



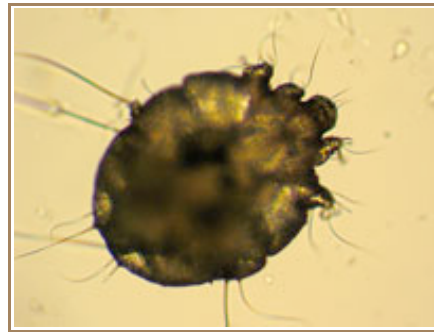
[Authoritative facts](#) about the skin from the [New Zealand Dermatological Society Incorporated](#).

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## Scabies

Scabies is an itchy rash caused by a little mite that burrows in the skin surface. The human scabies mite's scientific name is *Sarcoptes scabiei* var. *hominis*.

### *Sarcoptes scabiei*



### How does one get scabies?

Scabies is nearly always acquired by skin-to-skin contact with someone else with scabies. The contact may be quite brief such as holding hands. Frequently it is acquired from children, and sometimes it is sexually transmitted. Occasionally scabies is acquired via bedding or furnishings, as the mite can survive for a few days off its human host.

Scabies is not due to poor hygiene. Nor is it due to animal mites, which do not infest humans. However animal mites can be responsible for bites on exposed sites, usually the forearms.

Typically, an affected host is infested by about 10 –12 adult mites. After mating, the male dies. The female scabies mite burrows into the outside layers of the skin where she lays up to 3 eggs each day for her lifetime of one to two months. The development from egg to adult scabies mite requires 10 to 14 days.

### Symptoms and signs

#### Itch

The itching appears a few days after infestation. It may occur within a few hours if the mite is caught a second time. The itch is characteristically more severe at night and affects the trunk and limbs. It does not usually affect the scalp.

#### Burrows

Scabies burrows appear as tiny grey irregular tracks between the fingers and on the wrists. They may also be found in armpits, buttocks, on the penis, insteps and backs of the heels. Microscopic examination of the contents of a burrow may reveal mites, eggs or mite faeces (scybala).

#### Generalised rash

Scabies rash appears as tiny red intensely itchy bumps on the limbs and trunk. It can easily be confused with [dermatitis](#) or [hives](#) (and may be accompanied by these). The rash of scabies is due to an allergy to the mites and

their products and may take several weeks to develop after initial infestation.

### Nodules

Itchy lumps or nodules in the armpits and groins or along the shaft of the penis are very suggestive of scabies. Nodules may persist for several weeks or longer after successful eradication of living mite.

### Acropustulosis

Blisters and pustules on the palms and soles are characteristic of scabies in infants.

### Secondary infection

[Impetigo](#) commonly complicates scabies and results in crusting patches and scratched pustules. [Cellulitis](#) may also occur, resulting in localised painful swelling and redness, associated with fever.

Scabies only rarely affects the face and scalp. This may be the case in young babies and bedbound elderly patients.

## Scabies



Burrows (arrows point to mites)



Affected webspace



Burrows



Pustules on hand



Baby with scabies rash



Scabetic nodules

[More images of scabies](#)

## Crusted scabies

Crusted scabies (also called 'Norwegian scabies') is a very contagious variant of scabies in which there are thousands or even millions of mites, but very little itch. The patient presents with a generalised scaly rash. It is frequently misdiagnosed as [psoriasis](#). Unlike the usual form of scabies, crusted scabies may affect the scalp.

Crusted scabies is most likely to affect individuals with a poor immune system, neurological diseases, the elderly or those with mental incompetence. It is the usual cause of severe outbreaks of scabies in an institution such as a hospital, rest home or prison.

People in contact with someone with crusted scabies may become very itchy, with tiny red spots and blisters on exposed areas; these people are not always infested themselves but must be treated with insecticides just in case they are carrying the mite.

## Crusted scabies



## Diagnosis

Scabies can affect children, young adults and the elderly in every community. Think of it if you or your child has developed a widespread itchy rash, especially if there's been close contact with another itchy person. However, not everyone who itches has scabies; dermatitis is not contagious and is much more common in New Zealand.

If you or your doctor consider scabies a possible explanation for an itchy rash, the diagnosis can be confirmed by microscopic examination of the contents of a burrow. However, even experienced dermatologists only recover a mite or an egg in about 50% of cases of scabies.

A new technique using [dermoscopy](#) makes it easier to identify a mite at the end of a burrow by its characteristic "jet-plane" appearance.

### Dermoscopy of scabies burrows Red arrow points to mite



## Treatment

Scabicides are chemical insecticides used to treat scabies. Those available in New Zealand include:

- 25% Benzyl benzoate lotion, applied daily for 3 days

- 5% Permethrin cream, left on for 8–10 hours
- 0.5% Aqueous malathion lotion, left on for 24 hours

Gamma benzene hexachloride cream is no longer recommended because of resistance and potential toxicity. Sulphur and crotamiton were popular in the past but are relatively weak scabicides.

The scabicide has to be applied before bed to the whole body from the chin to soles. The scalp and face also need to be treated in children under 2 years, those confined to bed, and some others with reduced resistance.

A repeat treatment a week later is often recommended. It should not be repeated for several weeks after that without medical advice. Overuse of insecticides will irritate the skin.

Each treatment with scabicide should be followed the next morning by laundering or dry cleaning of sheets and pillow cases and any clothes worn against the skin over the last week. Clean carpet and furnishings with a vacuum cleaner.

Most people's itch improves within a few days of treatment but it may take 4–6 weeks for the itch and rash of scabies to clear completely because of dead mites at the skin surface. These will be slowly cast off.

To reduce the risk of the treatment failing:

- Ensure the scabicide is applied to the whole body from the chin down.
- Leave it on for the recommended time and reapply it after washing.
- Apply the scabicide under fingernails using a soft brush.
- Obtain antibiotics from your doctor if there is crusting and secondary infection.
- Ensure all close contacts are treated whether or not they are itchy.

## Persistent rash

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Occasionally a rash persists even though every mite has been killed. Reasons for this include:

- Scabies nodules may take several months to settle down. They are not infectious. A [topical steroid](#) may help; apply it accurately to each bump.
- The scabies can result in dermatitis. [Dermatitis](#) can be due to the mite, the scratching, the treatment or other factors. Persistently itchy patches should be treated with frequent applications of [emollients](#) and mild topical steroids.
- The diagnosis may be incorrect. Scabies can be confused with a number of other skin conditions, particularly [dermatitis](#) and [papular urticaria](#). If you have an itchy rash, your doctor may treat you for scabies 'just in case', even when it is more likely you have another skin disorder. This is because it is important to treat scabies vigorously to prevent other people catching it.
- Resistance to treatment. Scabies occasionally appears to be resistant to the prescribed scabicide. Obtain advice from your doctor; a different scabicide or other treatment may be prescribed. You may be referred to a [dermatologist](#).

Although not officially registered in New Zealand for treating scabies, oral [ivermectin](#) has proved very effective and is now considered treatment of choice for crusted scabies and other resistant cases.

### Related information

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#### On DermNet NZ:

- [Skin conditions related to arthropods](#)
- [Pruritus \(itch\)](#)
- [More images of scabies](#)

#### Other websites:

- [Scabies](#) – Medline Plus

- [Video of scabies mite](#) ihotauti.net, Prof R Suhonen (DermNet contributor)
- [Scabies](#) - emedicine dermatology, the online textbook

**Books about skin diseases:**

See the [DermNet NZ bookstore](#)

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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