

- ✓ Total number of vitamins 13. They are vitamins A, B complex (8), C, D, E and K.
- ✓ Vitamins A, D, E and K are fat soluble vitamins.
- ✓ Vitamins B and C are water soluble.
- ✓ B and C dissolve in water and are not stored. Hence needed in daily diet.
- ✓ Excess A, D, E and K are stored in liver. They are not needed every day in diet.

- ✓ Blood is classified into A, B, AB and O.
- ✓ The blood group 'AB' is **Universal acceptor.**
- ✓ The blood group 'O' is **Universal donor.**

✓ Blood consists of

- **RBC** (Red Blood Corpuscles - Erythrocytes)
- **WBC** (White Blood Corpuscles - Leucocytes)
- **Platelets**
- **Plasma**

- ✓ **ALZHEIMER'S DISEASE**: Common cause for memory loss in older people. The nerves in different parts of the brain die prematurely leading to the deficiency in Acetylcholine. It is a neurotransmitter that is involved in memory function. This is a progressive disease. The person loses judgment, orientation, concentration, calculation, communication skills over a period of time.
- ✓ Vitamin D is called **sunshine vitamin**.
- ✓ Deficiency of Vitamin A results in **night blindness**.
- ✓ Deficiency of Vitamin B1 leads to Beriberi.
- ✓ Deficiency of Vitamin B2 leads to **Ariboflavinosis**

- ✓ Deficiency of Vitamin C causes Scurvy.
- ✓ Deficiency of vitamin D causes Rickets.
- ✓ Vitamin K-essential for clotting of blood.
- ✓ Vitamin A is called – Retinal
- ✓ Vitamin B1 is called Thiamine
- ✓ Vitamin B2 is called – Riboflavin
- ✓ Vitamin C is called - Ascorbic acid

✓ **Insulin** was discovered by **Fredrick Banting** and **Charles Best** of Canada in the year 1921.

✓ Insulin is a hormone **secreted by the Pancreas** that regulates sugar levels in the body.

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✓ **Carbohydrates** are the compounds consisting of Carbon, Hydrogen and Oxygen.

✓ Enzymes are **made up of Proteins**.

- ✓ Enzyme is a catalyst. It promotes action without direct involvement. Substrate is a substance upon which enzyme acts.
- ✓ There are **23 pairs** of chromosomes and **total 46** present in a human body cell.
- ✓ Out of these 23 pairs one pair **determines the sex**. This pair is called sex chromosomes and others are called autosomes.
- ✓ If the pair contains identical chromosomes XX then the sex is female.
- ✓ If the pair contains different chromosomes X and Y then the sex is male.

✓ **XX - Female**

✓ **XY - Male**

- ✓ Human blood was classified into A, B, AB and O by **K. Landsteiner**.
- ✓ Blood Group “AB” carries no antibody, where as “O” carries antibody “Anti-A and Anti-B”. A carries antibody “Anti-B” and “B” group carries “Anti-A”.
- ✓ Deficiency of Iodine causes “**goiter**”.
- ✓ **Goiter is the enlargement of thyroid.**

- ✓ Deficiency of protein leads to **Kwashiorkor**.
- ✓ Deficiency of iron leads to **Anemia**.
- ✓ Deficiency of sodium leads to **Hyponatremia**.
- ✓ Deficiency of calcium leads to **Rickets**.

- ✓ Deficiency of Vitamin A leads to Xerophthalmia /dry eye and Night Blindness.
- ✓ Oxygen is a product of Photosynthesis that comes from water.
- ✓ Lactic acid is present in milk.
- ✓ A bacterium contains only one chromosome.
- ✓ A plant cell is differentiated from animal cell with the presence of cell wall in plant cell.
- ✓ Mitochondrion is considered to the power house of a cell.
- ✓ Virus that infects a bacterium is called bacteriophage.

- ✓ During photosynthesis plants cool the environment by releasing water through pores or **stomata** that present on the surface of leaves.
- ✓ Ethylene is used for **ripening of fruits**.
- ✓ Appendix also called vermiform appendix, located near the junction of large intestine and small intestine. **This is a vestigial organ** (No function).

- ✓ Smallest bone in the human body is “**stapes**”. This is present in the ear.
- ✓ The largest bone in the human body is “**Femur**”. This is present in thigh.
- ✓ The skin is the **largest organ** of the human body.
- ✓ The smallest muscle in the human body is “**Stapedius**”. This is also present in the ear.  
This is attached to Stapes. (The smallest bone).
- ✓ The biggest skeletal muscle is “**Gluteus Maximus**”. This is a buttock muscle.
- ✓ The longest muscle is “**Sartorius**”. This runs from hip to knee.

- ✓ The strongest muscle is “**Masseter**”, the chewing muscle.
- ✓ The muscle with the largest surface area is ‘**Latissimus Dorsi**’ that covers the middle portion of the back.
- ✓ The sweat has no odor.
- ✓ There are **9000 taste buds** on the tongue.