

Pancreas Basics

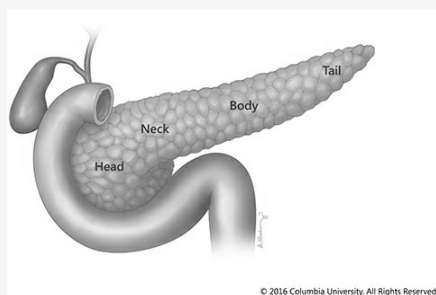
The pancreas is 6 to 8 inch gland organ composed of mostly exocrine tissue

It is located above the duodenum horizontally

The pancreas has a duct running through it that extends into smaller branches which is connected to the duodenum through a duct

The pancreas produces enzymes that aid in digestion and islets of Langerhans

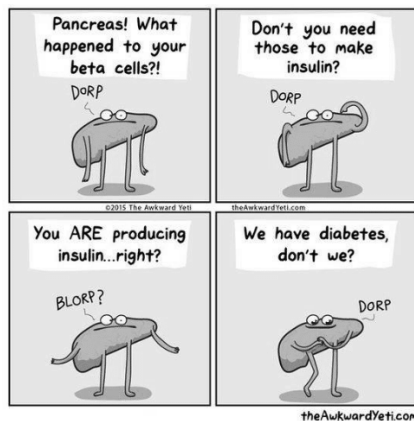
Sections of the Pancreas



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<http://columbiasurgery.org/pancreas/pancreas-and-its-functions>

Humor



<http://memebase.cheezburger.com/tag/pancreas>

Functions of the Pancreas

Functions of the Pancreas (cont)

Enzymes include trypsin for proteins, amylase for carbs, and lipase for fats

The cells are in grape like structures within the pancreas that release insulin and glucagon directly to the blood stream

When food is in the stomach the pancreas releases its enzymes (known as pancreatic juices) through the pancreatic duct that joins the common bile duct to form the ampulla of Vater that connects to the duodenum (first part of the small intestine)

The enzymes help digest fats, carbohydrates, and proteins so they can be absorbed by the body as useful nutrients

Insulin lowers blood sugar and is often in the body after a big meal

Glucagon raises blood sugar levels

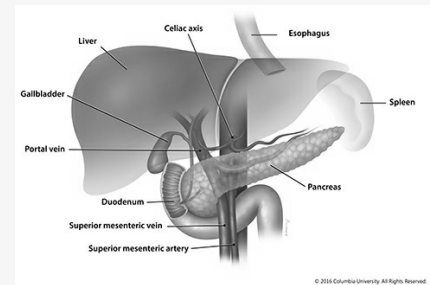
Keeping stable blood sugar levels is crucial to the function of the brain, liver, and kidneys

Role in Homeostasis

Balance blood sugar by releasing insulin or glucagon

Help the body digest macro-molecules crucial in providing the body energy

Location of the pancreas



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The pancreas is located to some of the major blood vessels to facilitate the release of hormones into the bloodstream

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Role in Systems

Active in the endocrine system by releasing hormones insulin and glucagon. Contributes to the digestive system by producing enzymes for the small intestine.

Pancreatic Disorders

Pancreatitis

Acute or chronic inflammation of the pancreas due to premature release of enzymes in the pancreas and not the small intestine

Type 1 Diabetes

Innability for pancreas to produce insulin or glucagon

Type 2 Diabetes

Body tissue is resistant to glucagon and insulin thereby not responding to exposure of the hormone

Exocrine Function	Endocrine Function
Produce enzymes that assist digestion occurring in the small intestine	The endocrine function of the pancreas is based off of the islet cells (AKA islets of Langerhans)



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