

# Pediculosis (LICE)

## **Head Lice Definition:**

Head lice are tiny insects (about an 1/8 of an inch long) that live in human hair and feed on human blood. They multiply rapidly, laying little silvery-colored oval-shaped eggs (called nits), which they glue to the base of the hair, close to the scalp. Although it is hard to see head lice, a person can see the nits if they look closely. Nits are most often found in the hair behind the ears and at the back of the head and neck. Nits should not be confused with dandruff. Dandruff can easily be flicked off the hair; nits cannot because they are firmly attached to individual hairs. One telltale sign of head lice is a persistent itching of the scalp, which is caused by the bite of the louse, and that is sometimes accompanied by infected scratch marks or what appears to be a rash. A secondary bacterial infection can occur, causing oozing or crusting. Swollen neck glands may also develop.

*Anyone can get head lice.* They are not a sign of being dirty and should not be considered a sign of an unclean house. Head lice are easily spread from person to person by direct contact and are often found in school settings and group settings such as sports teams and camps. Head lice do not spread any disease.

## **Transmission:**

Head lice have no wings and do not fly, hop, or jump; *they crawl.* They are transmitted through direct contact with the hair of a person infested with head lice, or with shared items, such as combs, brushes, towels, pillowcases, hats, headphones, other headgear, and clothing. Shared lockers and wall hooks may permit the spread of head lice. Head lice need human blood to survive. They usually do not survive for more than 2 days away from the human body. The nits (louse eggs) cannot hatch at the lower temperatures found away from the scalp.

## **Diagnosis:**

Head lice infestation is diagnosed by finding a live, crawling louse on the scalp or hair of a person.

A fine-tooth comb and magnifying glass might be needed in order to see them. If crawling lice are not seen, finding nits attached firmly within ¼ inch of the base of hair shafts suggests, but does not confirm, the person is infested. Nits frequently are seen on hair behind the ears and near the back of the neck. Nits that are attached more than ¼ inch from the base of the hair shaft are almost always hatched or dead. Misdiagnosis of head lice infestation is common because nits can be confused with other particles found in hair such as dandruff, hair spray droplets, and dirt particles. If no nymphs or adults are seen, and the only nits found are more than ¼ inch from the scalp, then the infestation is probably old and no longer active and does not need to be treated.

## **Treatment:**

*Treatment consists of getting rid of the lice from infested individuals, their surroundings, and their personal items.* Nits may persist after treatment, but successful treatment should kill all crawling lice. All household members and individuals with close physical contact should be examined for lice and if infested, treated with one of the recommended shampoos or hair rinses. Preventive treatment in the absence of lice is not recommended. *In recent years, lice have become more resistant to conventional treatments. It is important to follow treatment directions exactly as instructed and apply a second treatment if indicated.* If the lice persist, despite home treatment, students should be advised to be evaluated by their pediatrician for additional treatment options.

### **Four critical steps should be followed to control an infestation of head lice:**

- 1.** Using an effective head louse treatment. Doctors can recommend a medicated shampoo, cream, or lotion to kill head lice. These may be over-the-counter or prescription medications and need to be applied according to the instructions contained in the box or printed on the label. Retreatment is generally recommended for most prescription and non-prescription (over the-counter) drugs after 7-9 days in order to kill any surviving hatched lice before they produce new eggs.
  - 2.** Removing nits from the head (combing). Remaining eggs should be removed from the hair shafts with a special nit comb or fine-tooth comb often found in the product package (metal combs are much more effective than plastic). Many flea combs made for cats and dogs are also effective. Checking the hair, a small section at a time under a bright light or lamp that can be directed at the area being worked on and using a magnifying glass makes the nits easier to find. Tissues to clean the comb, a plastic bag for the discarded tissues, and hair clips to pin up the sections of hair that have been combed are also helpful. This may take an hour or more, so an entertaining video may help keep the child occupied.
  - 3.** Removing lice and nits from the household by vacuuming, storing, washing, or freezing objects suspected of being infested. All clothing, bed linens, and other items that an infested person used during the 2 days before treatment should be washed using the hot water laundry cycle and the high heat drying cycle. Items that are not machinewashable should be dry cleaned or sealed in a plastic bag for two weeks (enough time for any eggs to hatch and the lice to die). Vacuum the floor and furniture, particularly where the infested person sat or laid.
  - 4.** Checking heads daily and removing nits until infestation is gone followed by weekly head checks to detect re-infestation. Every 2-3 days comb the hair with a nit comb to remove nits and lice to decrease the chance of self-reinfestation. This should continue for 2-3 weeks to be sure that all lice and nits are gone.
- 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. Speak with your healthcare provider; a different medicine may be necessary. If your healthcare provider recommends a different product, carefully follow the treatment instructions contained in the box or printed on the label. Suffocation of head lice with olive oil, mayonnaise, butter, margarine, or any similar food-grade product is not recommended. In addition, do not use motor or machine oils, or kerosene, as these materials can be harmful. Pet shampoo should not be used to treat a lice infestation.