Northern Devon Healthcare NHS Trust

Abdominal wall reconstruction

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What is abdominal wall reconstruction?

Abdominal wall reconstruction (AWR) is an umbrella term to cover the techniques we use to repair large abdominal wall hernias.

Why is it needed?

An abdominal wall hernia is a hole in a muscular layer surrounding the abdomen that allows the contents of the abdomen to push through and cause a lump. This can happen at the site of an old scar (incisional hernia) or through the natural weak points in the abdomen (primary hernia). Sometimes these cause no symptoms and do not require surgery.

Symptoms can include pain in the hernia, a large lump that sometimes becomes firm, and sometime it can cause the bowel to become kinked which results in bloating and vomiting.

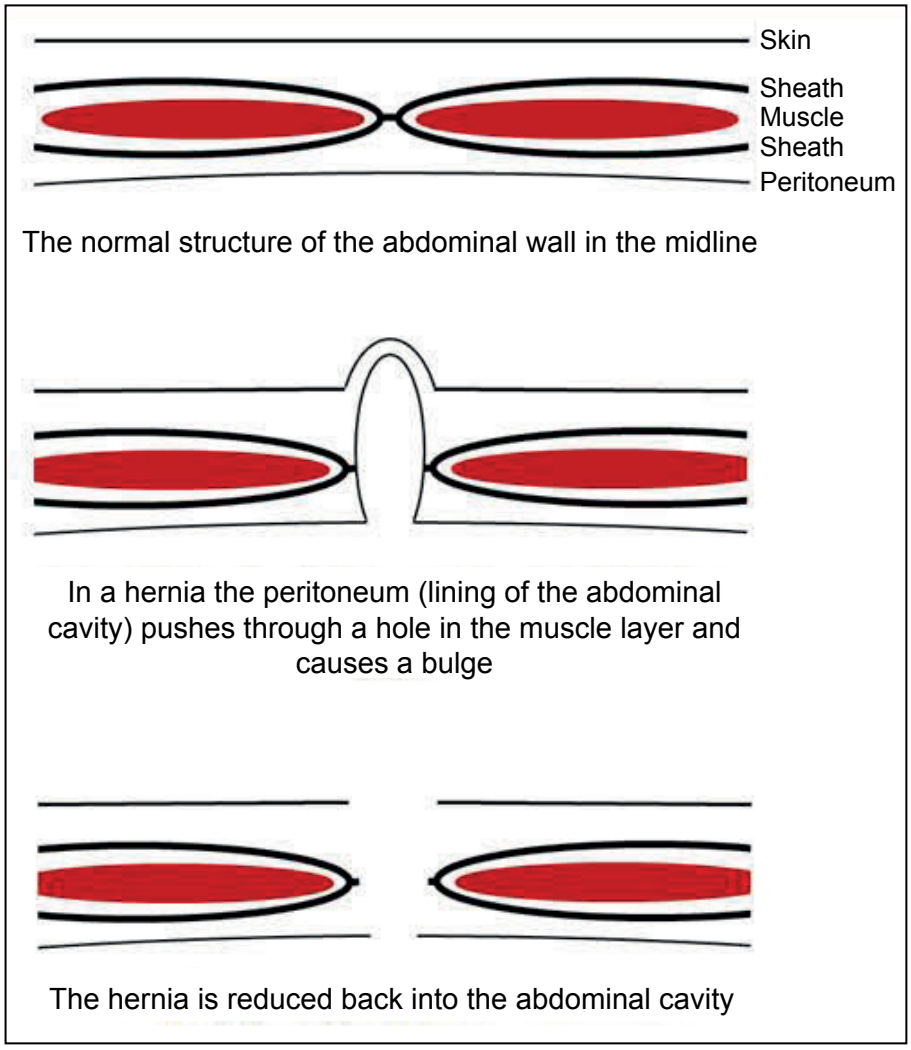
There is a low risk of the hernia becoming strangulated – where whatever is in the hernia gets stuck and loses its blood supply. This is an emergency and needs urgent treatment. The symptoms of strangulation are severe pain, the lump becoming very hard and tender being unable to push the lump back in. If this occurs, you should see a doctor as an emergency.

If you are getting frequent symptoms from your hernia you may wish to consider surgery to repair it. This is a complex procedure so we must be sure it is the right thing for you.

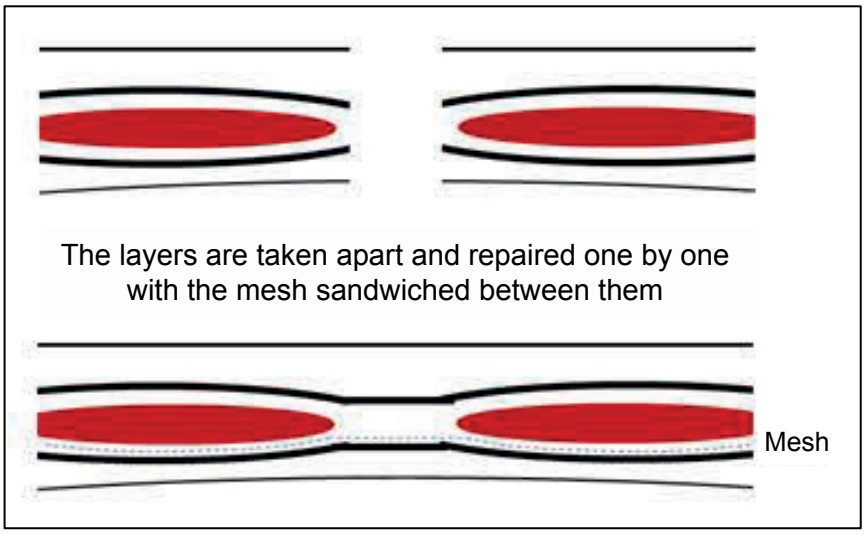
What does it involve?

The operation has two main parts – reducing the hernia and repairing your abdominal wall.

To start we will make a cut over the hernia – we can usually give you an idea of where and how big the scar will be before we begin. We then find the hernia and start to free it up from the surrounding tissues. We then usually open the hernia sac to check what is inside and free that up if necessary. We then return all of this to the abdominal cavity.



Next we start the repair. This is done by taking the layers of the abdominal wall apart and putting it back layer by layer. This makes the repair stronger and allows us to put the mesh between the layers.



To make the operation successful it is vital that there is only minimal tension on the layers. Sometimes the hernia can be so large that the muscle wall will not come together without being under tension so we have to perform something called a component separation. In this we divide a layer of the muscles further away from the hernia that allows the muscles to slide over each other and give us more length. We then sometimes use a different type of mesh to reinforce this area. This is called a biological mesh – pig muscle cells that have been generated in a laboratory and have been specially treated to remove all the cells and just leave the strong collagen layer. This prevents bulging in the areas we have divided.

Once the hernia is repaired, we close the wound using absorbable stitches and cover the wound with a waterproof dressing. We leave drains in the spaces above and below the mesh. Your body will produce fluid in reaction to the mesh and to fill the empty space left by the hernia so these drains allow this fluid to leave the body.

This operation can take anywhere from 1 to 6 hours. People with small hernias can sometimes go home the same day, whereas people with large hernias sometimes stay in for up to a week.

What are the alternatives?

Some people choose not to have surgery for their hernias. This is very reasonable as long as you are aware of the symptoms to watch out for in case of strangulation (see above). A hernia cannot fix itself, but you may go for many years with no/minimal symptoms.

There are special corsets that can help to hold a hernia in. There is no evidence that these help or prevent the hernia getting worse, but if they make you more comfortable then you are welcome to use these.

Special preparations

You may be asked to lose weight before your operation. This is to reduce the risks of wound problems and the hernia coming back in the future. It makes a big difference so if you are asked to do this, we will set you a realistic goal to try and achieve. If you need help doing so, you can see your GP or ask to be referred to a dietician.

You must stop smoking before this operation. Smoking dramatically increases the risk of wound problems such as infection and poor healing, and of the hernia coming back in the future. If you continue to smoke, your operation may be postponed until this is achieved. If you need help quitting, there are many different resources available – usually your GP or local pharmacist is a good place to start.

Another factor that impacts on wound healing is diabetes. If you are diabetic, it is really important that your sugars are under control before the operation. We may ask your GP to help with this.

How will I feel during the procedure?

You will be asleep throughout the operation.

How will I feel afterwards?

After this operation you will feel sore. We put lots of local anaesthetic in the wound to help with this and you may be given a PCA (patient-controlled analgesia) which is a button you can press to manage your own pain killers. You will have one or two drains in – these are little plastic tubes that pass through the skin into the cavity left behind after we fix the hernia. They drain any fluid that is produced. We may put on an abdominal support to help you feel more comfortable and reduce tension on your wound.

What happens after the procedure?

You will be encouraged to get up and about the day after the operation. If you have a catheter, this will come out as soon as possible to reduce infection risk. As soon as your pain is manageable we will let you go home. Your drains come out before you leave.

What are the risks?

All operations carry some risks. The general risks of an operation include:

- Bleeding – sometimes major requiring a blood transfusion
- Infection – a minor infection in the wound usually settles with antibiotics from your GP. More serious infections inside the abdomen usually require admission to the hospital for further treatment
- DVT or PE (blood clot in the legs or lungs) – your risk will be assessed pre-operatively and you will either be asked to wear stockings or we will use special calf pumps during the surgery. You will be given injections after the operation to thin the blood and reduce your risk of clots
- Strain on the heart and lungs – this risk will be assessed by the anaesthetist

Specific risks of this operation include:

- Seroma – this is a collection of fluid in the space where the hernia used to be. It is very common and just reabsorbs with time. If it is causing you lots of pain we can drain it off using a needle but this does carry a small risk of infection so it is better to leave it to heal by itself if possible.
- Damage to the bowel – sometimes the bowel is very stuck within the hernia and in the process of freeing it up we can create small holes. These can usually be repaired but sometimes require a small piece of bowel to be removed and joined back together. This then has the risk of leaking later on which is a small but serious risk and may require a further operation to sort out.
- Damage to other local structures – rare
- Ileus – this is when the bowel does not function properly for a few days after the operation. You will feel bloated and nauseated and your bowels will not open properly. It usually settles by itself within a few days but will require a small tube to be inserted into your nose to drain your stomach.
- Recurrence – any hernia repair has this risk. We try to minimise this as much as we can by doing all the things mentioned in the “Preparation” section.

- Difficulty in breathing – this is because the pressure inside your abdomen is much higher once we have returned everything back to where it should be. We can often anticipate this, and we will often arrange for you to go to High Dependency Unit afterwards to monitor for this.

Aftercare

You will be discharged with any medication you need. The stitches are all absorbable so you can shower from the day after the operation but do not bathe or soak them for 3 weeks. You must not lift anything heavy for 3 weeks and you should build it up gently from there. This is a big operation and it may take several months for you to feel completely back to normal.

You can return to work when you feel able to, but we would advise 2 weeks off. You can drive once you are able to comfortably wear a seatbelt and perform an emergency stop. You should inform your insurance company about your surgery.

Follow up

We will arrange a follow-up appointment in about 3 months to see how you are doing. If you need help before then, please see your GP.

Further information

If you have further questions about your surgery, please contact your consultant's secretary or ask the team when you arrive for your operation.

PALS

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern call 01271 314090 or e-mail ndht.pals@nhs.net. You can also visit the PALS and Information Centre in person at North Devon District Hospital, Barnstaple.

Have your say

Northern Devon Healthcare NHS Trust aims to provide high quality services. However, please tell us when something could be improved. If you have a comment or compliment about a service or treatment, please raise your comments with a member of staff or the PALS team in the first instance.

'Care Opinion' comments forms are on all wards or online at www.careopinion.org.uk.

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