


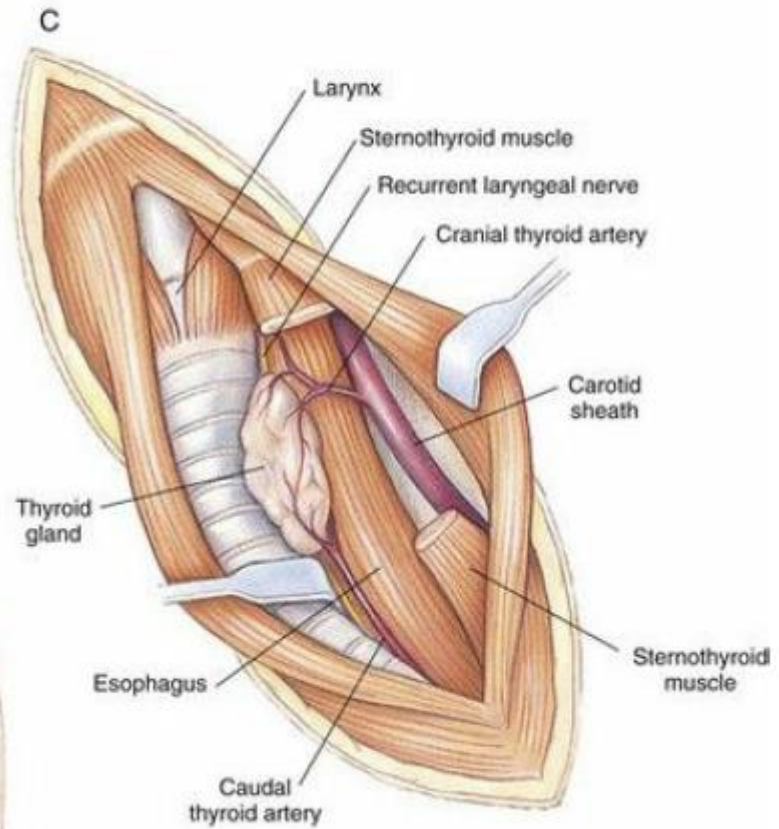
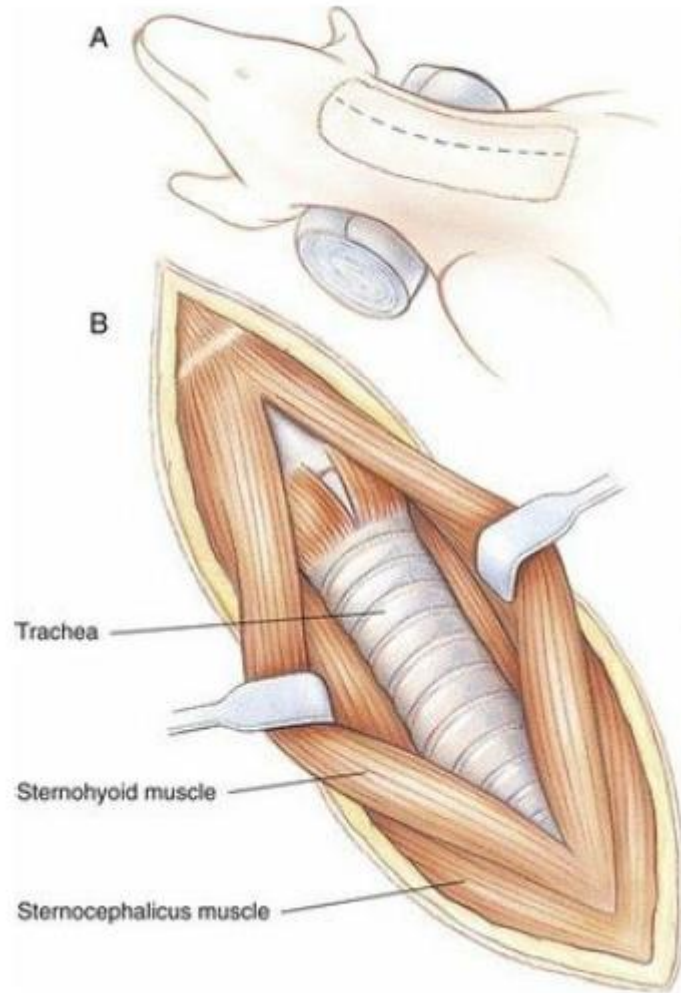
Gastrointestinal System Surgery In Small Animals

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ESOPHAGUS

Esophageal surgery is historically associated with a higher prevalence of incisional dehiscence than surgery on other portions of the alimentary tract. Several factors may contribute to the high complication rate, including lack of serosa, the segmental nature of the blood supply, the lack of omentum, constant motion caused by swallowing and respiration, and tension at the surgical site





Monofilament, minimally reactive, slowly absorbable suture materials, such as polydioxanone or polyglyconate, are often recommended for closure of esophageal incisions. Sutures should be placed approximately 2 mm from the cut edge and 2 to 3 mm apart.

A multitude of esophageal suturing techniques have been advocated in dogs and cats, including double-layer appositional and single-layer inverting, everting, and appositional

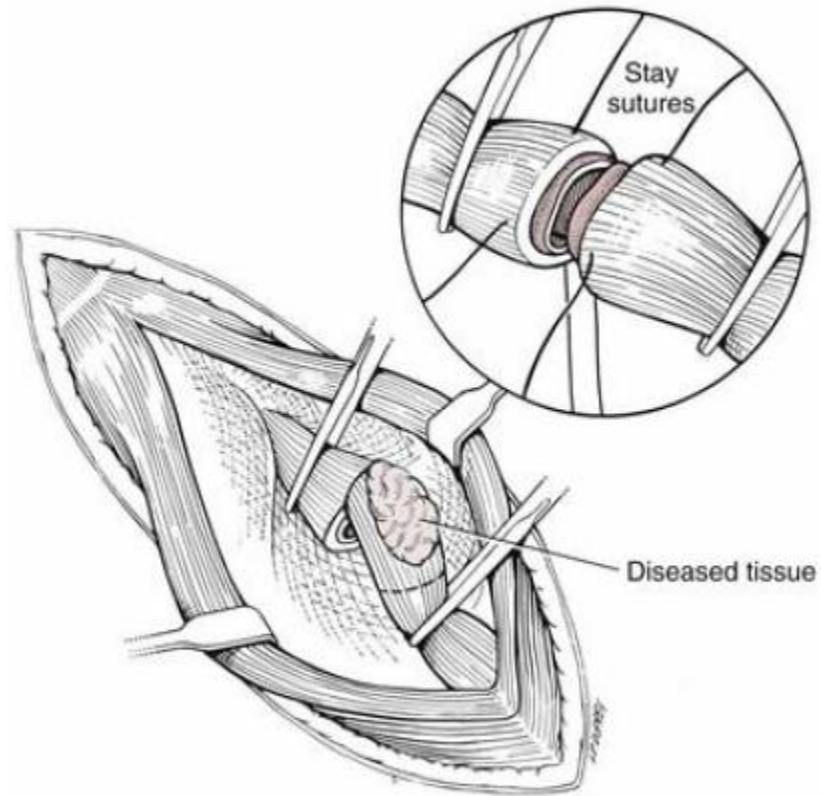


FIGURE 90-7 For partial esophagectomy, the esophageal lumen is occluded with noncrushing forceps and mobilized, and the diseased esophagus is resected (*dashed line*). (From Fossum TW: Small animal surgery, St Louis, 1997, Mosby/Elsevier.)



FIGURE 90-8 Esophageal reconstruction. A, Cervical esophagotomy in a dog with an esophageal foreign body and multiple perforations. The Allis tissue forceps is grasping a large piece of bone. B, Resected segment of the esophagus along with bone foreign bodies. The esophagus was thickened and friable and contained several large lacerations. C, Because of dehiscence of the primary anastomosis, the orad and aborad ends of the esophagus were sutured primarily to the skin, and the cervical region was flushed, drained, and closed in preparation for esophageal reconstruction 3 weeks later. D, An orogastric tube is inserted through the mouth and both stomas. The skin flap is incised and elevated. E, The haired skin is rolled inward and sutured together over the tube with a simple interrupted pattern. F, The remaining skin margins are apposed over the inverted flap. G, Appearance of the neck after recovery. No dysphagia or regurgitation was noted with food ingestion. (Courtesy Dr. Jesus Paredes, DVM, Centro Veterinario Mexico, Mexico City, Mexico.)

STOMACH

Normal gastric mucosa is undergoing constant renewal. In the stomach, mucosa is protected by normal cytoprotective mechanisms from autodigestion by gastric acid and digestive enzymes.

When superficial epithelial injury occurs, it is repaired rapidly by epithelial migration without proliferation. Gastric mucosa erosions heal rapidly by epithelial regeneration

Incisional healing differs from the previously described healing process because, although a full-thickness injury is created, it is of short duration. Standard phases of wound healing, including inflammation, debridement, repair, and maturation, occur in gastric healing. In contrast to other healing tissues in which collagen is produced by only fibroblasts, smooth muscle cells of the gastrointestinal tract contribute to collagen production during gastrointestinal wound healing



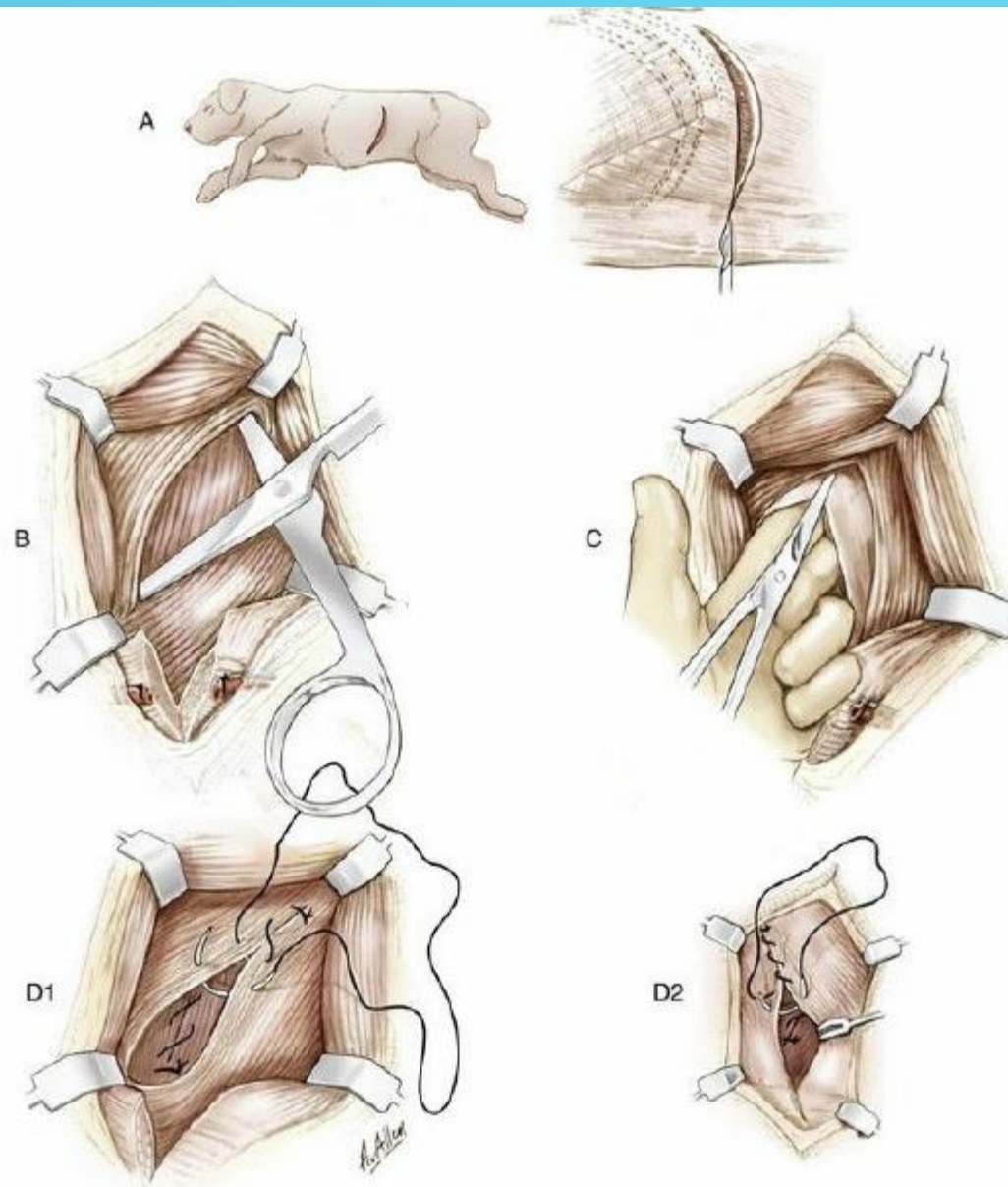
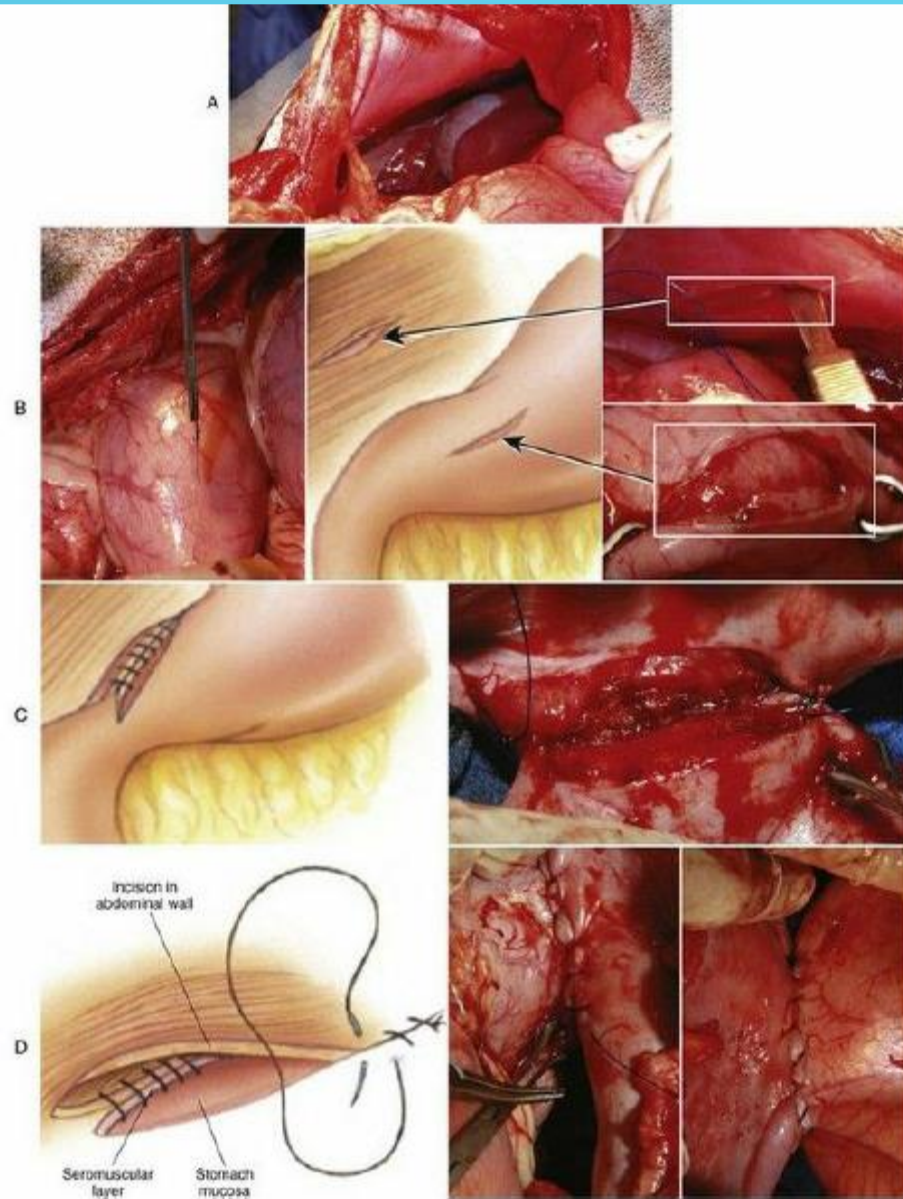


FIGURE 91-5 Paracostal approach. Muscles are bluntly divided between muscle fibers longitudinally. (From Knecht CD, Allen A, Williams DJ, et al: *Fundamental techniques in veterinary surgery*, ed 3, Philadelphia, 1987, Saunders/Elsevier.)



-6 Incisional gastropexy. A, The body wall is retracted after the Balfour retractor is removed to facilitate

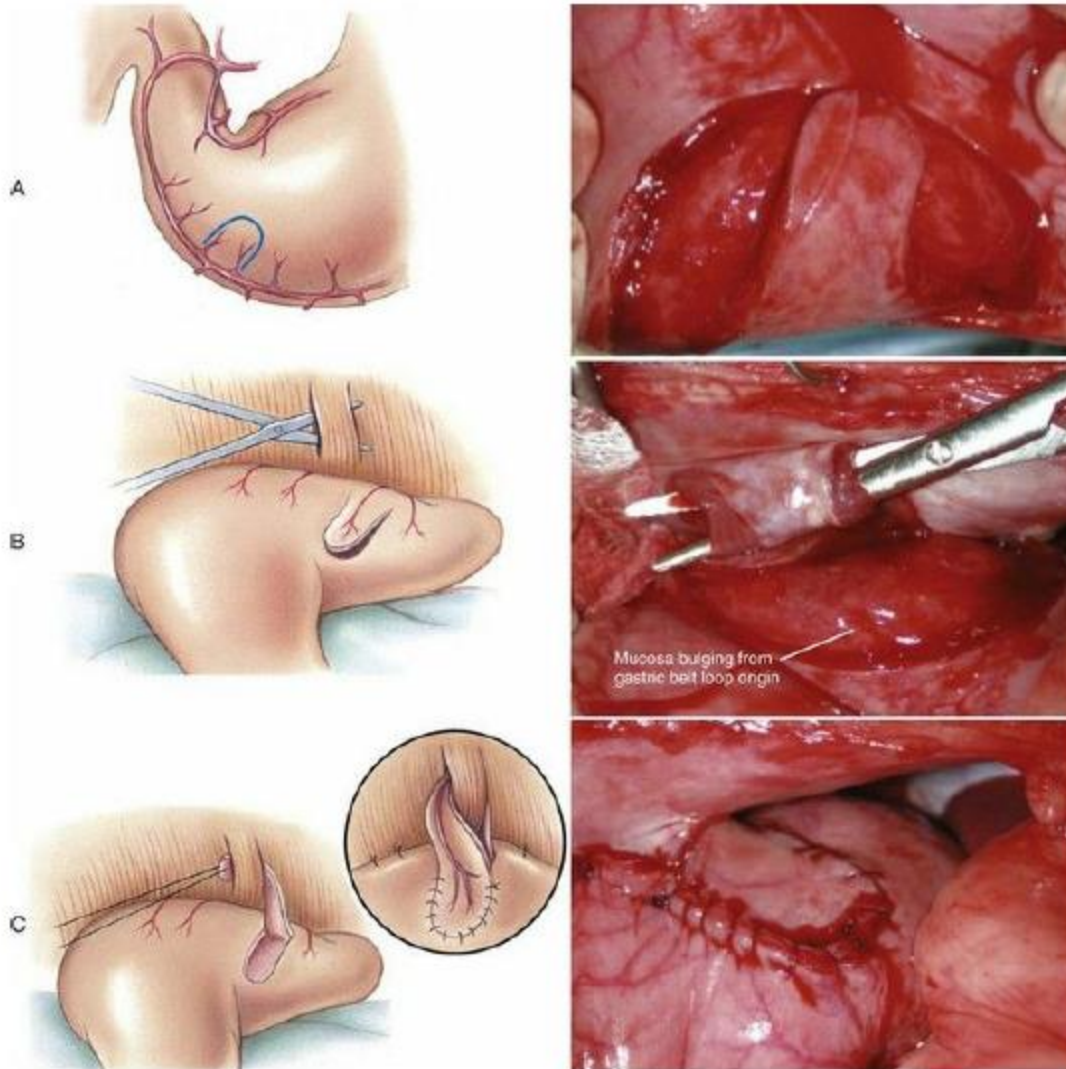


FIGURE 91-7 Belt-loop gastropexy. **A**, A seromuscular flap is raised, originating from the pyloric antrum and incorporating a blood supply in the base of the flap. **B**, Parallel transverse incisions are made in the transverse abdominus muscle. **C**, The seromuscular flap is advanced through the "belt loop" created in the abdominal wall. The stomach should be held in close approximation to the body wall as this is accomplished to minimize trauma to the flap. The flap is then sutured back into the area it originated from on the stomach. (Illustrations from Fossum T, editor: Small animal surgery, ed 3, St Louis, 2007, Mosby/Elsevier. Photographs courtesy Dr. Dan Degner.)

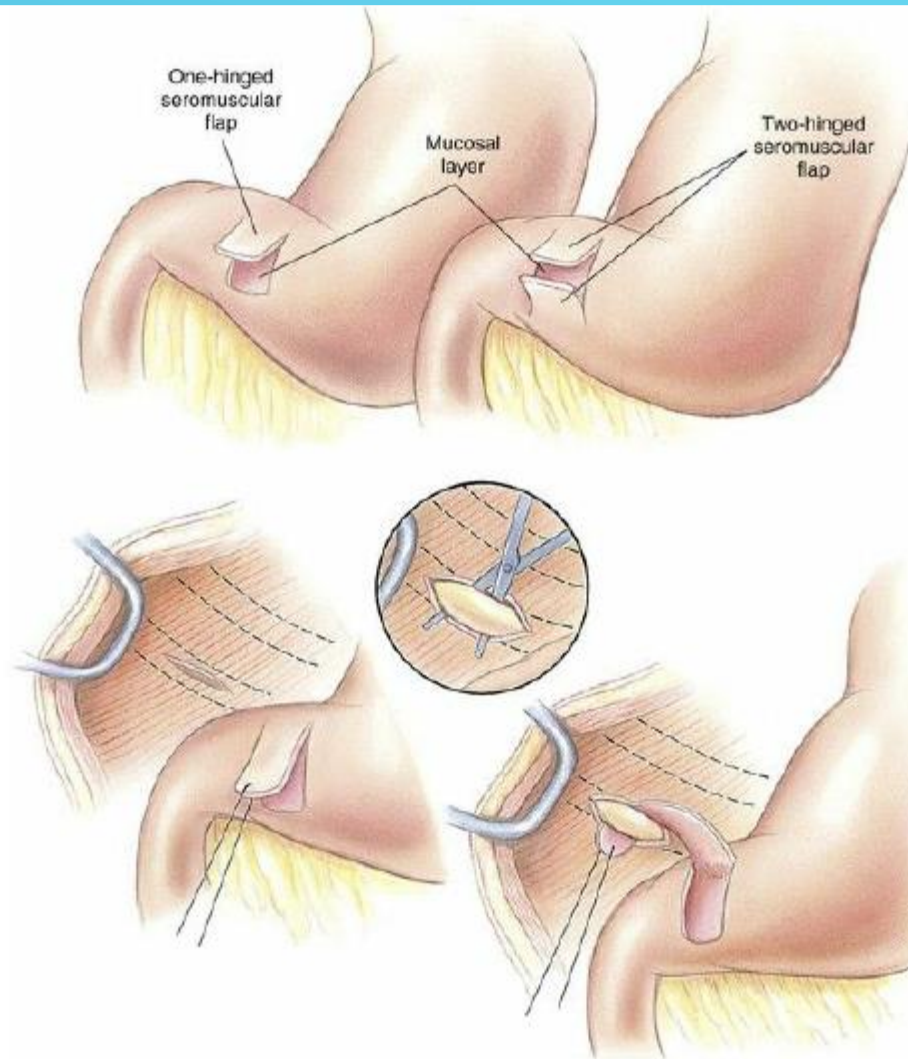
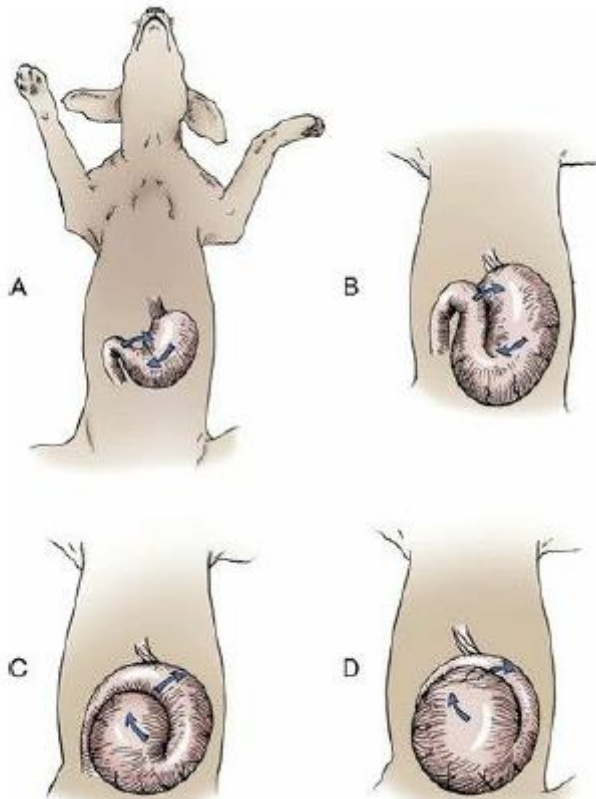


FIGURE 91-8 Circumcostal gastropexy. **A**, Make a single- or double-layered hinged seromuscular flap in the pyloric antrum. **B**, Make an incision over the eleventh or twelfth rib at the level of the costochondral junction. **C**, Form a tunnel under the rib using a Carmalt clamp or hemostat. **D**, Pass the gastric antral flap craniodorsal under the rib and suture it to the original gastric margin or to the other flap. (From Fossum T, editor: Small animal surgery, ed 3, St Louis, 2007, Mosby/Elsevier.)

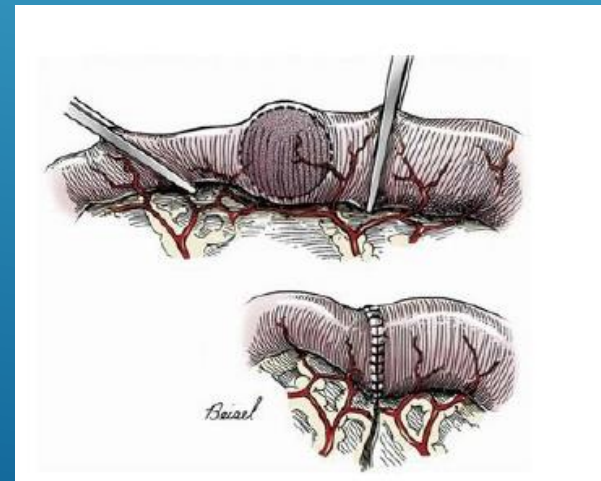
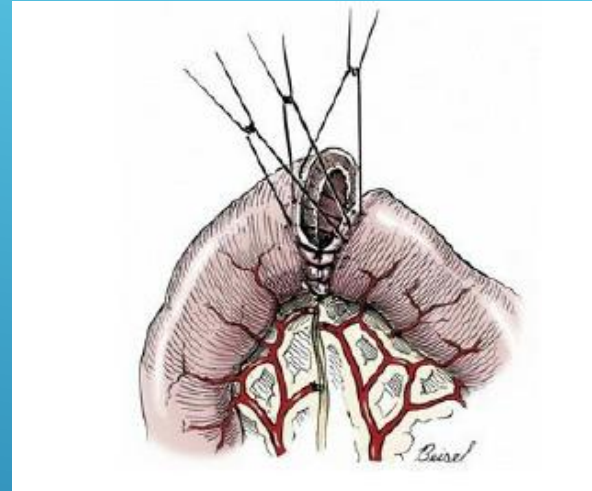
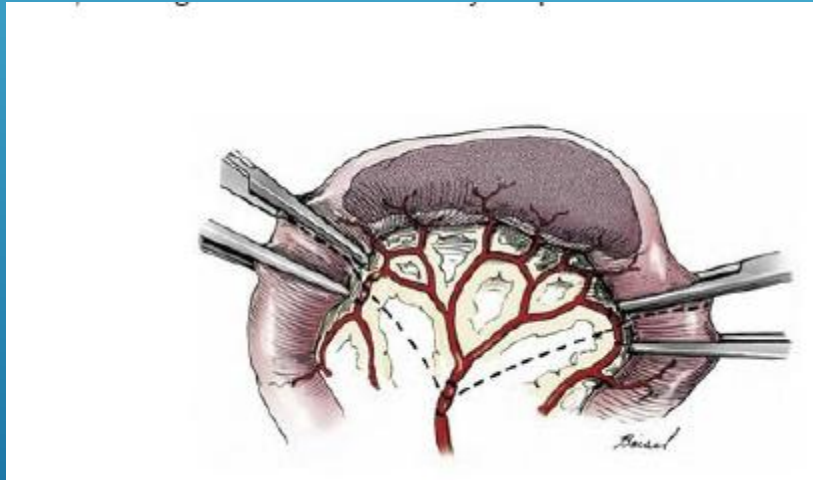
Gastric Dilatation And Volvulus

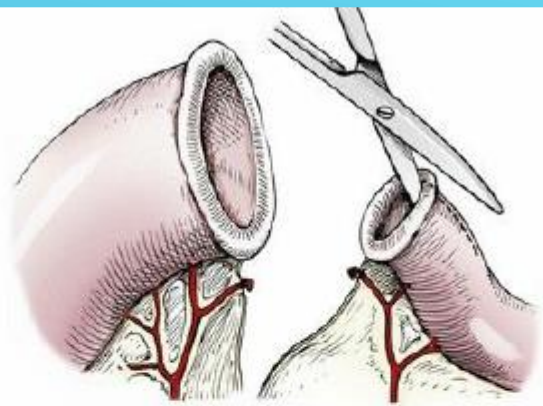
Gastric dilatation and volvulus is a life threatening syndrome reported most commonly in largebreed, deep-chested dogs in which the stomach rotates on its axis, trapping air within its lumen.



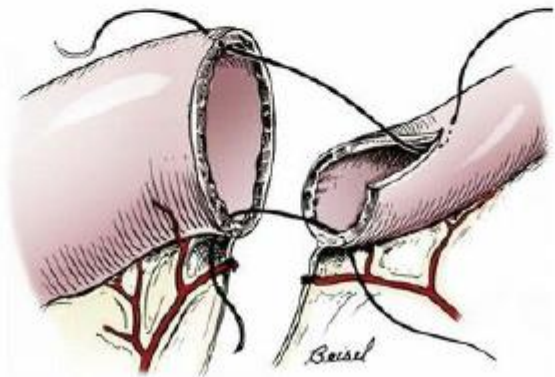


SMALL INTESTINE

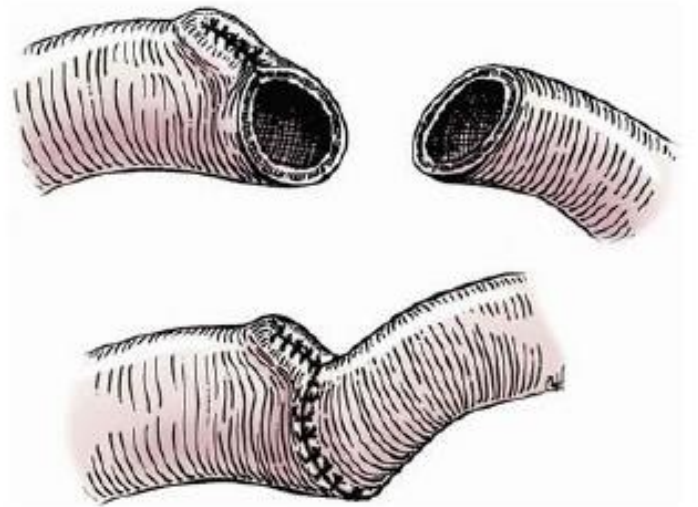


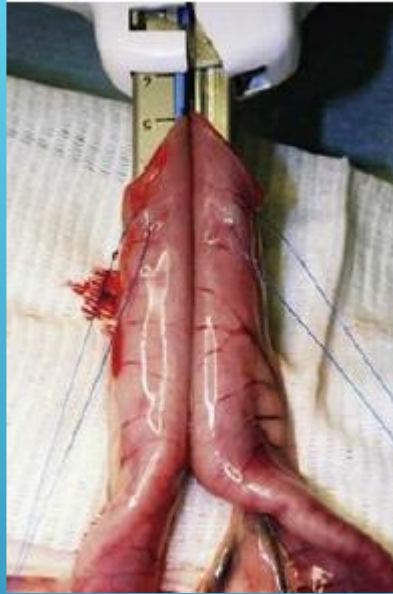
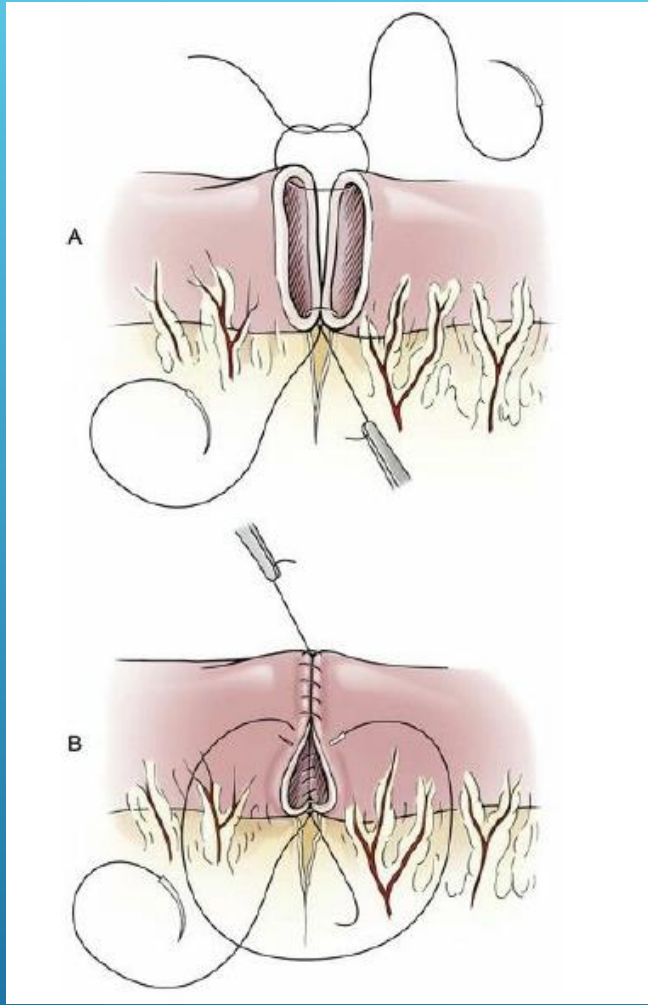


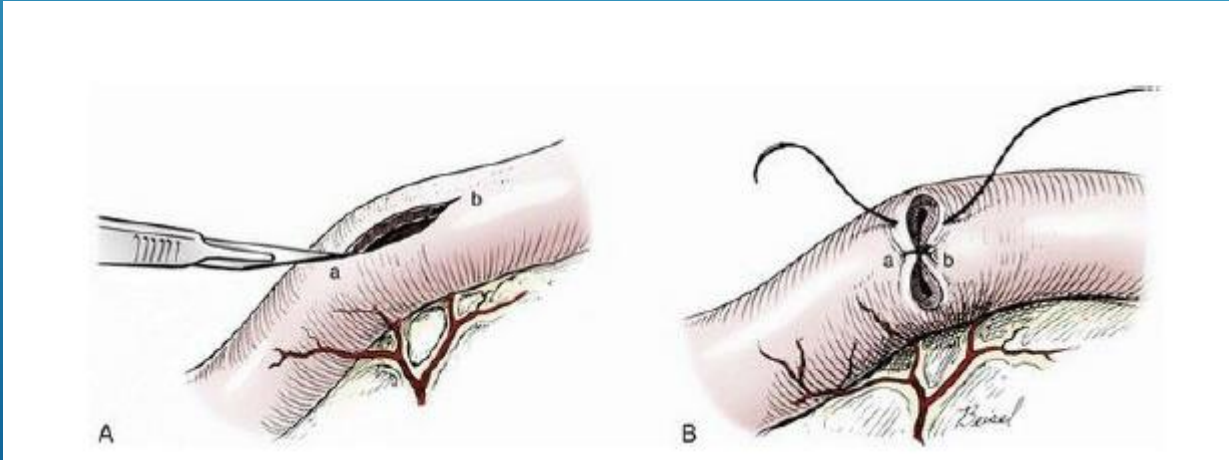
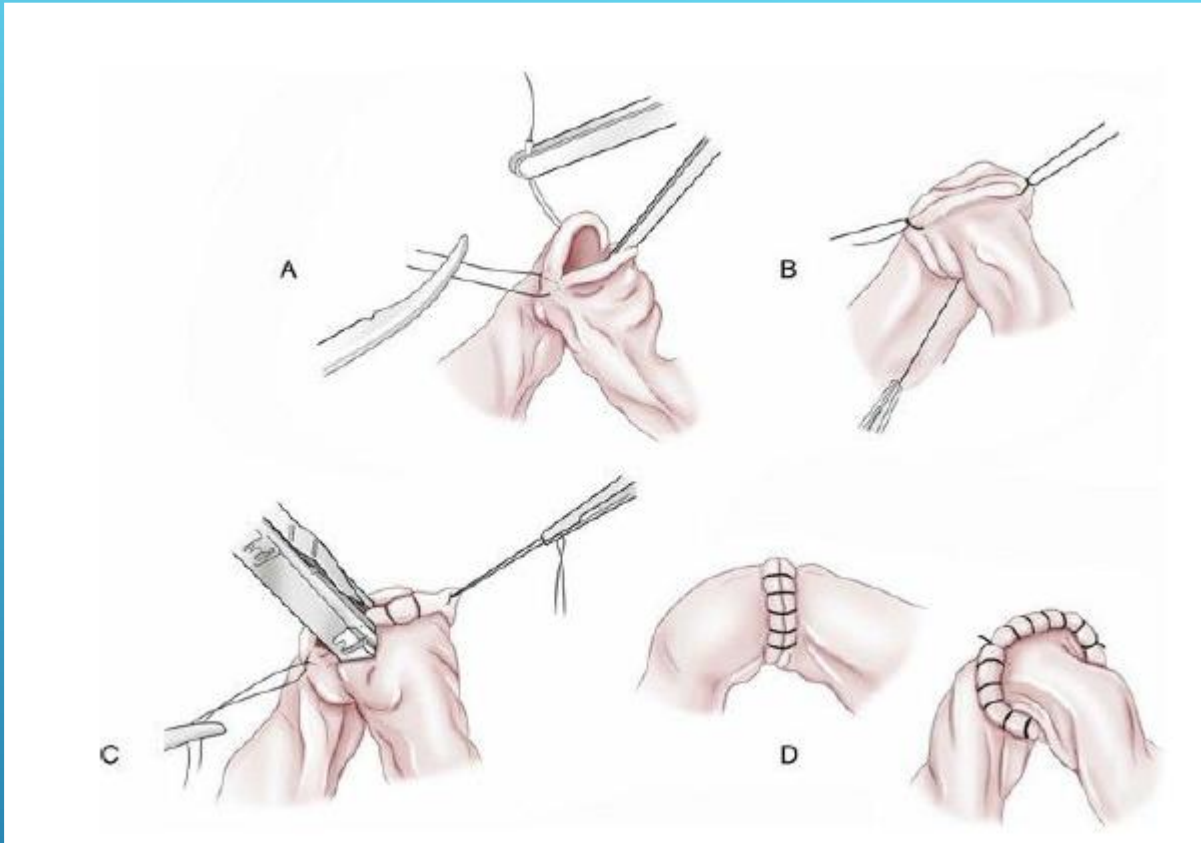
A



B







Fundamentals of Small Animal Surgery



Fred Anthony Mann,
Gheorghe M. Constantinescu
and Hun-Young Yoon

 WILEY-BLACKWELL