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## Peritonitis

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### Summary

- Peritonitis is the inflammation of abdominal membranes, most commonly due to bacterial infection.
  - Peritonitis is life threatening if not treated promptly.
  - Treatment options include hospitalisation, antibiotics and surgery.
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Peritonitis is inflammation of the membranes of the abdominal wall and organs. Peritonitis is a life-threatening emergency that needs prompt medical treatment.

The abdominal organs, such as the stomach and liver, are wrapped in a thin, tough membrane called the visceral peritoneum. The abdominal walls are similarly lined (parietal peritoneum). A protective layer of fat contained in a membrane (the omentum) sits between the organs and the abdominal wall. Lubricating fluid allows all these membranes to slide smoothly over each other.

The main function of the peritoneum is to permit free movement of the internal organs during digestion. Peritonitis is inflammation of the peritoneum caused by bacterial infection.

### Symptoms of peritonitis

The symptoms of peritonitis include:

- Severe and constant abdominal pain
- Fever
- Inability to break wind or pass stools
- Nausea and vomiting
- Shock.

### Spontaneous peritonitis and secondary peritonitis

Peritonitis may be classed as spontaneous peritonitis or secondary peritonitis. The symptoms of spontaneous peritonitis are often less dramatic than secondary peritonitis. Spontaneous peritonitis can occur in patients with severe liver disease, heart disease or kidney disease. Often these diseases cause the accumulation of fluid within the abdominal cavity. This is called ascites. The presence of ascites, together with the person's weakened defences against infection, often leads to bacterial infection.

### Causes of secondary peritonitis

The main cause of secondary peritonitis is the escape of pus from an infected abdominal organ, including:

- **Perforated ulcer** – a severe, untreated ulcer can sometimes burn through the wall of the stomach or duodenum, allowing digestive juices and food to leak into the abdominal cavity.
  - **Perforated bowel** – the intestines can be damaged and perforated by a range of conditions, including diverticulitis and inflammatory diseases such as Crohn's disease.
  - **Burst appendix** – the appendix is a thin tail growing out of the large intestine. Food or faecal matter can sometimes lodge inside the appendix and become infected with bacteria.
  - **Perforated gall bladder** – this small sac stores bile from the liver. A severe infection (cholecystitis) can cause the gall bladder to burst.
  - **Pancreatitis** – an inflamed pancreas can directly cause inflammation in the abdomen, which may be very severe. The two major causes of pancreatitis are alcoholism and gallstones.
  - **Ectopic pregnancy** – the fertilised egg lodges and grows inside the slim fallopian tube instead of the uterus.
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The tube ruptures in around one out of five cases.

- **Salpingitis** – inflammation of the fallopian tube. Sometimes, the tube becomes distended with pus until it bursts.
- **Abdominal surgery** – infection is a risk of any type of major surgery.
- **Necrotising enterocolitis** – a condition that affects newborn babies and sometimes prompts peritonitis.
- **Blood infection** – can be caused by a range of conditions, including cirrhosis of the liver, some forms of kidney disease and appendicitis.
- **Dialysis** – bacteria on peritoneal dialysis equipment can enter the abdominal cavity.
- **Stab wound** – bacteria from a knife or other sharp object enters the abdominal cavity.

### **The infection can be fatal**

Peritonitis is life threatening without prompt medical treatment. The infection stops the normal movements of the intestines (peristalsis). The body quickly becomes dehydrated, and important chemicals called electrolytes are dangerously disturbed. The internal organs – such as lungs, kidneys and liver – may fail. A person with untreated peritonitis can die within a few days.

### **Diagnosis of peritonitis**

Diagnosing peritonitis involves a number of tests, including:

- **Physical examination** – the abdomen is hard and painful. There are no bowel movements or sounds.
- **Signs of shock** – including low blood pressure, abnormal pulse rate and pale skin.
- **Blood tests** – to check for which bacteria are responsible.
- **X-rays** – of the abdomen.
- **Laparoscopy** – a slender tube is inserted through an abdominal incision and the insides examined.
- **Peritoneal fluid culture** – a sample of fluid is taken and examined for signs of infection.

### **Treatment for peritonitis**

Treatment options for peritonitis depend on the cause, but may include:

- **Hospitalisation** – often in an intensive care unit
- **Antibiotics** – tailored to the specific bacteria to kill the infection
- **Intravenous fluids** – to rehydrate the body and replace lost electrolytes
- **Surgery** – to repair the ruptured organ and wash out the abdominal cavity of blood and pus
- **Treatment for the underlying cause** – such as a perforated ulcer.

### **Adhesions often follow peritonitis**

Adhesions are bands of scar tissue that result from previous inflammation (such as peritonitis) or surgery. They can occasionally cause strangulation and obstruction to the bowel (bowel obstruction). In some cases, surgery may be required to cut the adhesions.

### **Where to get help**

- Your doctor
- Hospital emergency department
- In an emergency, call triple zero (000)

### **Things to remember**

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**This page has been produced in consultation with and approved by:**

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