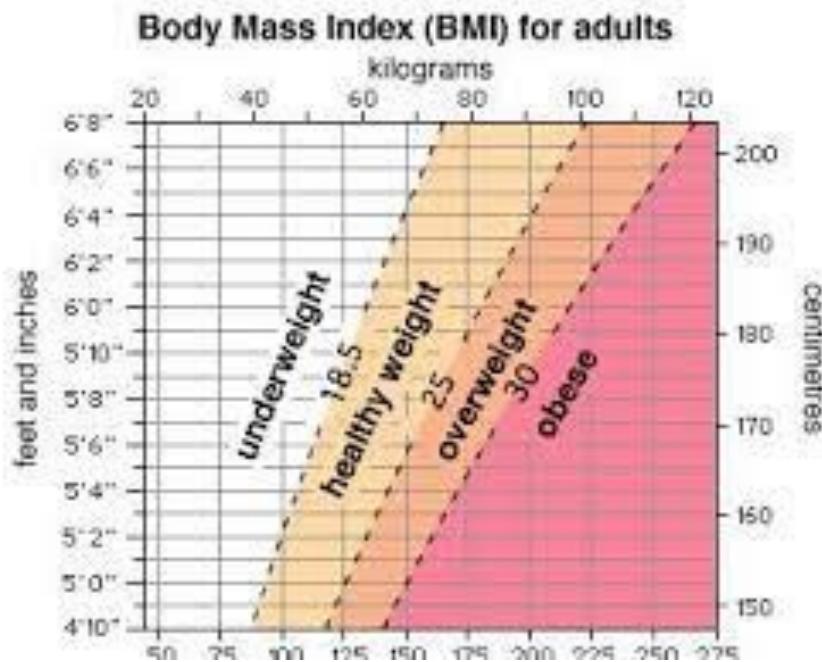
Body Mass Index is a simple calculation using a person's height and weight. The formula is  $BMI = \frac{kg}{m^2}$  where kg is a person's weight in kilograms and m<sup>2</sup> is their height in metres squared.

- A BMI of 25.0 or more is overweight, while the healthy range is 18.5 to 24.9. BMI applies to most adults 18-65 years.
- **Who shouldn't use a BMI calculator**
- BMI is not used for muscle builders, long distance athletes, pregnant women, the elderly or young children. This is because BMI does not take into account whether the weight is carried as muscle or fat, just the number. Those with a higher muscle mass, such as athletes, may have a high BMI but not be at greater health risk. Those with a lower muscle mass, such as children who have not completed their growth or the elderly who may be losing some muscle mass may have a lower BMI. During pregnancy and lactation, a woman's body composition changes, so using BMI is not appropriate.

For more information, visit [Health Canada's Canadian Guidelines for Body Weight Classification in Adults](#)(This link opens in a new window).

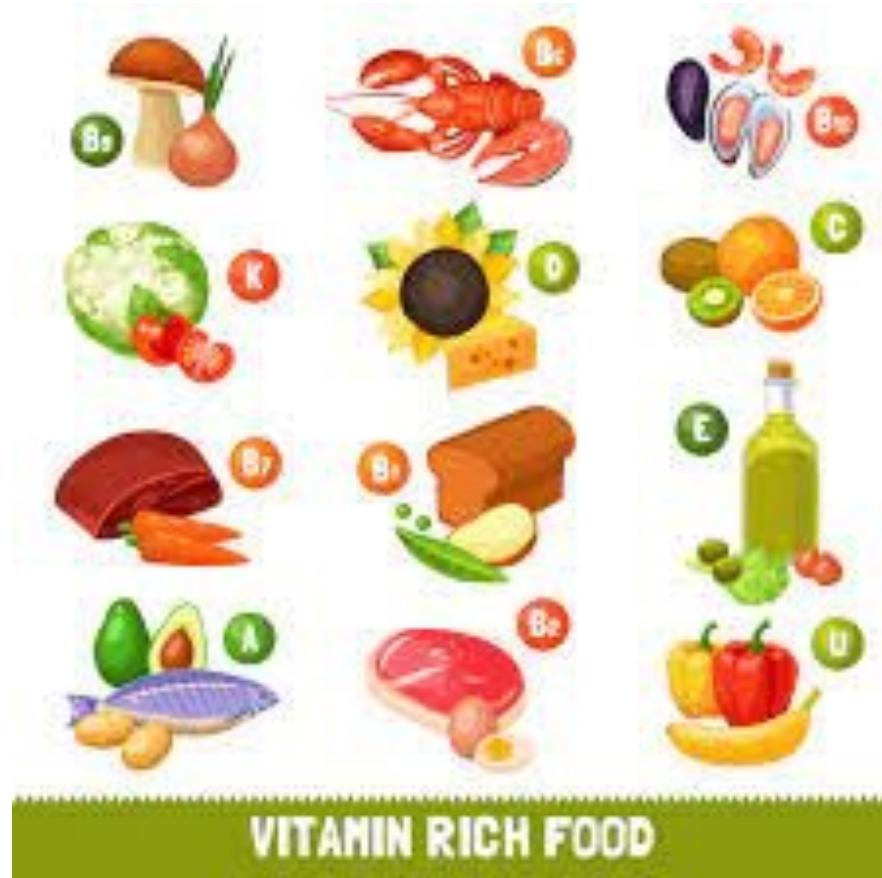
BMI

Calculate here what is your [BMI](#), or with [American cancer society](#)



# Healthy Diet: Key facts

- A healthy diet helps to protect against malnutrition in all its forms, as well as noncommunicable diseases (NCDs), including such as diabetes, heart disease, stroke and cancer.
- Unhealthy diet and lack of physical activity are leading global risks to health.
- Healthy dietary practices start early in life – breastfeeding fosters healthy growth and improves cognitive development, and may have longer term health benefits such as reducing the risk of becoming overweight or obese and developing NCDs later in life.



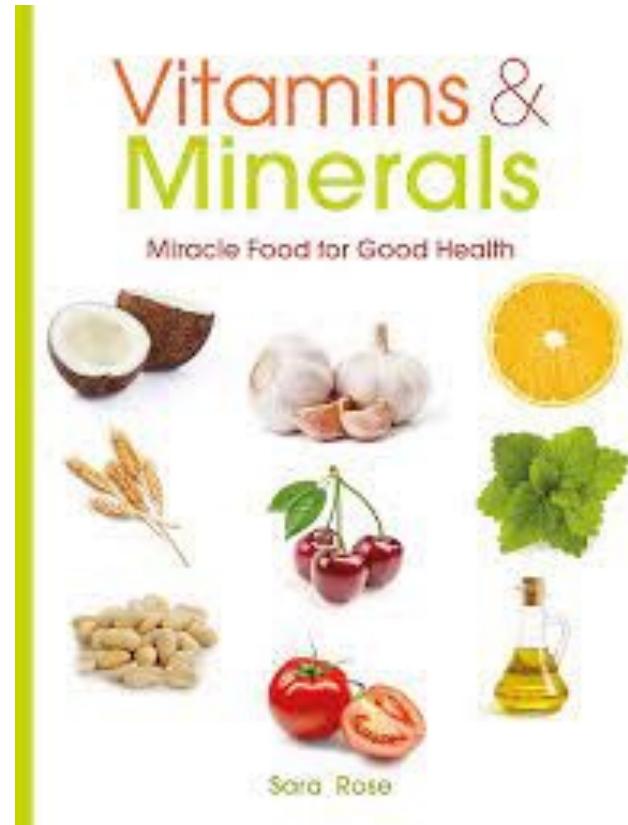
# Healthy Diet: Key facts

- Energy intake (calories) should be in balance with energy expenditure. To avoid unhealthy weight gain, total fat should not exceed 30% of total energy intake (1, 2, 3). Intake of saturated fats should be less than 10% of total energy intake, and intake of trans-fats less than 1% of total energy intake, with a shift in fat consumption away from saturated fats and trans-fats to unsaturated fats (3), and towards the goal of eliminating industrially-produced trans-fats (4, 5, 6).
- Limiting intake of free sugars to less than 10% of total energy intake (2, 7) is part of a healthy diet. A further reduction to less than 5% of total energy intake is suggested for additional health benefits (7).
- Keeping salt intake to less than 5 g per day (equivalent to sodium intake of less than 2 g per day) helps to prevent hypertension, and reduces the risk of heart disease and stroke in the adult population (8).
- WHO Member States have agreed to reduce the global population's intake of salt by 30% by 2025; they have also agreed to halt the rise in diabetes and obesity in adults and adolescents as well as in childhood overweight by 2025 (9, 10).



# Healthy Diet: Overview

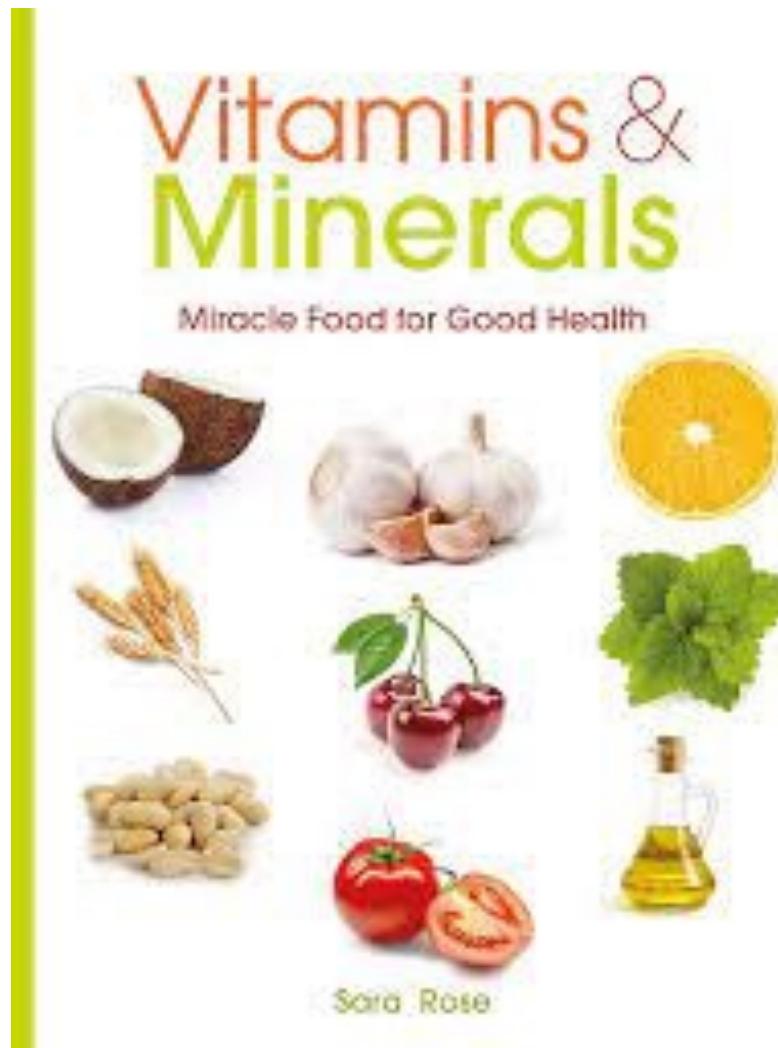
- Consuming a healthy diet throughout the life-course helps to prevent malnutrition in all its forms as well as a range of noncommunicable diseases (NCDs) and conditions. However, increased production of processed foods, rapid urbanization and changing lifestyles have led to a shift in dietary patterns. People are now consuming more foods high in energy, fats, free sugars and salt/sodium, and many people do not eat enough fruit, vegetables and other dietary fibre such as whole grains.
- The exact make-up of a diversified, balanced and healthy diet will vary depending on individual characteristics (e.g. age, gender, lifestyle and degree of physical activity), cultural context, locally available foods and dietary customs. However, the basic principles of what constitutes a healthy diet remain the same.



# Healthy Diet: For adults

A healthy diet includes the following:

- Fruit, vegetables, legumes (e.g. lentils and beans), nuts and whole grains (e.g. unprocessed maize, millet, oats, wheat and brown rice).
- At least 400 g (i.e. five portions) of fruit and vegetables per day (2), excluding potatoes, sweet potatoes, cassava and other starchy roots.
- Less than 10% of total energy intake from free sugars (2, 7), which is equivalent to 50 g (or about 12 level teaspoons) for a person of healthy body weight consuming about 2000 calories per day, but ideally is less than 5% of total energy intake for additional health benefits (7). Free sugars are all sugars added to foods or drinks by the manufacturer, cook or consumer, as well as sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates.



# Healthy Diet: For adults

- A healthy diet helps to protect against malnutrition in all its forms, as well as noncommunicable diseases (NCDs), including such as diabetes, heart disease, stroke and cancer.
- Unhealthy diet and lack of physical activity are leading global risks to health.
- Healthy dietary practices start early in life – breastfeeding fosters healthy growth and improves cognitive development, and may have longer term health benefits such as reducing the risk of becoming overweight or obese and developing NCDs later in life.

## Vitamin-C Rich Foods



[www.medicineuses.com](http://www.medicineuses.com)

# Healthy Diet: For adults

- Less than 30% of total energy intake from fats (1, 2, 3). Unsaturated fats (found in fish, avocado and nuts, and in sunflower, soybean, canola and olive oils) are preferable to saturated fats (found in fatty meat, butter, palm and coconut oil, cream, cheese, ghee and lard) and *trans-fats* of all kinds, including both industrially-produced *trans-fats* (found in baked and fried foods, and pre-packaged snacks and foods, such as frozen pizza, pies, cookies, biscuits, wafers, and cooking oils and spreads) and ruminant *trans-fats* (found in meat and dairy foods from ruminant animals, such as cows, sheep, goats and camels). It is suggested that the intake of saturated fats be reduced to less than 10% of total energy intake and *trans-fats* to less than 1% of total energy intake (5). In particular, industrially-produced *trans-fats* are not part of a healthy diet and should be avoided (4, 6).
- Less than 5 g of salt (equivalent to about one teaspoon) per day (8). Salt should be iodized.



# Healthy Diet: For infants and young children

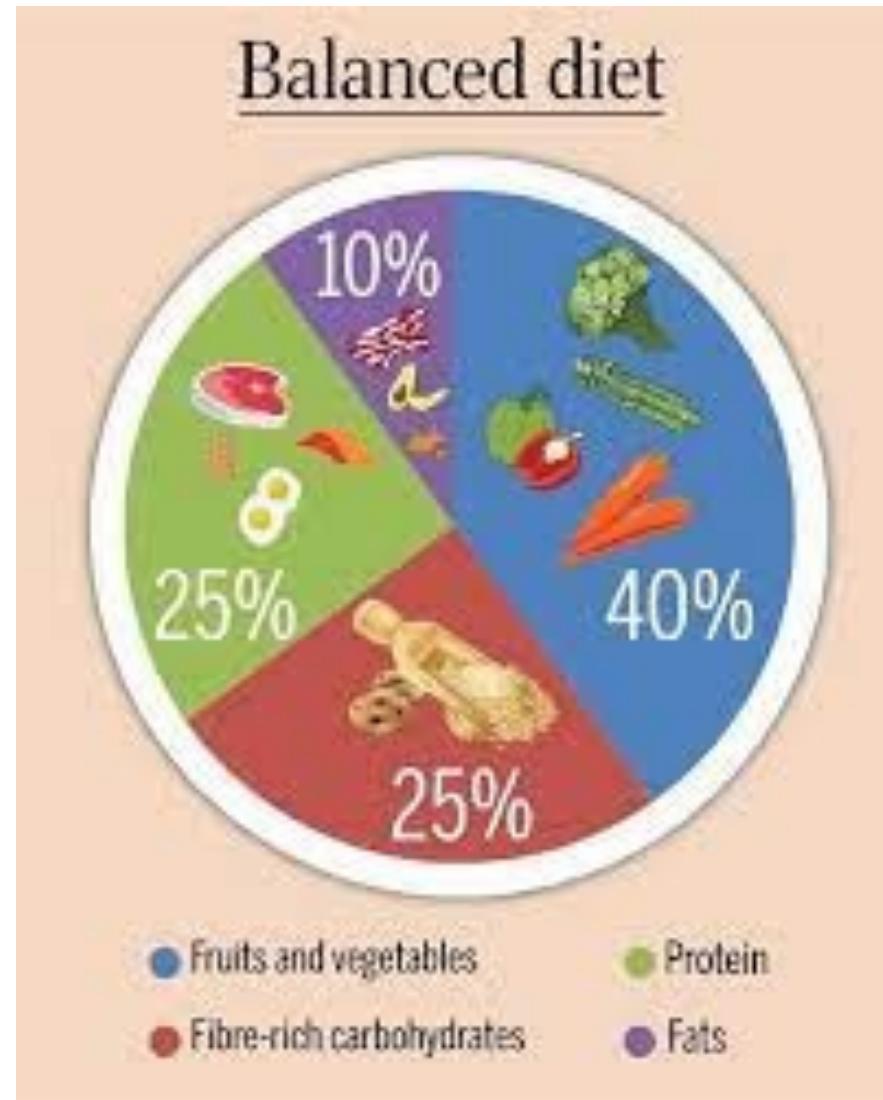
- In the first 2 years of a child's life, optimal nutrition fosters healthy growth and improves cognitive development. It also reduces the risk of becoming overweight or obese and developing NCDs later in life.
- Advice on a healthy diet for infants and children is similar to that for adults, but the following elements are also important:
- Infants should be breastfed exclusively during the first 6 months of life.
- Infants should be breastfed continuously until 2 years of age and beyond.
- From 6 months of age, breast milk should be complemented with a variety of adequate, safe and nutrient-dense foods. Salt and sugars should not be added to complementary foods.



# Healthy Diet: Maintaining a healthy diet

## Fruit and vegetables

- Eating at least 400 g, or five portions, of fruit and vegetables per day reduces the risk of NCDs (2) and helps to ensure an adequate daily intake of dietary fibre.
- Fruit and vegetable intake can be improved by:
- always including vegetables in meals;
- eating fresh fruit and raw vegetables as snacks;
- eating fresh fruit and vegetables that are in season; and
- eating a variety of fruit and vegetables.



# Healthy Diet: Maintaining a healthy diet

## Fats

- Reducing the amount of total fat intake to less than 30% of total energy intake helps to prevent unhealthy weight gain in the adult population (1, 2, 3). Also, the risk of developing NCDs is lowered by:
- reducing saturated fats to less than 10% of total energy intake;
- reducing *trans*-fats to less than 1% of total energy intake; and
- replacing both saturated fats and *trans*-fats with unsaturated fats (2, 3) – in particular, with polyunsaturated fats.

## Balanced Diet for Adults

### Whole Grains-

- Breakfast cereals
- Rice
- Pasta
- Bread
- Noodles

### Vegetables-( 2.5-3.5 cups)

- Tomatoes
- Potatoes
- Carrots
- Green peas
- Broccoli
- <http://www.buzzle.com/articles/balanced-diet-chart.html>

### Meat, egg, and beans( 5.5-6.5 ounces)

- Oils-(27.37 grams)
- Low fat mayonnaise
- Light salad dressing
- Vegetable oil
- Olive oil
- Additional low calorie fluids

### Fruits-(1.5-2 cups)

- Bananas
- Grapes
- Oranges
- Peaches
- Mango
- Pineapple
- Berries

### Dairy(3 cups)-

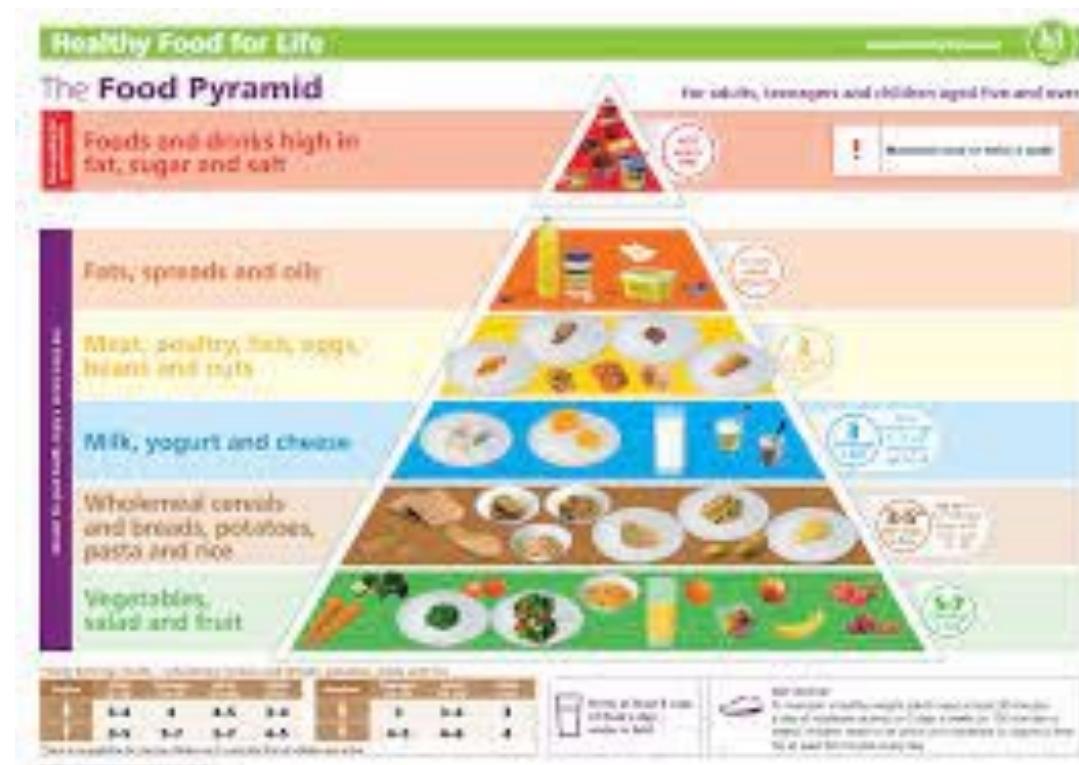
- Milk
- Yogurt
- Cheese

# Healthy Diet: Maintaining a healthy diet

## Fats

Fat intake, especially saturated fat and industrially-produced *trans*-fat intake, can be reduced by:

- steaming or boiling instead of frying when cooking;
- replacing butter, lard and ghee with oils rich in polyunsaturated fats, such as soybean, canola (rapeseed), corn, safflower and sunflower oils;
- eating reduced-fat dairy foods and lean meats, or trimming visible fat from meat; and
- limiting the consumption of baked and fried foods, and pre-packaged snacks and foods (e.g. doughnuts, cakes, pies, cookies, biscuits and wafers) that contain industrially-produced *trans*-fats.



# Healthy Diet: Maintaining a healthy diet

## Salt, sodium and potassium

- Most people consume too much sodium through salt (corresponding to consuming an average of 9–12 g of salt per day) and not enough potassium (less than 3.5 g). High sodium intake and insufficient potassium intake contribute to high blood pressure, which in turn increases the risk of heart disease and stroke (8, 11).
- Reducing salt intake to the recommended level of less than 5 g per day could prevent 1.7 million deaths each year (12).
- People are often unaware of the amount of salt they consume. In many countries, most salt comes from processed foods (e.g. ready meals; processed meats such as bacon, ham and salami; cheese; and salty snacks) or from foods consumed frequently in large amounts (e.g. bread). Salt is also added to foods during cooking (e.g. bouillon, stock cubes, soy sauce and fish sauce) or at the point of consumption (e.g. table salt).

## Food Pyramid in Bangladesh



# Healthy Diet: Maintaining a healthy diet

## Salt, sodium and potassium

Salt intake can be reduced by:

- limiting the amount of salt and high-sodium condiments (e.g. soy sauce, fish sauce and bouillon) when cooking and preparing foods;
- not having salt or high-sodium sauces on the table;
- limiting the consumption of salty snacks; and
- choosing products with lower sodium content.
- Some food manufacturers are reformulating recipes to reduce the sodium content of their products, and people should be encouraged to check nutrition labels to see how much sodium is in a product before purchasing or consuming it.
- Potassium can mitigate the negative effects of elevated sodium consumption on blood pressure. Intake of potassium can be increased by consuming fresh fruit and vegetables.

## Excellence is a Habit

### Breakfast 7:00 AM

**Example:** 3 egg whites & 1 yolk omelette with Veggies and 1/2 a fruit  
Excellent source of protein, helps maintain/gain lean body mass + Low Glycemic Carbs for energy  
Proteins are essential for the repair and growth of tissues.



### Snack 9:30 AM

**Example:** Plain Greek Yogurt, topped with Berries + a dozen mixed nuts  
Sustain energy & maintain Protein intake. Ideal combination of probiotics, B vitamins, anti-oxidants, healthy fats, fiber and protein.



### Lunch 12:00 PM

**Example:** Chicken Breast, Quinoa & Mixed Veggies  
The breast is the leanest part of the chicken and a great source of protein.  
Quinoa is a gluten free grain that contain more protein than any other grain or rice.



### Pre-Workout 3:30 PM

**Example:** Almond Butter smeared on a Whole Grain Toast + Banana splices  
Bananas are rich in potassium and B6 which aid in the manufacturing of amino acids, the building blocks of proteins. Nut butter & bananas are notorious for providing long lasting energy.  
60-90 minutes before training for adequate digestion and absorption



### Health Tip

Staying hydrated is key to looking, feeling your best.  
Drink roughly 6 cups of water a day.  
Mostly between meals.

### Post-Workout 6:00 PM

**Example:** Whey Protein Smoothie  
Optimize your efforts with fast absorbing protein- Whey or Eggs are ideal.  
The vitamins & minerals in fruits contribute to a faster post-workout recovery.



### Dinner 7:00 PM

**Example:** Salmon & Mixed Veggies  
The different colors in vegetables (and fruits) correspond to different combinations of nutrients. For optimal health, eat a colorful variety every day.  
Salmons are nutritional powerhouse. Rich in high quality protein & large amount of omega-3 oils which reduce inflammation and provide a nutritional foundation for optimal heart, brain, mental, visual & immune system.



### Late Snack 9:00 PM

**Example:** Roast Turkey Breast Slice & 1/5 Chopped Avocado  
Slow digesting protein such as turkey, and chicken curb the break down of muscle during sleep by providing a steady release of amino acids. Healthy fats such as avocados and almonds help slow digestion further & extending the drip-feed of protein.



Use your hands as a simple way to measure a single serving  
One palm for meat Two palms for vegetables



# Healthy Diet: Maintaining a healthy diet

## Sugars

- In both adults and children, the intake of free sugars should be reduced to less than 10% of total energy intake (2, 7). A reduction to less than 5% of total energy intake would provide additional health benefits (7).
- Consuming free sugars increases the risk of dental caries (tooth decay). Excess calories from foods and drinks high in free sugars also contribute to unhealthy weight gain, which can lead to overweight and obesity. Recent evidence also shows that free sugars influence blood pressure and serum lipids, and suggests that a reduction in free sugars intake reduces risk factors for cardiovascular diseases (13).



# Healthy Diet: Maintaining a healthy diet

# Sugars

- Sugars intake can be reduced by:
  - limiting the consumption of foods and drinks containing high amounts of sugars, such as sugary snacks, candies and sugar-sweetened beverages (i.e. all types of beverages containing free sugars – these include carbonated or non-carbonated soft drinks, fruit or vegetable juices and drinks, liquid and powder concentrates, flavoured water, energy and sports drinks, ready-to-drink tea, ready-to-drink coffee and flavoured milk drinks); and
  - eating fresh fruit and raw vegetables as snacks instead of sugary snacks.



# Promoting healthy diets

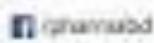
Diet evolves over time, being influenced by many social and economic factors that interact in a complex manner to shape individual dietary patterns. These factors include income, food prices (which will affect the availability and affordability of healthy foods), individual preferences and beliefs, cultural traditions, and geographical and environmental aspects (including climate change). Therefore, promoting a healthy food environment – including food systems that promote a diversified, balanced and healthy diet – requires the involvement of multiple sectors and stakeholders, including government, and the public and private sectors.

**স্বাস্থ্য মানের  
সাহারী ও ইফতার এন খাবাদের তালিকা**

কালারি ১৫০০	
<b>পুরুষ</b>	<b>মহিলা</b>
পুরুষ - ১/২ কাল (১৫ শাখ কাল পুরুষ) শিশুরু - ৫ টি শক্ত মানের চাষকী - ২ টি শক্ত মানের মুরগি - ৫ কাল বিভিন্ন ফল ও পোক পুরুষ	মহিলা - ৫ কাল মাঝ দাপুরু - ১-২ শক্ত চাষকী চৌপাশের মাল - ১ কাল পুরুষ কাল মাঝ দাপুরু মুরগি
* সাহারী এবং সপ্তাহ কালের পরিমাণ এককি হলে।	
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 **Pharma Company Bangladesh**

 **Islamic Relief Bangladesh**

 **dhakaunivbd**

# Promoting healthy diets

Governments have a central role in creating a healthy food environment that enables people to adopt and maintain healthy dietary practices. Effective actions by policy-makers to create a healthy food environment include the following:

- Creating coherence in national policies and investment plans – including trade, food and agricultural policies – to promote a healthy diet and protect public health through:
  - increasing incentives for producers and retailers to grow, use and sell fresh fruit and vegetables;
  - reducing incentives for the food industry to continue or increase production of processed foods containing high levels of saturated fats, *trans*-fats, free sugars and salt/sodium;
  - encouraging reformulation of food products to reduce the contents of saturated fats, *trans*-fats, free sugars and salt/sodium, with the goal of eliminating industrially-produced *trans*-fats;
  - implementing the WHO recommendations on the marketing of foods and non-alcoholic beverages to children;
  - establishing standards to foster healthy dietary practices through ensuring the availability of healthy, nutritious, safe and affordable foods in pre-schools, schools, other public institutions and the workplace;
  - exploring regulatory and voluntary instruments (e.g. marketing regulations and nutrition labelling policies), and economic incentives or disincentives (e.g. taxation and subsidies) to promote a healthy diet; and
  - encouraging transnational, national and local food services and catering outlets to improve the nutritional quality of their foods – ensuring the availability and affordability of healthy choices – and review portion sizes and pricing.

# Promoting healthy diets

- Encouraging consumer demand for healthy foods and meals through:
  - promoting consumer awareness of a healthy diet;
  - developing school policies and programmes that encourage children to adopt and maintain a healthy diet;
  - educating children, adolescents and adults about nutrition and healthy dietary practices;
  - encouraging culinary skills, including in children through schools;
  - supporting point-of-sale information, including through nutrition labelling that ensures accurate, standardized and comprehensible information on nutrient contents in foods (in line with the Codex Alimentarius Commission guidelines), with the addition of front-of-pack labelling to facilitate consumer understanding; and
  - providing nutrition and dietary counselling at primary health-care facilities.

# Promoting healthy diets

- Promoting appropriate infant and young child feeding practices through:
  - implementing the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions;
  - implementing policies and practices to promote protection of working mothers; and
  - promoting, protecting and supporting breastfeeding in health services and the community, including through the Baby-friendly Hospital Initiative.



# WHO response

- The “WHO Global Strategy on Diet, Physical Activity and Health” (14) was adopted in 2004 by the Health Assembly. The strategy called on governments, WHO, international partners, the private sector and civil society to take action at global, regional and local levels to support healthy diets and physical activity.
- In 2010, the Health Assembly endorsed a set of recommendations on the marketing of foods and non-alcoholic beverages to children (15). These recommendations guide countries in designing new policies and improving existing ones to reduce the impact on children of the marketing of foods and non-alcoholic beverages to children. WHO has also developed region-specific tools (such as regional nutrient profile models) that countries can use to implement the marketing recommendations.
- In 2012, the Health Assembly adopted a “Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition” and six global nutrition targets to be achieved by 2025, including the reduction of stunting, wasting and overweight in children, the improvement of breastfeeding, and the reduction of anaemia and low birthweight (9).

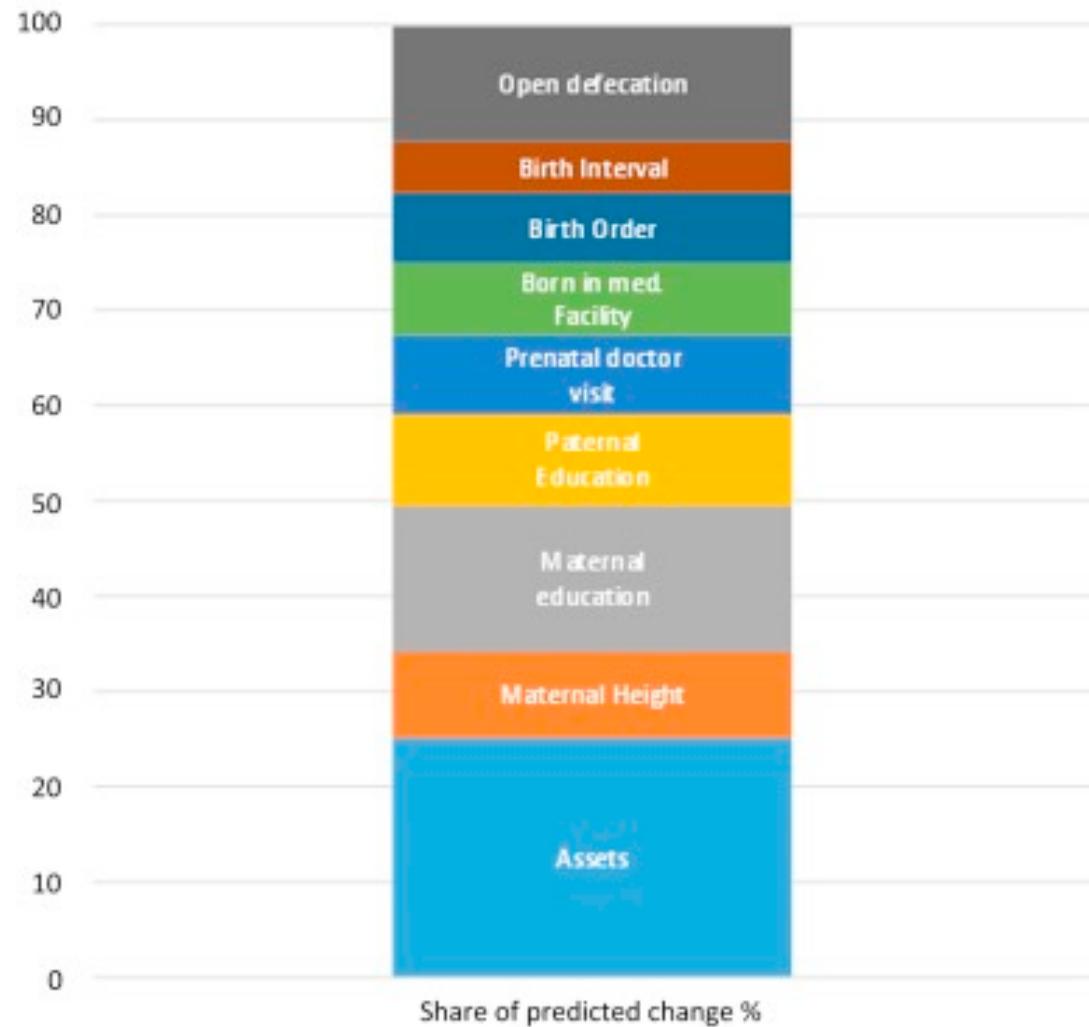
# WHO response

- In 2013, the Health Assembly agreed to nine global voluntary targets for the prevention and control of NCDs. These targets include a halt to the rise in diabetes and obesity, and a 30% relative reduction in the intake of salt by 2025. The “Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020” (10) provides guidance and policy options for Member States, WHO and other United Nations agencies to achieve the targets.
- With many countries now seeing a rapid rise in obesity among infants and children, in May 2014 WHO set up the Commission on Ending Childhood Obesity. In 2016, the Commission proposed a set of recommendations to successfully tackle childhood and adolescent obesity in different contexts around the world (16).
- In November 2014, WHO organized, jointly with the Food and Agriculture Organization of the United Nations (FAO), the Second International Conference on Nutrition (ICN2). ICN2 adopted the Rome Declaration on Nutrition (17), and the Framework for Action (18) which recommends a set of policy options and strategies to promote diversified, safe and healthy diets at all stages of life. WHO is helping countries to implement the commitments made at ICN2.

# WHO response

In May 2018, the Health Assembly approved the 13th General Programme of Work (GPW13), which will guide the work of WHO in 2019–2023 (19). Reduction of salt/sodium intake and elimination of industrially-produced *trans*-fats from the food supply are identified in GPW13 as part of WHO's priority actions to achieve the aims of ensuring healthy lives and promote well-being for all at all ages. To support Member States in taking necessary actions to eliminate industrially-produced *trans*-fats, WHO has developed a roadmap for countries (the REPLACE action package) to help accelerate actions (6).

Bangladesh - sources of 53.3% of nutritional change 1997-2011



# Eating the Right Food

**A good diet is essential for physical health. A growing body of evidence suggests that it also makes a difference to your mind.**

- The Mental Health Foundation notes that a good diet is important for mental health. It also suggests that diet can play a role in the development, management and prevention of several specific conditions, including schizophrenia, **depression**, attention deficit hyperactivity disorder (ADHD) and Alzheimer's disease.

**That is not to say that diet can control these conditions, nor that it should be looked upon as a panacea or cure-all, or that other treatments should be stopped in favour of a particular diet.**

**However, diet may play a role, alongside other treatments, in the management of these conditions.**



# Stress and Mental Health



Stress hormones cause the body to reduce blood flow to the digestive system, as digestion is less essential than, for example, running away from a tiger. While this is good if you're being chased by a tiger, it's less good if you're under stress over a long period because of being busy at work, or moving house. Under those circumstances, you may find that your digestive system suffers.

The good news is that there are various things that you can do to help.

For example:

- When you're feeling under stress, eat smaller meals and, if necessary, eat more often to make up for it. This will be easier for your body to manage.
- Eat foods containing more B vitamins as this can help your digestion (see our page on [Vitamins](#) for more).
- Reduce your caffeine intake, as caffeine, like adrenaline, is a stimulant. It can also irritate your gut and make digestion harder.

# Diet, Nutrition, and Stress

When we encounter something stressful, our nervous system and adrenal glands send signals to the rest of the body to help us think more clearly and be ready for a physical response – should it be required.

This is a basic instinct that we have evolved to help us cope with potentially dangerous situations and is known as the “fight or flight” response.

**However in modern life we can become stressed for many reasons other than impending danger and yet our bodies' reaction is the same. With their pre-determined instincts, our bodies' still prepare our minds in this instinctive way and give less priority to other, less urgent, functions. Digestion is one such function that is given a lower priority during stressful situations, this is not good as poor digestion can make us feel unwell and this in turn can be a source of stress.**



# Diet, Nutrition, and Stress

Being aware of how your body works and deals with stress can help you to manage stress and stressful situations. After a stressful period the human body can go into a 'recovery mode' where increased appetite and food cravings become more prevalent. At the same time metabolic rates drop to conserve energy. Being aware of these patterns can help you manage your stress levels and through nutrition and diet you can help your body recover from stressful periods more rapidly and minimise negative effects such as weight gain.



Spinach salad

Source: WebMD

## Magnesium

### Stress-Busting Foods

- **Magnesium deficiency:**
  - headaches and fatigue.
  - compounding the effects of stress.
- **Magnesium rich food**
  - Spinach
  - Soybeans
  - Salmon
  - Green leafy vegetables



# Diet, Nutrition, and Stress

On Stressful Days, Eat Little and Often

- **This will keep your metabolism ticking over all day and you will minimise peaks and troughs in energy levels. Eat breakfast, even though you may not feel hungry or believe you do not have enough time. Eating breakfast helps to kick start your metabolism for the day and also helps to stabilise your blood sugar level which will in turn reduce stress. Choose fruit or fruit juice and a whole-grain cereal for maximum benefits.**



## HOW TO ADDRESS AUTOIMMUNITY DISEASE



# Diet, Nutrition, and Stress

## Eat Well Throughout the Day

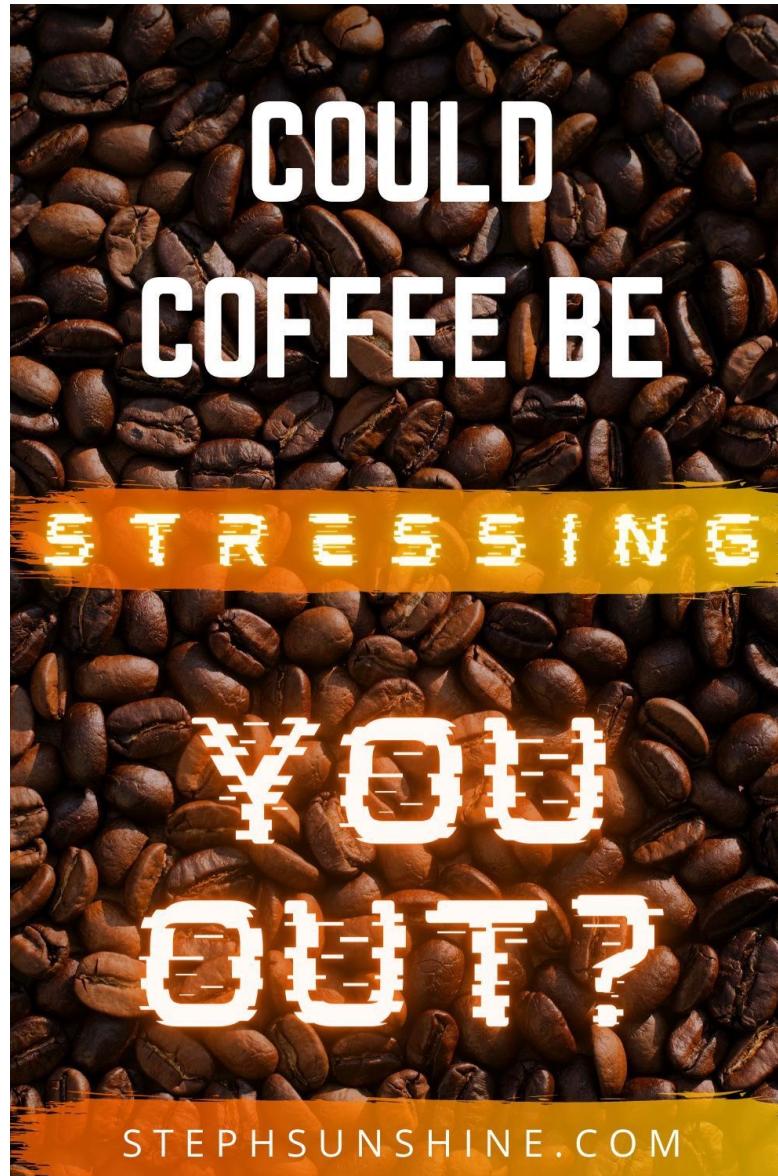
- Make sure you eat at least five portions of fruit and vegetables each day and focus on foods containing Vitamins B and C, and Magnesium:
- **B Vitamins** can help you feel more energetic after a stressful episode. Bananas, leafy green vegetables, avocados, nuts, seeds and also meat, fish and dairy products all contain essential B vitamins.
- **Vitamin C** – The adrenal glands contain the largest store of vitamin C in the body and are important in the production of stress hormones. Eat citrus fruit such as oranges, tomatoes, peppers, kiwi fruit, leafy green vegetables, broccoli and other foods rich in Vitamin C.
- **Magnesium** – Can help to relax muscles and reduce anxiety. Increase your magnesium intake by eating nuts, especially Brazil nuts, but also hazelnuts and peanuts. Leafy green vegetables, whole grains, especially oats, brown rice and beans are also good sources of magnesium. You can also take a relaxing bath with a good handful of Epsom salts (available at your pharmacist) as these contain magnesium that can be absorbed through your skin.

# Diet, Nutrition, and Stress

As well as trying to maximise your intake of certain foodstuffs, you should also be aware of the negative effects of others and therefore try to minimise them.

## Caffeine

- Caffeine is found mostly in coffee, tea, some soft drinks and chocolate, can have negative effects on the body if taken in high quantities. Try to wean yourself off caffeine by substituting coffee or tea with decaffeinated versions, herbal tea, or green tea (which is also full of antioxidants). Substitute sugary and caffeinated soft drinks with sparkling water or (preferably diluted) fruit juice and you will reduce your caffeine and sugar intake. Since caffeine can stay in your body for six hours or more, avoid all caffeinated drinks after lunchtime and you will sleep better. Getting adequate sleep is an important factor in reducing stress levels.



# Diet, Nutrition, and Stress

## Alcohol, Sugar, Salt and Nicotine

- You should aim to reduce your intake of alcohol, sugar and salt. Consumption of these items are all known to strip the body of essential nutrients and undo the work of a healthier diet. Stop smoking! Although reaching for a cigarette may feel like instant stress relief it actually causes greater stress over time.
- By watching our diet, increasing our intake of stress-busting nutrients and limiting our intake of stress-inducing substances we can feel better about ourselves and our well-being, as well as give our bodies the chance to cope with, and recover from, stressful situations.



sources: [health.howstuffworks.com](http://health.howstuffworks.com), [medicalnewstoday.com](http://medicalnewstoday.com), [cannabisculture.com](http://cannabisculture.com), [stopthedrugwar.org](http://stopthedrugwar.org), and [drugwarfacts.org](http://drugwarfacts.org)

# Diet and other Stress Release Stuff

## Exercise

- Even some gentle exercise can help reduce stress levels and combined with a healthier diet will probably lead to weight loss. Yoga and tai chi are particularly good, as is swimming. Take time to relax. Breathing exercises, meditation on and yoga will all help reduce stress.



# Diet and other Stress Release Stuff

## Relax

- Take time out to relax. You may feel as though you have to force yourself to relax if you are not used to it but it is worth the effort. Learning to relax can help you manage your stress more effectively.

## Sleep

- Make sure you get sufficient and quality sleep. Eating healthier and avoiding excessive caffeine will help you sleep well and for longer periods.



# Diet and other Stress Release Stuff

## Socialise

- Spend time with friends and family, talk to them about problems you are having and find time to laugh together. Simply talking and interacting with others can help relieve stress and boost self-esteem.

## Get help

- If you are experiencing a lot of stress over a long period of time, or are at all worried about how stress is affecting you, then seek help. See your doctor who may recommend a counsellor or some alternative stress relief techniques such as massage, acupuncture or alternative medicine.



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