

How long do mites survive once the host dies?

- *Sarcoptes scabiei* var. *canis* (mange on dogs) can survive **between two days and three weeks** off a host, depending on relative humidity and temperature. Low temperature (10-15°C) and high relative humidity prolong survival of all life stages (larva, nymph, adult). However even when environmental conditions are poor for mite survival, mites at all life-stages can survive for at least two days.

- *S. scabiei* var. *canis* mites were found to survive off the host for **19 days** at 10°C and 97% relative humidity. Generally, higher humidity and lower temperatures favoured survival, whereas higher temperature and lower humidity led to early death. Most canine scabies mites that were held off the host for 36 hours at 75% relative humidity and 22-24°C remained infestive and penetrated when returned to the host (Arlian *et al.* 1984).

- Mites survived **8-19 days** at 10°C-25°C and high relative humidity, but died after a few hours when the ambient temperature was increased to 25°C-45°C and humidity was decreased to 45% (Arlian *et al.* 1989).

How long after the host dies are mites able to infect other mammals?

- Under experimental conditions, mites **remain infective at least one-half to two-thirds of their survival time** after being dislodged from their host (Arlian 1989).

How fast is infection?

- The time needed for scabies mites on humans, after being immediately transferred from one host to another, to begin penetrating the skin was around 10 minutes (Arlian *et al.* 1984), and it took the mites approximately 35 minutes to become completely submerged (Bornstein *et al.* 2001).

Mites may be transmitted from a carcass by flies!

Larval mites may **survive on the ovipositors of flies for more than 24 hours** after contact between a fly and a dead mangy carcass, indicating the possibility of transmission of mange via flies (Zeh 1974).

General

- Long survival off the host, together with host-seeking behaviour, make environments contaminated with *Sarcoptes scabiei* a likely source of scabies in domestic and wild mammals as well as humans (Arlian *et al.* 1989).

References

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