



# Surgical mesh repair of inguinal hernia in men

## What is an inguinal hernia?

An inguinal hernia is a type of groin hernia. Inguinal hernias occur when a piece of bowel or fatty tissue bulges out through the abdominal wall causing a swelling in the groin. Inguinal hernias are much more common in men than women: nine hernias in men to every one hernia in women.

## What is surgical mesh hernia repair?

Operations to repair an inguinal hernia can either use a piece of surgical mesh to reinforce the body tissues or surgical stitches to pull the body's tissues together. Surgical mesh is a loosely woven sheet of polypropylene (a type of plastic). The 'thread' used to stitch tissues together for hernia repair is also made of polypropylene.

## Why is this important?

Use of surgical mesh has become an important topic in the last few years following women's experiences of severe chronic pain after an operation using surgical mesh to treat pelvic organ prolapse. In Scotland there are around 5,000 inguinal hernia repairs each year that use surgical mesh. Following the issues raised about surgical mesh for pelvic organ prolapse, there is an awareness that similar issues need to be considered in relation to using surgical mesh for repair of inguinal hernias.

## What we did

We assessed whether inguinal hernia repair using surgical mesh was effective, safe and good value for money. We also explored patient experiences and views about using surgical mesh for inguinal hernia repair.

## What we found

Men who had an inguinal hernia repaired using surgical mesh were less likely to have their hernia return compared with men who had their hernia repaired using surgical stitches. Patients treated with surgical mesh were also less likely to suffer from urinary retention or to have an injury to nerves, blood vessels or internal organs. However, patients who had an inguinal hernia repaired using mesh were more likely to develop a build-up of fluid or swelling around the wound in the period immediately after their surgery.

### Safety

Between 2013 and 2018 there were 70 operations in Scotland to remove surgical mesh from patients who had previously had an inguinal hernia repair. This represents 0.3% of patients who had an inguinal hernia repair using surgical mesh over the same 5-year period (25,188 people).

Serious complications after surgery to repair an inguinal hernias include problems with the heart or blood vessels, infection, severe pain, and injuries that require more surgery or have long-term consequences. All of these complications were significantly less common after hernia repair using surgical mesh compared with repair using stitches.

The risk of developing chronic pain after having a hernia repair was either lower with surgical mesh or similar between repair using surgical mesh and repair using stitches. Younger age, a history of chronic pain, low pre-surgery optimism, pain or heat sensitivity, and perceived pain control one week after surgery, were associated with an increased risk of developing chronic pain after hernia repair surgery.

### Patient experiences and views

Pain gave rise to concern when it differed from expectations in Scottish patients interviewed in one study. Patients experienced pain differently but all wanted to understand what was 'normal'.

One study showed that quality of life was better following hernia repair using surgical mesh compared with repair using stitches. Other studies suggest that experiencing pain after hernia repair using surgical mesh leads to a reduced quality of life and limitations on daily activities.

### Value for money

Repairing an inguinal hernia using surgical mesh was less expensive and more effective than repairing a hernia using stitches. Therefore using surgical mesh to repair inguinal hernias appears to offer good value for money.

## What SHTG considered when developing advice for NHSScotland

- Experts in inguinal hernia repair described how the composition and design of surgical mesh has changed over time. The SHTG Committee acknowledged that the evidence on inguinal hernia repair probably included different types of surgical mesh. It was thought likely that surgical mesh will continue to change in the future.
- The SHTG Committee discussed the importance of communicating with patients about the risks associated with inguinal hernia repair using surgical mesh, particularly the risk of chronic pain. These discussions between patients and clinicians were considered essential for informed consent and managing expectations.
- It was noted that inguinal hernias are a lot more common in men, which is why the advice focused on men. The Committee also noted there was limited evidence on inguinal hernia repair in women, although approximately 6% of study participants were women.
- The Committee discussed the need for caution when interpreting results from the public engagement survey carried out for this topic. People who replied to the survey were self-selected and unlikely to represent the views of all patients who had an inguinal hernia repair in Scotland. The number of respondents was also small compared with the number of hernia repairs in Scotland each year.

## What is our advice to NHSScotland?

Surgical mesh should be used to repair inguinal hernias in adult men in Scotland. Using surgical mesh to repair inguinal hernias leads to lower rates of hernia recurrence, fewer serious complications and a similar or reduced risk of chronic pain. The use of surgical mesh to repair inguinal hernias also offers good value for money.

All inguinal hernia repairs should be preceded by a detailed discussion with patients to manage post-surgery expectations. These conversations should cover the risks associated with inguinal hernia repair - particularly the risk of chronic pain for some patients, and the potential consequences of not repairing an inguinal hernia.

Appropriate systems should be in place to routinely collect and use data from all inguinal hernia repairs in Scotland to inform practice and generate data on new types of surgical mesh.

This plain language summary has been produced based on SHTG Advice 01-20  
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