

Digestive System

- when we eat food it is crushed by teeth and mixed by tongue and saliva (saliva makes it soft) and provide lubrication to the food. [DEPTH OF BIOLOGY]
(helps in swallowing)

- * Saliva also contain lysozyme which kills bacteria present in food

↓
Now food swallows and enter into Oesophagus (food pipe) with the help of peristalsis movement

↓
Now food enter into stomach.

- food passes oesophagus in the form of Bolus
- Bolus → food + saliva (in form of small balls)
- In stomach conc. HCl is present [DEPTH OF BIOLOGY]
 - helps to kill the foreign particles present in our food.
 - convert large particles of food into small particles
- chewed food + HCl passes stomach in the form of chyme

[DEPTH OF BIOLOGY] • There are 3 enzymes that acts on food in stomach

- Amylase — digestion of carbohydrates
- Lipase — digestion of fat or oil
- Trypsin — digestion of proteins

- These also act on chyme as the chyme passes down the stomach to intestine [DEPTH OF BIOLOGY]

• Liver secretes Bile Juice and Bile salts.

• Bile Juice [DEPTH OF BIOLOGY]

↓
convert acidic food (chyme) due to HCl into Basic

↓
why it is needed?

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Because food gets transported into Intestine only in basic nature.

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Then food enters into Small Intestine

[DEPTH OF BIOLOGY]

┌ Duodenum
├ Jejunum
└ Ileum

• small intestine secretes Intestinal Juice pH - 7.6

• Bile salts

OO large particles of fats $\xrightarrow{\text{Emulsification}}$ Small particles

• Small Intestine

[DEPTH OF BIOLOGY]

┌ Main site of absorption
├ Portion between stomach and large intestine
├ Highly convoluted tube [DEPTH OF BIOLOGY]
└ absorb 90% Nutrient from food that we eat.

• Here presence of Villi and Microvilli
- available for better absorption.

* length of small Intestine - 7m

• 4-5 times longer than large intestine.

* Brush-Border enzyme are digestive enzyme synthesised in small intestine [DEPTH OF BIOLOGY]

• Duodenum

- Majority of chemical digestion takes place here.
- Initial and small part of small intestine
- hollow tube like structure [DEPTH OF BIOLOGY]

• Jejunum

- part of small intestine
- also composed of muscle to help in movement of food.

• Ileum

- lower end of small intestine
- continues into large intestine
- Blood vessels are fewer in Ileum as compared to Jejunum.

↓ [DEPTH OF BIOLOGY]

Food enters into large intestine
(1.5 m)
(caecum to Anus)

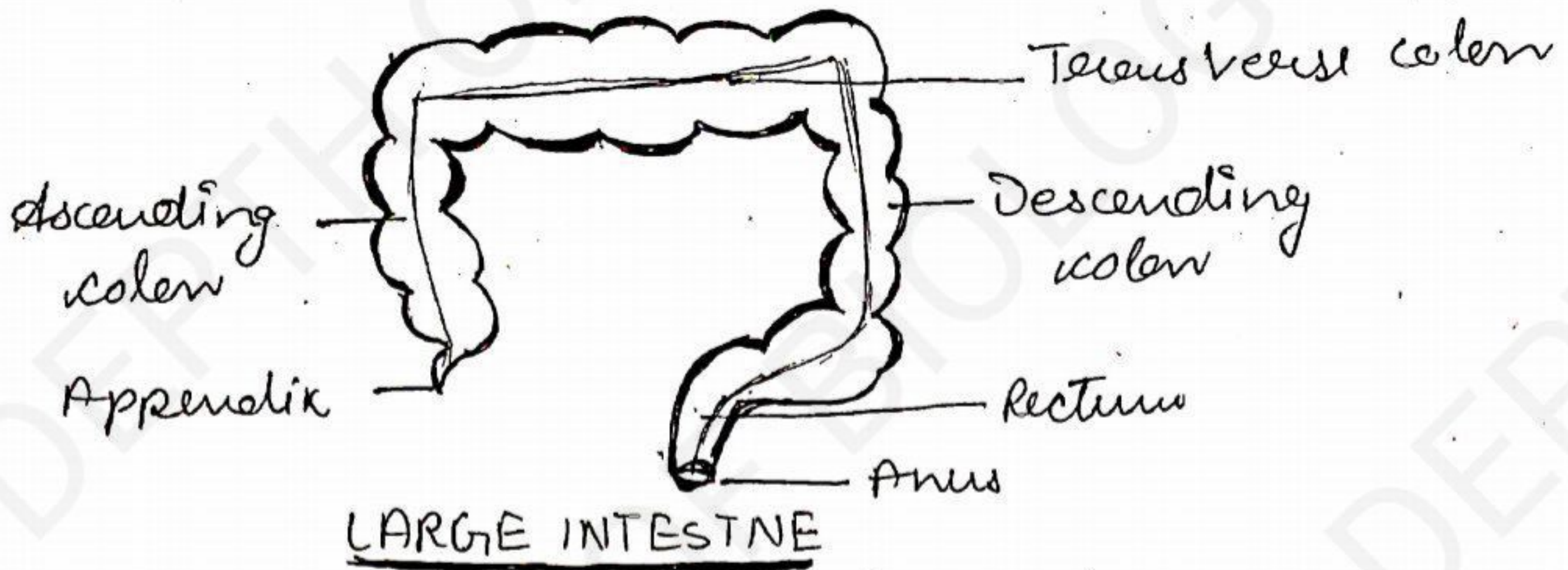
In large intestine - absorb H_2O and Vitamins.
- smaller than small intestine

① Caecum -

- 1st part of large intestine
- inferior end of caecum (Appendix)

② Colon -

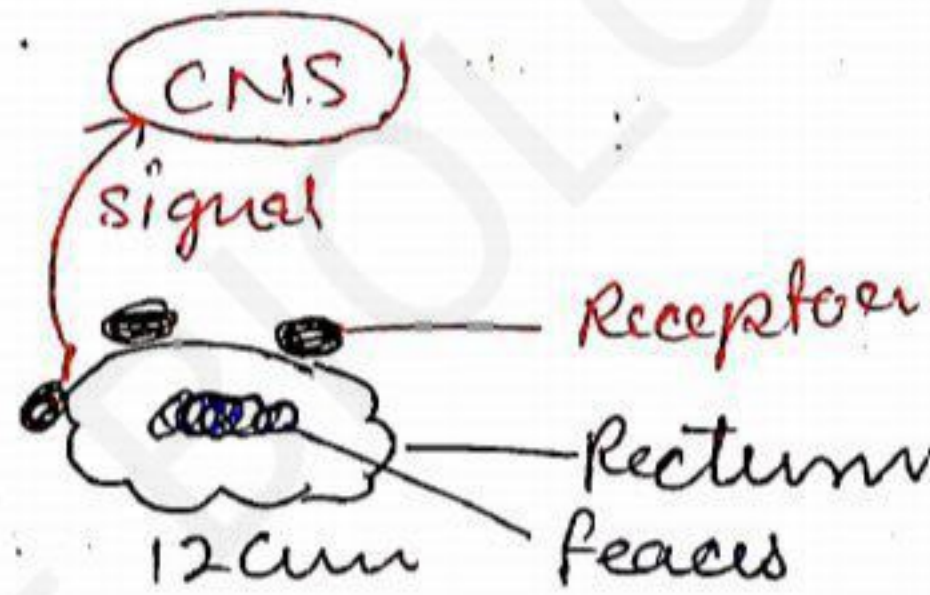
- Ascending colon
- Transverse colon
- Descending colon.



[DEPTH OF BIOLOGY]

③ Rectum :-

- Generally 12 cm.
- continuous to Anus
- stores feces temporarily



[DEPTH OF BIOLOGY]

If not defecated

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feces goes into colon

↓
More H₂O absorbed

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Feces solidifies more (constipation)

④ Anus

- external opening of rectum
- expulsion of feces from the body.
- like a ring

[DEPTH OF BIOLOGY]