

Chronic metabolic acidosis destroys pancreas.

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One primary reason for the current epidemic of digestive disorders might be chronic metabolic acidosis, which is extremely common in the modern population. Chronic metabolic acidosis primarily affects two alkaline digestive glands, the liver, and the pancreas, which produce alkaline bile and pancreatic juice with a large amount of bicarbonate. Even small acidic alterations in the bile and pancreatic juice pH can lead to serious biochemical/biomechanical changes. The pancreatic digestive enzymes require an alkaline milieu for proper function, and lowering the pH disables their activity. It can be the primary cause of indigestion. Acidification of the pancreatic juice decreases its antimicrobial activity, which can lead to intestinal dysbiosis. Lowering the pH of the pancreatic juice can cause premature activation of the proteases inside the pancreas with the potential development of pancreatitis. The acidification of bile causes precipitation of the bile acids, which irritate the entire biliary system and create bile stone formation. Aggressive mixture of the acidic bile and the pancreatic juice can cause erratic contractions of the duodenum's walls and subsequent bile reflux into the stomach and the esophagus. Normal exocrine pancreatic function is the core of proper digestion. Currently, there is no effective and safe treatment for enhancing the exocrine pancreatic function. Restoring normal acid-base homeostasis can be a useful tool for pathophysiological therapeutic approaches for various gastrointestinal disorders. There is strong research and practical evidence that restoring the HCO_3^- capacity in the blood can improve digestion.