



Head Lice Management in the School Environment

Lice are parasites that can be found on people's heads and bodies. Lice move by crawling; they cannot hop or fly. Head lice problems occur year-round. However, it is during the school year that head lice cases seem to be the most common. The reason is that many head louse infestations are discovered by teachers and school nurses. Children are usually sent home, and their parents are notified. It is the school nurse's responsibility to manage head lice problems in the school setting (through head checks, child exclusion, etc.), and it is the parents responsibility to control head lice in their own children.



Prevention of Head Lice in Schools

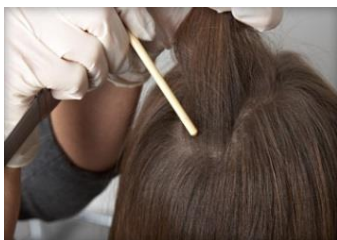
Head lice are spread from person-to-person through close body contact, or through sharing combs, brushes, hats, and other head gear. Lice do not infest classrooms, carpets, and chairs. Person-to-person spread can be minimized in the school environment by doing the following:

- (1) Space desks and chairs apart so that children are not sitting shoulder-to-shoulder.
- (2) Have children hang coats and hats separately. Do not pile them on top of each other.
- (3) Space children apart when standing or walking in lines.
- (4) During head lice outbreaks, minimize close contact games and sports, such as wrestling.
- (5) During outbreaks, minimize use of shared head-gear (such as earphones, helmets, etc.) and clothing (such as hats and costumes in drama classes). Always hand-vacuum head-gear between users.
- (6) Provide head louse prevention education to children, such as not sharing combs, brushes, hats, headbands, or clothing.

The recommendations listed above are also applicable outside of the school environment. At home, parents should take steps to keep infested children separate while playing and napping and teach them not to share brushes, combs, hats, etc.

Prevention of Lice Outbreaks at School

The American Academy of Pediatrics and National Association of School Nurses advocate the discontinuance of routine head lice surveillance in the classroom. This is due to findings indicating that



routine head checks are in fact not helpful or cost-effective in identifying or preventing head lice infestation among students. However, teachers can help by informing the nurse of any "head scratchers" within their classrooms. The student can then be checked for lice (individual head check) and, if evidence of louse infestation (nits and/or crawling lice) is identified, the child can be sent home after notifying the parents. Parents should be provided with louse control instructions.

Children should not be readmitted until proper treatment has been initiated (Communicable Disease Rule R9-6-355). School nurses may want to ask the parents for a box top from the product as proof of

treatment. This helps to ensure that appropriate products were used to kill lice. Additionally, school nurses may consider rechecking the child's head before readmission to school. Even the most diligent parents will miss a few nits, but it is important to distinguish between "new nits" and "old nits." The newly laid eggs/nits are cemented by the female louse to the hair shaft very close to the scalp, and as the hair grows out, so does the nit. Hair grows an average of a quarter inch per week, and viable louse eggs usually hatch within one week. Generally, nits that are greater than a half inch from skin line are usually either dead or already hatched and are likely to be "old"--nonviable--nits. Old nits are not evidence of an active infestation. On the other hand, finding "new nits" close to the scalp, or finding many nits (indicating that the parent did a poor job of nitpicking) may be enough justification to send a child home again. **Head lice do not transmit diseases, and they are NOT considered to be a significant public health problem.**

Best Strategy for Controlling Lice

Both over-the-counter and prescription medications are available for treatment of lice infestations. Currently, the best control strategy involves using pyrethrum or permethrin-based shampoos combined with diligent nit removal. **Shampoos rinses should be applied according to label**, and usually this involves a second treatment 7-10 days after the first application. Timing is important as it is designed to interrupt the louse's life cycle. In addition, shampoos should be applied to dry hair, as wet lice do not absorb the insecticide as efficiently.



Mechanical removal of the eggs ("nit-picking") is the second step, and is essential to ending the infestation, as shampoo products do not kill all of the eggs. Nit removal can be accomplished by using nit combs or narrow-toothed flea combs. Parents should make their child as comfortable as possible as thorough nit picking takes time. Nit picking should be done with adequate lighting. Parents should start looking for nits at the nape of the neck and behind the ears and search in small sections until the entire head has been screened. Shorter hair may be easier to scan for nits than long hair, but shaving a child's head is unnecessary. Parents should repeat the head checks several times during the next week, as it is easy to overlook a few nits.

Treatment and Alternative Remedies

Encouraging parents to use lice treatment products correctly and to follow through with the second treatment will lead to efficient control of the lice concern and faster return of the child to the classroom. Some parents may use alternative remedies when pesticide-based products have failed. Many "new" remedies are being promoted and old remedies are being revived. Some of the alternative remedies include treating heads with margarine, olive oil, tea-tree oil, mayonnaise, petroleum jelly, and even kerosene and gasoline. Many of these remedies are not proven to be effective, and some may even be dangerous. Most of the new remedies are presumed to work by suffocating lice and eggs, and in order to be effective, they must be left on the head for many hours - usually overnight. Unfortunately, lice, like many insects, can go a very long time (many hours) without a "breath of air," and the eggs will survive even longer. Since information is lacking on efficacy and safety, these "off-label" products are generally not endorsed by health officials for head louse control. **Home remedies are not recommended. The best results will be achieved with proper use of pediculocide products and thorough nit removal.**

Lice is Not an Environmental Problem

Head lice do not infest classrooms and homes. They are blood-feeding insects that have become very specialized for surviving on the human head. They do not survive for very long (24-48 hours) when separated from the warm and humid body environment. Lice are so specialized, in fact, that researchers have a difficult time keeping them alive when conducting laboratory studies. As a result of their dependency, 99% of control efforts and time should focus on controlling the infestation on the human body. Spraying classrooms with pesticides is generally a waste of time and money. However, vacuuming carpets and furniture where infested kids spend a lot of time may have some benefit toward picking up any lice and nits that have fallen off the body. Another common misconception is that head lice problems emanate from pets. Human head lice do not infest other animals. Attempts to prevent/control human pediculosis by treating family pets are a waste of effort.

Steps to Control Head Lice

- 1.** Shampoo the child's hair (and other infested family members) with an appropriate shampoo or cream rinse, which is labeled for controlling lice. Some examples of lice shampoos or rinses include: A – 200 Pyrinate, Kwell, Nix, Rid, and R & C. These and other products are available at your local drug store, or they may be prescribed by a doctor. Be sure to follow the instructions on the label!!! Do not use remedies or products that are not labeled for controlling lice as these may not work, and they may even be harmful.
- 2.** Be sure to shampoo all affected family members at the same time! Any family member with nits (eggs) in the hair or with an itchy scalp should be treated.
- 3.** After shampooing, family members should change into clean clothes. Wash all dirty clothing, linens, and towels in a hot or warm wash cycle. Non-washable items may be dry-cleaned, or they may be vacuumed and sealed in plastic bags for two weeks.
- 4.** Soak combs, brushes, hair picks, etc. in hot (almost boiling) water for at least 15 minutes.
- 5.** Vacuum chairs, couches and other furniture where the children sit, sleep, or play in order to pick-up any loose nits or lice. You do not need to apply household pesticides.
- 6.** Be sure to shampoo everyone once again 7 to 10 days later!!! The timing is very important. In addition, remember to wash dirty clothes, vacuum furniture and treat combs and brushes on the same day.
- 7.** To better your chances for a successful treatment, take the time to remove nits from your child's hair, preferably by using nit combs which are available at local drugstores. Nit removal is important as some of the eggs will survive the shampoo treatments.

How to Avoid Getting Head Lice

- 1.** Do not share hats, combs, brushes, scarves, or coats.
- 2.** Hang your coats separately. Do not hang or pile them on top of each other.
- 3.** Try not to sit and play real close together. Chairs and desks should be spaced apart.

We hope this information is helpful to school officials and parents in the control and prevention of head lice. If you have additional questions, feel free to contact your county health department or the Arizona Department of Health Services, Vector-Borne & Zoonotic Diseases Program at (602) 364-3676.