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## THE GENERAL COMPLICATIONS OF SURGERY

This general guide is designed to provide background information to the complications of general surgery. This document is not a substitute for direct, personal verbal discussion. It aims to address common questions and to help you identify areas of concern to you so these can be raised in direct discussion. You can use it as an *aide memoir* in these discussions.

It is very important that you recognise this document can only cover this issue in a general manner. It cannot cover in detail every aspect of your individual operation. For many operations the risk of any complication is very small. In other operations there may only be a small risk of any complications, but these may be potentially serious events.

You should feel free to ask about any aspect of your care. All your questions will be answered fully, honestly and in as much detail as you wish. In the heat of the moment it is easy for questions that you intended to ask to slip from your mind. You should note on paper any questions that you may have.

Further information related to specific operations is available at the web site above. The advice sheet for each operation deals with the most important complications for each operation. The web site also provides links to other sites that may provide additional information.

The aim of the table below is to summarise the potential risks and complications of general and abdominal gastro-intestinal surgery. It is not intended to alarm you as most patients will not have any complications. However, it is important that you do appreciate that all operations carry risk and complications can and do occur. Although everything possible will be done to prevent the development of any complication, it is only possible to reduce, not eliminate, these events.

The elderly and frail usually survive major surgery, but they struggle to survive serious complications. The best way to manage many potential complications is to prevent them occurring in the first place. Hence the use of preventative, or prophylactic, treatment. This includes correcting any underlying medical conditions. For this reason it is essential that you advise your doctors of all earlier operations and previous or ongoing medical illness. All your drugs should be brought to the hospital and shown to your doctors.

The complications of surgery can be grouped as general (that is can occur after any operation) or specific to that operation. The table below summarises these potential complications. It is a summary and is not exhaustive. You must ask about any specific concerns you have.

<b>Risk</b>	<b>What happens</b>	<b>What may be done (options)</b>
<i>General complications that may occur after any surgery</i>		
Clot in legs (DVT)	A clot forms in the legs. This may make the legs swell. The clot may break away into the lungs. This is a pulmonary embolus.	Blood thinning drugs (heparin) started at the time of surgery. TED stockings. Calf compression.
Post-operative bleeding	Blood leaks into the surgical site, into the abdomen or out through a drain	1. blood transfusion 2. re-operation
Wound infection	An infection, including the development of pus, occurs in the wound	Antibiotics started at the time of surgery. Drainage of any pus is required, and this may require another operation or drainage under radiological guidance
Chest infection	A pneumonia develops	Antibiotics are required. A few patients require ventilation (in ICU)
Wound dehiscence	The wound opens up	Surgical repair within a few hours.
Hernia around an abdominal wound	A weakness develops in the wound. The bowel then slips through the abdominal wall and a bulge appears. This usually occurs more than six months after surgery. The overall life time risk is >15%. This risk is increased in patients who have either chemo-therapy or radiotherapy, a wound infection or a chronic illness like diabetes or obesity.	A surgical repair, usually with mesh, is required.
Urinary tract infection	Bacteria enter the bladder	Antibiotics
Bladder may not empty	It is not possible to pass urine. As the bladder get full, the patient becomes uncomfortable.	The catheter is re-inserted and removed a few days latter. Normally this solves the problem. Sometimes a catheter is required for 2-3 weeks. In men, prostate surgery may be required.
Vascular event	Stroke Heart attack	Each event is managed on its own merits. Sometimes a period in ICU is required.
Death		
<i>Complications that may occur after bowel surgery</i>		
Anastomotic leak	The join between the two ends of the bowel develops a leak	1. antibiotics alone 2. Drainage under radiological guidance 3. further surgery, including an stoma if not already present
Post operative ileus	The bowel remains paralysed for longer then the usual 3-4 days	1. a tube through the nose is inserted/left in the stomach 2. various drugs may be given 3. although it normally resolves in 3-5 days an ileus can occasionally be so prolonged that intra-venous feeding (TPN) is required.
Bile leak	Leak of bile form either the biliary system or the small bowel	Re-operation is normal required
Bowel blockage (adhesions)	Scar tissue in the abdomen blocks the bowel. This can occur within a few days of surgery, or many years latter (or any time in between)	A NGT and IVI settles most. Some patients require further surgery.

<b><i>What increases the risk of surgery</i></b>	<b><i>Examples</i></b>	<b><i>Why is the risk increased</i></b>
Cardiovascular	Previous heart attacks, strokes <i>etc.</i>	The heart will be under strain and if is diseased it may not be able to respond. A full pre-operative re-evaluation of the heart may be required.
Previous surgery		Scarred tissue is normally of poor quality and does not heal well
Obesity		<ol style="list-style-type: none"> <li>1. poor quality tissue</li> <li>2. poor mobilisation leading to increased risk of DVT, chest infection</li> <li>3. poor blood supply so the risk of wound or anastomotic failure is much increased</li> <li>4. extra strain on the wound, heart <i>etc</i></li> </ol>
Drugs	Examples include steroids, aspirin, blood thinning agents	Normally because they increase the risk of bleeding, infection or decrease the quality of wound healing
Diabetes		<ol style="list-style-type: none"> <li>1. Ability to combat infection reduced</li> <li>2. Poor blood supply</li> <li>3. Slow healing</li> </ol>
Smoking		Leads to poor healing. This increases risk of infection, anastomotic failure, vascular events and thrombosis

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## Definitions

IVI	Intravenous infusion ('a drip')	
NGT	Nasogastric tube	A fine tube from through the nose into the stomach to drain the stomach and stop vomiting.
ICU	Intensive Care Unit	For very ill patients, or those requiring ventilation
Ventilation		Placing patients on a machine that does the breathing for them. A tube is placed through the mouth into the upper airway.