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What causes appendicitis?

Appendicitis is a common condition where the appendix – part of the gut – becomes blocked, swollen, and inflamed. It typically causes stomach pain in the lower right part of the tummy (abdomen), amongst other symptoms. Appendicitis needs urgent treatment in hospital, usually requiring surgery to remove the appendix.

Appendicitis is caused by the opening of the appendix getting blocked, causing the appendix to become swollen. As it gets swollen, bacteria inside the appendix can enter the damaged walls, causing infection. The appendix can burst (perforate), causing the bacteria to spread outside the gut and into the tummy (abdominal cavity) more widely.

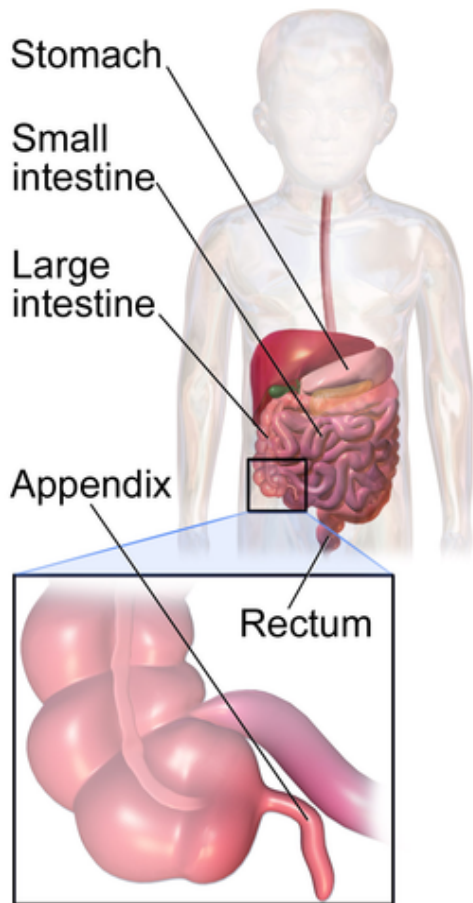
If you think you may have [appendicitis find out what to do here](#).

In this series of articles centred around appendicitis you can read about [symptoms of appendicitis](#), treatment of appendicitis, and causes of appendicitis– all written by one of our expert GPs.

The rest of this feature will take an in-depth look at the causes of appendicitis as, at Patient, we know our readers sometimes want to have a deep dive into certain topics.

What causes appendicitis?

The appendix is a small tube that connects to the large intestine (gut). It's found on the lower right side of the tummy.



Location of the Appendix

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Appendicitis is caused by the following:

A blockage in the appendix

It's thought that appendicitis starts with the tube of the appendix becoming blocked. Several things can cause this, such as:

- Hard bits of poo (stool) - the medical name for this is a faecolith.
- Swelling of the nearby lymph nodes or lymph tissue, in response to an infection.
- Swelling (inflammation) of the walls of the gut for another reason, such as infection.
- Rarely, [bowel cancer](#) - can cause the appendix to become blocked. This is more likely to affect older people.

When the appendix is blocked, mucus builds up inside and becomes trapped. This leads to swelling (inflammation) of the appendix, and abdominal pain.

The swelling causes blockage of the blood vessels that supply the appendix with oxygen and nutrients. The cells of the appendix can't get enough blood, and start to die. The appendix can eventually burst (rupture).

Infection

As the appendix walls get damaged, bacteria inside the gut begin to leak into and through the walls, causing infection. The body reacts to the infection by producing pus to try to fight it off. Pus inside the appendix causes it to swell further. If the appendix has burst, bacteria can spread throughout the abdominal cavity and into the blood, causing serious and, sometimes, life-threatening infections.

Genetic factors

Appendicitis is more common in people with a family history of appendicitis. Research suggests that genetic factors might be involved to some extent. We don't yet know of any specific genes that are clearly linked to appendicitis.

Other environmental factors

There might be other things in the environment that cause appendicitis. Appendicitis occurs more commonly in the summer – some people think this might be related to higher levels of air pollution.

How common is appendicitis?

Appendicitis is common – around one in 10 people develop it at some point in their lives. Appendicitis is also the most common reason for people to have emergency abdominal surgery.

Risk factors for appendicitis

Risk factors for appendicitis include:

- Age – it is most common in people between the ages of 10 and 20, but can occur at any age.

- Gender – is slightly more common in men than in women in most studies.
- Family history – people with appendicitis are more likely to have family members who have also had the condition.

How to prevent appendicitis

There is no effective and safe way to prevent appendicitis.

Having surgery to remove the appendix, before it causes any symptoms, does prevent appendicitis – but has risks. It isn't known who will, and who won't, get appendicitis, so doing this type of preventative procedure would involve a lot of unnecessary operations.

This operation has, however, been done in very rare circumstances when people have been due to travel somewhere where having emergency surgery would be impossible. An example of this military personnel going on extended missions in remote areas, people on polar expeditions, and astronauts going into space. Even then, this is controversial, and thought by some to be unnecessary and potentially risky.

Further reading

- [Appendicitis; NICE CKS, May 2021 \(UK access only\)](#)

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