

Food and Health

Grade 5

Food and Health

Food :

- Acts as fuel for our body.
- It provides energy
- It also helps in the growth and development of our body.

⇒ Food

- Solid → eat
- Liquid → drink

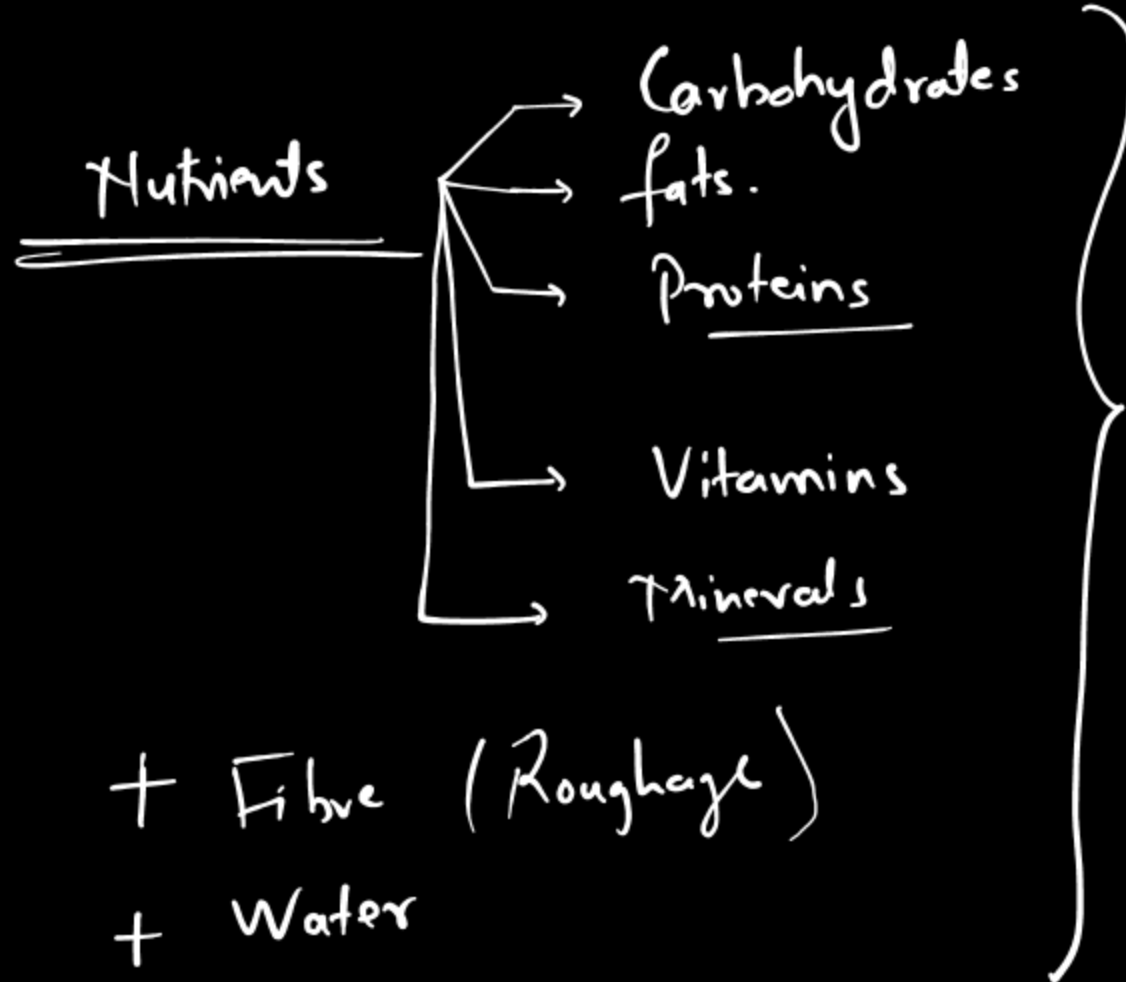
⇒

- Right kind of food
- and
- Right amount of food

 → Keeps us healthy and strong.

Food has special substance called nutrients

└─ energy
└─ grow and develop.



Balanced Diet
has Right amount
of all these things.

Balanced diet

⇒ It contains right amount of all the necessary nutrients + Roughage + water.

Components of balanced diet:

Nutrients ←
Water
Roughage

① Nutrients:

① Carbohydrates : • They provide energy

• Present in Rice, chapati, sugar, potato, banana

• Instant source of energy.

• Extra carbohydrates are stored in our body.

③ Fats → They also gives us energy.

↳ Energy is released slowly

→ Sources : Ghee, nuts, butter, oil, seed,

→ If we consume more fat than the required amount,
that extra fat gets stored in our body
as fat cell.

(c) Proteins :

→ They are building blocks of our body.

→ They help in growth, development and repair of ^{our} body.

Sources : Milk, egg (egg-white), meat, fish, pulse, nuts.

Vitamins and Minerals

- They keep us healthy.
- They help us fight diseases.

Vitamins :

- Vit. A → Yellow and orange fruits (mango, papaya, carrot)
 - Vit. B (Vit. B-complex)
 - Vit. C → Citrus fruit (orange, lemon)
 - Vit. D → egg yolk, sunlight.
 - Vit. E → Almonds, vegetable oils.
 - Vit. K → kale, broccoli, eggs, green onions.
- { Fresh fruits and green / fresh vegetables }

Minerals :

↳	<u>Calcium</u>	(milk, egg)
↳	<u>Iodine</u>	(sea-food Iodized-salt)
↳	<u>Iron</u>	(Spinach and apple)
↳	<u>Zinc</u>	(nuts, meat, egg)

General sources of Vitamins and minerals : fresh vegetables, fresh fruits,
milk, egg, meat, fish,

Milk has all the vitamins except vit. C.

Water: → Regulates temperature of our body
→ It helps in digestion and excretion.
⇒ 2-3 litres per day for adults.

Roughage: (Dietary fibres) or (fibre)

→ helps in proper bowel movement

↳ [removal of waste/undigested/non-absorbed food from the body.]

→ they prevent constipation.

Sources of roughage: fruits, salad, fresh vegetables, whole grains.

Junk food

↳ low nutritive value

↳ Deep-fried

↳ food with high amount of sugar and salt.

↳ does not build immunity.

↳ a person may fall ill.

↳ person may become obese.

↳ • Diseases → Diabetes → too much sugar (glucose) in blood.

• Hypertension → High blood pressure

• Cardio-vascular diseases → related with heart.

Fast food vs Junk Food



It can be prepared/eaten
quickly.

↳ all junk food are fast food



Healthy diet :

- fresh fruits
- vegetables
- Steamed, roasted or baked instead of fried food.
- whole grain based food like brown bread.
- Include sprouts in our diet. → high in protein & fibre
- Fermented foods → idlis, dosa,
 - good microbes (bacteria, yeast) → help in digestion.
- urd (good bacteria)

Diseases

① Diseases related to food habits and lifestyle

→ Lifestyle related diseases

- ① Obesity.
- ② Hypertension (High blood pressure)
- ③ Diabetes (high-blood sugar level)
- ④ Anaemia (Low iron / RBC)

② Deficiency Diseases

- ① Night-blindness
- ② Beri-beri
- ③ Scurvy.
- (iv) Rickets
- (v) Goitre
- (vi) Anaemia
- (vii) Parasitosis
- (viii) Kwashiorkor

Lifestyle related disease:

↳ the way we live our life.

Unhealthy lifestyle may lead to one ~~or more~~ disease.

- ① Obesity:
- Person gains excessive weight.
 - Person is called obese

Possible Reasons:

- Lack of exercise
- too much junk food.
- oily food (contains lots of fat).

Inactive lifestyle leads to deposition/accumulation of fat in the body.

Health problems related with obesity

- Diabetes.
- Hypertension (High blood pressure High BP)
- High cholesterol.

Common Symptoms of Obesity :

- Excessive weight
- Tiredness
- Difficulty in sleeping.
- Shortness of breath

② Hypertension (= High blood pressure)

High BP.

Deposition of fat/cholesterol on the walls of blood vessels. →

↑ after eating too much junk food.

Blood flows through a narrow opening, creating more pressure of the walls.

↓
High B.P.

or
Hypertension

Normal blood vessel.

" Blood in blood vessels (arteries) ~~exerts~~ pushes the walls of the vessels."

⇒ This force on the walls of blood vessels is called blood pressure (BP)

High blood pressure can damage →

- ① blood vessels.
- ② heart
- ③ Brain
- ④ eyes
- ⑤ Kidneys.

⇒ No - prominent symptoms.

⇒ we can only know ~~if~~ it by measuring the B.P. of the person.

Diabetes :

↳ excess level of blood sugar or sugar in blood.
(glucose) (glucose)

→ Pancreas, the organ responsible for controlling blood sugar.

→ Pancreas releases a chemical insulin, which controls the blood sugar.

Anaemia

↳ "Red blood cell (RBCs) is less than the normal amount."

→ Less oxygen in our body.

↳ Less energy generation in our body.

⇒ Generally caused by iron deficiency.

Symptoms: →

- Tiredness
- Shortness of breath
- Lack of energy.

- pale yellow skin.

Prevention of Lifestyle related disease

- healthy and balanced diet.
- Do not eat (avoid) junk food.
- Regular exercise.
- Proper sleep.

Deficiency diseases

Deficiency

Vit. A →

⇒ (Carrot, papaya,
pumpkin, Spinach)

Disease

Night blindness

↳ cannot see in dim light.

Vit. B →

(milk, cereals,
leafy veg.)

Beriberi

→ fatigue, weakness.

Vit. C ← →

citrus
(like lemon, orange,
goose berry)

Scurvy (Sailor's diseases)

↳ Swelling and bleeding
in the gums.

Vit. D →

→ (milk, fish, mushroom,
egg.)

Rickets (affects childrens)

↳ Bow shaped leg
↳ bending of bone.

→ Skin can make vit. D when exposed to mild sunlight.

Iodine →
⇒ [iodised salt]

Goitre

↳ enlargement of Thyroid gland,
present in neck region.

→ Swollen neck.

Vit D →

Deficiency of proteins and carbohydrates

causes

→ Marasmus (generally affect infant & child)

Symptoms :

- Poor growth and tiredness
- Poor mental growth.
- Dry and wrinkled skin.

Prevention : • food should contain meat, egg, beans, pulses, nuts, wheat, rice, potato, fish, etc.

Deficiency of protein (only)

- Causes -
Kwashiorkor (affects child & infant)

Symptoms :

- poor growth
- Loss of appetite.
- enlarged liver.
- Swelling in legs and stomach.

Prevention: Food rich in protein like, meat, fish, egg, pulses, nuts, etc.

Food adulteration

⇒ Water in milk

Chemicals in milk.

⇒ Black pepper is mixed with dried papaya seed.

⇒ Brick powder in red chilli powder.

⇒ Mustard oil with poppy seed oil.

⇒ Starch and palm oil is mixed with pancer.

⇒ polishing of rice.

Food adulteration

"Adulterant is mixed with the food."

this process is called food adulteration.

End of the chapter