

Management of Pediculosis Information Packet

What are head lice?

The head louse, or *Pediculus humanus capitis*, is a parasitic insect that can be found on the head, eyebrows, and eyelashes of people. Head lice feed on human blood several times a day and live close to the human scalp. Head lice are not known to spread disease.

Who is at risk for getting head lice?

Head lice are found worldwide. In the United States, infestation with head lice is most common among pre-school children attending child care, elementary schoolchildren, and the household members of infested children. Although reliable data on how many people in the United States get head lice each year are not available, an estimated 6 million to 12 million infestations occur each year in the United States among children 3 to 11 years of age. In the United States, infestation with head lice is much less common among African-Americans than among persons of other races, possibly because the claws of the head louse found most frequently in the United States are better adapted for grasping the shape and width of the hair shaft of other races.

Head lice move by crawling; they cannot hop or fly. Head lice are spread by direct contact with the hair of an infested person. Anyone who comes in head-to-head contact with someone who already has head lice is at greatest risk. Spread by contact with clothing (such as hats, scarves, coats) or other personal items (such as combs, brushes, or towels) used by an infested person is uncommon. Personal hygiene or cleanliness in the home or school has nothing to do with getting head lice.

What do head lice look like?

Head lice have three forms: the egg (also called a nit), the nymph, and the adult.



Egg/Nit: Nits are lice eggs laid by the adult female head louse at the base of the hair shaft nearest the scalp. Nits are firmly attached to the hair shaft and are oval-shaped and very small (about the size of a knot in thread) and hard to see. Nits often appear yellow or white although live nits sometimes appear to be the same color as the hair of the infested person. Nits are often confused with dandruff, scabs, or hair spray droplets. Head lice nits usually take about 8–9 days to hatch. Eggs that are likely to hatch are usually located no more than $\frac{1}{4}$ inch from the base of the hair shaft. Nits located further than $\frac{1}{4}$ inch from the base of hair shaft may very well be already hatched, non-viable nits, or empty nits or casings. This is difficult to distinguish with the naked eye.



Nymph: A nymph is an immature louse that hatches from the nit. A nymph looks like an adult head louse, but is smaller. To live, a nymph must feed on blood. Nymphs mature into adults about 9–12 days after hatching from the nit.



Adult: The fully grown and developed adult louse is about the size of a sesame seed, has six legs, and is tan to grayish-white in color. Adult head lice may look darker in persons with dark hair than in persons with light hair. To survive, adult head lice must feed on blood. An adult head louse can live about 30 days on a person's head but will die within one or two days if it falls off a person. Adult female head lice are usually larger than males and can lay about six eggs each day.

Where are head lice most commonly found?

Head lice and head lice nits are found almost exclusively on the scalp, particularly around and behind the ears and near the neckline at the back of the head. Head lice or head lice nits sometimes are found on the eyelashes or eyebrows but this is uncommon. Head lice hold tightly to hair with hook-like claws at the end of each of their six legs. Head lice nits are cemented firmly to the hair shaft and can be difficult to remove even after the nymphs hatch and empty casings remain.

What are the signs and symptoms of head lice infestation?

- Lice seen on hair shaft.
- Eggs attached to hair shaft.
- Tickling feeling of something moving in the hair.
- Severe itching of the scalp, caused by an allergic reaction to the bites of the head louse.
- Irritability and difficulty sleeping; head lice are most active in the dark.
- Sores on the head caused by scratching. These sores can sometimes become infected with bacteria found on the person's skin.

How did my child get head lice?

Head-to-head contact with an already infested person is the most common way to get head lice. Head-to-head contact is common during play at school, at home, and elsewhere (sports activities, playground, slumber parties, camp).

Although uncommon, head lice can be spread by sharing clothing or belongings. This happens when lice crawl, or nits attached to shed hair hatch, and get on the shared clothing or belongings. Examples include:

- sharing clothing (hats, scarves, coats, sports uniforms) or articles (hair ribbons, barrettes, combs, brushes, towels, stuffed animals) recently worn or used by an infested person;
- or lying on a bed, couch, pillow, or carpet that has recently been in contact with an infested person.

Dogs, cats, and other pets do not play a role in the spread of head lice.

How is head lice infestation diagnosed?

The diagnosis of a head lice infestation is best made by finding a live nymph or adult louse on the scalp or hair of a person. Because nymphs and adult lice are very small, move quickly, and avoid light, they can be difficult to find. Use of a magnifying lens and a fine-toothed comb may be helpful to find live lice. If crawling lice are not seen, finding nits firmly attached within a ¼ inch of base of the hair shafts strongly suggests, but does not confirm, that a person is infested and should be treated. Nits that are attached more than ¼ inch from the base of the hair shaft are almost always dead or already hatched. Nits are often confused with other things found in the hair such as dandruff, hair spray droplets, and dirt particles. If no live nymphs or adult lice are seen, and the only nits found are more than ¼-inch from the scalp, the infestation is probably old and no longer active and does not need to be treated.

If you are not sure if a person has head lice, the diagnosis should be made by their health care provider, local health department, or other person trained to identify live head lice.

Do head lice spread disease?

Head lice should not be considered as a medical or public health hazard. Head lice are not known to spread disease. Head lice can be an annoyance because their presence may cause itching and loss of sleep. Sometimes the itching can lead to excessive scratching that can sometimes increase the chance of a secondary skin infection.

Can head lice be spread by sharing sports helmets or headphones?

Head lice are spread most commonly by direct contact with the hair of an infested person. Spread by contact with inanimate objects and personal belongings may occur but is very uncommon. Head lice feet are specially adapted for holding onto human hair. Head lice would have difficulty attaching firmly to smooth or slippery surfaces like plastic, metal, polished synthetic leathers, and other similar materials.

What can be done to help prevent head lice?

Avoid head to head contact with others. Do not share combs, brushes, hair ties, etc. Do not lie on bedding, pillows, and carpets that have recently been used by someone with lice.

If your child has head lice, inform your child's School Nurse so that you and the parents/guardians of his/her classmates can be provided with a Management of Pediculosis Information Packet.

What is the treatment for head lice?

Lice treating products are available over the counter or by prescription. Ask your pharmacist or physician for a specific product recommendation and follow label directions.

1. Before applying treatment, it may be helpful to remove clothing that can become wet or stained during treatment.
2. Apply the lice treating product according to the instructions contained in the box or printed on the label. If the infested person has very long hair (longer than shoulder length), it may be necessary to use a second bottle. Pay special attention to instructions on the label or in the box regarding how long the medication should be left on the hair and how it should be washed out.
 - Have the infested person put on clean clothing after treatment.
 - If a few live lice are still found 8–12 hours after treatment, but are moving more slowly than before, do not retreat. The medicine may take longer to kill all the lice. Comb dead and any remaining live lice out of the hair using a fine-toothed nit comb.
 - If, after 8–12 hours of treatment, no dead lice are found and lice seem as active as before, the medicine may not be working. Do not retreat until speaking with your health care provider; a different product may be necessary. If your health care provider recommends a different product, carefully follow the treatment instructions contained in the box or printed on the label.
 - Nit (head lice egg) combs, often found in lice medicine packages, should be used to comb nits and lice from the hair shaft.
 - After each treatment, checking the hair and combing with a nit comb to remove nits and lice every 2–3 days may decrease the chance of self-reinfestation. Continue to check for 2–3 weeks to be sure all lice and nits are gone.
 - Retreatment is meant to kill any surviving hatched lice before they produce new eggs. For some drugs, retreatment is recommended about a week after the first treatment (7–9 days, depending on the drug) and for others retreatment is only recommended if crawling lice are seen during this period.

What supplemental measures should be taken after head lice treatment?

While head lice do not survive long if they fall off a person and cannot feed, these steps will help avoid re-infestation by lice that have recently fallen off the hair or crawled onto clothing or furniture.

1. Machine wash and dry clothing, bed linens, and other items that the infested person wore or used during the 2 days before treatment using the hot water (130°F) laundry cycle and the high heat drying cycle. Clothing and items that are not washable can be dry-cleaned **OR** sealed in a plastic bag and stored for 2 weeks.
2. Soak combs and brushes in hot water (at least 130°F) for 5–10 minutes.
3. Vacuum the floor and furniture, particularly where the infested person sat or lay. However, the risk of getting infested by a louse that has fallen onto a rug or carpet or furniture is very small. Head lice survive less than 1–2 days if they fall off a person and cannot feed; nits cannot hatch and usually die within a week if they are not kept at the same temperature as that found close to the human scalp. Spending much time and money on housecleaning activities is not necessary to avoid reinfestation by lice or nits that may have fallen off the head or crawled onto furniture or clothing.
4. Do not use fumigant sprays; they can be toxic if inhaled or absorbed through the skin.