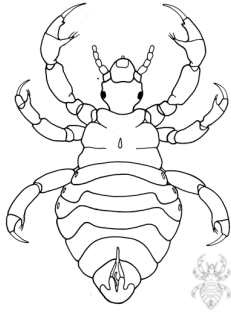


Human Lice



Head louse, with life-sized inset.

Have you ever wondered where the phrases “getting down to the nitty gritty” or “nit-picking” come from? These are ancient sayings that refer to removing louse eggs or nits. Calling someone a “nitwit” is the same as saying they have the intelligence of a louse egg. Humans have a long and close association with lice. Egyptian mummies were often buried with louse combs.

Lice are flat-bodied, wingless insects that live exclusively on blood. Human body, head and crab lice are exclusively human parasites and cannot feed on any other animals. These insects are wingless, and have legs adapted for crawling through hair or on clothing. Lice are not capable of jumping any distance. Human lice must feed every 24 hours, and if they cannot do so they quickly starve to death.

Lice can be detected by persistent itching and redness, particularly on the scalp on the back of the head or on pubic areas, depending on the kind of louse. The eggs, or nits, can be recognized immediately as they are white to grey and are glued firmly to hairs in head and crab lice. If only nits are observed and never any lice, then the “nits” should be examined under magnification. Skin flakes and other debris in the hair can closely resemble nits, but appear lumpy, or angular and asymmetrical under magnification. Louse eggs, even when dead, appear smooth and rounded.

Treatment. Lice can be killed using a number of insecticidal shampoos available on the market. However, a minimum of two treatments are necessary, separated by two weeks. Although adults are generally susceptible to these compounds the nits may be relatively impervious to insecticides. It takes 10-14 days for the eggs to hatch, thus the need for a second treatment. Nits should also be removed with a fine-toothed louse comb or with the fingernails. Children with head lice need to be routinely inspected. Any hats or clothing that come up to neck level should be washed; as should bedding. This should be done corresponding with each shampoo treatment. Head lice cannot live more than a day off the human head.

Head lice (*Pediculus humanus capitis*) are commonly found in preschoolers and elementary school aged children. They are transmitted from individual to individual by direct contact, head to head, or head to hat to head. They live only in the hair on the head, though not facial hair, and nowhere else. Eggs are cemented to hairs on the head and not on clothing. It takes roughly 21 days for the entire life cycle from egg to egg. These lice are not known to transmit any disease pathogens. They also have very specific temperature requirements and will die if the temperature drops too low.

Body Lice (*Pediculus humanus humanus*) are also called “cooties”. Although closely related to the head louse, this louse differs biologically in a number of significant ways. Body lice lay their eggs in clothing, cementing them to fibers. Adult and immature lice actually shelter in the seams and folds of clothing worn for long periods, moving onto the host only to feed. The life cycle is 9-10 days from egg to adult, unless clothing is removed at night. Then complete development might take 2-4 weeks. However, these lice will die if clothing is not worn for several days. Body lice are known to transmit epidemic and relapsing typhus in a few parts of the world. Body lice are found in the United States, but only in indigent populations, particularly the homeless.

Crab or Pubic Lice (*Phthirus pubis*) are shorter and broader than the other two types of human lice. The general life style is essentially the same as the head louse, except that the crab louse is generally found on pubic and armpit, and less commonly facial hair. It also can survive only short periods off the host, and is transmitted primarily by human to human contact, particularly sexual contact. This louse is not known to transmit any disease causing pathogens.



Louse egg (left), pubic louse (right).

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