Fundamentals of Foods & Nutrition

Fundamental of Foods & Nutrition

Nutrition is a brunch of science which studies the process by which living organisms take in and use food for the maintenance of life, growth and the production of energy.

Topics Of Discussion

- What are nutrients?
- Types of Nutrients
- Food Quality
- Result of poor nutrition
- Lifestyle & Nutrition

What is nutrients?

Any substances that nourishes an organism.

What is nutrients?

- **Nutrients are the substances that** :
- Enrich the body
- Build and repair tissues
- Give heat and energy

Types of Nutrients

- **Macro Nutrient :**

  Macro Nutrients are required in a large amount. Ex- Carbohydrate, protein, fat.

- **Micro nutrient :**

  Micro Nutrients are required in a small amount.

  Ex – Vitamins, minerals.

Carbohydrate

- **Carbohydrates are the main source**

of energy for the body.

- **They are the sugars, starches, and dietary fiber that occur in**

Plant foods and

dairy products.

Carbohydrate

- Carbohydrates, also known as saccharides or carbs, provide energy for the body. Each gram of carbohydrates provides 4 calories.
- The body breaks carbohydrates down into glucose, which is the primary energy source for the brain and muscles.
- In human , the storage carbohydrate is called glycogen and in plants, starch. Glycogen and starch are complex carbohydrate.

Which foods have carbohydrates?

Common foods with carbohydrates include Grains, such as bread, noodles, pasta, crackers, cereals, and rice

Fruits, such as apples, bananas, berries, mangoes, melons, and oranges and starchy veggies.

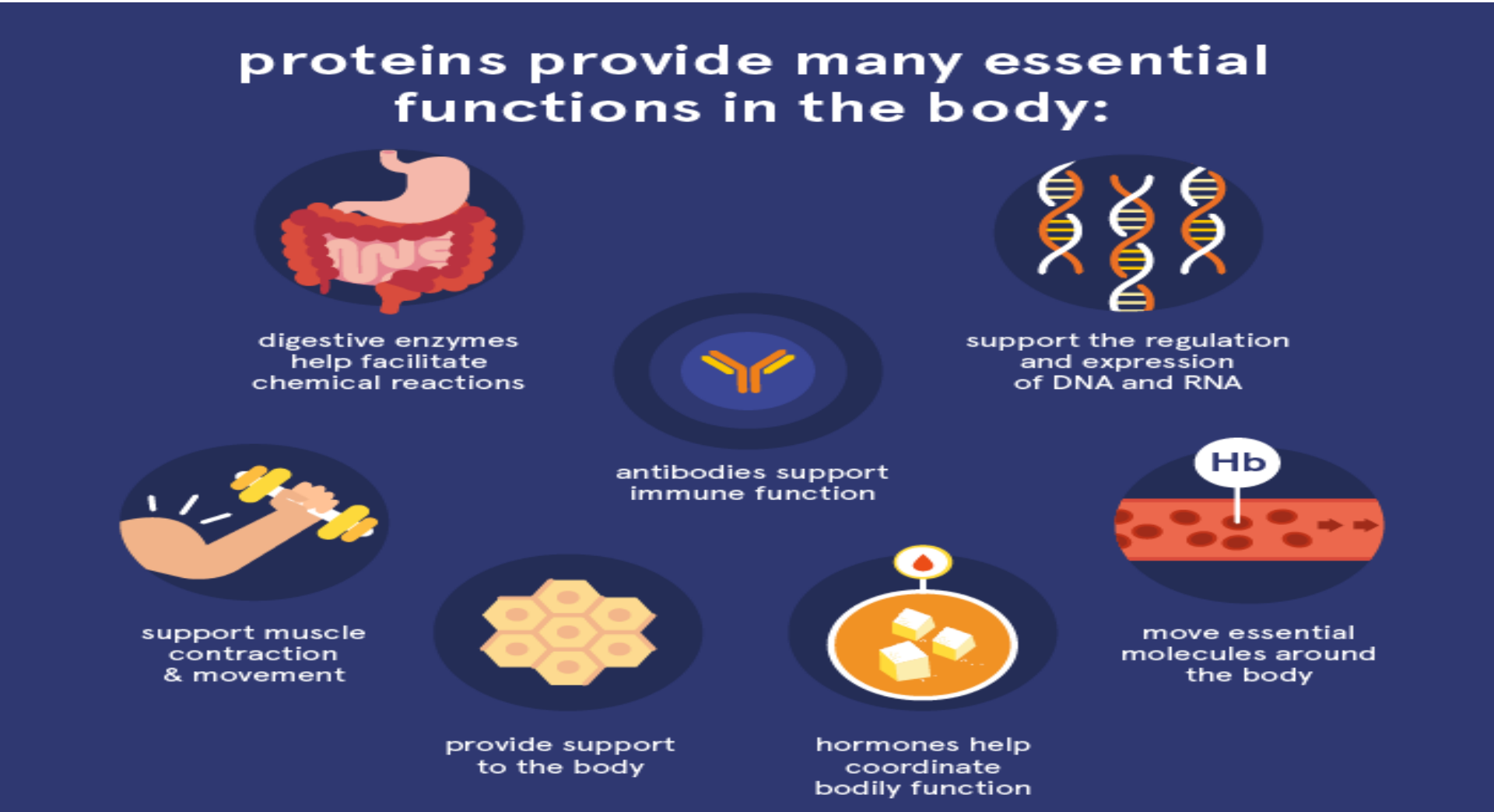
Snack foods and sweets, such as cakes, cookies, candy, and, sports drinks, and energy drinks that contain sugar

Proteins

- Protein is considered the building block of life and found in every cell of the body.
- Amino acids are the simplest form of protein.
- Each gram of any carbohydrates provides 4 calories.

FEONNAA HERBALS

Function Of Protein



How to get your protein needs

- Your daily protein needs can easily be met by following the Australian Dietary Guidelines. The Guidelines group foods into five different food groups, each of which provide key nutrients.
  The two main food groups that contribute to protein are the:
- ‘lean meat and poultry, fish, eggs, tofu, nuts and seeds and legumes/beans’ group
- ‘milk, yoghurt, cheese and/or alternatives (mostly reduced fat)’ group

Fat/Lipids

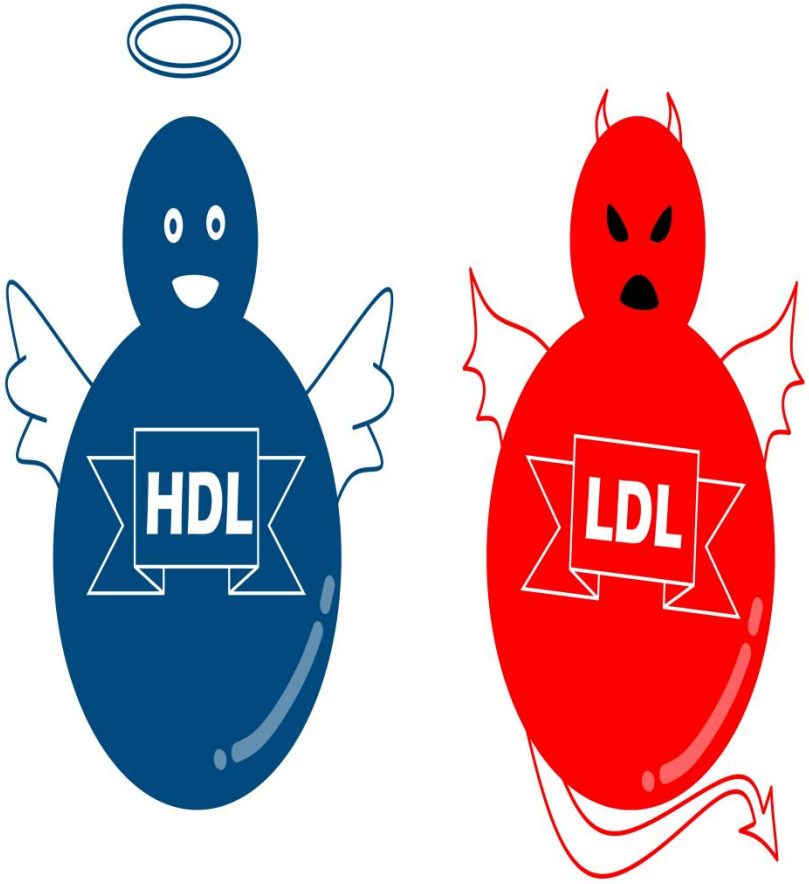
- **Lipids are a family of organic compounds that are mostly insoluble in water.**
- **Fats and oils are the most abundant lipids in nature.**
- **Dietary fats provide 9 kcal/g which is more than twice the calories provided by either, carbohydrates or proteins. Therefore, it is a major determinant of the energy density of a particular food.**

Fat/Lipids

Why we need to eat some fats

- For taking energy.
- To absorb some vitamins from food, these are the fat soluble vitamins, A, D E and K.
- For a healthy immune system.
- For our brains to function.

"Bad" and "Good" Cholesterol



- Cholesterol travels through the blood on proteins called “lipoproteins.” Two types of lipoproteins carry cholesterol throughout the body:
- LDL (low-density lipoprotein), sometimes called “bad” cholesterol, makes up most of your body’s cholesterol. High levels of LDL cholesterol raise your risk for heart disease and stroke.
- HDL (high-density lipoprotein), or “good” cholesterol, absorbs cholesterol and carries it back to the liver. The liver then flushes it from the body. High levels of HDL cholesterol can lower your risk for heart disease and stroke.

Vitamin & Minerals

- Micronutrients are the vitamins and minerals found in food that nourish your body and help keep you healthy. They are essential to your overall health.
- However, these micronutrients are not produced in our bodies and must be derived from the food we eat.

Vitamin & Minerals

- We need vitamins and minerals to help

us grow, to see correctly, to form bones, muscles, skin organs, as well as to help us battle infections.

- There are 2 kinds of vitamins like fat soluble vitamin & water soluble vitamins.
- Minerals are inorganic elements present in soil and water, which are absorbed by plants or consumed by animals. While you're likely familiar with calcium, sodium, and potassium, there is a range of other minerals, including trace minerals (e.g. copper, iodine, and zinc) needed in very small amounts.

Dietary Fibers

Dietary fiber, also known as roughage or bulk, includes the parts of plant foods your body can't digest or absorb. Unlike other food components, such as fats, proteins or carbohydrates — which your body breaks down and absorbs — fiber isn't digested by your body. Instead, it passes relatively intact through your stomach, small intestine and colon and out of your body.

Fiber is commonly classified as soluble, which dissolves in water, or insoluble, which doesn't dissolve.

Water

- Water is very important for your body • Water is used in every cell of your body.

- Water travels throughout our body carrying nutrients, oxygen, and wastes to and from your cells and organs.

- Water keeps our body cool as part of your body's temperature regulating system.

Healthy Food Choice

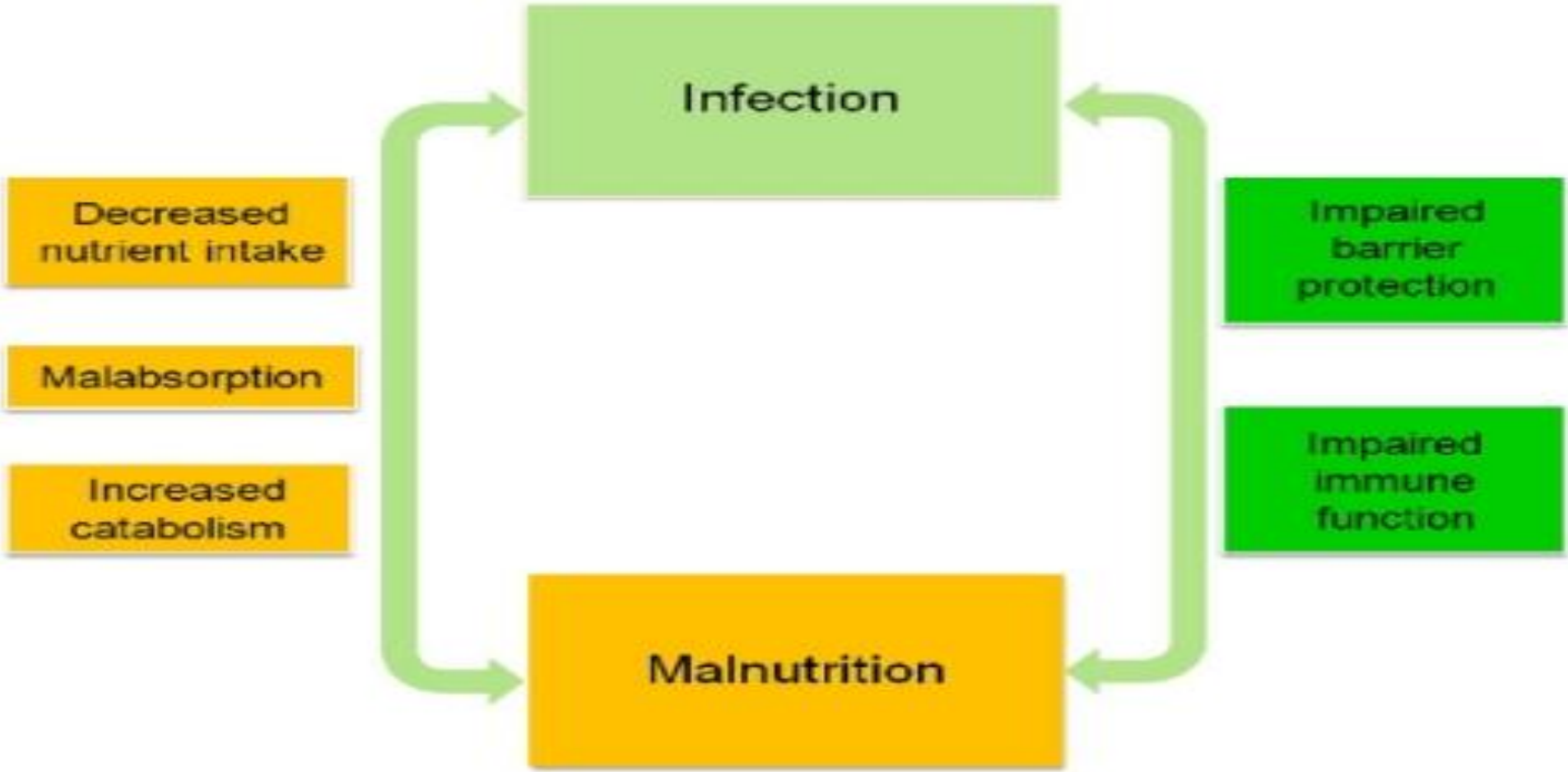
Result Of Poor Nutrition

Effects of Poor Nutrition

Poor nutrition will enhance:

- Overweight or underweight, failure to grow (Stunting), underweight and sudden loss of weight (Wasting).
- Poor posture, protruding abdomen
- Thin flabby muscle, lack of padding of fat or excessive fat in the body (underweight or overweight and obesity)
- Dry , scaly, pale skin, pale mucous membranes.
- Poor arrangement and texture of teeth
- Poor appetite, diarrhea, constipation
- Fatigue, lack of endurance for work
- Infections, longer convalescence from disease
- Short attention span

Relation between Food And Health



Lifestyle & Nutrition

In addition to nutrition, health is affected by genetics, the environment, life cycle and lifestyle.

- **Physical Activity :**

Health and Human Services have a strong evidence the increased physical activities will decreases the risk of early death.

Life Style & Nutrition

- **Sleeping Patterns :**

Scientific studies have shown that insufficient sleep increases the risk for heart disease, Diabetes Type 2, obesity and depression.

- **Personal Choice :**

The effects of individual foods and nutrients is another point for the good food choice.

Questions Of Fundamentals foods &nutrition (Chapter 1)

1)Why nutrition is important for us?

2) Which nutrients help in energy production?

3) What are the consequences of poor nutrition?

4) What are the food sources of fat & fiber?

5) Importance of water in our body?