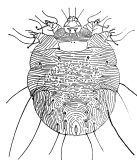


SCABIES MITE



CLASSIFICATION - DISTRIBUTION

Of the species of mites that directly affect humans, none are more notorious than the Scabies Mite (*Sarcoptes scabiei hominis*). This species invades the skin and produces a severe itching rash that is often difficult to control with conventional treatment. Scabies mites are found worldwide with human infestation rates highest in developing countries or in situations where high human contact and poor sanitation occur simultaneously.

GENERAL CHARACTERISTICS

Adult mites are microscopic sized (males 0.2mm and females 0.5mm in length) arthropods characterized by having oval bodies with either a cream or slightly brownish coloration. The skin (cuticle) of the mite is textured with fine striated lines arranged in an intricate pattern that is somewhat suggestive of a human fingerprint. The four pairs of legs are arranged with the fore pair attached at the anterior (head) end of the body while the remaining two hind pairs attached ventrally toward the posterior (rear) end. The anterior legs of both males and females possess long delicate suction pads that also are present on the last hind pair of legs on males.

LIFE CYCLE

This species spends its entire life within a 5 to 15mm long burrow excavated in the skin of the human host. Males and females mate within the female burrow. A female will lay on the average of 40 to 50 eggs within her burrow. The eggs will typically hatch in about three days. The newly hatched larva (six-legged stage) immediately begins feeding and soon molts to the first nymphal stage (protonymph). This stage is soon followed by the second (tritonymph) nymphal stage. Interestingly, the tritonymphs resemble the adult, but are not yet capable of reproducing. During their development, the nymphal stages leave the parental burrow and enter nearby hair follicles to feed.

PUBLIC HEALTH SIGNIFICANCE

Scabies are transmitted from human to human via close personal contact. Intimate contact is necessary for successful transfer of mites from infested to uninfested persons because these mites die quickly once separated from their host. Multiple infections can occur among family members and cohabitants of dormitories, mental institutions, and day care facilities. Burrows occur in the skin between the fingers and on the elbows. The skin of the scrotum, penis, breasts, knees, and buttocks also is often invaded. The scalp and face of children can be affected in severe infestations.

TREATMENT

A typical scabies infestation may involve fewer than 20 mites. Severe itching and development of a rash can occur in regions of the skin not directly involved with an active infestation. Often itching and rash may occur in mite free areas around the armpits, waist, and back of the calves. Severe infestations can lead to uncontrollable scratching and an inevitable secondary bacterial infection. Severe cases of secondary infection frequently require aggressive and prolonged medical treatment.

It is important that a scabies infestation be diagnosed by a professional to facilitate proper care and treatment. An astute physician should examine the skin closely for the presence of the burrows in the skin between the fingers and in the folds of skin of the wrists and elbows. There are a number of effective treatments for controlling a scabies infestation. If treatment with chemical products is prescribed by a physician, then carefully follow the instructions printed on the product label. A second treatment may be required 7 to 10 days following the initial treatment in order to kill any surviving eggs and newly hatched larvae.

