Having a Hernia Operation

- Should I consider this? Information for Patients



This information leaflet has been created by the Bristol specialist laparoscopic and hernia surgeons

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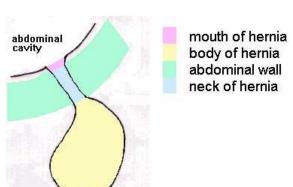
Patient name:		
Hernia type:		
Inguinal		
Femoral		
Umbilical		
Epigastric		

What is a hernia?

A hernia occurs when the layers of muscle of the belly wall split apart, leaving a gap through which the contents of the abdominal cavity protrude. This is what the lump or bulge is, at the site of your hernia.

What is a hernia repair?

To repair a hernia, the split in the muscle layer that has produced the gap needs to be repaired by closing the gap



internal stitches, or by patching with an artificial permanent patch of material, often called a mesh.

shut with either strong permanent

Schematic Drawing of a Hernia

Having a hernia operation |

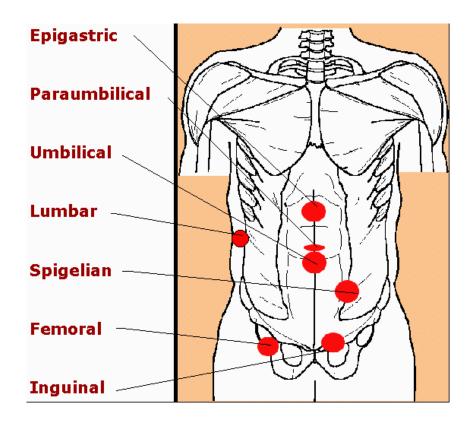
Are there different types of hernias?

Yes. Hernias occur in several different areas of the body. These include:

- Inguinal hernias (in the groin). These are the most common type of hernia. They are more common in men than women.
- Femoral hernias (in the groin). These are ten times less common than inguinal hernias.
- **Umbilical hernias** (at the belly button). These are also very common
- Paraumbilical hernias (at or near the belly button, but usually off to one side). These are also very common.
- Epigastric/ventral hernias (these occur anywhere in a line between the bottom of the breast bone and the belly button). Quite common, and usually occur in younger people.
- **Spigelian hernias** (at the side of the abdomen). These are very rare.
- Lumbar hernias (in the flank). These are even rarer.

Each type will be discussed in more detail later on.

Anatomical diagram of hernia sites



What sort of trouble can hernias cause?

A hernia may cause no pain or discomfort at all, and you may simply notice that there is a lump present. Often the lump disappears when you lie down.

Some people experience discomfort, aching, or an actual pain at the area where the lump appears. This is often worse towards the end of the day, when you have been on your feet a lot. You may notice that this discomfort can be reduced/ stopped by lying down and pushing and massaging the lump away (the contents of the hernia go back in to the abdominal cavity).

Do all hernias need to be operated on?

No. Some small hernias, which are not causing discomfort, can be left alone. Sometimes a small hernia will continue to grow, and eventually after months, but usually after several years, it may reach a size where it causes discomfort or is large enough that it might develop complications. Should your hernia grow significantly larger, tell your GP who will send you back to see a surgeon.

Can hernias develop complications?

Yes. Fortunately the majority of hernias do not develop complications but remain simply as a lump, which may be painless, or cause minor discomfort.

The complications are:

- Irreducible. This means that the hernia lump never goes away. The hernia may always have been like that from the very start (common with umbilical/paraumbilical/ventral/epigastric hernias) when it is not painful, or only causes mild discomfort occasionally. Other hernias may originally have gone away by themselves when you lay down or pushed on them, but by having grown larger, have stopped going away. This is commonest with femoral and inguinal types of hernias. If you have a hernia which does not go away, you should have it looked at by a doctor, particularly if the hernia lump becomes painful or you start to be sick (in which case you need to be seen by a doctor as an emergency as it may mean that you have developed an obstructed or strangulated hernia).
- **Obstructed**. This is uncommon and means that part of the bowel has become stuck within the hernia, blocking the bowel from passing food and fluid along. This will result in colicky pains in the belly (like trapped wind, the pains

come and go in waves), followed by vomiting. You will also notice that you have stopped passing wind from the back passage and your hernia lump is hard, often painful, and will not go away. It has become irreducible. If this happens you must seek immediate attention from your GP or hospital Accident & Emergency department.

■ Strangulated. This is the most severe complication that a hernia can have. It occurs when there is severe pain at the site of the lump, sometimes followed several hours later by the skin over the lump becoming red, and often a griping pain in the belly. This may progress to vomiting and a stoppage of all bowel activity (you stop passing wind from the back passage, and your bowels don't work).

If this happens you must seek immediate medical attention from your GP or hospital Accident & Emergency department.

The hernia lump contains abdominal contents: either a fatty sheet of tissue called the omentum, or bowel. When strangulation occurs, it means that so much bowel or omentum has squeezed in to the hernia through the gap in the muscles that it cuts off its own blood supply and the tissue in the hernia dies. This process can occur in just a few hours, which is why it is called a surgical emergency.

Fortunately this is a rare complication of a hernia.

■ **Skin changes.** The skin overlying a longstanding hernia, can become stretched and thinned. At its worst, an ulcer can develop.

Can there be complications of an operation to fix my hernia?

Yes. All operations carry a risk.

There are general risks that are common to all operations:

- Wound infection: the skin around the wound may go red and painful or the wounds may leak pus. Around 1 in 20 patients will experience this complication, usually after they are already at home. You should get your doctor or practice nurse to check your wound if this occurs, as you may need antibiotics. A short course of antibiotics usually clears the infection within days.
- **Bruising**: it is quite normal to experience some bruising where your wound is, often this does not appear until after you have gone home from hospital. Occasionally a very large bruise may form which take weeks to go away. The wounds may ooze a little bit of blood or clear fluid for the first 48 hours, requiring a change of wound dressing. This is quite normal.
- Haematoma: this means a collection of blood. In hernia operations, this usually occurs just beneath the wound, forming a lump. A large lump may take several weeks to disperse. As it disperses, bruising usually appears. With keyhole surgery of groin hernias, the haematoma may appear in the area where your hernia lump was, it is important not to mistake this haematoma for a recurrent hernia.
- Chest infection: if you develop a cough, or feel short of breath after your operation, you may have developed a chest infection. This is rare if you are fit and healthy. You are at high risk of this if you have a lung disease (chronic bronchitis, emphysema, severe asthma), and moderate risk if you are overweight, or are a smoker.

- Internal bleeding: this is rare (occurring in less than 1 in 1000 hernia operations), but may require you to have a blood transfusion, or a second operation in order to stop the bleeding.
- Allergic reactions to antibiotics or anaesthetics: this is also rare (occurring in less than 1 in 100 operations). If you have had a previous bad reaction to an anaesthetic or any medication, you MUST inform the surgeon or the anaesthetist before your operation.
- Blood clots in the legs: this is also known as deep venous thrombosis (DVT). It carries the risk of the blood clot moving from the leg up to the lungs (pulmonary embolus), which can be a life-threatening condition. A blood clot in the leg may not give any sign or symptom that it is there, or it may cause a pain in the leg (usually in the calf muscle) or swelling of the leg. A fit healthy person has a very small risk of DVT. Your risk is higher if you are overweight, a smoker, in poor general health, have difficulty walking, or have had a previous DVT. To reduce your chance of developing a DVT you will be encouraged to get out of bed as soon as you are sufficiently recovered from the anaesthetic. You may also be given an injection of a medicine called heparin, which is proven to reduce your chance of developing a large pulmonary embolus. While you are on bed rest you should exercise your calf muscles by moving your feet up and down.

There are risks specific to the patient's general health:

■ If you have heart disease: having an operation can put a strain on existing heart problems, resulting in a heart attack around the time of surgery. This may result in death, or prolonged ill health. You may have to have a heart scan (echocardiogram), and an anaesthetic review in advance of surgery. You may also require a review by a heart specialist (cardiologist).

- If you have breathing problems: you may require special tests on your lungs and an anaesthetic review. Your risk of developing a chest infection (pneumonia) will be markedly increased. People with severe breathing problems may require admission to the Intensive Care Unit for observation, sometimes for support on a breathing machine.
- If you are on warfarin: this will have to be stopped in advance of your operation. Depending on why you are on warfarin, it may be necessary to keep your blood thinned with heparin prior to your operation; this needs to be done while you are in hospital. If so you will need to be admitted to hospital one or more days before your planned operation day. The heparin needs to be stopped several hours before you go to the operating theatre, so that your blood clots normally at the time of your surgery. It is not possible to operate on hernias without normal blood clotting, as the risk of a major life-threatening haemorrhage is too great. Clearly you have been put on warfarin in order to prevent your blood clotting normally, and there is a risk to you during the time you are off warfarin.

If your symptoms from your hernia are fairly mild and the hernia is small the surgeon may advise you that the risk of surgery is too high and advise you not to have the operation. Having surgery when you are on blood thinning medication always increases the risk that you will develop a haemorrhage at the time of surgery or in the first few days after surgery. You are also likely to get a lot of bruising.

■ If you are on aspirin: this increases the chances of bruising and bleeding around the time of surgery. We advise you to stop your aspirin three days before your operation, and start it again the day after your operation.

- If you are on clopidrogel: this is another drug which acts similarly to aspirin, but is more powerful. We advise you to stop your clopidrogel (trade name is Plavix) seven to ten days before your operation and restart it the day after your operation.
- If you have diabetes: mild diabetes controlled by diet or a small number of tablets is often not a problem if you are having hernia surgery. If a combination of tablets, or insulin injections is required to keep your diabetes under control then you may have a longer stay in hospital, having insulin given by a drip. If you have had diabetes for many years it may have had a bad effect on your heart and kidney function and problems with your circulation: if this is the case then the risks to your life of having hernia surgery is increased.
- If you are overweight: this greatly increases your chances of developing a blood clot in the legs, which may lead to a pulmonary embolism (the blood clot travels to the lungs, a condition which can be fatal). You are also at increased risk of developing a chest infection (pneumonia) and a wound infection. People who are overweight are also at increased risk of having diabetes and heart disease, which also increases your risks when having surgery (as described above). Obesity is also one of the main reasons a hernia occurs in the first place and if you remain overweight after surgery there is a much higher chance of your hernia coming back in the future (recurrence). Sometimes you may not be able to have a hernia operation if you are too heavy as the recurrence rate makes the operation very likely to fail and not worth doing in the first place.
- If you are a smoker: you are at increased risk of developing a chest infection and blood clots in the legs after an operation. Smoking also increases the risks of heart disease, so you are at increased risk of developing

a heart attack or stroke around the time of surgery, even from one cigarette a day. Smoking also makes your body's wound healing much less effective and likely to develop infections.

If we feel you are a high-risk patient, we will tell you.

Complications specific to each type of hernia site are described later.

Complications due to the mesh itself

All types of mesh used to repair hernias are made of synthetic material that is not absorbed by the body, but remains permanently in place. This is why they are so successful in repairing hernias. Rarely, however, there can be problems related to the mesh itself:

- Pain: The mesh is designed to induce scarring, which gives the hernia repairs its strength. Everyone gets some pain after surgery, but 10-15% of people may get pain from the scarring that can take months to settle down. Uncommonly, one in 100 people will get a chronic pain syndrome from the hernia repair itself, thought to be due to scar tissue and this can be very hard to treat. It is important to think of this if you are having an operation for pain symptoms in the first place.
- Infection: all meshes are sterilised and free of germs when they are put in. However, everyone carries germs on their skin, so there is a small risk that one of your skin germs could get on the mesh at the time of surgery and cause an infection. Mesh infection is a rare complication for hernia repairs performed as a planned operation, less than 0.2% of patients having a hernia repaired will get a mesh infection. Once a mesh is infected antibiotics may

- not get rid of the infection, and you may require to have the mesh removed by further surgery. Having the mesh removed may result in the hernia coming back.
- Bowel obstruction/bowel fistula: this extremely rare complication can only occur if the bowel is in contact with the mesh. In many hernia repairs this contact does not happen. Even where bowel is in contact with mesh, it is rare for this to cause a problem. Bowel can be in contact with the mesh in keyhole (laparoscopic) surgery of epigastric hernias, umbilical/paraumbilical hernias and spigelian hernias. Less commonly, bowel may come in contact with mesh in keyhole surgery of inguinal or femoral hernia repairs.

Open hernia repairs where mesh may be in contact with bowel include ventral, epigastric and umbilical hernias. It is extremely uncommon for mesh to get in contact with bowel in open hernia repairs of inguinal or femoral hernias.

Bowel obstruction or fistula usually requires major surgery to deal with it. The mesh may have to be removed, in addition to dealing with the bowel problem. Occasionally, a stoma (a piece of bowel brought to the surface of the abdomen) is required to allow healing to occur.

Will I have a mesh hernia repair?

The majority of hernias are now repaired with mesh. The mesh is made from synthetic material which is used to patch the muscle gap which is the hernia. The mesh is permanent, but is usually placed deeply within the layers of muscle, so that you are unaware of its presence.

The use of mesh has reduced the number of hernias that come back (called "recurrence" of a hernia).

So hernias can come back?

Yes. The risk of a hernia coming back is related to many factors:

- The type of hernia you have.
- The size of hernia (larger ones often have large gaps in the muscle which are more difficult to patch successfully).
- The hernia is recurrent (it has been repaired before, but has come back again).
- If you are diabetic you heal less well. If you have an emergency operation.
- If you have a heavy physical job or routinely undertake extremely strenuous exercise.
- If you are on medication which impairs healing e.g. steroids, immunosuppressive medication.
- If you have a chronic cough.
- If you are overweight.

Will my hernia be repaired by keyhole surgery?

This depends on what type of hernia you have, its size, and whether your surgeon is trained in keyhole (laparoscopic) surgery.

Keyhole surgery is a method of repairing a hernia through several small cuts on the belly, rather than a single larger one. Both keyhole and open surgery aim to close or patch the gap in the muscles that is the hernia.

Your surgeon will discuss with you which type of surgery they are planning to perform.

Keyhole surgery may not be an option for some hernias Keyhole surgery has to be performed under general anaesthetic, and has some extra risks attached, see below. Keyhole surgery always involves use of a mesh.

Your surgeon will be happy to discuss the option of keyhole surgery with you, and advise you as to whether your particular hernia is suitable for that method of repair.

The National Institute for Clinical Excellence (NICE) has assessed the benefits of keyhole versus open hernia repair only for inguinal hernias. They concluded that inguinal hernias which have come back after a previous repair (recurrent inguinal hernias), and bilateral inguinal hernias (having a right and left sided hernia at the same time) should be mesh repaired laparoscopically. They have also concluded that patients with a single inguinal hernia should be offered the choice of open or laparoscopic surgical mesh repair.

Are there any advantages specific to keyhole surgery?

Keyhole surgery of inguinal and femoral hernias causes less pain than open surgery in the first few days after surgery. It is also associated with fewer wound infections. There is also evidence to support that patients have an earlier return to normal activities and less prolonged groin pain after keyhole surgery.

Are there any disadvantages specific to keyhole surgery?

Yes. Keyhole surgery involves placing hollow metal tubes the width of a pencil, or larger, through the muscle of the abdominal wall. The muscle of the abdominal wall protects the contents of your abdomen (bowel, bladder etc.) from harm, and on rare occasions these metal tubes may unintentionally puncture something. This is a rare complication. This damage is usually identified at the time it happens, and is repaired, although it may prevent your intended operation from being completed. Less commonly, damage is not seen at the time

of your operation, but you become unwell in the hours or days following your surgery, which alerts the doctors looking after you to the fact there is a problem. Under these circumstances you may require major surgery to correct the problem.

Types of hernias:

Inguinal hernia: this type of hernia occurs in the groin, immediately above the crease at the top of the leg. It is much more common in men than women, and, if large, may extend down in to the scrotum, towards the testicle. It is virtually always repaired with a mesh. You may have a hernia on the right and left side at the same time: if so, most surgeons would choose to repair both hernias at the same time, using keyhole surgery. If you have a single hernia it may be repaired by open surgery or by keyhole surgery. If you have a single hernia there is a 10-30% chance you will develop a hernia on the opposite side at some time in your life. If you are fit and healthy, with someone at home who can look after you, you may be able to have your surgery as a day case.

It is possible to repair small inguinal hernias in slim people under local anaesthetic, by the open operation (keyhole surgery requires a general anaesthetic).

Risks specific to inguinal hernia repair

- Bruising and swelling of the scrotum (in men). Most men experience a minor degree of this, but in around 10-15% the skin of the scrotum becomes very bruised, which may take two to three weeks to go away. Significant swelling may require you to wear supportive underpants, and may be uncomfortable enough to require extra time off work.
- **Numbness** in the groin and/or upper scrotum. It is common to experience reduced sensation (a numb type feeling like that you experience in your cheek after a local

anaesthetic injection at the dentists) in those areas for several weeks/months after surgery. This is not painful, although some patients find it an unpleasant sensation, and usually gets better with time. This is more common after open surgery, and rare after keyhole surgery.

■ Chronic pain. Several nerves that supply the skin of the groin, thigh and scrotum/labia travel in close proximity to the hernia. Unfortunately around 10% of patients get long-term groin pain due to nerve irritation, which can last for months after the operation (this is not to be confused with ordinary post-operative pain which is experienced by all patients in the first few days/weeks after surgery, which gradually gets better).

Rarely some patients get permanent pain from the hernia repair. If you are unfortunate enough to get chronic groin pain after your hernia repair, your GP can refer you to the Pain Clinic where specialist doctors can help you sort it out.

- Damage to the testicle. This is a very rare complication. The blood supply to the testicle is very close to the hernia, if the blood supply is damaged the testicle will shrink over the weeks/months after the operation, and it will no longer function. This complication is usually only encountered in an operation for recurrent inguinal hernia.
- **Groin seroma**. This occurs mainly after keyhole surgery. Several days after your operation a lump appears where your hernia lump used to be. This is **not** the hernia having returned, but a ball of fluid which has moved in to the space where the hernia used to be. It will disperse by itself after a few weeks, but may in a few patients last several months. If you develop this you should ignore it as it will go away by itself.

Femoral hernia; this is another type of groin hernia,

occurring immediately below the groin crease at the top of the leg. This type is more common in women than men. It may be repaired by open surgery or keyhole surgery. If you are fit and healthy, with good home support, you can have your operation as a day case. In open surgery your hernia may be repaired with a mesh, or by stitches; if done by keyhole surgery a mesh will be used.

Umbilical hernia or paraumbilical hernia; this type of hernia occurs at, or beside, the belly button. The belly button is the scar of the umbilical cord which kept you alive and growing whilst a baby in your mother's womb, it is a site of weakness in the muscles of the belly wall. The lump can be above, below, or to either side of the belly button. It can also push the belly button out, or make it disappear entirely. Most of these hernias are small (less than 2cm/1 inch across), and many people are unaware of them, until it is pointed out to them. It is perfectly safe to have a small umbilical hernia. These hernias are more common if you are overweight, and you are advised to lose weight prior to any surgery. They are also common in people who have a chronic cough.

After getting your weight down to normal, you may find any discomfort from your hernia has stopped, and surgery may no longer be necessary.

Uncommonly, these hernias can enlarge to plum or even grapefruit size, when they may result in weakness and thinning of the skin over them, or development of a strangulated hernia. In these circumstances you may be advised to have an operation to repair the hernia, if your general health allows it.

Small umbilical hernias can be repaired without a mesh, usually by open surgery. Larger umbilical hernias usually require a mesh, and your surgeon may advise repair by keyhole surgery. Very large hernias with abnormally thinned skin over them may require removal of the abnormal skin,

which will result in loss of your belly button. Your surgeon will tell you in advance if he/she intends to remove your belly button. Some require more major complex surgery to fix by surgeons who specialize in this operation.

Epigastric hernia or ventral hernia: this type of hernia occurs anywhere in a line between the bottom of the breastbone and the belly button. This line (it's anatomical name is linea alba) is where the two large muscles (the "six-pack" muscles) of the belly wall join in the middle. These hernias are a weak spot in that join line. Despite their small size, these hernias can often be quite tender.

Small hernias here can be repaired without a mesh.

Spigelian hernias and lumbar hernias: both of these types of hernias are rare, and occur towards the side of the belly. Your surgeon may decide to repair these types of hernias by open surgery (with or without a mesh) or by keyhole surgery (with a mesh).

How soon can I go home after my operation?

To be able to go home you must be able to drink, be able to eat light meals, and be able to walk about comfortably. Sometimes a patient booked in for day surgery has to be kept in overnight, because they cannot achieve all of these.

You must also be able to pass urine normally. Your surgeon will have given you an estimate of how long you will be in hospital at your clinic visit. Most people need to take tablet-type painkillers after their operation. If you have had keyhole surgery, this may be only required for a few days, but if you have an open operation, you may need to take them for longer.

Everyone is different when it comes to experiencing pain after

an operation, so we can only give you an estimate about how you will feel.

Will I need to have somebody to look after me at home?

After day case surgery, you should have a responsible adult able to stay with you for 24 hours. Many people feel tired and woozy after a general anaesthetic, so someone able to look after you by making hot drinks, light meals etc is helpful. They can also phone the hospital on your behalf if you have an unexpected problem.

After the first 24 hours, it is helpful to have someone able to do shopping or run errands for you, until you are fully mobile.

What will I be able to do when I go home?

It is normal to feel tired and a bit sore for several days. This is quite normal after hernia surgery. You should rest, and eat only light meals for the first day or two, and avoid any alcohol while taking painkillers stronger than paracetamol.

You may find your bowels tend to be constipated, this is as a result of missing normal meals around the time of your surgery, and is also a side effect of many painkillers. It should settle by itself, but if not, you can use a gentle laxative that you can buy from any chemist.

You may not feel like leaving the house for the first couple of days, but make sure you walk about within the house or around the garden every couple of hours during waking hours to keep the blood circulating in the legs and reduce the chance of a blood clot forming in the legs. If you feel quite sore you should take your pain killers regularly to enable you to move about. If you are still feeling sore and requiring painkillers after you have finished the supply provided by the hospital, contact your GP for a further supply (this is

seldom necessary).

Younger people will usually return to normal more rapidly than an older person.

What should I do with my wound(s)?

The nurses on the ward will explain this to you in detail before you leave the hospital.

Most surgeons use skin stitches which go away by themselves, and your wound will be covered by a light dressing. For the first couple of days it is not unusual to have slight blood leakage on to the dressing. After 48 hours wounds are usually sealed enough for you to have a shower and you may have a bath seven days after your surgery provided your wound is clean and dry.

It is normal for the wound to feel hard and tender for several weeks. It is also quite normal for you to feel a lump under the wound, as this is the healing ridge of tissue. The actual scar itself will appear red, and often remains red for many months.

If the skin around the wound develops redness extending more than 1 inch (2cm) from the scar and this does not go away with 24 hours of you noticing it, you should contact your practice nurse, as you may be developing a wound infection.

When will I be able to go back to work?

This depends on your type of work, and the type of hernia you have had operated on.

A desk job can usually be returned to after a week or two.

A heavy manual job will require longer off work, usually around four to six weeks, or a return to light duties only.

When can I start to drive again?

You must not drive within 24 hours of a general anaesthetic. It is also recommended that you do not drive while on strong painkillers, as they may make you sleepy. Otherwise, once you can comfortably use all the controls in the car, it is safe to drive. This means being able to perform an emergency stop, and being able to turn round in your seat to safely reverse the car. Most people find they need a week to recover enough to drive safely.

It is always best to check with your insurance company to see if they have any specific rules related to the type of operation you have had done. This is particularly important for professional drivers.

When can I start to exercise again?

Doctors opinions vary about this because of a lack of any detailed study in to this question. Your surgeon will be able to give you his/her opinion related to your specific type of hernia and the type of sport you have in mind.

Will I be given a hospital review appointment after my operation?

This varies from surgeon to surgeon. Most surgeons see the majority of patients once after a hernia repair.

The vast majority of patients make a straightforward recovery from a hernia operation, but if you have problems your GP can refer you back to see your surgeon if they have any concern.

Is it possible to be too unfit for hernia surgery?

Yes. This is usually because of heart problems or lung problems, but a variety of health conditions can make somebody have such a high risk of dying with surgery, that the surgeons will advise them not to have surgery. We may also decide to have an anaesthetic doctor examine someone to

help us assess whether they are fit for surgery or not.

If you are advised by a consultant surgeon not to have surgery on your hernia but you still wish to have the operation, you should ask for a second opinion from another consultant surgeon, and we will arrange this for you, or we will ask your GP to arrange it for you.

Is there anything I can do to improve my health before having surgery?

If you are a smoker you should stop as far in advance (at least six weeks) before your surgery if possible (smoking increases the risk of a chest infection after an anaesthetic and wound problems).

If you are overweight you should try and lose weight to get down to your target weight for your height. Your GP may have a nurse in the practice that can help you with a weight reducing diet or you could join Weightwatchers.

If you are diabetic you need to keep your blood sugar levels in the correct range.

If you have high blood pressure, that needs to be well controlled before you can have surgery.

Further Information

https://patient.info/health/hernia-leaflet

www.rcseng.ac.uk/patient-care/recovering-from-surgery/groin-hernia-repair/

www.britishherniasociety.org/for-patients/



If you have any suggestions as to how we can improve this leaflet for future patients, please write to me

How to contact:



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You may wish to discuss your own particular situation with a specialist.

Mr J Hopkins.

THE UPPER GASTROINTESTINAL SURGICAL UNIT
NUFFIELD HEALTH - CHESTERFIELD HOSPITAL BRISTOL