

Disorders of the Pancreas

The pancreas is a small gland with its 'head' lying in the curve of the duodenum. Its main duct joins the common bile duct (of the liver and gallbladder) to form what is known as the *ampulla* of the bile duct. The ampulla enters the duodenum at its midpoint. Apart from secreting the hormones, *insulin* and *glucagon*, the pancreas produces *pancreatic juice* containing enzymes that digest carbohydrates, proteins and fats. When acid stomach contents enter the duodenum, they are mixed with pancreatic juice and bile. This creates the proper acid/alkali balance (pH value) at which the pancreatic enzymes are most effective (both bile and pancreatic juice are alkaline).

Gallstones in the liver or gallbladder cut down bile secretion from the normal amount of about one quart per day, to as little as one cup per day. This severely disrupts the digestive process, particularly if fats or fat-containing foods are consumed. Subsequently, the pH remains too low, which inhibits the action of pancreatic enzymes, as well as those secreted by the small intestine. The end result is that food is only partially digested. Improperly digested food that is saturated with the stomach's hydrochloric acid can have a very irritating, toxic effect on the entire intestinal tract.

If a gallstone has moved from the gallbladder into the ampulla, where the common bile duct and the pancreatic ducts meet (see *Figure 1*), the release of pancreatic juice becomes obstructed and bile moves into the pancreas. This causes protein-splitting pancreatic enzymes that are normally activated only in the duodenum to be activated while in the pancreas. These enzymes begin to digest parts of the pancreatic tissue, which can lead to infection, suppuration and local thrombosis. This condition is known as *pancreatitis*.

Gallstones obstructing the ampulla release bacteria, viruses and toxins into the pancreas, which can cause further damage to pancreatic cells, and eventually lead to *malignant tumors*. The tumors occur mostly in the head of the pancreas, where they inhibit the flow of bile and pancreatic juice. This condition is often accompanied by *jaundice* (for more details see 'Diseases of the Liver').

Gallstones in the liver, gallbladder and ampulla may also be responsible for both types of diabetes - insulin-dependent and non-insulin-dependent. All clients of mine with diagnosed diabetes, including children, have had large quantities of stones in their liver. Each liver cleanse further improved their condition, provided they followed a healthy regimen and diet void of animal products.

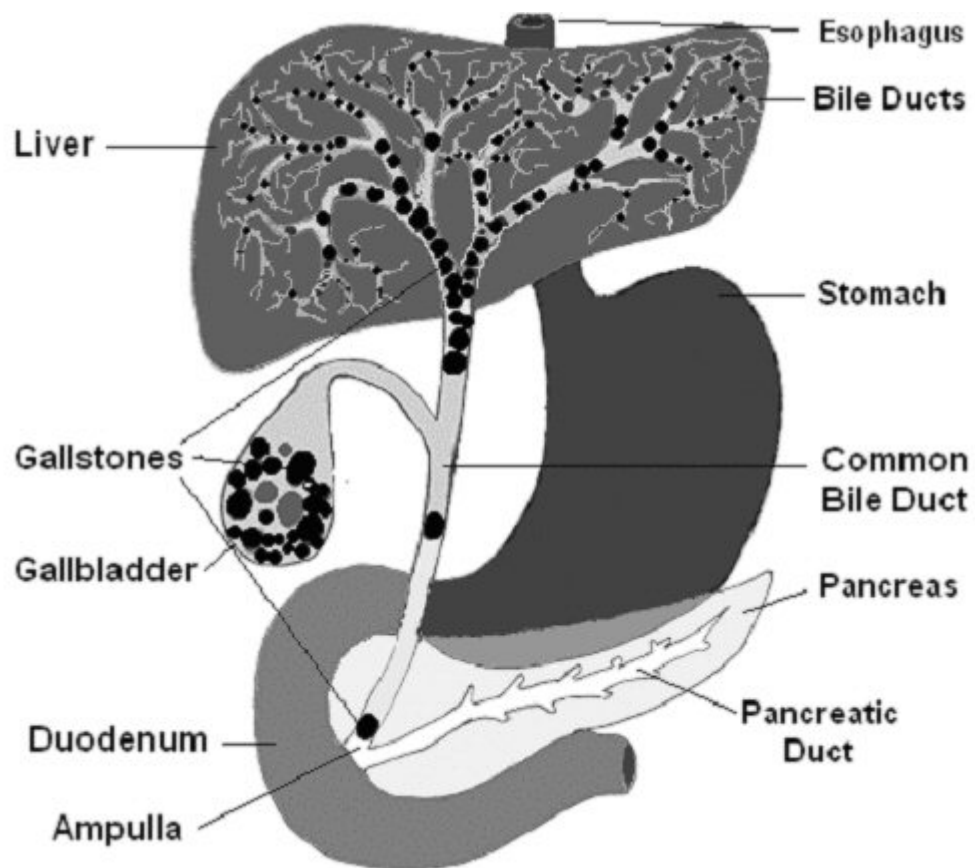


Figure 1: Gallstones in the liver and gallbladder