

Splenectomy

Splenectomy is the term used to describe the surgical procedure of removing the spleen. The spleen plays an important role in the immune system and although the body copes well without a spleen, patients who have undergone the procedure need to take some precautions to maintain optimum health.

Why Remove the Spleen?

There are a large number of conditions which may indicate the spleen needs to be removed as summarised in the table below.

Condition	Description
Ruptured Spleen	The spleen can be ruptured during trauma, or due to infections or diseases of the spleen. If rupturing occurs, it is a medical emergency as a large amount of blood will leak into the abdominal cavity causing shock and possibly death.
Diseases or Disorders of the Blood Cells	Rare diseases or disorders of blood cells can indicate spleen removal such as: <ul style="list-style-type: none"> • idiopathic thrombocytopenic purpura (ITP), where immune cells destroy platelets used for clotting; • hereditary spherocytosis, where the blood cells become spherical and burst, due to a disorder of the membrane surrounding the blood cells; • haemolytic anaemia, where there are not enough red blood cells in the blood due to premature destruction; and • hereditary elliptocytosis, where the blood cells are abnormally shaped.
Cirrhosis of the Liver	A splenectomy has been shown to improve liver function in patients with cirrhosis of the liver as protein synthesis in the liver improves after a splenectomy.
Hypersplenism	Hypersplenism is when the spleen is overactive, removing too many blood cells from the blood and destroying them too quickly, leading to haemolytic anaemia.
Cancers Affecting the Spleen	A number of different types of cancer may indicate the spleen being removed: <ul style="list-style-type: none"> • Hodgkin's lymphoma is a cancer of the lymph tissue found in the lymph nodes, spleen, bone marrow and liver; • Leukaemia is a cancer which begins in the bone marrow, causing an over production of white blood cells, the cancer can spread though the body; and • any type of tumour or cancer affecting the spleen will indicate removal.
Wandering Spleen	Wandering spleen, or pelvic spleen, is a rare medical disease caused by the loss or weakening of the ligaments that help to hold the spleen.

Spleen Removal

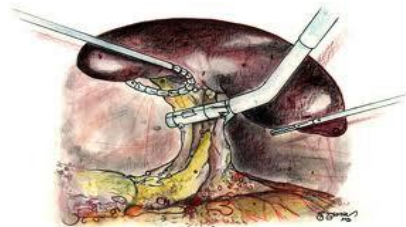
The spleen is removed under general anaesthesia using one of two procedures.

❖ *Open Spleen Removal*

The surgeon will make a cut in the middle of the patient's abdomen or on the left side of the abdomen just below the ribs. The surgeon will locate the organ, dissect the ligaments holding it in place and remove it. Open spleen removal is the nominated procedure for cases where the spleen is enlarged or ruptured.

❖ *Laparoscopic Spleen Removal*

A laparoscope is an instrument with a tiny camera and a light on the end. It allows the surgeon to see the area to be operated on through a small incision. The surgeon will make three to four small cuts in the abdomen and insert the laparoscope through one of the cuts. Other medical instruments will be inserted through the other cuts to assist in removal. Gas will be pumped into the abdomen to expand it and give the surgeon more space in which to work. The surgeon will use the laparoscope to guide the other instruments and remove the spleen. Patients usually recover more quickly from laparoscopic surgery and have less pain than from open surgery, it is the preferred method of removing a spleen in most cases.



Prognosis

All surgery carries risks and patient recovery will always be dependent on the success of surgery. Specific risks related to this type of surgery include:

- ❖ blood clot in the portal vein, an important vein that carries blood to the liver;
- ❖ collapsed lung;
- ❖ hernia at the surgical cut site;
- ❖ increased risk of infection after splenectomy, post splenectomy sepsis or other infections;
- ❖ injury to nearby organs, such as the pancreas, stomach and colon; and
- ❖ pus collection under the diaphragm, a sub diaphragmatic abscess.

Risks are the same for both open and laparoscopic spleen removal. The major factor affecting all patients who have had a splenectomy is the fact that they are at increased risk of infection, due to the role of the spleen in the immune system, particularly pneumococcal infection. Post surgery and indefinitely, patients will require certain vaccinations and boosters such as pneumococcal, Meningococcal and haemophilus influenzae type b vaccines. Other functions of the spleen are taken over by other reticuloendothelial cells, which are cells scattered throughout the body with a range of functions including the ability to destroy other cells, once the spleen is removed.

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