

Pancreas

- Important organ in Digestive system.
- 6 to 10 inches long
- 2 inches wide.
- located in the upper abdomen, directly behind the stomach and next to the small intestine.
- comprised primarily of a network of tubes or Pancreatic duct.

* Pancreas is a heterocrine gland as it is

[DEPTH OF BIOLOGY]

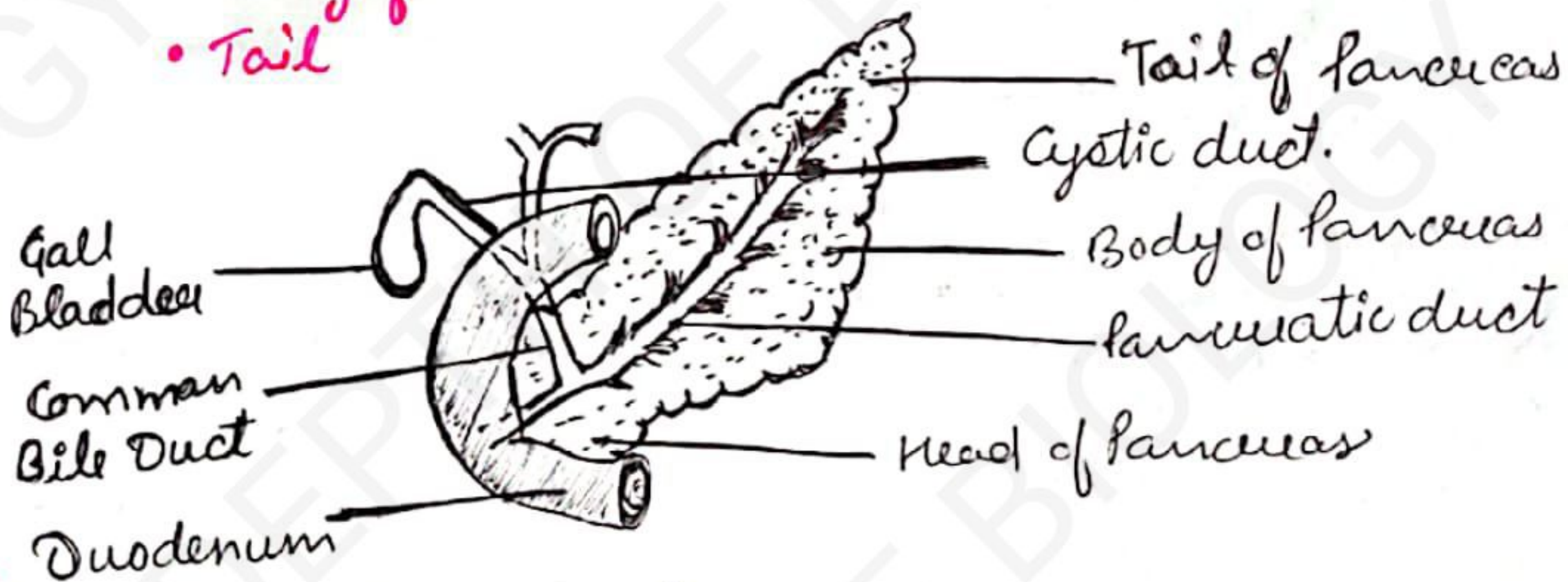
99% of exocrine
1% of endocrine

* They release liquid in upper portion of small intestine called duodenum.

• Anatomically the pancreas is divided into 3 Regions

[DEPTH OF BIOLOGY]

- Head
- Body of Pancreas
- Tail



• Pancreas has 2 functions

→ Endocrine (1%)

→ Exocrine (99%)

1. **Endocrine** → The pancreas produces chemical (Hormone) that regulate blood sugar. [DEPTH OF BIOLOGY]

It has three types of cells in it.

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- ① α cells (alpha cells) \longrightarrow secrete Glucagon
- ② β cells (beta cells) \longrightarrow secrete Insulin
- ③ δ cells (delta cells) \longrightarrow secrete somatostatin
pancreatic polypeptide.

④ **Exocrine** \longrightarrow The pancreas produce enzyme that helps in digestion of food.

Amylase \longrightarrow Digestion of Carbohydrate

Lipase \longrightarrow Digestion of Fats/oil [DEPTH OF BIOLOGY]

Protease \longrightarrow Digestion of protein into amino acid
 \hookrightarrow wrapped in a protective layer.

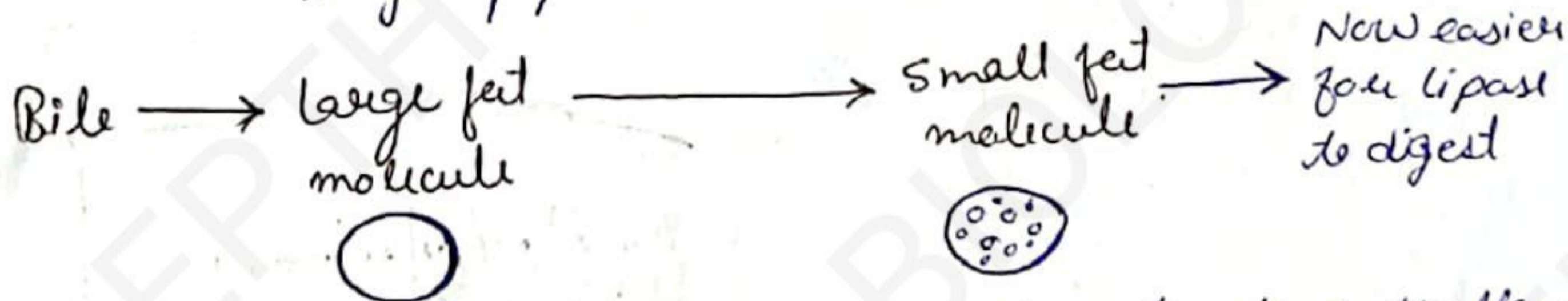
Digestive enzyme to reach G.I.T. they travel through pancreatic duct and release into the Duodenum at the Major Papilla (Ampulla of Vater)

[DEPTH OF BIOLOGY]

Once they completely out from the pancreas the protective layer is removed.

And the enzymes becomes active

\rightarrow Bile from the Gall Bladder also enter the Duodenum at the major papilla. [DEPTH OF BIOLOGY]



- * when the pancreas is healthy it contributes to a healthy digestive system.
- * However when our pancreas does not function correctly or is unwell we face trouble in digesting food properly.
- * Pancreas is made up of numerous **acini** \rightarrow groups of secretory cells surrounding a cavity.

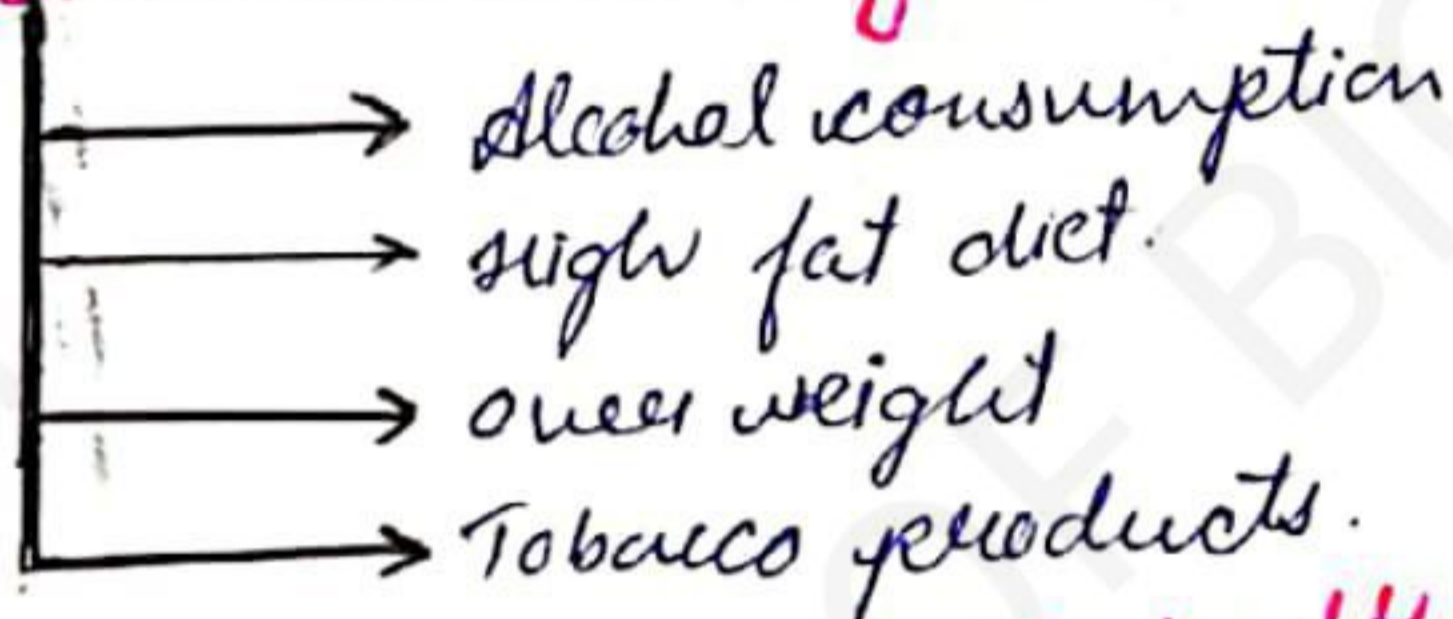
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* Consequences of Unwell Pancreas



* Each acini is lined by pyramidal shaped cell. These cells secrete enzymes of pancreatic juices.

* Risk factors contributing to poor pancreatic health



* How to keep your pancreas healthy?

