



# Splenectomy

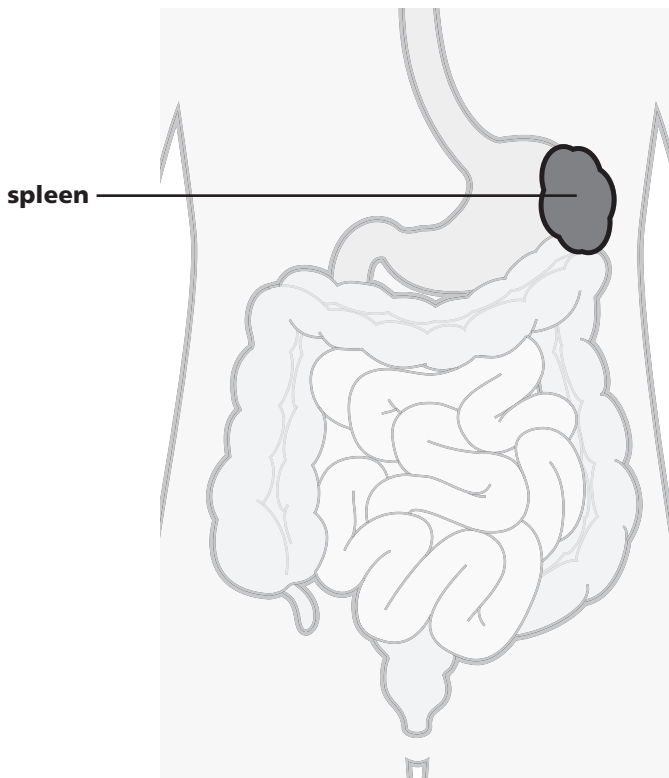
**This leaflet explains the splenectomy operation and tells you what to expect when your child comes in to Great Ormond Street Hospital (GOSH) to have this type of surgery.**

## What is a splenectomy?

A splenectomy is an operation to remove the spleen. It can be carried out using keyhole surgery or traditional open surgery. Most splenectomies at GOSH are carried out using keyhole surgery.

## What is the spleen?

The spleen is an important organ in fighting infection. It is found in the upper left-hand side of the abdomen, partly protected by the ribcage.



## Why does my child need to have his or her spleen removed?

In some cases, it may need to be removed following an accident, so that it does not bleed into the abdomen. Other people may need to have their spleen removed to increase red cell survival. Removing the spleen is used for this reason in rare blood diseases, for example, hereditary spherocytosis. For further detail about these rare blood diseases, please see our information sheets.

## What are the risks for a child without a spleen?

The main risk is from infection, but this varies according to the age of your child. Young children are at a higher risk of infection than adults. If your child has no spleen, he or she is also at greater risk of developing an infection after being bitten by an animal or insect, and therefore at greater risk of catching malaria. There are ways of reducing these risks of infection, which are explained later in this leaflet.



## **What are the risks of the operation?**

The main risks of this operation include infection or bleeding. To minimise the risk of infection your child will be given antibiotics while he or she is in theatre. To minimise the risk of bleeding, your child will have blood tests before the operation so that blood can be available to be given as a transfusion during the operation. If these blood tests are not satisfactory, your child's operation may be rescheduled for when he or she is well enough. Every anaesthetic carries a risk of complications, but this is very small. Your child's anaesthetist is an experienced doctor who is trained to deal with any complications. After an anaesthetic some children feel sick and vomit, have a headache, a sore throat or feel dizzy. These side effects do not usually last long. The risk of adhesions (scarring inside the abdomen) are minimised by using keyhole surgery.

## **Are there any alternatives to the operation?**

If the spleen has been damaged in an accident, leaving it in the body could be dangerous because there is a risk that it will bleed. If the spleen is damaged by a blood disease the only alternative is regular blood transfusions, but this is less practical in the long term. The haematology team will discuss this with you and your child before the operation.

## **What happens before the operation?**

As mentioned previously, wherever possible, unless the splenectomy is carried out as an emergency, it is advisable for your child to have some vaccinations before the operation. More details follow in the Reducing the risk of infection section later in this information sheet. You will receive information in your admission letter about how to prepare your

child for the operation. Your child will need to come to hospital before the operation so that they can have a check up and the necessary blood tests at a pre-admission assessment. The doctors will explain about the surgery in more detail, discuss any worries you may have and ask you formally for your consent for the operation. Another doctor will also visit you to explain about the anaesthetic and the most suitable pain relief for your child. If your child has any medical problems, such as allergies, please tell the doctors about them.

## **What does the operation involve?**

The majority of splenectomies at GOSH are carried out using keyhole (laparoscopic) surgery. Keyhole surgery is a method of carrying out an operation without having to make a large incision. Sometimes the spleen is too large or damaged to be removed using keyhole surgery so the surgeons will need to use open surgery instead. Your child will be away from the ward for between 1½ to 3 hours. Once the spleen has been removed, the cut made by the surgeon will be closed using dissolvable stitches.

## **What happens after the operation?**

After the operation, your child will usually return to the ward to recover where he or she will have a drip (intravenous infusion) giving fluids and pain relief. Your child will probably also have a tube going from their nose to their stomach in case he or she does not feel like eating or drinking for the first 24 hours. Your child's abdomen will feel sore and bruised. The Pain Control Service will organise pain relief, which is usually by patient controlled analgesia (PCA) or nurse-controlled analgesia (NCA). A common side effect of pain relief is nausea and vomiting, but there are anti-sickness drugs to reduce this.



## Leaving hospital

Your child will be able to go home three to five days after the operation once they are eating and drinking as usual and feeling more comfortable. They may feel a bit wobbly after the operation but this will pass. The stitches will dissolve on their own so you will not need to have them removed.

You will receive the first few doses of antibiotics from the pharmacy in the hospital, after which you will need to see your family doctor (GP) for a repeat prescription. Your child may need to continue taking pain relief when they get home. Usually paracetamol is strong enough and you should give it according to the instructions on the bottle.

Your child should be able to return to school within a month but should avoid contact sports, such as rugby, for at least three months. There are no other restrictions. They will need to come back to the hospital for an outpatient appointment six weeks after the operation. We will try to arrange appointments on the same day with the haematologist (blood specialist) if applicable and with your child's surgeon.

## Reducing the risk of infection

**Regular antibiotics:** In order to reduce the small risk of serious infection, your child will need to take antibiotics for the rest of their life. In most cases this will be penicillin, but children who are allergic to this will be given some other form of antibiotic.

**Recognising a minor infection before it becomes serious:** If you see any sign of infection in your child you should contact a doctor quickly. Signs of infection may include a raised temperature, sore throat, unexplained cough, abdominal pain and/or headache with drowsiness or a rash.

**Vaccination against infection:** The most common type of infection is caused by a bacterium called *Streptococcus pneumoniae*. This can lead to pneumonia or progress to potentially fatal septicaemia (blood poisoning). A pneumococcal vaccine (PCV) called Prevenar® (produced by Wyeth) provides some protection against pneumonia caused by pneumococcal bacteria. PCV was introduced into the routine childhood immunisation schedule in 2006. Your child should be immunised with PCV when two months, four months and 13 months of age.

There is another vaccine against pneumococcus infection called Pneumovax® II (produced by Sanofi Pasteur), which is recommended by the Department of Health for patients over two years old without spleens. It will protect your child from most common strains of pneumococcus. Ideally, your child should have the vaccine four to six weeks before the operation but it can be given at least two weeks before or after the operation or when your child is sufficiently recovered. He or she will need a booster every five years after the initial dose. Daily oral antibiotic therapy against pneumococcal infection should not be stopped after immunisation.

Haemophilus influenzae type b (Hib) and Meningitis group C (Men C) cause infections such as epiglottitis and meningitis in children. A vaccine against Hib was introduced in 1993 and one against Meningitis C in 1999, so all children born after these dates should have received it. Although the risk of developing these infections is small, it is present for life. If your child has not had the Hib or meningitis C vaccines, they will require vaccination. Children who have received their usual childhood vaccinations will require one further dose of the combined Hib/Men C vaccine (Menitorix®), preferably six weeks before the procedure.

In addition to the vaccinations mentioned above, your doctor may also suggest that your child has the flu vaccine every year. There is no problem with your child receiving their regular vaccines and they should have them according to the usual schedule.



**Precautions against animal bites:** If your child is bitten by an animal, including a family pet, he or she will probably need extra antibiotics to prevent infection so contact your doctor as soon as possible.

**Precautions against malaria:** Your child should minimise the risk of catching malaria if travelling to tropical countries. They should avoid mosquito bites by wearing insect repellent and take anti-malarial tablets as directed by your doctor.

**Letting people know your child has no spleen:**

Before you leave hospital, we will give you a 'splenectomy card', which your child should carry all the time. Cards can be obtained from either the General Surgery or Haematology departments at GOSH. This card tells doctors and nurses your child has no spleen and explains what precautions they need to take. An alternative is to wear a Medicalert® bracelet. This bracelet has a telephone number which doctors and nurses can call to hear details of your child's medical condition.

Medicalert®

Freephone: 0800 581420

Website: [www.medicalert.co.uk](http://www.medicalert.co.uk)

**If you have any worries or concerns about the splenectomy operation, please call Squirrel Ward on 020 7829 8814.**

**If your child has his or her spleen removed because of a blood disorder, please call the Haemophilia Centre on 020 7829 8820.**

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