

## Patient information from the BMJ Group

# Anal tears

In this section

[What is it?](#)

[What are the symptoms?](#)

[How is it diagnosed?](#)

[How common is it?](#)

[What treatments work?](#)

[What will happen?](#)

[Questions to ask](#)

## Anal tears

Anal tears can be painful and uncomfortable. But they usually heal after some simple treatments. If they don't get better, you'll probably need treatment to help the muscle in your anus relax. Anal tears are also known as anal fissures.

We've brought together the best research about anal tears and weighed up the evidence about how to treat them. You can use our information to talk to your doctor and decide which treatments are best for you.

## What are anal tears?

Anal tears are small cuts or rips in the skin of your **anus**. Your anus is the opening from which stools (feces) come out. A tear here makes passing stools very painful.

If you've got an anal tear (also called anal fissure), the pain after passing stools can last for hours after you've been to the toilet. <sup>[1]</sup>

Doctors don't know why some people get anal tears and others don't. There are a number of reasons why you may get an anal tear. <sup>[1] [2] [3]</sup>

- Passing hard and dry stools. These types of stools can cause your anus to stretch and tear slightly because the skin around your anus is quite thin.
- Constipation. When you're **constipated**, passing stools is difficult and you don't pass them often enough. This may lead to tears in your anus. But we don't know for certain how many people get tears because of constipation.
- **Diarrhoea** may also cause anal tears in some people.

Most anal tears happen at the back of the anus. But 1 in 4 women and 1 in 12 men get a tear at the front. <sup>[1]</sup>

It's unusual to have more than one tear at a time, or for the skin on the sides of your anus to tear. If this happens, your doctor may do some tests to see if the tears are due to an **infection** or a problem with your digestion. <sup>[4]</sup>

## Anal tears

Anal tears often heal on their own. Or you may need to take some simple steps to help them heal. To learn more see [What can I do to help my anal tear heal?](#)

Sometimes a tear stays open for several weeks or more. Tears that don't heal, or come and go for months, are called chronic anal tears.<sup>[1]</sup> <sup>[3]</sup> Your doctor will probably say your anal tear is chronic if you've had it for at least six weeks.

Doctors think that some tears don't heal because the muscle that controls your anus tightens up (goes into spasm). The tightness can cause more pain and it stops blood getting to your anus properly. This prevents the tear from healing.<sup>[2]</sup> <sup>[5]</sup> <sup>[6]</sup>

### What are the symptoms of anal tears?

If you've got an anal tear the main things you'll notice are pain and blood in your stools.

The pain you get:<sup>[8]</sup>

- Can be sharp and intense (some people say that passing a stool is like trying to pass broken glass)
- Can last for a while after you've been to the toilet.

You probably won't bleed very much. But the blood you see in your stools or on the toilet paper will be fresh and bright red.<sup>[9]</sup>

If you have a chronic tear (a tear that lasts for more than six weeks) you may be in pain for hours. You may even have some pain most of the time.<sup>[9]</sup> Chronic anal tears are usually deeper than the ones that heal quickly. This means that more of your skin is damaged.<sup>[10]</sup>

Sometimes a small lump or swelling appears at the end of the tear furthest from your anus. This is called a sentinel tag. It's not a haemorrhoid (which is a cluster of small blood vessels).<sup>[10]</sup> Because anal tears bleed and there's swelling around the tear, they're often mistaken for haemorrhoids.

You may feel embarrassed about seeing your doctor with this problem. But your doctor will have seen plenty of people with anal problems before. There's no need to suffer in silence.

### How common are anal tears?

Anal tears are a common cause of pain in the anus. But there hasn't been any good research to say exactly how many people get them.

Here's what we do know:<sup>[11]</sup> <sup>[12]</sup>

- Anyone can get anal tears, but young and middle-aged adults are more likely to get them

## Anal tears

- Men seem to be just as likely to get them as women.

We don't know how many people with anal tears get chronic tears (those that last longer than six weeks).<sup>[11]</sup>

### What treatments work for anal tears?

If you've got an anal tear that won't heal with simple treatments, your doctor may suggest some ointment or an injection. If these don't work, you may need a small operation. All of these treatments aim to relax the muscle in your **anus**.

To read more about the simple treatments see [What can I do to help my anal tear heal?](#)

### Key points about treating anal tears

- An ointment that contains glyceryl trinitrate (GTN) helps heal tears in some people. Doctors usually advise trying this treatment first.
- Drugs called calcium channel blockers may also help. But we need more research to show how well these work.
- Botox injections may also help. They may work better than GTN ointment. But again, we need more research to be sure.
- Surgery to relax the anal muscle works well for tears. As with all operations there's a small risk of complications. There's a small chance that you'll lose control over your bowels for a few weeks after the operation.

We've looked closely at the research and ranked the treatments into categories, according to whether they work.

### Treatment Group 1

#### Treatments for anal tears

##### Treatments that work

- [Surgery on the anal muscle](#)

##### Treatments that are likely to work

- [Glyceryl trinitrate ointment \(GTN\)](#)

##### Treatments that need further study

- [Botox injections](#)

## Anal tears

- [Calcium channel blockers](#)
- [Surgery with a skin patch](#)

### Treatments that are unlikely to work

- [Anal stretch](#)

## What will happen to me?

Most anal tears get better with simple treatments. But if you have a chronic tear (one that has lasted for more than six weeks) you may need to have a small operation to help the tear heal properly.

About 8 in 10 people with an anal tear get better with simple treatments such as taking warm baths and changing their diet. This usually happens in about three weeks. <sup>[2]</sup> To learn more, see [What can I do to help my anal tear?](#)

Some people need other treatments such as **laxatives** or ointments to help the pain. <sup>[13]</sup>

Chronic tears are less likely to heal with simple treatments. Most people who have chronic tears need treatments to help relax the muscle that controls their **anus**. When this muscle relaxes, the blood flow to the skin of your anus improves. This helps the tear to heal. <sup>[14]</sup>  
<sup>[15]</sup>

Treatments to help your anal muscle relax include:

- A small operation
- Ointments that you rub into your anus
- Injections.

Surgery works for about 9 in 10 of those people who need it. <sup>[15]</sup> We don't know how many people get tears again afterwards, but we do know that some types of surgery work better than others. For example, you're more likely to still get anal tears after an operation to stretch the muscles in your anus than after surgery that makes small cuts on your anal muscle. <sup>[16]</sup> To read more, see [What treatments work for anal tears?](#)

It's unusual to have more than one tear at a time, or for the skin on the sides of your anus to tear. If this happens, your doctor may do some tests to see if the tears are due to an **infection** or a problem with your digestion. <sup>[13]</sup>

### Treatments:

#### Surgery on the anal muscle

In this section

Your doctor may recommend having surgery on your **anal muscle** if other treatments haven't helped. This operation is called an **internal anal sphincterotomy**, and it helps heal anal tears in about 9 in 10 people.<sup>[17]</sup> <sup>[18]</sup> It's the most reliable long-term cure for anal tears.

It works better than another operation called anal stretch.<sup>[19]</sup>

Surgery on the anal muscle is a minor operation. It can be done while you're awake (you're given a **local anaesthetic** so that you don't feel pain) or while you're asleep (you're given a **general anaesthetic**). The surgeon will make a small cut in your anal muscle. The cut makes your muscle weaker so it's less likely to tighten up (go into spasm). This improves the blood flow to the skin of your **anus** and the tear is more likely to heal.

Surgery on the anal muscle can have side effects for a few weeks after surgery. About 1 in 10 people lose full control over their bowels. Doctors call this **incontinence**. Many people have flatus incontinence. This means they can't fully control wind coming from their anus. But these problems usually go away fairly quickly.<sup>[20]</sup>

---

#### Glyceryl trinitrate ointment

In this section

Glyceryl trinitrate (GTN) ointment can help to heal anal tears in some people.<sup>[19]</sup> Doctors usually advise trying this treatment first. But some research has shown that tears have a tendency to come back after you stop treatment, in about half the people who use GTN.<sup>[21]</sup> <sup>[22]</sup> <sup>[23]</sup>

One summary of the research (a **systematic review**) looked at 15 studies on treatment with GTN for anal tears. The summary found that anal tears healed in:<sup>[19]</sup>

- About 50 in 100 people who used GTN
- About 40 in 100 people who didn't use GTN, but were advised to take warm baths, eat more fibre, and use laxatives if they needed to.

GTN (brand name Rectogesic) helps to widen your blood vessels. This improves the blood flow to your **anus**. GTN comes as an ointment that you rub on your anus. It also comes as patches that you put on your skin. GTN patches are usually used to treat **angina** (heart pain), but they may work well for anal tears too. You'll need a prescription from your doctor to get GTN ointment or GTN patches.

## Anal tears

GTN causes headaches in about 25 in 100 people. <sup>[19]</sup>

GTN is not recommended by the Scottish Medicines Consortium (SMC), the body that approves which treatments can be used in the NHS in Scotland. <sup>[24]</sup>

---

### Botox injections

In this section

Having Botox injections into the muscle of your **anus** may help to heal your anal tear.

<sup>[19]</sup> But the research shows mixed results.

- Some studies show that Botox injections don't work as well as surgery on the anal muscle. Your anal tear may heal at first after having Botox injections. But it's more likely to come back than if you have surgery.
- Other studies show that having Botox injections works at least as well as using GTN ointment. Lower doses work just as well as higher doses. <sup>[19]</sup> <sup>[25]</sup> <sup>[26]</sup> One study showed Botox injections worked to get rid of anal tears for 92 in 100 people, compared with 70 in 100 people who used GTN ointment. <sup>[27]</sup>
- One study found that having a combination of Botox injections with an ointment containing isosorbide dinitrate works better than having Botox injections on their own. <sup>[28]</sup> Isosorbide dinitrate ointment works like GTN. It opens up your blood vessels and improves blood flow.
- Two studies found that having Botox injections worked just as well as treatment with other medicines called nifedipine or diltiazem. <sup>[19]</sup> <sup>[29]</sup>

We need more research to know for certain how best to use Botox injections for anal tears.

The full name for the chemical inside Botox injections is botulinum A toxin. Botox is a brand name.

Botox works by making the muscle in your anus weaker, so the muscle is less likely to tighten up (go into spasm). The aim is to improve the blood flow to the skin of your anus to help the tear heal.

You may get some pain and bleeding after having Botox injections. <sup>[30]</sup> <sup>[31]</sup> About 6 in 100 people can't control wind for about two weeks after having Botox injections. And about 4 in 100 are less able to control their bowels for a week. <sup>[25]</sup> These problems may be more likely with larger doses. They're also more likely after surgery on the anal muscle than after having Botox injections. <sup>[32]</sup>

## Anal tears

Rarely, the botulinum toxin in Botox injections may spread from the place it's been injected. If you get any problems with swallowing, talking, or breathing after having a Botox injection, get medical help straight away.<sup>[33]</sup>

---

### Calcium channel blockers

In this section

Diltiazem and nifedipine belong to a type of drugs called calcium channel blockers. They're usually used to treat **high blood pressure**. They can be used to treat anal tears.

Some research has shown that diltiazem and nifedipine seem to work as well as GTN ointment for treating anal tears.<sup>[19]</sup> <sup>[34]</sup> <sup>[35]</sup> But we need more studies to say for certain.

Doctors use diltiazem and nifedipine to try to relax the muscle in your **anus**, and improve blood flow to the skin of your anus. Diltiazem and nifedipine usually come as ointments that you can rub on your anus, or they can be taken as tablets. You'll need a prescription from your doctor to get these drugs.

You're more likely to get side effects if you take one of these treatments as a tablet rather than using it as an ointment. In one study, 1 in 3 people who took diltiazem tablets felt nauseous, vomited, or had headaches or a rash.<sup>[19]</sup> But no one who used diltiazem ointment had these side effects.

---

### Surgery with a skin patch

In this section

Surgery with a skin patch seems to work well, but it isn't often used. It's still being studied. Doctors call this operation an **anal advancement flap**.

Surgery with a skin patch is a minor operation. It can be done while you're awake (you're given a **local anaesthetic** so that you don't feel any pain) or while you're asleep (you're given a **general anaesthetic**). In this operation, your surgeon stitches healthy anal skin over your tear.

In one small study (called a **randomised controlled trial**) 20 people had surgery on the anal muscle and 20 had surgery with a skin patch. After three months the tears had healed in 17 in 20 people in both groups.<sup>[18]</sup> But more studies need to be done before we can say how well this operation works.

No one in this small study had problems controlling their bowels (**incontinence**) after surgery.<sup>[18]</sup> But other studies have found that flatus incontinence (when people can't control wind from their **anus**) is more common after surgery with a skin patch than after surgery on the anal muscle.<sup>[17]</sup>

---

### Anal stretch

## Anal tears

In this section

Anal stretch is an operation in which your surgeon stretches the muscle in your anus with their fingers or by using a special instrument. The aim is to weaken the muscle so that it's less likely to tighten up (go into spasm). This means that the blood flow to the skin of your anus improves, and the tear heals.

The anal stretch operation isn't used much any more because it can cause people to lose full control over their bowels (incontinence). People who have an anal stretch are much more likely to have flatus incontinence (they can't control wind from their anus) than those who have surgery on the anal muscle.<sup>[17]</sup>

Also, anal stretch doesn't seem to work as well as surgery on the anal muscle.<sup>[17]</sup> One big review of studies found people who had an operation to stretch the anal muscle were more likely to still get anal tears than people who had surgery on the anal muscle.

One other study found no difference between the two operations. But we don't know whether anal stretch caused more incontinence in this study.<sup>[36]</sup>

---

### Further informations:

#### What can I do to help my anal tear heal?

You may be able to help your anal tear heal by taking some simple steps.



The fibre in fresh fruit and vegetables may prevent you getting anal tears again.



# Anal tears

## Eating lots of fibre

Fibre is food that isn't broken down by the body. It makes your stools more bulky. This usually makes them easier to pass. Foods high in fibre include:

- Wholegrain cereals
- Bread and pasta
- Root vegetables
- Nuts
- Fruit.

Adding fibre to your food may also prevent you getting more anal tears. <sup>[7]</sup>

## Drinking lots of fluids

Drinking plenty of water and other drinks can stop you getting constipated . It also makes your stools softer and easier to pass.

## Having frequent warm baths

Having water baths can help to ease the pain caused by the tear and to relax your anal muscle. <sup>[3]</sup>

## Taking laxatives if you're constipated

Ask your doctor if you should try laxatives .

### Glossary:

#### anus

The anus, which is at the end of the rectum, is where stools leave your body when you go to the toilet. Part of the anus is a muscle that helps you hold in the stool until you are on the toilet.

#### constipated

When you're constipated, you have difficulty passing stools (faeces). Your bowel movements may be dry and hard. You may have fewer bowel movements than usual, and it may be a strain when you try to go.

#### diarrhoea

Diarrhoea is when you have loose, watery stools and you need to go to the toilet far more often than usual. Doctors say you have diarrhoea if you need to go to the toilet more than three times a day.

#### infection

You get an infection when bacteria, a fungus, or a virus get into a part of your body where it shouldn't be. For example, an infection in your nose and airways causes the common cold. An infection in your skin can cause rashes such as athlete's foot. The organisms that cause infections are so tiny that you can't see them without a microscope.

#### fibre

Fibre is all the parts of food that the body can't absorb. This is why foods that are high in fibre make you have more bowel movements. When your body can't absorb something, it leaves your body in your stools. Foods high in fibre include wholemeal bread and cereals, root vegetables and fruits.

# Anal tears

## **laxative**

Laxatives are medicines that empty your bowels by making you go to the toilet more often than usual.

## **haemorrhoids**

Haemorrhoids are swollen veins in the anus. Sometimes you can see or feel them and sometimes they are inside the anus. Haemorrhoids can hurt and bleed. They usually happen when you strain a lot to pass a stool.

## **local anaesthetic**

A local anaesthetic is a painkiller that's used to numb one part of your body. You usually get local anaesthetics as injections.

## **general anaesthetic**

You may have a type of medicine called a general anaesthetic when you have surgery. It is given to make you unconscious so you don't feel pain when you have surgery.

## **incontinence**

If you have incontinence, you cannot control when you pass urine (this is called urinary incontinence) or have a bowel movement (faecal incontinence).

## **systematic reviews**

A systematic review is a thorough look through published research on a particular topic. Only studies that have been carried out to a high standard are included. A systematic review may or may not include a meta-analysis, which is when the results from individual studies are put together.

## **angina**

Angina is the name that doctors use for a pain in your chest that you get when your heart muscle isn't getting enough oxygen.

## **high blood pressure**

Your blood pressure is considered to be high when it is above the accepted normal range. The usual limit for normal blood pressure is 140/90. If either the first (systolic) number is above 140 or the lower (diastolic) number is above 90, a person is considered to have high blood pressure. Doctors sometimes call high blood pressure 'hypertension'.

## **randomised controlled trials**

Randomised controlled trials are medical studies designed to test whether a treatment works. Patients are split into groups. One group is given the treatment being tested (for example, an antidepressant drug) while another group (called the comparison or control group) is given an alternative treatment. This could be a different type of drug or a dummy treatment (a placebo). Researchers then compare the effects of the different treatments.

## **Sources for the information on this leaflet:**

1. American Gastroenterological Association. Technical review on the diagnosis and care of patients with anal fissure. *Gastroenterology*. 2003; 124: 235-245.
2. American Society of Colon and Rectal Surgeons. Fissure and pruritus. Available at [http://www.fascrs.org/physicians/education/core\\_subjects/1998/fissure\\_and\\_pruritus/](http://www.fascrs.org/physicians/education/core_subjects/1998/fissure_and_pruritus/) (accessed on 21 February 2014).
3. American Society of Colon and Rectal Surgeons. Anal fissure. 2012. Available at [http://www.fascrs.org/patients/conditions/anal\\_fissure](http://www.fascrs.org/patients/conditions/anal_fissure) (accessed on 21 February 2014).
4. American Gastroenterological Association. American Gastroenterological Association medical position statement: diagnosis and care of patients with anal fissure. *Gastroenterology*. 2003; 124: 233-234.
5. Pfenninger JL, Zainea GG. Common anorectal conditions: part II: lesions. *American Family Physician*. 2001; 64: 77-88.
6. Nelson RL. Treatment of anal fissure. *BMJ*. 2003; 327: 354-355.
7. American Gastroenterological Association. Technical review on the diagnosis and care of patients with anal fissure. *Gastroenterology*. 2003; 124: 235-245.
8. American Gastroenterological Association. Technical review on the diagnosis and care of patients with anal fissure. *Gastroenterology*. 2003; 124: 235-245.
9. American Gastroenterological Association. American Gastroenterological Association medical position statement: diagnosis and care of patients with anal fissure. *Gastroenterology*. 2003; 124: 233-234.
10. Pfenninger JL, Zainea GG. Common anorectal conditions: part II: lesions. *American Family Physician*. 2001; 64: 77-88.

## Anal tears

11. American Gastroenterological Association. Technical review on the diagnosis and care of patients with anal fissure. *Gastroenterology*. 2003; 124: 235-245.
12. Simpson J, Lund JN, Thompson RJ. The use of glyceryl trinitrate (GTN) in the treatment of chronic anal fissure in children. *Medical Science Monitor*. 2003; 9: 123-126.
13. American Gastroenterological Association. American Gastroenterological Association medical position statement: diagnosis and care of patients with anal fissure. *Gastroenterology*. 2003; 124: 233-234.
14. Pfenninger JL, Zainea GG. Common anorectal conditions: part II: lesions. *American Family Physician*. 2001; 64: 77-88.
15. Nelson RL. Treatment of anal fissure. *BMJ*. 2003; 327: 354-355.
16. Nelson R. Operative procedures for fissure in ano (Cochrane review). In: *The Cochrane Library*. Wiley, Chichester, UK.
17. Nelson R. Operative procedures for fissure in ano (Cochrane review). In: *The Cochrane Library*. Wiley, Chichester, UK.
18. Leong AF, Seow-Choen F. Lateral sphincterotomy compared with anal advancement flap for chronic anal fissure. *Diseases of the Colon and Rectum*. 1995; 38: 69-71.
19. Nelson R. Non surgical therapy for anal fissure (Cochrane review). In: *The Cochrane Library*. Wiley, Chichester, UK.
20. Nelson RL. Treatment of anal fissure. *BMJ*. 2003; 327: 354-355.
21. Demirbag S, Tander B, Atabek C, et al. Long-term results of topical glyceryl trinitrate ointment in children with anal fissure. *Annals of Tropical Paediatrics*. 2005; 25: 135-137.
22. Jonas M, Lund JN, Scholefield JH. Topical 0.2% glyceryl trinitrate ointment for anal fissures: long-term efficacy in routine clinical practice. *Colorectal Diseases*. 2002; 4: 317-320.
23. Graziano A, Lopez LS, Lencinas S, et al. Long-term results of topical nitroglycerin in the treatment of chronic anal fissures are disappointing. *Techniques in Coloproctology*. 2001; 5: 143-147.
24. Scottish Medicines Consortium. Glyceryl trinitrate (GTN), 0.4% w/w (4mg/g), rectal ointment (Rectogesic®). Available at [http://www.scottishmedicines.org.uk/Press\\_Statements/Glyceryl\\_trinitrate\\_GTN\\_0.4\\_w\\_w\\_4mg\\_g\\_rectal\\_ointment\\_Rectogesic\\_174](http://www.scottishmedicines.org.uk/Press_Statements/Glyceryl_trinitrate_GTN_0.4_w_w_4mg_g_rectal_ointment_Rectogesic_174) (accessed on 26 February 2014).
25. Jost W, Schrank B. Chronic anal fissures treated with botulinum toxic injections: a dose-finding study with Dysport. *Colorectal Disease*. 1999; 1: 26-29.
26. Uluutku H, Akin ML, Erenoglu C, et al. Efficacy of nifedipine, glyceryl trinitrate and botulinum toxin in treatment of chronic anal fissure. *Turkish Journal of Surgery*. 2001; 17: 343-350.
27. Brisinda G, Cadeddu F, Brandara F, et al. Randomized clinical trial comparing botulinum toxin injections with 0.2 per cent nitroglycerin ointment for chronic anal fissure. *British Journal of Surgery*. 2007; 94: 162-167.
28. Lysy J, Israelit-Yatzkan Y, Sestiery-Iltah M, et al. Topical nitrates potentiate the effect of botulinum toxin in the treatment of patients with refractory anal fissure. *Gut*. 2001; 48: 221-224.
29. Samim M, Twigt B, Stoker L, et al. Topical diltiazem cream versus botulinum toxin a for the treatment of chronic anal fissure: a double-blind randomized clinical trial. *Annals of Surgery*. 2012; 255: 18-22.
30. Jost WH. One hundred cases of anal fissure treated with botulin toxin: early and long-term results. *Diseases of the Colon and Rectum*. 1997; 40: 1029-1032.
31. Jost WH, Schanne S, Mlitz H, et al. Perianal thrombosis following injection therapy into the external anal sphincter using botulin toxin. *Diseases of the Colon and Rectum*. 1995; 38: 781.
32. Brisindi G, Maria G, Sganga G, et al. Effectiveness of higher doses of botulinum toxin to induce healing in patients with chronic anal fissures. *Surgery*. 2002; 131: 179-184.

## Anal tears

33. Medicines and Healthcare Products Regulatory Agency. Botulinum toxin products: rare but serious risk. October 2007. Available at <http://www.mhra.gov.uk/Safetyinformation/DrugSafetyUpdate/CON079276> (accessed on 21 February 2014).
34. Shrivastava UK, Jain BK, Kumar P, et al. A comparison of the effects of diltiazem and glyceryl trinitrate ointment in the treatment of chronic anal fissure: a randomized clinical trial. *Surgery Today*. 2007; 37: 482-485.
35. Mustafa NA, Cengiz S, Turkyilmaz S, et al. Comparison of topical glyceryl trinitrate ointment and oral nifedipine in the treatment of chronic anal fissure. *Acta Chirurgica Belgica*. 2006; 106: 55-58.
36. Yucel T, Gonullu D, Oncu M, et al. Comparison of controlled-intermittent anal dilatation and lateral internal sphincterotomy in the treatment of chronic anal fissures: a prospective, randomized study. *International Journal Of Surgery*. 2009; 7: 228-231.

---

This information is aimed at a UK patient audience. This information however does not replace medical advice. If you have a medical problem please see your doctor. Please see our full [Conditions of Use](#) for this content. For more information about this condition and sources of the information contained in this leaflet please visit the Best Health website, <http://besthealth.bmj.com>. These leaflets are reviewed annually.

