

Hernia repair (inguinal)

<p>Indications</p>	<p>Inguinal hernia: protrusion of abdominal contents into inguinal canal or through weakness in muscle wall. Surgical emergency if complicated hernia (strangulated and/or bowel lumen obstructed) Elective if uncomplicated (not incarcerated/strangulated, not femoral)</p>
<p>History</p>	<p>Mass/bulge in groin region, may increase in size when coughing (Valsalva maneuver) or straining.</p> <ol style="list-style-type: none"> 1. Uncomplicated hernia: no pain/pain intermittent or only during physical activity. 2. Complicated hernia: sudden onset, persistent pain (suggests strangulation ie constriction of blood vessels -> ischemia), symptoms of bowel obstruction eg vomiting, bloating, abdominal pain, constipation (suggests protrusion of bowel lumen).
<p>Examination</p>	<p>Groin exam Differentiate inguinal vs femoral hernia: inguinal- above inguinal ligament, femoral- below inguinal ligament. Differentiate direct vs indirect inguinal hernia: Patient supine, apply pressure over deep inguinal ring (just above mid-point of inguinal ligament), then ask patient to cough. Direct hernia - protrudes despite occlusion of deep inguinal ring. Indirect hernia - does not protrude. Uncomplicated hernia: reducible, complicated hernia: irreducible, tender, erythematous.</p>
<p>Preoperative considerations</p>	<p>Emergency surgery required (within a few hours) when:</p> <ol style="list-style-type: none"> 1. Strangulated hernia and/or signs of mechanical bowel obstruction, persistent pain <p>Urgent surgery required (within 24 hours):</p> <ol style="list-style-type: none"> 1. Incarcerated hernia without strangulation: consider manual reduction of inguinal hernia. If unsuccessful->urgent surgery. 2. Femoral hernia: whether incarcerated/strangulated or not - high risk of incarceration, poor prognosis. <p>Elective when:</p> <ol style="list-style-type: none"> 1. Inguinal hernia (uncomplicated): can schedule in a few months time.
<p>Key procedural points</p>	<p>1-Move hernia contents back into correct position or remove hernial sac 2- insert synthetic mesh to reinforce posterior wall of inguinal canal.</p> <p>Modified Lichtenstein (open) hernia repair: gold standard- better recurrence rate than laparoscopic repair, but more scars, pain, and healing time. Laparoscopic repair – standard of care now. Preferred for bilateral/recurrent inguinal hernias. Patients go home earlier but slight increased risk of major complications because it involves surgery within abdominal wall.</p>

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	<p>Intestines Weak abdominal layer Inguinal hernia Inguinal Hernia</p> <p>Intestines Abdominal layer Mesh patch Post-Inguinal Hernia Repair</p>
<p>Relevant Anatomy</p>	<p>Hasselbach's triangle borders: rectus abdominis muscle, inguinal ligament, inferior epigastric vessels.</p> <p>Indirect inguinal hernia- lateral to inferior epigastric vessels</p> <p>Direct hernia- medial to inferior epigastric vessels.</p> <p>Femoral hernia: through femoral ring – increased risk of incarceration due to adjacent lacunar ligament (crescent-shaped, hard and sharp – hernia gets trapped)</p> <p>Incarcerated: hernia trapped, not reducible. Strangulated: incarcerated hernia that has blood supply to bowel cut-off -> ischemia/necrosis of bowel tissue -> life-threatening.</p> <p>Inferior epigastric artery and vein Internal inguinal ring Inguinal ligament Femoral artery Femoral vein Femoral ring Spermatic cord Rectus abdominis muscle External inguinal ring Hasselbach's triangle Inguinal canal</p>
<p>Post-operative considerations</p>	<p>Consider post-op complications</p> <ol style="list-style-type: none"> 1. Bruising, hematoma, infection, urinary retention 2. Recurrence (approximately 1% within 5 years of surgery) 3. Chronic groin pain (persisting 3 months after surgery) 4. Damage to vas deferens or testicular vessels, leading to ischemic orchitis (and potentially sub-fertility) <p>Patients should be able to go home the same day. Recovery time variable: 2-4 weeks. May return to light activity after 3 weeks. Strenuous exercise/heavy lifting should until after 6 weeks.</p>