UNIVERSITY STUDENT HEALTH SERVICES • Fact Sheet

SCABIES

WHAT IS IT?

Scabies is an infestation of the skin caused by the human itch mite, *Sarcoptes scabiei*. The microscopic scabies mite burrows into the upper layer of the skin to live and lay eggs. The characteristic rash and intense itching are due to an allergic reaction to the proteins and feces of the mite. Scabies mites usually survive no more than 2-3 days away from human skin.

HOW IS IT TRANSMITTED?

- Scabies is spread by direct, prolonged skin-to-skin contact with an infested individual. Sexual partners and household members are likely to become infested. Casual skin intact is unlikely to result in transmission.
- Sharing towels, bedding, clothing, and other objects is a less common means of transmission. This is more likely with severe cases of scabies, known as crusted scabies.
- Pets can become infested with a different species of scabies mite and develop mange. If a human has close contact with an infected animal, he or she can develop a mild rash and itching. However, the mites that infect animals will not reproduce on humans and will die within a few days. Therefore, no specific treatment is required for humans, but the infected pet should be treated for mange.

WHAT ARE THE SYMPTOMS?

- Widespread itching can be severe and is usually worse at night. The itching usually develops within 3-6 weeks of the first infestation but can occur within days if the person has been exposed to scabies in the past. Even though symptoms may not appear for up to 6 weeks, the infested person is still able to spread scabies during that time.
- A rash consisting of multiple small red bumps is common. The rash is usually found between the fingers and toes, skin folds around the wrists/elbows/knees, armpits, nipple area, belt line, groin area (including the penis and scrotum), buttocks, upper thighs, and the sides/bottoms of the feet. It usually spares the head, neck, and back of adults.
- Small gray/red/brown burrows or ridges, due to tunneling of the female mite under the skin, may be visible. This finding is uncommon but strongly supports a diagnosis of scabies.

HOW IS IT DIAGNOSED?

Scabies is usually diagnosed based on your symptoms and physical exam findings. A microscopic examination of the skin may show the mite or eggs. However, a negative test does not rule out infection because of the low number of mites in patients with classic scabies.

WHAT IS THE TREATMENT?

- **PRESCRIPTION MEDICATIONS:** First-line agents include permethrin cream and oral ivermectin, both of which are generally well-tolerated.

  Permethrin (Elimite) 5% cream is highly effective against scabies, with cure rates exceeding 90%. Permethrin kills mites and eggs for several days following treatment.
  - Massage the cream thoroughly into clean, dry skin from the neck down to the soles of the feet.
    - Include the skin between fingers & toes, under the nails, and in naval & buttock folds.
    - Do not apply permethrin to the vagina, the tip of the penis, the eyes, the nose, the mouth, or to any areas of open skin.
  - The cream is usually applied at bedtime and left on overnight (for 8-14 hours or as directed on the product label). It is washed off in the shower/bath the next morning. Clean clothing should be worn after treatment.
  - A second application of permethrin 1-2 weeks later is sometimes necessary.

❖ **PRESCRIPTION MEDICATIONS (continued)**

Ivermectin (Stromectol) is an alternative first-line treatment for scabies. It appears to be as effective as topical permethrin in clinical studies and is often preferred due to ease of use.

- Ivermectin is taken by mouth as a single dose, with a repeat dose given 1-2 weeks later.
- Oral ivermectin is not a first-line treatment in pregnant or lactating women and in young children. Permethrin cream is the treatment of choice in these populations.

Other Agents

- Topical ivermectin is another treatment option that appears to be effective against scabies. In one study, ivermectin 1% lotion was as effective as topical permethrin.
- Topical spinosad was approved by the FDA in 2021 for the treatment of scabies in adults and children ≥ 4 years of age. Its efficacy compared with first-line treatments is unclear.
- Other topical treatments are available but considered second-line due to low availability, higher cost, and/or higher risk of drug toxicity.

❖ **SKIN CARE & ITCHING**

- Antihistamines and/or steroid creams can help reduce itching.
  - Consider taking a non-sedating antihistamine (such as Zyrtec, Claritin, or Allegra) during the day and a sedating antihistamine (such as Benadryl 25-50mg) at bedtime.
  - Prescription steroid creams can be used twice daily if needed for itching. Only a thin layer is needed. Overuse can lead to thinning and whitening of the skin.
- Avoid excess soap and hot water, as they can dry out the skin and intensify the itching.

❖ **GENERAL ENVIRONMENTAL MEASURES**

Immediately following medical treatment, it is important to treat your belongings and living space (in particular, objects and areas that have had prolonged contact with you in the last 3 days):

- Wash in HOT water and dry in a HOT dryer all contaminated clothing, head gear, bedding, and towels used by the infested individual and close contacts during the 3 days prior to treatment. Ironing washed items is also effective.
- Items that cannot be washed (eg. stuffed animals) should be dry-cleaned or sealed in a plastic bag for at least 3 days to kill the mites.
- Vacuum rugs and upholstered furniture used by individuals diagnosed with a severe case of scabies (crusted scabies). Discard the vacuum bag immediately.
- The use of pesticides is not recommended and may be harmful.

❖ **RETURN TO SCHOOL/WORK**

Infested individuals can usually return to school or work the day after completing the first treatment.

DO CLOSE CONTACTS NEED TREATMENT?

Yes, it is generally recommended that close contacts of an infested individual receive simultaneous treatment since symptom onset is often delayed for weeks. This usually includes household members, sexual partners, and individuals with whom you have had prolonged physical contact in the last 6 weeks. Teachers and classmates without symptoms usually do not require treatment.

HOW DO I KNOW IF I AM BETTER?

❖ Treatment is likely successful if active lesions resolve and nighttime itching is gone by 1 week after treatment. However, it is not unusual for itching to persist for 2-4 weeks after successful treatment.

❖ Symptoms should progressively improve. Retreatment may be necessary if itching persists beyond 4 weeks or if new rashes/burrows continue to appear 48 hours after treatment.

RECOMMENDED WEBSITES: www.cdc.gov, www.mayoclinic.org