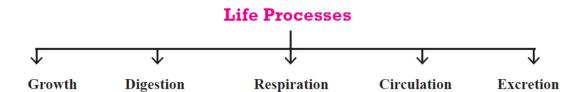
#### LIFE PROCESSES

## **FOCUS POINTS**



## **Nutrition in Plants**

Plants are autotrophs.

Can make their own food.

## **Nutrition in Animals**

Animals are hetrotrophs.

Depends on plants or other animals for their food.

Autotrophs — Use Simple inorganic material — Convert ino Complex high energy molecules (Carbohydrates)

## **Hetrotrophic Nutrition**

#### Holozoic

Animals take in solid food and breakdown inside the body.

E.g., Amoeba, animals.

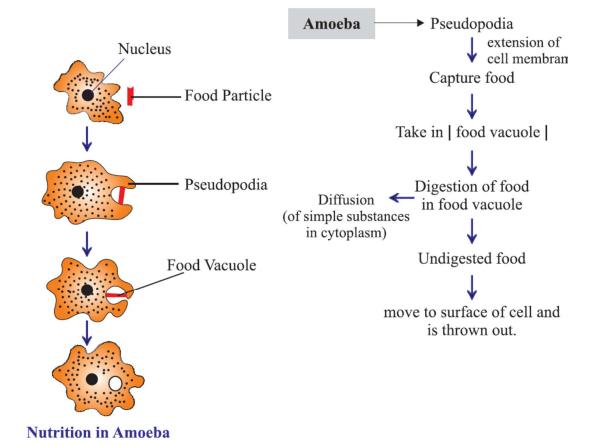
## Saprophytic

Organisms feed on dead, decaying matter. *E.g.*, Fungi.

#### Parasitic

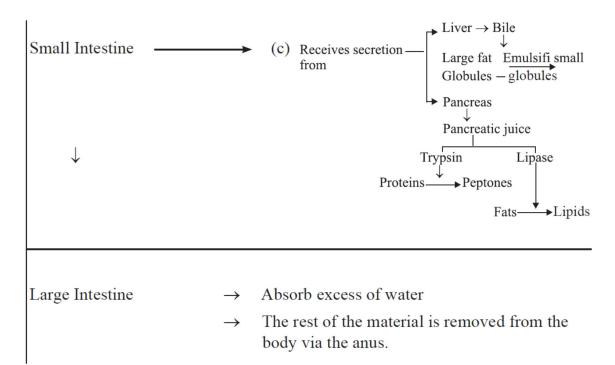
Parasites live inside or outside other organism (host) and derive nutrition from it. *E.g.*, Cuscuta (plant parasites), Ticks etc.

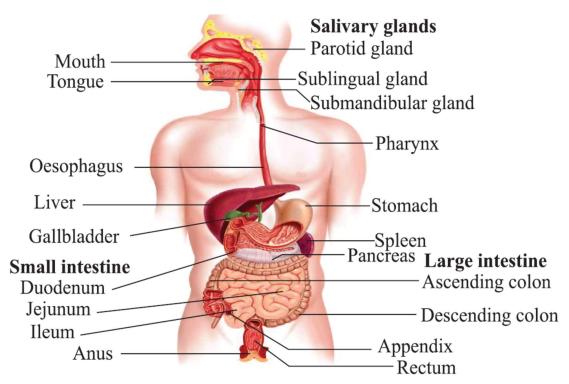
## (i) Amoeba

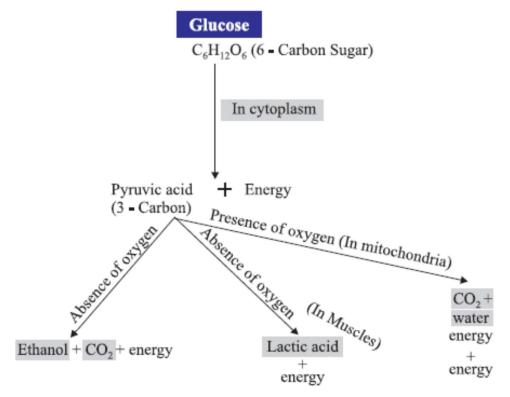


# **Nutrition in Human Beings**

١.	Mouth	→ Intake of whole food.
	↓ Teeth	→ Chewing/grinding of food.
	Tongue	Rolling of food +
	<b>V</b>	Tasting of food + Swallowing/Pushing down of the food.
	Salivary Glands	Secrete saliva + Mucus
	<b>↓</b>	$ \frac{Salivay}{amylase} \rightarrow Sugar $ Starch [Saliva] Sugar
١	Oesophagus	→ Taking food from mouth to stomach by
	$\downarrow$	Peristaltic movements. [Contraction and expansion of muscles of the oesophagus
	Stomach	Gastric glands Secrete Gastric juice
		Gastric Juice
		Gastric Juice  PEPSIN HCl MUCUS
	<b>↓</b>	
-	↓ Small Intestine	PEPSIN HCI MUCUS  (Enzyme that (Makes medium (Protects inner lining))
-	↓ Small Intestine	PEPSIN HCI MUCUS  (Enzyme that (Makes medium breaks down acidic) inner lining proteins) of the stomach)
-	↓ Small Intestine	PEPSIN HCI MUCUS  (Enzyme that (Makes medium breaks down acidic) inner lining of the stomach)  ———————————————————————————————————
-	↓ Small Intestine	PEPSIN HCI MUCUS  (Enzyme that (Makes medium breaks down acidic) inner lining proteins) of the stomach)  → (a) Intestinal enzyme  ↓ convert
-	↓ Small Intestine	PEPSIN HCI MUCUS  (Enzyme that (Makes medium breaks down acidic) inner lining proteins) of the stomach)  → (a) Intestinal enzyme  ↓ convert
	↓ Small Intestine Small Intestine	PEPSIN HCI MUCUS  (Enzyme that (Makes medium breaks down acidic) inner lining of the stomach)  (a) Intestinal enzyme    Carbohydrate   Fats   Proteins







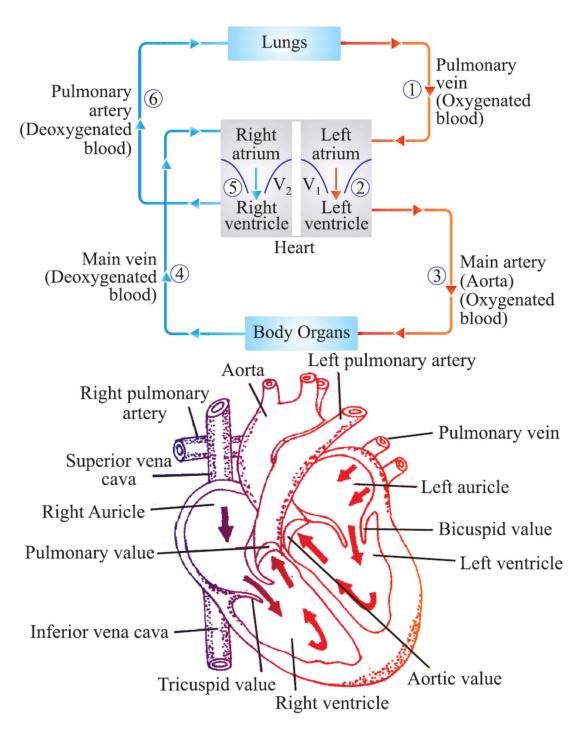
# Respiration

#### Aerobic

- Takes place in the presence of oxygen
- Occurs in mitochondria
- End products are CO<sub>2</sub> and H<sub>2</sub>O
- More amount of energy is released

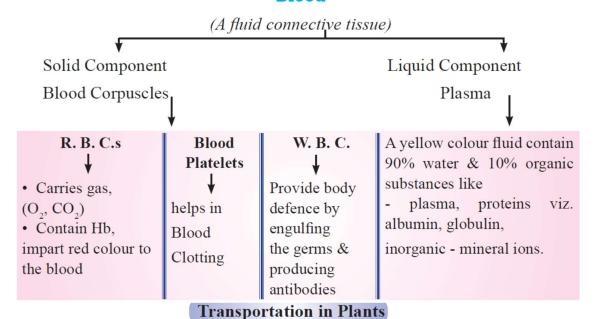
#### Anaerobic

- Takes place in the absence of oxygen
- Occurs in cytoplasm
- End products are alcohol or lactic acid
- Less amount of energy is released



Direction of blood flow through human heart

#### Blood



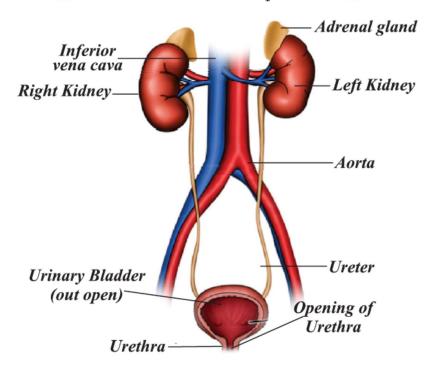
There are two main conducting pathways in a plant.

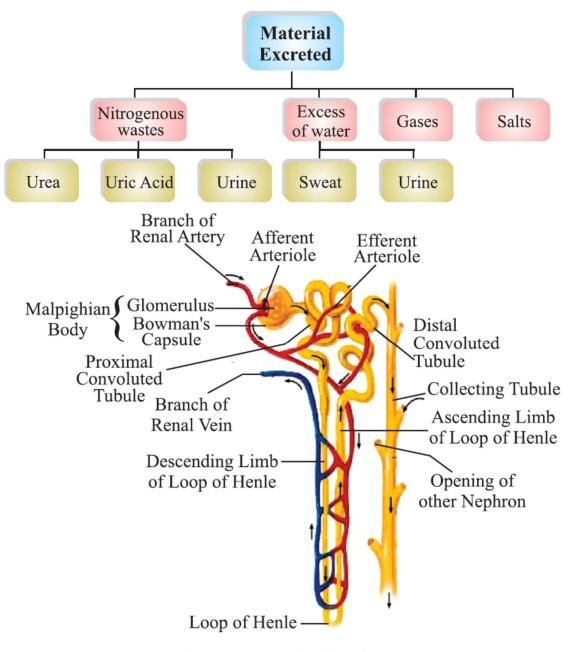
**Xylem** Phloem

Carries water & minerals from the roots to other parts of the plant.

No energy is used.

- 1. Carries product of photosynthesis from leaves to the other parts of the plant.
- 2. Energy is used from ATP.





Structure of a Nephron