



PALMOPLANTAR KERATODERMA

WHAT ARE THE AIMS OF THIS LEAFLET?

This leaflet has been written to help you understand more about palmoplantar keratoderma (PPK). It tells you what it is, what causes it, what can be done about it, and where you can find out more about the condition.

WHAT IS PALMOPLANTAR KERATODERMA?

'Palmo' refers to the palm of the hand, 'plantar' refers to the sole of the foot, and 'keratoderma' describes excessive skin thickening. Palmoplantar keratoderma is the term used for a group of conditions that cause abnormal thickening of the palms of the hand and/or soles of the feet. It is also known as 'keratosis palmaris et plantaris'.

WHAT CAUSES PALMOPLANTAR KERATODERMA?

Palmoplantar keratoderma can be genetic (hereditary) or acquired. Inherited or hereditary PPK happens when a mistake (mutation) in a gene that codes for a protein called keratin is passed from parent to child or it can happen spontaneously without a family history (acquired).

Keratin is one of the key materials in hair, nails, and the outer layer of your skin.

Acquired palmoplantar keratoderma may be due to another illness, infection, medication or as a symptom of another skin condition such as psoriasis or eczema.

IS PALMOPLANTAR KERATODERMA HEREDITARY?

Yes, some forms of palmoplantar keratodermas are hereditary (also called inherited).

Palmoplantar keratodermas can be inherited in two ways:

- Autosomal dominant keratodermas: this is likely to be passed down in every generation of a family. If one parent is affected there will be a 50% likelihood that each child will also be affected.
- Autosomal recessive keratodermas: this will be passed down less commonly. For a child to be affected, both parents will need to carry the abnormal gene for this condition. However, if only one abnormal gene is passed down to a child, this child will be a carrier. This means they will not develop the condition but can pass the abnormal gene onto their children.

WHAT DOES PALMOPLANTAR KERATODERMA LOOK LIKE?

Thickened skin on the palms or soles may appear hard and yellow, or red and flaky. Patients may also notice a red band at the edges of the thickened skin.

Palmoplantar keratoderma can be diffuse, focal or punctate:

- Diffuse: thickened skin covers the whole soles and completely across the palms. It can also include thickening of the skin over the Achilles tendon (just above the back of the heel) and/or up onto the toes.
- Focal: affects smaller areas such as over pressure points or sites of friction. It may look like calluses.
- Punctate: causes tiny bumps of thickened skin on the palms and soles.



WHAT ARE THE OTHER SYMPTOMS OF PALMOPLANTAR KERATODERMA?

Patients report thickened waxy skin on their palms and/or soles. This can cause pain and difficulty walking. Patients are susceptible to fungal infections and may notice thickening and yellow discolouration of the nails or an itchy, red, flaky rash in between the toes known as athlete's foot. Patients may also experience excessive sweating. Other symptoms may be present dependent on the type of palmoplantar keratoderma. In families affected by hereditary palmoplantar keratodermas, family members may have different symptoms and severity of the skin condition.

HOW IS PALMOPLANTAR KERATODERMA DIAGNOSED?

The diagnosis is usually clinical, meaning a doctor will take a careful history and thorough examination to determine if your symptoms are consistent with a palmoplantar keratoderma. Genetic testing may be offered if your symptoms are consistent with an inherited keratoderma. Determining the type of keratoderma will depend on the clinical features and whether it is inherited.

CAN PALMOPLANTAR KERATODERMA BE CURED?

Hereditary types of keratodermas cannot be cured. Treatment can help to control or minimise symptoms. Acquired keratodermas may improve when the underlying cause is treated.

HOW CAN PALMOPLANTAR KERATODERMA BE TREATED?

Palmoplantar keratoderma can be difficult to treat. Treatment options are varied and may differ according to the type and severity.

Topical treatments (applied to the skin)

- **Emollient** creams (moisturisers) or ointments can be used to soften and moisturise the skin. Creams or ointments containing urea also moisturise the skin.
- Peeling creams (or keratolytics) containing salicylic acid break down the outer layers of the skin allowing emollients to soften and reduce the thickness of the skin.
- Topical retinoids (derived from vitamin A) soften and break down the outer layer of the skin, but should be avoided in women who are pregnant or trying to get pregnant.
- Corticosteroids reduce inflammation of the skin and may be prescribed by a doctor. The **topical corticosteroids** may need to be used on an intermittent or regular basis as directed by your doctor.

Systemic treatments (taken orally)

Oral retinoids (**acitretin**, **alitretinoin**, **isotretinoin**) may be prescribed by a doctor. Some patients find improvement with oral retinoids, but they have not been proven effective in most forms of palmoplantar keratoderma. Women who are pregnant or trying to get pregnant should not take oral retinoids.

Light treatment (**PUVA** or re-PUVA) may be recommended by your doctor.

SELF-CARE (WHAT CAN I DO?)

Many people with palmoplantar keratoderma find self-care methods helpful in improving their symptoms. For example:

- Wearing supportive, comfortable footwear.
- If pain or discomfort is a particular problem, special insoles may help
- Regular foot care including soaking the feet, paring or filing down large



calluses and trimming the nails can help with pain and the appearance of the feet. A podiatrist can offer advice and treatment about foot care.

- Wearing socks that contain silver or moisture-wicking materials where sweating is a problem (these absorb the sweat).
- Recognising signs of an infection and getting prescribed antifungal or antibiotic medication from a doctor.

WHERE CAN I GET MORE INFORMATION ABOUT PALMOPLANTAR KERATODERMA?

Links to patient support groups:

[Ichthyosis Support Group](https://www.ichthyosis.org.uk/)

<https://www.ichthyosis.org.uk/>

Weblinks to websites:

<http://emedicine.medscape.com/article/1108406-overview#a1>

<https://www.ichthyosis.org.uk/FAQs/palmoplantar-keratoderma-ppk>

PC Project

Pachyonychia congenita is a type of painful palmoplantar keratoderma. If your doctor has told you that you have this type of palmoplantar keratoderma, the PC Project has information on this type of keratoderma on their website.

<https://www.pachyonychia.org/>

<https://www.firstskinfoundation.org/type-s-of-ichthyosis/palmoplantar-keratodermas>

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

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