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Juvenile plantar dermatosis

What is juvenile plantar dermatosis?

Juvenile plantar dermatosis is the name given to a skin problem on the feet of children. Occasionally the hands develop similar signs. It is seen most often in boys aged four to eight. It then tends to gradually improve.

The sole of the forefoot becomes shiny and glazed. The top of the toes and other parts of the feet may also be affected. The toewebs are spared. The skin becomes scaly. Painful cracks (fissures) develop under the toes and on the ball of the foot. These may take many weeks to heal.

Juvenile plantar dermatosis is usually most severe during the summer months.

Juvenile plantar dermatosis



What is the cause of juvenile plantar dermatosis?

Juvenile plantar dermatosis is often seen in 'atopic' children, i.e. those who have [atopic dermatitis](#) (eczema), asthma, or hay fever. Their skin seems generally more sensitive than others.

The problem is related to friction. Friction is greater when the foot moves up and down in a shoe, especially when the foot is sweaty. The foot gets wetter in synthetic shoes (eg. nylon or vinyl), and moves more in open sandals or jandals.

It is sometimes difficult to tell juvenile plantar dermatosis apart from [atopic dermatitis](#), [contact dermatitis](#), [psoriasis](#), [keratolysis exfoliativa](#), or a [fungal infection](#). To aid diagnosis, tests such as [scrapings](#) and [patch tests](#) may be recommended.

Treatment

Reduce friction

Wear well fitting shoes, preferably leather, with two pairs of cotton socks.

Lubricate the dry skin

Greasy [moisturisers](#) can be very helpful, including white soft paraffin (Vaseline), particularly applied after a bath and before bed. Dimeticone barrier creams are easier to use during the day, applied every four hours.

Remove the dead skin

Use heel balms regularly; these contain keratolytics such as [urea](#) and [salicylic acid](#), and humectants such as petrolatum and saccharide isomerate.

Have a rest day

Schedule quiet times with little or no walking to allow the fissures to heal.

Cover the cracks

Fissures heal faster when occluded. Plasters are usually satisfactory. Spray or liquid bandage or nail glue can be applied to the fissure and will relieve the pain. Take care not to stick the toes together!

Topical steroids

[Topical steroid](#) ointments are often prescribed, but rarely prove more effective than simple emollients. The more potent products are worth a trial for a couple of weeks. If helpful, they should then be reserved for a flare-up, particularly if the affected skin is red or itchy.

Related information

On DermNet NZ:

- [Dermatitis](#)
- [Atopic dermatitis](#)
- [Pompholyx](#)
- [Patch testing](#)
- [Psoriasis](#)
- [Tinea pedis](#)

DermNet does not provide an on-line consultation service.

If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

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