

POST-OPERATIVE COMPLICATIONS

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Post-operative complications may be

- **general:**
 - post-operative fever
 - bleeding
 - atelectasis
 - wound infection
 - embolism
 - deep vein thrombosis
 - myocardial infarction
 - pneumonia

POST-OPERATIVE COMPLICATIONS

Post-operative complications may be

- **general:**
- **specific due to type of operation**
 - early
 - late

POST-OPERATIVE FEVER

- Days 0 to 2:

Mild fever (T <38 °C)	

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Mild fever (T <38 °C)	Persistent fever (T >38 °C)
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POST-OPERATIVE FEVER

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Tissue damage and necrosis at operation site	Atelectasis: the collapsed lung may become secondarily infected
Haematoma	

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Haematoma	Specific infections related to the surgery, e.g. biliary, urinary tract infection

POST-OPERATIVE FEVER

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Tissue damage and necrosis at operation site	Atelectasis: the collapsed lung may become secondarily infected
Haematoma	Specific infections related to the surgery, e.g. biliary, urinary tract infection
	Blood transfusion or drug reaction

POST-OPERATIVE FEVER

- **Days 3-5:**
 - pneumonia
 - sepsis
 - wound infection
 - abscess formation, e.g. subphrenic or pelvic, depending on the surgery
 - deep vein thrombosis

POST-OPERATIVE FEVER

- **After 5 days:**
 - specific complications related to surgery, e.g. bowel anastomosis insufficiency, fistula formation, prolaps of intestine
 - pulmonary embolism



POST-OPERATIVE FEVER

- **after the first week:**
 - **wound infection**
 - **distant sites of infection, e.g. urinary tract infection**

INFECTION

- **Infectious complications are the main causes of post-operative morbidity in abdominal surgery.**
- **Wound infection: most common form is superficial wound infection occurring within the first week presenting as localised pain, redness and slight discharge usually caused by skin staphylococci.**
- **Cellulitis and abscesses:**
 - Usually occur after bowel-related surgery
 - Most present within first week but can be seen as late as third post-operative week, even after leaving hospital
 - Cellulitis is treated with antibiotics
 - Abscess requires suture removal and probing of wound but deeper abscess may require surgical re-exploration. The wound is left open in both cases to heal by secondary intention

INFECTION

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- **Cellulitis and abscesses**
- **Gas gangrene is uncommon and life-threatening.**
- **Wound fistula is a late infectious complication from a deep chronic abscess that can occur after apparently normal healing. Usually needs re-exploration to remove non-absorbable suture or mesh, which is often the underlying cause.**

RESPIRATORY COMPLICATIONS

- **Atelectasis (alveolar collapse):**
 - Caused when airways become obstructed, usually by bronchial secretions. Most cases are mild and may go unnoticed
 - Symptoms are slow recovery from operations, poor colour, mild tachypnoea, tachycardia and low-grade fever
 - Prevention is by post-operative physiotherapy
- **Pneumonia: requires antibiotics, physiotherapy.**

THROMBO-EMBOLISM

- **deep vein thrombosis signs:**
 - swelling of leg
 - tenderness of muscle
- **Pulmonary embolism signs :**
 - sudden dyspnoea
 - cardiovascular collapse
 - chest pain

ACUTE RENAL FAILURE:

- **May be caused by antibiotics, obstructive jaundice**
- **Often due to episode of severe or prolonged hypotension**
- **Presents as low urine output with adequate hydration**

COMPLICATIONS OF BOWEL SURGERY

- **Delayed return of function:**
 - **Temporary disruption of peristalsis: may complain of nausea, anorexia and vomiting and usually appears with the re-introduction of fluids. Often described as ileus**
 - **More prolonged extensive form with vomiting and intolerance to oral intake called dynamic obstruction and needs to be distinguished from mechanical obstruction.**

COMPLICATIONS OF BOWEL SURGERY

- **Early mechanical obstruction:** may be caused by twisted loop of bowel or adhesions occurring approximately 1 week after surgery.
- **Late mechanical obstruction:** adhesions can organise and persist, commonly causing isolated episodes of small bowel obstruction months or years after surgery.
- **Anastomotic leakage or breakdown**
 - small leaks are common causing small localised abscesses with delayed recovery of bowel function.
 - major breakdown causes generalised peritonitis and progressive sepsis
 - local abscess can develop into a fistula.