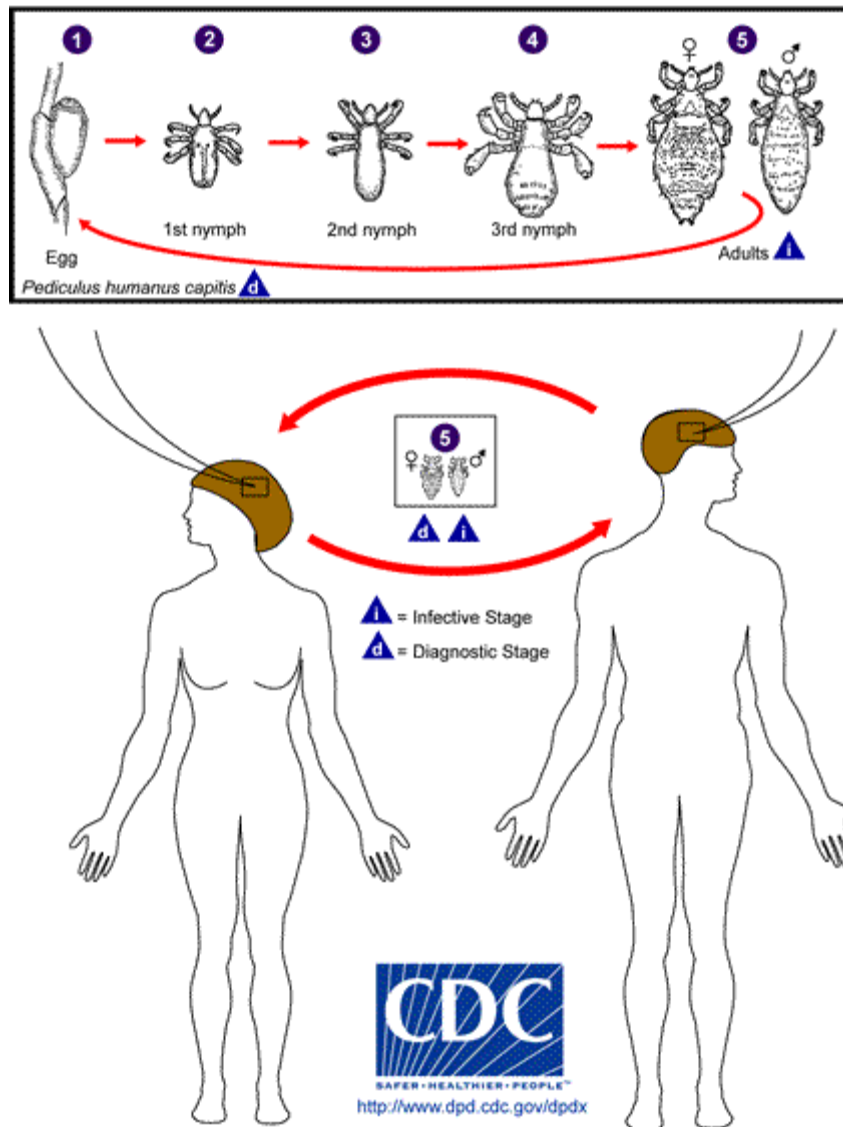


Head Lice

Causal Agent:

Pediculus humanus capitis, the head louse, is an insect of the order Anoplura and is an ectoparasite whose only host are humans. The louse feeds on blood several times daily and resides close to the scalp to maintain its body temperature.

Life Cycle:



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 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.

Geographic Distribution:

Head lice infestation is very common and is distributed worldwide. Preschool and elementary-age children, 3 to 10 years of age are infested most often. Females are infested more often than males, probably due to more frequent head to head contact. In the United States, African-Americans are rarely infested with head lice. This is believed to be due to the American louse's preference for the shape and width of the hair shaft of other races.

Clinical Features:

The majority of infestations are asymptomatic. When symptoms are noted they may include a tickling feeling of something moving in the hair, itching, caused by the an allergic reaction to louse saliva, and irritability. Secondary bacterial infection may be a complication.

Modes of Transmission:

The main mode of transmission is contact with a person who is already infested (i.e., head-to-head contact). Contact is common during play (sports activities, playgrounds, at camp, and slumber parties) at school and at home.

Less commonly, transmission via fomites may occur. Wearing clothing, such as hats, scarves, coats, sports uniforms, or hair ribbons worn by an infested person; using infested combs, brushes or towels; or lying on a bed, couch, pillow, carpet, or stuffed animal that has recently been in contact with an infested person may result in transmission. Of note, both nymph and adult lice forms need to feed on blood to live. If an adult louse does not have a blood meal, it can die in 2 days.

Laboratory Diagnosis:

The diagnosis of pediculosis is best made by finding a live nymph or adult louse on the scalp or in the hair of a person. Finding numerous nits within 6 mm of the scalp is highly suggestive of active infestation. Finding nits only more than 6 mm from the scalp is only indicative of previous infestation.

Diagnostic findings

- Microscopy

Treatment:

Requires using either a prescription or an over-the-counter (OTC) medication.

