

WELCOMB®

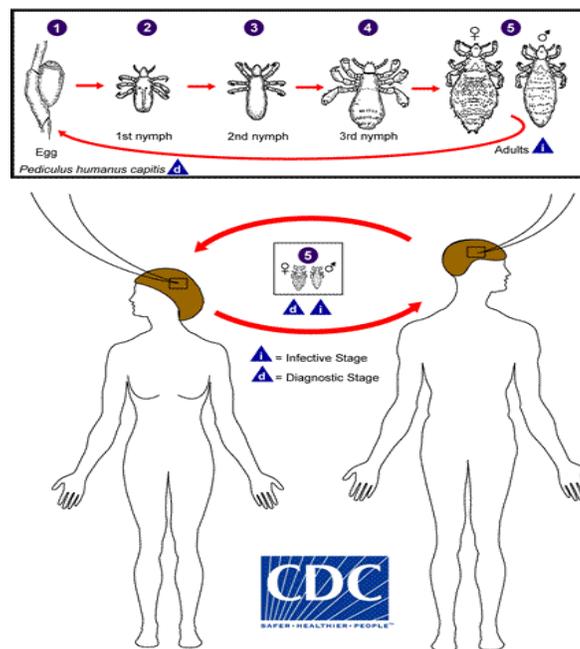
Life Cycle of the Head Louse

CDC: The life cycle of the head louse has three stages: egg, nymph, and adult.

Eggs: Nits are head lice eggs. They are hard to see and are often confused for dandruff or hair spray droplets. Nits are laid by the adult female and are cemented at the base of the hair shaft nearest the scalp **1**. They are 0.8 mm by 0.3 mm, oval and usually yellow to white. Nits take about 1 week to hatch (range 6 to 9 days). Viable eggs (nits) are usually located within 6 mm of the scalp.

Nymphs: The egg hatches to release a nymph **2**. The nit shell then becomes a more visible dull yellow and remains attached to the hair shaft. The nymph looks like an adult head louse, but is about the size of a pinhead. Nymphs mature after three molts (**3**, **4**) and become adults about 7 days after hatching.

Adults: The adult louse is about the size of a sesame seed, has 6 legs (each with claws), and is tan to grayish-white **5**. In persons with dark hair, the adult louse will appear darker. Females are usually larger than males and can lay up to 8 nits per day. Adult lice can live up to 30 days on a person's head. To live, adult lice need to feed on blood several times daily. Without blood meals, the louse will die within 1 to 2 days off the host.



Life cycle image/information courtesy of [DPDx](#).

Why is it important to understand the Life Cycle of the Head Louse?

The three stages of the louse life cycle are egg/nit, nymph, and adult, and altogether, the life cycle lasts approximately 45 days (CDC). To effectively get rid of lice infestation you have to make sure that lice and nits are able to be eradicated at any given stage. Head lice live on people, not things and need a human host and will die within 24 hours if host is not available. Eggs can remain viable for a bit longer but once hatched they must feed on

a human host or will die within hours. The myths about poor hygiene, transmission by pets, spread on household items and shared clothing and lice flying and jumping are just that-MYTHS.

Lice and nits live on human heads and are transmitted via head to head contact. The best way to get rid of a lice infestation is to get rid of both the louse and the viable nit concurrently. It is more important to understand that just getting rid of live lice may not solve the problem. You have to additionally get rid of any viable nits that will hatch and if able to mate, start the whole life cycle again.

When this cycle is not stopped you get repetitive infestations.

Combs for the removal of adult lice and nits have been used since ancient times. This method not only is for treatment but can be for prevention. Combing is used to remove mature lice which might otherwise lay eggs and perpetuate the life cycle and remove viable nits before they hatch, potentially mate and restart the life cycle. With patience and diligence all live lice and viable nits can be removed on the first combing. But for added precaution additional combings are recommended every 3-4 days over a two-week period. This assures that the life cycle will be broken and reinfestation will be avoided. Combings can also be done prophylactically, allowing for the discovery of newly acquired lice.

If resistance to available OTC products has been proven in the community, if the patient is too young, or if parents do not wish to use a pediculicide, consider the manual removal of lice/nits by methods such as “wet-combing”

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Cynthia D. Devore, Gordon E. Schutze, The Council on School Health and Committee on Infectious Diseases.
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