



Managing scabies

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Scabies is a highly contagious skin infestation that is caused by a mite known as *Sarcoptes scabiei* (Figure 1). This mite is microscopic and therefore cannot be seen with the naked eye. The scabies mite can affect anyone of any age and socioeconomic status. However, it does more commonly occur in crowded conditions (such as in nursing homes or prisons), as well as in areas where there is a lack of resources.



Figure 1: *Sarcoptes scabiei*
Centers for Disease Control and Prevention (CDC). Scabies.
[updated 2 Nov 2010; cited 26 March 2020]. Available from: <https://www.cdc.gov/parasites/scabies/index.html>

How does the mite enter the skin?

This microscopic mite reproduces on the surface of the skin and then the female mite burrows into the upper layer of the skin and lays eggs. The symptoms of scabies may take up to six weeks to appear.

What are the symptoms of scabies?

Classic scabies: The earliest and most common symptom of scabies is a rash that is intensely itchy, especially at night.

This intense itch (pruritis) is due to a hypersensitivity reaction to the mite itself, the mite faeces and the mite eggs. The rash appears as multiple raised, red bumps (papules) that may have a damaged or chafed appearance.

Most of the body may be affected. However, the most common sites include:

- The wrist, elbow, armpit, penis, nipple, waist, buttocks, shoulder blades, and the area between the fingers (webbing).

In most cases, the head and the back are not affected. However, the elderly, young children and immunosuppressed patients can sometimes present with scabies on the head and neck.

Burrow tracks may sometimes be seen on the skin, which appear as raised, silvery lines with a small round spot on one end (most commonly detected between the fingers, or in the folds of the wrist, elbow or knee) (See Figure 2).

Burrows may not be easily identifiable, as scratching may damage the tracks.



Figure 2: Rash caused by scabies mite
Centers for Disease Control and Prevention (CDC). Scabies Fact Sheet. [updated 31 Oct 2017; cited 26 March 2020]. Available from: https://www.cdc.gov/parasites/scabies/fact_sheet.html

Crusted scabies (Norwegian scabies): This is a severe form of scabies affecting mostly people with weakened immune systems and the elderly. It presents as thick crusts over the skin and may also contain vesicles. The typical rash and itching that is seen in classic scabies, may not be present in patients with crusted scabies.

How is scabies transmitted?

The scabies mite is easily transmitted from person to person, mostly through prolonged direct skin contact. However, the mites may also be spread indirectly through infested furniture, bedding, and clothes. The mites infecting animals do not cause infestation of human skin.

What are the complications of scabies?

The intense itching leads to continuous scratching, which may lead to a secondary bacterial skin infection (impetigo).

How is scabies managed?

Scabies may be treated with topical preparations (scabicides). More severe (crusted) or widespread scabies may need oral therapy prescribed by a doctor.

Topical over-the-counter (OTC) treatment includes benzyl benzoate lotion or permethrin lotion. Either of these scabicide lotions may be applied after bathing or showering (preferably in the evening).

Benzyl benzoate

Adults and children over six years of age:

- Apply a thin layer of 25% benzyl benzoate undiluted over the whole body from neck to feet and rub in well (do not apply to head)
- Leave the lotion on the body for 12–24 hours (overnight)
- Wash off with soap and water
- Repeat above process after one week if necessary

Permethrin

Adults and children over six years of age:

- Apply the 5% permethrin lotion undiluted on the whole body from the neck to feet
- Leave the lotion on overnight (8–12 hours) and wash off the following morning
- Treatment may need to be repeated after one week

Crotamiton

Used to manage pruritis after scabies.

- Apply to whole body after bathing (except for face and scalp)
- Repeat once daily for five days

Sulfiram

While not used to treat scabies infections, sulfiram in soap form (monosulfiram), can be used as a prevention measure controlling outbreaks of scabies in institutions, such as boarding schools, nursing homes, hospitals, etc.

Practical points

- Patients should be advised that they may still experience itching for several days or weeks after completion of treatment, and that this does not necessarily mean that the treatment was unsuccessful.
- Patients should be referred to a doctor if their skin is still itching four weeks after treatment has been completed.
- Babies and children should be referred to a doctor.
- Patients with infected skin should be referred to a doctor.
- All household members, close contacts and sexual contacts need to be treated, even if they do not have any symptoms of scabies.
- The scabies mite only lives for about 24 to 36 hours after leaving its host. It is therefore recommended to wash clothes and bedding at a minimum of 50 degrees Celsius after the first treatment to prevent possible reinfestation. If clothing cannot be washed, they should be placed in a sealed bag for three days until mites die.

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