

THE PANCREAS: ANATOMY & PHYSIOLOGY

1. GROSS ANATOMY

- **Head** Widest part, nestled in the curve of the duodenum.
- **Neck & Body** Central section extending horizontally behind the stomach.
- **Tail** Tapered left extremity touching the spleen.
- **Pancreatic Duct (Wirsung)** Joins common bile duct to enter the small intestine.

2. HISTOLOGY

- **Acini (Exocrine)** Clusters of cells producing digestive enzymes (95% of tissue).
- **Islets of Langerhans (Endocrine)** Cell clusters secreting hormones directly into blood.

3. EXOCRINE FUNCTION

- **Amylase** Breaks down carbohydrates into simple sugars.
- **Lipase** Works with bile to break down dietary fats.
- **Proteases (Trypsin/Chymotrypsin)** Digests proteins into amino acids.
- **Sodium Bicarbonate** Neutralizes stomach acid in the duodenum.

4. ENDOCRINE FUNCTION

Hormone	Cell Type	Action
Insulin	Beta	Lowers Blood Glucose
Glucagon	Alpha	Raises Blood Glucose
Somatostatin	Delta	Inhibits Islet Output