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Human Scabies

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GENERAL

Scabies is a skin condition, also known as “seven year itch” or “Norwegian itch,” produced by almost invisible (0.015 inches long) parasitic mites commonly referred to as “itch mites,” *Sarcoptes scabiei* (DeGeer).

There are several varieties of itch mites that can be distinguished only by the host they attack. Dog, pig, horse and human itch mites are known to exist. Though it is possible for people to be infested with non-human varieties, usually little to no adverse effect is produced.

BIOLOGY

Itch mite nymphs and adults are whitish in color and have eight short, pointed legs equipped with suction devices on the two front pairs and long hairs on the remaining hind legs (Fig. 1). The life cycle of the human itch mite consists of the egg, six-legged larval, eight-legged nymphal and adult stages. The period from egg to mature adult takes 10-14 days at body temperature. These mites seldom survive more than a few hours off their host.

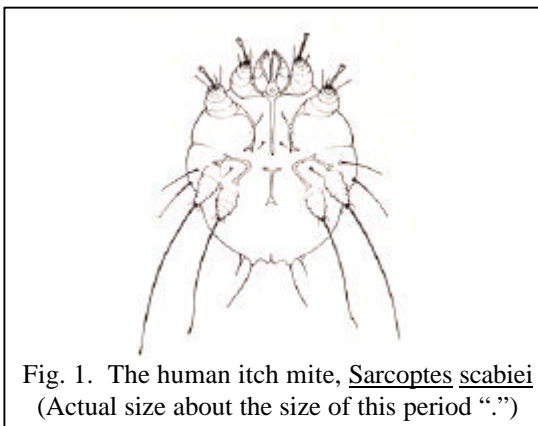


Fig. 1. The human itch mite, *Sarcoptes scabiei*
(Actual size about the size of this period “.”)

INJURY & SPREAD

Mature female mites are responsible for the majority of the skin irritation caused by tunneling in the upper skin layer. The female will deposit eggs in tunnels that extend over one inch in length at 2-3 day intervals over a two-month period. Once the eggs hatch (3-8 days), emerging larvae exit the tunnels and remain on or near the surface of the skin until they reach adult stage. During this time, male mites move about the skin surface where it is thought they mate with females. These newly fertilized female mites are highly active and are thought to be the contagious stage. Itch mites are primarily transmitted through close personal contact, though bed linens and clothing may serve as secondary sources.

SIGNS, SYMPTOMS & DIAGNOSIS

Red patches of skin on various regions of the body characterize scabies. The most common infested areas include: the wrists, elbows, breasts, penis, bends of the knees, between the fingers, and between the fold of buttocks. Sometimes the actual raised tunnels or bumps produced by the mites can be seen. Tunneling mites may produce severe itching which can be caused by toxic substances released from them. Often, constant itching causes the individual to become pale and haggard from loss of sleep. Scratching to relieve itching frequently leads to secondary bacterial infections that may become more serious than actual scabies. Widespread allergic reactions may also occur due to the mites' presence.

First-time infestations often cause no immediate itching, although sensitivity normally occurs after one month. Thereafter, subsequent infestations result in reactions within the first 24 hours. Infestations producing these symptoms typically involve less than 12 adult mites. Diagnosis is best made by applying mineral oil to the affected skin surface (i.e. where tunnels occur), scraping the skin with a scalpel, and examining under a microscope.

CONTROL

1. Recognize signs/symptoms of a possible infestation and attempt to recover mites for identification (see above).
2. Inspect all individuals coming in contact with infested person(s).
3. Treat all infested persons with one of the recommended miticides listed in the following treatment section. Prophylactic treatment of non-infested persons should be

avoided unless screening programs are not effectively suppressing an outbreak.

4. Isolate infested person(s) for 24 hours after treatment has been applied.
5. Machine wash bed linens, clothing and all other possible contaminated articles in hot (130°F) water and soap or tightly sealing non-washables in plastic bags for two weeks.

TREATMENT

Ointments containing 5% permethrin cream (Elimite[®]), benzyl benzoate, crotamiton (Eurox[®]) sulfur, tetraethylthiuram monosulfide (Tetmosol[®]), thiabendazole, or 1% lindane (Kwell[®]) are the most widely recommended medications for itch mite control. These products are available only through a physician by prescription and should be applied strictly according to labeled and/or prescribed directions.

For More Information & Photographs

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Greene, A. 1996. What is the appropriate medication to use for scabies?
<http://www.drgreene.com/961118.html>

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