

View this article online at: [patient.info/treatment-medication/painkillers/topical-anti-inflammatory-painkillers](https://patient.info/treatment-medication/painkillers/topical-anti-inflammatory-painkillers)

## Topical anti-inflammatory painkillers

Topical anti-inflammatory painkillers are used to ease muscle pains, sprains and strains. They can also help to ease painful arthritis. Topical anti-inflammatory painkillers are sometimes prescribed instead of oral anti-inflammatory medicines because they have fewer side-effects.

### What are anti-inflammatory painkillers?

Anti-inflammatory painkillers are a group of medicines that are used to ease muscle pains, sprains, strains and arthritis. They can be taken by mouth (tablets, capsules or liquids), injected, or applied to the skin.

When they are applied to the skin they are called topical anti-inflammatory painkillers. Sometimes they are called 'topical non-steroidal anti-inflammatory drugs' (NSAIDs), or just 'topical anti-inflammatories'.

Topical anti-inflammatories are available as gels, gel patches, sprays, or foams. They contain an anti-inflammatory medicine such as [ibuprofen](#), [diclofenac](#), [felbinac](#), [ketoprofen](#), or [piroxicam](#) and come in various brand names.

Other anti-inflammatory creams and ointments are available to ease muscle pains, strains and sprains – for example, capsaicin. However, this leaflet only discusses topical anti-inflammatory medicines.

[For information on anti-inflammatory medicines taken by mouth or injected, see the separate leaflet called Anti-inflammatory Tablets \(NSAIDs\).](#)

# How do topical anti-inflammatory painkillers work?

When anti-inflammatories are taken by mouth they work by blocking (inhibiting) the effect of chemicals (enzymes) called cyclo-oxygenase (COX) enzymes. COX enzymes help to make other chemicals called prostaglandins.

Some prostaglandins are involved in the production of pain and inflammation at sites of injury or damage. A reduction in prostaglandin production reduces pain and inflammation.

Topical anti-inflammatories work in the same way but, instead of having an effect on all of the body, they only work on the area to which you have applied them. When they are applied they are taken into (absorbed into) your skin.

They then move deeper into areas of the body where there is inflammation (for example, your muscle). They relieve pain and reduce swelling affecting joints and muscles when rubbed into the skin over the affected area.

**Using a topical preparation means that the total amount of anti-inflammatory in your body is very low. This means that you are much less likely to have a side-effect to this medicine.**

## When are topical anti-inflammatory painkillers usually prescribed?

Topical anti-inflammatories are usually prescribed if you have muscular pains, [sprains and strains](#). They can also be used to help ease pain caused by [osteoarthritis in the knee](#) or hand.

They are sometimes prescribed instead of oral anti-inflammatory medicines because they have fewer side-effects.

They may be prescribed with other measures such as, heat and ice to help reduce pain. [See separate leaflet called Ice and Heat Therapy for Pain Relief.](#)

## How well do topical anti-inflammatory painkillers work?

Topical anti-inflammatories work well to treat acute muscular pain and inflammation. Research trials provide good evidence that topical anti-inflammatories work better than dummy creams or gels. Studies suggest that topical anti-inflammatories can be as effective as tablets but have fewer side-effects.

## When using topical anti-inflammatory painkillers

Some important considerations are:

- How to apply.
- How much to apply.
- Sensitivity to light.

### How to apply

Apply to the affected area and massage into the skin gently. **Always wash your hands after you have finished rubbing the anti-inflammatory cream, gel or spray into the skin.** This is to make sure that you avoid rubbing this medicine into sensitive areas of the body such as the eyes. Do not apply to skin that is broken, or near the eyes, nose, mouth, genital or bottom (anal) areas. Do not use plasters or bandages (dressings) on top of these medicines. Generally these medicines are applied to the skin 2-4 times a day. However, for specific advice for your medicine, see the leaflet that comes inside the packet.

### How much to apply

This varies a lot, and depends upon which anti-inflammatory cream, gel, or spray you have. **Read the instructions that are inside the packet of your medicine for more details.**

## Sensitivity to light

If you are using a topical anti-inflammatory there is a risk that your skin can become sensitive to light (photosensitivity). **If you are using a preparation that contains ketoprofen you should cover the area of skin where ketoprofen has been applied (to protect it from sunlight).**

Also, you should not use a sunbed, or expose your skin to sunlight during treatment, and for two weeks after stopping.

## What are the possible side-effects?

Most people who use topical anti-inflammatories do not have any side-effects. However, side-effects occur in a small number of users. The most common side-effect is a rash. If you develop a rash when using an anti-inflammatory, you should stop the treatment and ask your doctor or pharmacist for advice.

Some people have had an allergic reaction to these medicines – this is rare. An increase in [wheezing](#) has been reported in a very small number of people who have [asthma](#). However, these side-effects have happened when people have applied very large amounts to their skin.

For a full list of side-effects and possible interactions associated with your medicine, consult the leaflet that comes with your medication.

If you cannot tolerate these medications you may need other pain-relieving medication. [See separate leaflet called Painkillers.](#)

## Can I buy topical anti-inflammatory painkillers?

Yes – you can buy some topical anti-inflammatories. For example, you can buy the smaller packs of ibuprofen gel, ketoprofen gel and diclofenac gel.

# What is the usual length of treatment?

This can vary depending on the reason for treating you, so speak with your doctor for advice. If you are using an anti-inflammatory for acute muscle pain, usually treatment lasts for as long as you have pain and inflammation. For example, a few days, or weeks. But if you are being treated for conditions like osteoarthritis, your doctor may advise you to use this medicine for the long term.

## How to use the Yellow Card Scheme

If you think you have had a side-effect to one of your medicines you can report this on the Yellow Card Scheme. You can do this online at [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard). The Yellow Card Scheme is used to make pharmacists, doctors and nurses aware of any new side-effects that medicines or any other healthcare products may have caused. If you wish to report a side-effect, you will need to provide basic information about:

- The side-effect.
- The name of the medicine which you think caused it.
- The person who had the side-effect.
- Your contact details as the reporter of the side-effect.

It is helpful if you have your medication – and/or the leaflet that came with it – with you while you fill out the report.

---

## Further reading

- [British National Formulary \(BNF\)](#); NICE Evidence Services (UK access only)
- [Osteoarthritis in over 16s: diagnosis and management](#); NICE guideline (October 2022)
- [NSAIDs – prescribing issues](#); NICE CKS, April 2020 (UK access only)
- [Analgesia – mild-to-moderate pain](#); NICE CKS, November 2021 (UK access only)

**Disclaimer:** This article is for information only and should not be used for the diagnosis or treatment of medical conditions. Navigate Health Ltd. has used all reasonable care in compiling the information but makes no warranty as to its accuracy. Consult a doctor or other healthcare professional for diagnosis and treatment of medical conditions. For details see our [conditions](#).

|   |   |
|---|---|
| <b>Last updated by:</b><br>Dr Hayley Willacy, FRCGP<br>26/03/2023 | <b>Originally authored by:</b><br>Jenny Whitehall<br>21/02/2012 |
| <b>Peer reviewed by:</b><br>Dr Toni Hazell, MRCGP<br>26/03/2023   | <b>Next review date:</b><br>24/03/2028                          |

---

View this article online at: [patient.info/treatment-medication/painkillers/topical-anti-inflammatory-painkillers](https://patient.info/treatment-medication/painkillers/topical-anti-inflammatory-painkillers)

Discuss Topical anti-inflammatory painkillers and find more trusted resources at [Patient](#).