

SPORTS and NUTRITION

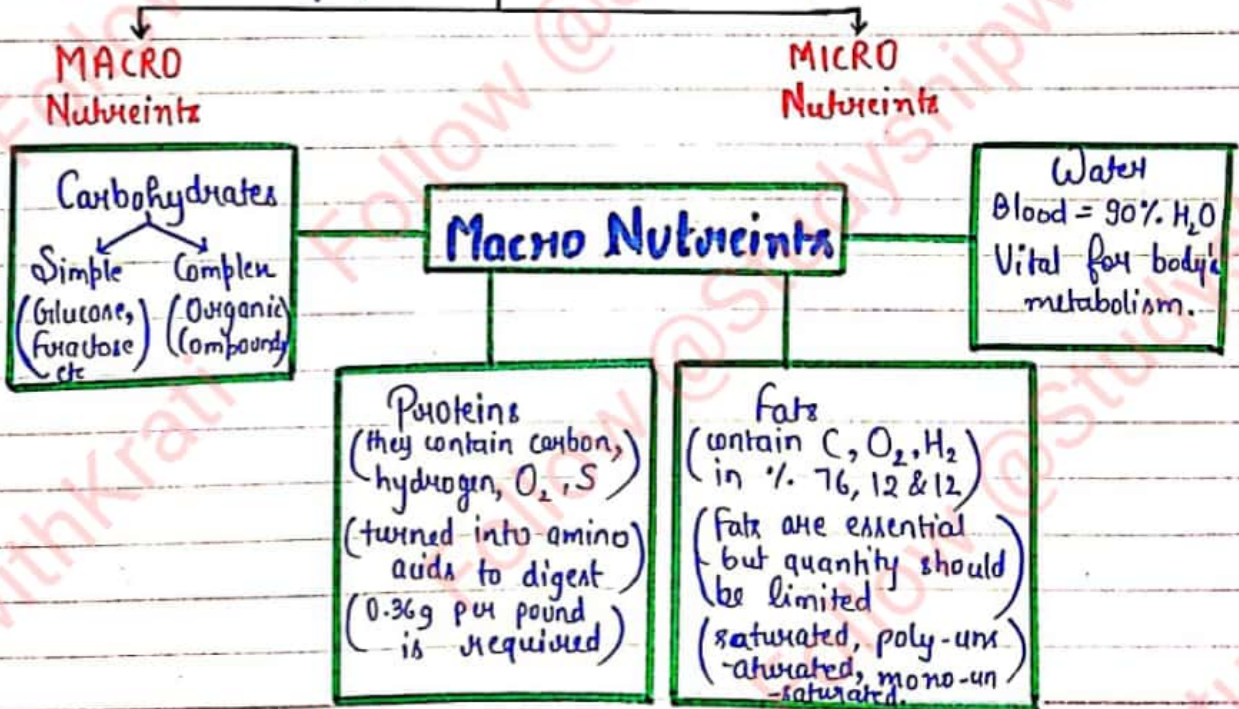
1. BALANCED DIET

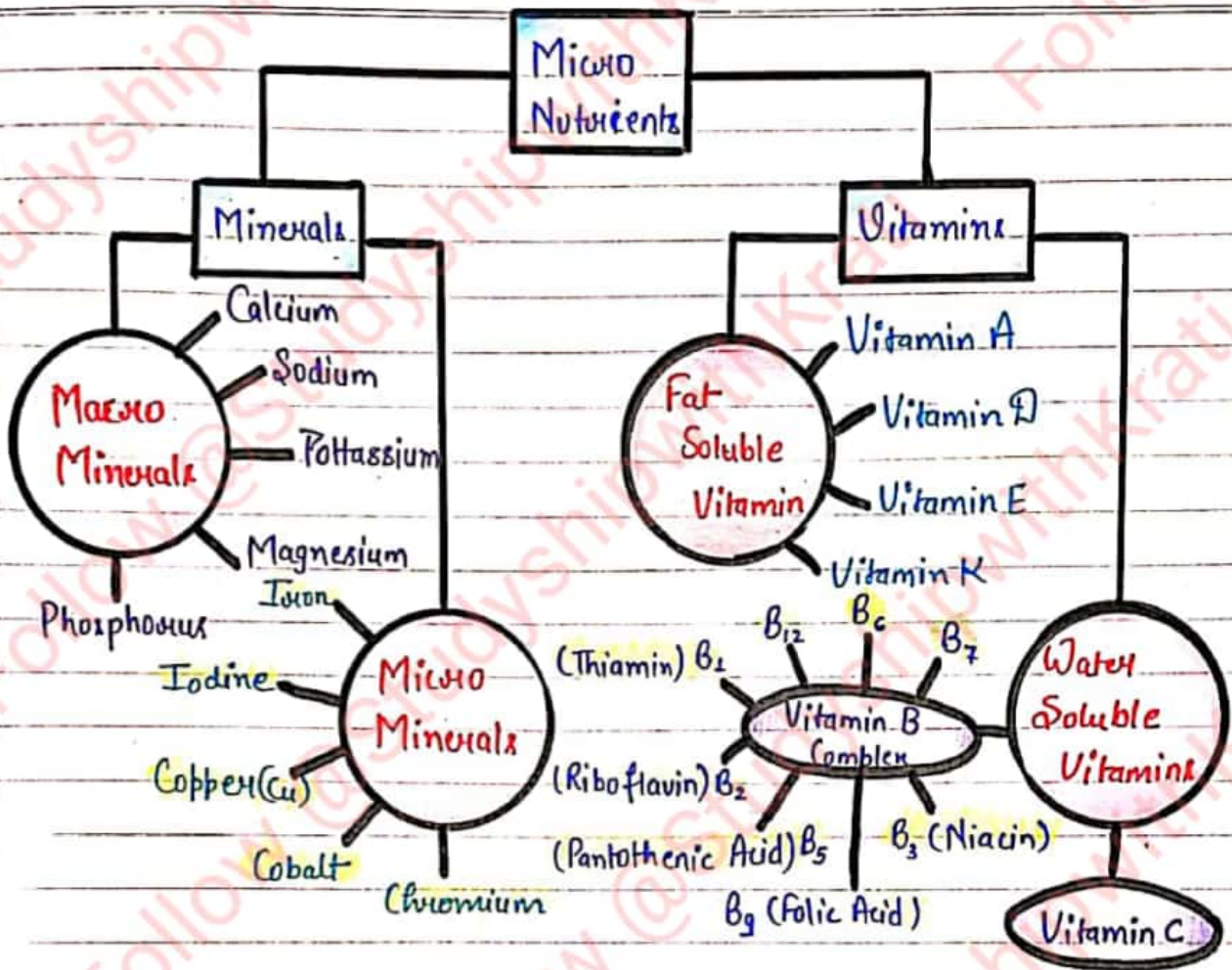
A diet which consists of all the essential food constituents, viz proteins, carbohydrates, fats, vitamins, minerals and water in correct proportion is called "balanced diet".

2.

NUTRITION

(Science of food and its relationship with health)





NUTRITIVE COMPONENTS

1. Proteins → Promote cell growth and help in mental development.
 - ↳ Animal Protein: Source - Egg, Milk, meat and fish.
 - ↳ Vegetable Protein: Source - Pulses, Beans, Nuts, dry fruits etc.
2. Carbohydrates → Provides energy and helps in formation of fat.
 - ↳ Source - rice, maize, jowar, bajra, pulses gram etc.
3. Fats → Provides heat and energy, and regulates body temperature.
 - ↳ Animal Sources: Milk products, fish oil, meat, eggs and milk.
 - ↳ Vegetable Sources: Sweet Potato, whole corn, dry fruits, coconut, food grains, cotton seed etc.
4. Vitamins → Increase immunity and help in general growth of body.
 - ↳ Lack of few specific vitamins can cause deficiency disease.

Vitamins	Deficiency Disease	Sources
A	Poison in Cord	Milk, Egg Yolk, fish, Tomato, papaya etc.
D	Rickets	Sunlight, Vegetables, Tomato, carrot etc.
E	weak muscles	organ meats, cotton seed, sprouts etc.
K	Anaemia	Cauli flower, Spinach, cabbage, potato etc.
B ₁ (Thiamin)	Constipation	wheat, ground nuts, green tea etc.
B ₃ (Niacin)	Grey hair	Milk, Egg Yolk, dry fruits etc.
B ₆	—	meat, fish, egg yolk, yeast etc.
B ₇	—	fresh vegetable, yeast bread, cereals etc.
B ₁₂	Anaemia	—
C	blood oozed gums	Lemons, Guavas, oranges, amla etc.
Folic Acid	Lack of Leucocytes	Yeast, Spinach, liver etc.

B ₂ (Riboflavin)	Stunted Growth	Egg Yolk, Fish, Pulses etc.
B ₃ (Pantothenic Acid)	Pellagra	Polished rice, Nuts, yeast etc.

5. Minerals → Helpful in general development of body (Specifically teeth, muscles and blood).

NON-NUTRITIVE COMPONENT

1. Fibre or Roughage :- Soluble fibres reduces blood fluctuation and lowers cholesterol whereas insoluble fibre acts as stool softener.
Sources: Whole wheat, fresh fruits, meat, vegetables etc.
2. Water :- Blood contains 90% of water, it helps in transportation of nutrients, Evacuation of waste, regulation of temperature etc.
Sources :- 20% of water intake comes from food and remaining from drinking water.
3. Colour Compounds :- Used to make food attractive, extracted from edible pigments.
4. Flavour Compounds :- It is derived from both nutritive and non-nutritive components and are added to add flavour to food.
5. Plant Compounds :- Few Plant compounds can have harmful and beneficiary effect on the body. Ex. Eni:- Caffeine

BMI

(Body Mass Index)

A healthy weight is considered to be the one that is between 19 and 25 (BMI). If BMI is between 25 and 29 an adult is considered overweight. If BMI is 30 or greater, the person is considered to be obese.

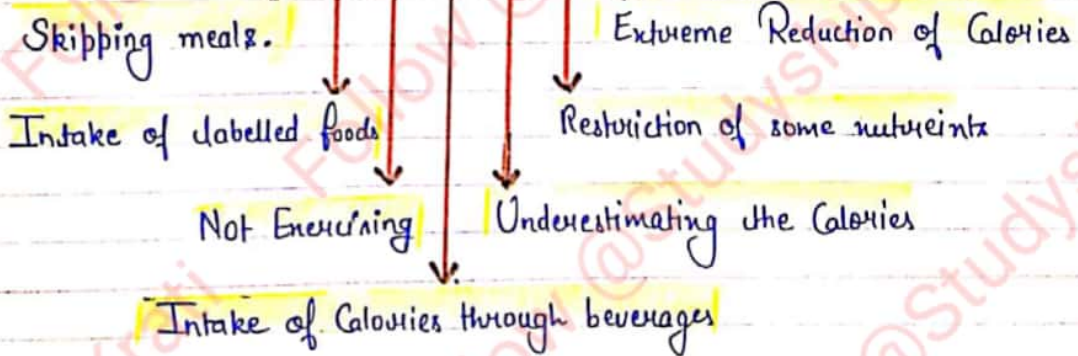
$$\text{BMI} = \frac{\text{Weight in kg}}{\text{Height in m}^2} = \frac{\text{Weight (kg)}}{\text{Height} \times \text{Height}}$$

Chart of Height and Weight

Male				Female			
Height in cm	Low Weight (kg)	Medium Weight (kg)	Maximum Weight (kg)	Height in cm	Low Weight (kg)	Medium Weight (kg)	Maximum Weight (kg)
157.5	50.7-54.4	53.7-57.1	57.1-63.9	147.5	41.7-44.4	43.5-48.5	47.1-53.9
160	52.1-55.8	54.8-60.3	58.5-65.3	150	42.6-45.8	44.4-49.9	48.0-55.3
162.5	53.5-57.1	56.2-61.6	59.8-67.1	152.5	43.5-47.1	45.8-51.2	49.4-56.7
165	54.8-58.5	57.8-63.0	61.2-68.9	155	44.9-48.5	47.1-52.6	50.8-58.0
167.5	56.2-60.3	59.0-64.8	62.6-70.0	157.5	46.2-49.9	48.5-53.9	52.1-59.4
170	58.0-62.1	60.7-66.6	64.4-73.0	160	47.6-51.2	49.9-55.3	53.5-60.7
172.5	59.8-63.9	62.6-68.9	66.6-75.2	162.5	49.0-52.6	51.2-57.1	54.9-62.6
175	61.6-63.7	64.4-70.7	68.4-77.1	165	50.3-53.9	52.6-58.9	56.7-64.4
178	63.4-68.0	66.6-72.5	70.3-78.9	167.5	51.6-55.8	54.4-61.2	58.5-66.2
180	65.3-69.8	68.0-74.8	72.1-81.1	170	53.5-57.6	56.2-63.0	60.3-68.0
183	67.1-71.6	69.8-77.1	75.3-83.4	172.5	54.8-59.4	58.0-64.8	62.1-69.8
185.5	68.9-73.4	71.6-79.3	76.1-85.7	175	57.1-61.2	59.8-66.6	63.9-71.6
188	70.7-75.7	73.4-81.6	78.4-87.9	178	58.9-63.5	61.6-68.4	65.7-73.9
190.5	72.5-77.5	75.7-83.9	80.7-90.2	180	60.7-65.3	63.5-70.3	67.5-76.2
193	74.3-79.3	78.0-86.1	82.5-92.5	183	62.6-67.1	65.3-72.1	69.4-78.4



Dangers OF Dieting



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FOOD INTOLERANCE

Cause

Caused by complete absence of enzymes responsible for breaking down food elements.

Symptoms

Nausea, vomiting, flatulence, gas, cramps, heart burn, stomach pain etc.

Management

fructose, lactose, and histamine intolerance therapy can be applied.

FOOD MYTHS

- Potatoes make you fat.
- Fat-free products help you lose weight.
- Eggs increase cholesterol level.
- Drinking while eating makes you fat.
- Don't take milk immediately after eating fish.
- Starve to lose weight.
- Exercise makes you eat more.

SPORTS NUTRITION

Before Competition

Rich in carbohydrate and low in fat, protein and fibre.

After Competition

Complete balanced meal rich in carbohydrate.

During Competition

small amount of carbohydrate and water frequently.

Effects

It enhances the sports performance and make the body of sportsperson active.



* **FOOD SUPPLEMENT** is a nutrient that is added to your body to nourish your body as you are not taking this nutrient in adequate amounts in your regular diet.
(Precautions must be taken while taking food supplements)

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