

TOPICAL CALCINEURIN INHIBITORS



WHAT ARE THE AIMS OF THIS LEAFLET?

This leaflet has been written to help you understand more about topical (applied to the skin) calcineurin inhibitors. It explains what they are, how they work, how they are used to treat skin conditions, and where you can find out more about them. It answers common questions and provides helpful tips.

WHAT ARE TOPICAL CALCINEURIN INHIBITORS?

Topical calcineurin inhibitors (TCIs) are creams and ointments that are prescribed to treat skin conditions, such as eczema (also known as [atopic dermatitis](#)).

They reduce inflammation in the skin. This helps:

- Calming itch and soreness
- Reducing the visible appearance of eczema on the skin

There are two available TCIs in the UK:

1. Tacrolimus ointment
 - 0.03% strength: Used for moderate inflammation in children (ages 2 and older) and adults.
 - 0.1% strength: Used for significant inflammation in adults and teens (ages 16 and older).
2. Pimecrolimus cream: For mild inflammation and suitable for children as young as 3 months.

TCIs are alternative treatments to topical steroids. They do not cause skin thinning or stretch marks, or some of other side-effects associated with the prolonged use of [topical steroids](#). For this reason, TCIs are valuable

for use on areas where the skin is already thin, such as the face or around eyes, or where prolonged skin treatment may be required.

WHAT SKIN CONDITIONS ARE TREATED WITH TOPICAL CALCINEURIN INHIBITORS?

TCIs are used widely in dermatology for many skin conditions.

1. They are commonly used for the treatment of eczema, but can also be used disorders such as psoriasis, seborrheic dermatitis, lichen planus, vitiligo, necrobiosis lipoidica, cutaneous lupus erythematosus and pityriasis alba, among other conditions. The use of TCIs in conditions apart from eczema is off-licence; this means TCIs were originally tested for eczema, but over time, doctors have found that TCIs can be used in different conditions with good benefit. For further information on the licensed and off-licence use of medicines, visit our Jargon Buster webpage: www.skinhealthinfo.org.uk/support-resources/jargon-buster/
2. Sometimes, dermatologists will advise that the 0.1% strength of tacrolimus ointment is used under the age of 12 years. This is not per the product license but can be recognised and suitable treatment.

WILL TOPICAL CALCINEURIN INHIBITORS CURE MY SKIN CONDITION?

No, TCIs do not cure skin conditions, but they help control inflammation and keep symptoms under control.

HOW SHOULD I USE TOPICAL CALCINEURIN INHIBITORS?

TCIs are applied as a thin layer to an affected area. They are usually applied twice a day (morning and evening). Once the skin improves, use can be cut down to twice a week (once a day) for maintenance and symptom control. Your treating doctor may advise an exact treatment plan for your condition.

TCIs are usually applied using the 'fingertip' method. Squeeze the ointment or cream onto the tip of your finger (from the last crease of the finger to the fingertip). When using this method to treat a child, use an adult's finger as a measure. This amount of cream or ointment is enough to cover an area about the size of 2 palms.

Your healthcare professional will explain how you should apply TCIs for your skin. They may recommend use with [emollients](#) (moisturizers) and [topical steroids](#) to provide the best treatment for your skin.

WHEN SHOULD I AVOID TOPICAL CALCINEURIN INHIBITORS?

Do not use TCIs if:

- Your skin is infected (for example, red and weepy, crusty. In brown or black skin, redness may not be easily seen, and affected skin may appear more purplish or darker in colour). You may need a healthcare professional to check if your skin and recommend other treatments for the infection.
- You have a significantly weakened immune system, due to medicines that suppress the immune system (for example, azathioprine, methotrexate and biologic therapies).
- You have a certain skin condition, such as Netherton syndrome, that results in increased absorption of the TCI from the skin into your body.

Your healthcare professional will let you know if TCIs are safe for you.

WHAT ARE THE COMMON SIDE EFFECTS OF TOPICAL CALCINEURIN INHIBITORS?

Common side effects can include:

- Burning or itching when first used. This is a temporary side effect that usually gets better within a few days of continued use.
- Facial redness or darkening of colour (depending on skin tone), flushing, or irritation after drinking alcohol (this is uncommon).
- Small pimples around hair follicles (folliculitis) or extra hair growth where TCIs are applied may rarely occur
- A form of rosacea may rarely happen with prolonged TCI use.

Your healthcare professional can assess and help manage these, if they occur.

It is important to report suspected side effects of medicines. The Medicines and Healthcare products Regulatory Agency (MHRA) manages the Yellow Card scheme. This scheme collects information and safety concerns about medicines and medical devices. Anyone can report these side effects or concerns by using:

- the Yellow Card website www.mhra.gov.uk/yellowcard or
- the Yellow Card app

ARE TOPICAL CALCINEURIN INHIBITORS SAFE LONG-TERM?

TCIs are safe when used as directed. There is no evidence they damage the immune system or increase the risk of cancer, such as lymphoma or skin cancer.

DO TOPICAL CALCINEURIN INHIBITORS AFFECT FERTILITY, PREGNANCY AND BREASTFEEDING?

- Fertility: There is no evidence that TCIs affect fertility.
- Pregnancy: TCIs are not known to harm unborn babies because so little is absorbed into the body. Let your



healthcare professional know if you are planning a pregnancy or are pregnant.

- Breastfeeding: Avoid applying TCIs to areas that might come into contact with your baby's mouth. Wash your hands thoroughly after application and before any contact with your baby.

WHERE CAN I GET MORE INFORMATION ABOUT TOPICAL CALCINEURIN INHIBITORS?

Web links to other relevant sources:

<https://eczema.org/information-and-advice/treatments-for-eczema/topical-calcineurin-inhibitors/>

<https://medlineplus.gov/druginfo/meds/a602020.html>

<https://www.medlineplus.gov/druginfo/meds/a603027.html>

Jargon Buster:

<https://www.skinhealthinfo.org.uk/support-resources/jargon-buster/>

Please note that the British Association of Dermatologists (BAD) provides web links to additional resources to help people access a range of information about their treatment or skin condition. The views expressed in these external resources may not be shared by the BAD or its members. The BAD has no control of and does not endorse the content of external links.

This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.

This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel

BRITISH ASSOCIATION OF DERMATOLOGISTS

PATIENT INFORMATION LEAFLET

PRODUCED | AUGUST 2012

UPDATED | JULY 2016, SEPTEMBER 2020, MAY 2025

NEXT REVIEW DATE | MAY 2028

