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The gastric mucous layer is essential to the integrity of the gastric mucosa. It is a viscid layer of mucopolysaccharides produced by the mucus-producing cells of the stomach and the pyloric glands. Gastric mucus is an important physiological barrier that protects the gastric mucosa from mechanical damage and also the effects of acid and pepsin. It has considerable buffering capacity, enhanced by the presence of bicarbonate ions within the mucus. Many factors can lead to the breakdown of this gastric mucous barrier. These include bile, non-steroidal anti-inflammatory drugs (NSAIDs), alcohol, trauma and shock. Tonometry studies have shown that, of the entire gastrointestinal tract, the stomach is the most sensitive to ischaemia following a hypovolaemic insult and also the slowest to recover. This may explain the high incidence of stress ulceration in the stomach.

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