

CHROMO-TROPISM IN HEAD LOUSE

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ABSTRACT

Lice are blood-feeding insects. They are translucent when they are born and are nearly not visible. They change their color as they mature from nymph to adult matching the hair color of their host and they mostly appear red or brown when they are closer to hatching.

Introduction:

Louse are tiny crawling ectoparasites that depend on human blood for food. They are mostly common in children aged from 3 to 12 years. Head lice is not a health hazard but surely a sign of poor hygiene as they transfer from head-to-head and they can survive up to 30 days on their host. They change their color when they go from nymph to adult stage which is chromotropism (1, 5).

Lifecycle

P. capitis lays its eggs singly and glued to the hair shaft where they can be incubated by warmth. The eggs appear whitish translucent so are very hard to detect. The eggs hatch and the nymph come out. Nymph sucks more amount of blood compared to adult as they require more energy and growth. The timing of head lice maturation is most favorable to their survival in the presence of anti-lice agents in the maximum time as an ovum (12 days) and the shortest possible time of maturing from newly hatched nymph to egg-laying adult (8.5 days). The nymph matures into fully mature adults of 13mm of size that are maximum in size and they cannot walk because of their heavy weight and size. The adult lice can begin to create more eggs as soon as they hatch and keep laying as they hatch and the cycle goes on. The complete life cycle of lice is a maximum of 35 days. They die after that and the empty skeleton is left in their hair. The louse are obligate parasites that cannot jump but climb speedily from hair to hair (3, 4, 6).

helps to understand how they survive and adapt. This little exploration of lice colors also leads to larger concerns about bugs and living things in general.

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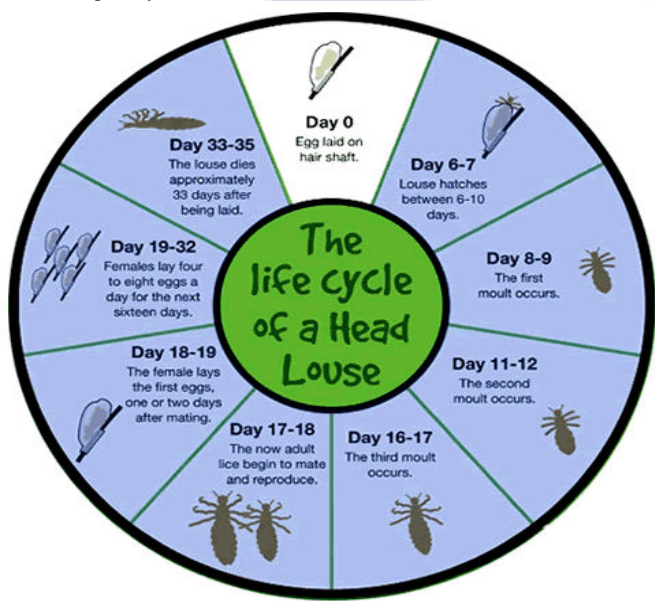


Figure: An explanation of lifecycle of human head louse and chromotropism in its life cycle stages

Treatment, prevention and control

Effective prevention involves combing to remove nits and adults. Medical treatment involves anti-lice shampoos and some ointments. Keep your towels and pillows separate. Regular monitoring and prompt intervention are vital in handling life cycle infestations. Carbaryl shampoo and combs are used for control and prevention as the most common method (2, 7).

Conclusion

In a nutshell, lice are tiny creatures that live on human heads and require their blood to survive. They go through various stages as they mature, from see-through eggs called nits to darker adults. These hue shifts are triggered by a process called sclerotization, which is similar to a magic trick that makes their outer layer hard and dark. As they get older, they put on a new suit. Their colors can be affected by factors such as their age, genes, and location. Looking closely at their color journey isn't just about their appearance; it also