

Surgical approaches to hernia

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In general, modern surgical repairs follow these principles:

- Reduction of the hernia contents into the abdominal cavity with excision of any non-viable tissue and bowel repair if necessary.
- Excision and closure of the peritoneal sac if present (though small sacs may be reduced intact).
- Closure of the hernia defect if possible.
- Reinforcement of the abdominal wall with mesh (though non-mesh repairs are an option).
- If necessary, excise redundant skin to improve cosmetic outcome.

Reduction of hernia content is essential for a successful repair. Excision and closure of the peritoneal sac is ideal but not essential. During intraperitoneal onlay mesh laparoscopic repair of incisional hernia, for example, surgeons will often leave the sac in situ after reducing the hernia contents, and simply fix a mesh over the defect. Leaving the peritoneal sac in situ risks the accumulation of serous fluid formation within the sac (seroma). This can arise after all forms of hernia repair. In open repair of lateral (indirect) inguinal hernia, most surgeons excise the peritoneal sac but small sacs can be simply pushed back through the deep inguinal ring, which is said to reduce postoperative pain. Similarly, in laparoscopic repair of inguinal hernias, surgeons simply pull the sac back into the abdominal cavity from within and do not excise it. Closure of the hernial defect is ideal but may not be possible when the defect is large, the surrounding tissues are rigid (such as the femoral canal) or structures traversing the defect must be retained (such as the spermatic cord traversing the deep inguinal ring). Plastic surgical techniques have been developed to 'borrow' tissue from elsewhere in order to cover large muscle defects, but usually at the cost of leaving a weak area elsewhere. The repair of large and complex hernias using a variety of such specialised techniques has led to some surgeons declaring a specialist hernia interest.

recurrence rate. Additional reinforcement of the repair with a non-absorbable mesh reduces but does not prevent recurrence. With improved techniques and new meshes it is hoped that recurrence after surgery will fall further. Mesh repair has become so important in hernia surgery that some understanding of mesh technology is essential for the modern surgeon.

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