

angina” in which some patients experience relief of angina as they continue at the same or even a greater level of exertion (**Chap. 273**). Alterations in the intensity of pain with changes in position or movement of the upper extremities and neck are less likely with myocardial ischemia and suggest a musculoskeletal etiology. The pain of pericarditis, however, often is worse in the supine position and relieved by sitting upright and leaning forward. Gastroesophageal reflux may be exacerbated by alcohol, some foods, or a reclined position. Relief can occur with sitting.

Exacerbation by eating suggests a gastrointestinal etiology such as peptic ulcer disease, cholecystitis, or pancreatitis. Peptic ulcer disease tends to become symptomatic 60–90 min after meals. However, in the setting of severe coronary atherosclerosis, redistribution of blood flow to the splanchnic vasculature after eating can trigger postprandial angina. The discomfort of acid reflux and peptic ulcer disease is usually diminished promptly by acid-reducing therapies. In contrast with its impact in some patients with angina, physical exertion is very unlikely to alter symptoms from gastrointestinal causes of chest pain. Relief of chest discomfort within minutes after administration of nitroglycerin is suggestive of but not sufficiently sensitive or specific for a definitive diagnosis of myocardial ischemia. Esophageal spasm may also be relieved promptly with nitroglycerin. A delay of >10 min before relief is obtained after nitroglycerin suggests that the symptoms either are not caused by ischemia or are caused by severe ischemia, such as during acute MI.

Associated Symptoms Symptoms that accompany myocardial ischemia may include diaphoresis, dyspnea, nausea, fatigue, faintness, and eructations. In addition, these symptoms may exist in isolation as anginal equivalents (i.e., symptoms of myocardial ischemia other than typical angina), particularly in women and the elderly. Dyspnea may occur with multiple conditions considered in the differential diagnosis of chest pain and thus is not discriminative, but the presence of dyspnea is important because it suggests a cardiopulmonary etiology. Sudden onset of significant respiratory distress should lead to consideration of pulmonary embolism and spontaneous pneumothorax. Hemoptysis may