

*Pancreas divisum is not believed to cause acute pancreatitis in isolation or another disease precipitant.

■ ETIOLOGY AND PATHOGENESIS

There are many causes of acute pancreatitis ([Table 348-1](#)), and the mechanisms by which each of these conditions triggers pancreatic inflammation have not been fully elucidated. Gallstones and alcohol account for 80–90% of identified cases of acute pancreatitis in the United States. Gallstones continue to be the leading cause of acute pancreatitis in most series (30–60%). The risk of acute pancreatitis in patients with at least one gallstone <5 mm in diameter is fourfold greater than that in patients with larger stones. Alcohol is the second most common cause, responsible for 15–30% of cases in the United States. The incidence of pancreatitis in alcoholics is surprisingly low (5/100,000), indicating that in addition to the amount of alcohol ingested, other factors affect a person's susceptibility to pancreatic injury, such as cigarette smoking and genetic predisposition. Acute pancreatitis occurs in 5–10% of patients following endoscopic retrograde cholangiopancreatography (ERCP); however, this risk can be decreased with proper patient selection and the use of a prophylactic pancreatic duct stent and/or rectal nonsteroidal anti-inflammatory drugs (NSAIDs; indomethacin). Risk factors for post-ERCP pancreatitis include minor papilla sphincterotomy, suspected sphincter of Oddi dysfunction, prior history of post-ERCP pancreatitis, age <60 years, more than two contrast injections into the pancreatic duct, and endoscopist experience.

Hypertriglyceridemia is the cause of acute pancreatitis in 1–4% of cases; serum triglyceride levels are usually >1000 mg/dL. Most patients with hypertriglyceridemic pancreatitis have undiagnosed or uncontrolled diabetes mellitus. An additional subset has an underlying derangement in lipid metabolism, probably unrelated to pancreatitis. Such patients are prone to recurrent episodes of pancreatitis. Any factor (e.g., alcohol or medications, such as oral contraceptives) that causes an abrupt increase in serum triglycerides can potentially precipitate a bout of acute pancreatitis. Patients with a deficiency of apolipoprotein CII have an increased incidence of pancreatitis; apolipoprotein CII activates lipoprotein lipase, which is