

Head Lice: Background and Treatment

A little history

Head lice represent a common problem which has been around at least since the pharaohs ruled Egypt and were buried with long, metal-pronged combs in their tombs—surely lice combs. Today these combs are *still* the safest and most effective method for getting rid of lice.

What lice are

Lice are parasites that live on the surface of the human body in head, body or pubic hair. An infestation of lice is called “pediculosis.” **Head lice** (unlike body or pubic lice) are *not* a sign of poor hygiene or a reflection on the quality of a child care setting. There is no evidence that head lice carry disease. A single lice is called a “louse.”

Head lice are wingless, crawling insects which live on the human scalp. They do not fly or jump but they can crawl at a pace of about nine inches per minute. Live lice are hard to spot because they move so fast. The lice feed by taking tiny amounts of blood every few hours. This causes itching which may be the first sign of an infestation in a child or adult although in a *first* case of head lice this itching might not occur for four to six weeks. Head lice live only on human hosts and are not able to survive without a blood meal for more than 24 to 48 hours. The average life span of lice on the human host is about 30 days.

The adult louse is about $\frac{1}{8}$ inch long (about the size of a sesame seed) and is grayish white or light brown. An adult female louse lays three to ten eggs per day, gluing them to the hair shaft very close to the scalp. The eggs are incubated by body heat, taking seven to twelve days to hatch, and another one to two weeks to mature and start laying eggs. The empty egg shells remain glued to the hair shaft.

Who gets them and how?

Lice don't jump, fly or live on animals. Lice crawl from one person or object to another. This happens when heads touch (sleeping together, hugging, playing), or less commonly when personal items are shared (combs, brushes, hats, car seats, bedding, helmets). Young children

are particularly at risk because child care and school environments provide many opportunities for lice to pass between children.

What kills lice?

Pesticides which kill lice are called pediculicides. According to the American Academy of Pediatrics permethrin 1 percent (available over the counter) is currently the recommended treatment for head lice. Pediculicides can be useful as a first step in the treatment of lice, but **none** of the pediculicide preparations used for treatment today will kill ALL of the lice and eggs. Leaving the chemicals on hair longer than directed does not increase their effectiveness. **Don't ever put a child to bed with a plastic bag or shower cap on their head because of the risk of suffocation.** Check with a health care provider before using chemical treatments more than recommended in the package instructions. Only a parent should treat his or her child with a pediculicide and only a parent should cut his or her child's hair, even if it's only a strand or two with stubborn nits on them.

Pesticide sprays are not useful in getting rid of lice, can cause unnecessary exposure to insecticidal residues and may trigger allergies and respiratory symptoms, especially in children with asthma. Another factor to consider with the use of any pesticide is that it remains in the environment for a long time after use. Treatment for pets is not necessary.

Although there is documentation of lice resistance to pediculicides in some communities, the primary reasons for treatment failure are:

- misidentification of hair debris as “nits,” (no active infestation)
- failing to follow label directions properly for using the medication,
- not identifying and treating others with lice at the same time (reinfestation), and
- incomplete removal of surviving eggs and lice after treatment.



Alternative treatments

Some parents find alternative treatments effective and preferable to pesticides. Careful “wet combing” and occlusive methods (such as petroleum jelly or Ceta-phil) can also be effective at getting rid of lice. Parents might also ask their health care providers about a new product containing benzyl alcohol 5%. Products that are marketed by health food stores are not required to meet FDA standards. New products should be evaluated for safety and effectiveness.

Getting rid of nits

Finding a live louse on the scalp provides solid proof of infestation. Identifying “nits” is a different story and many children are mistakenly thought to have nits/head lice. Nits are microscopically small, and are more easily found at the nape of the neck and behind the ears. Anything that slides along the hair shaft easily is **not** a nit. The further out a nit is from the scalp the less likely it is to contain a live egg, but to avoid confusion and misdiagnosis it is best to remove all nits as soon as possible.

Vacuuming, including couches and car seats, washing recently used linens and clothing (plus hair brushes etc.), and putting other items (like pillows) in the dryer for 20 minutes or in a plastic bag for two weeks should take care of the risk of reinfestation from non-human objects. The greater risk is from head-to-head contact with the human host.

Tips

- Communicate calmly with parents about lice detection and management.
- Head-to-head contact is the primary cause of the spread of lice.
- Separate storage areas for each child’s and staff member’s personal belongings. Make sure coats and clothing don’t touch each other.
- Don’t share combs, brushes, towels or bedding.

When to exclude

The National Health and Safety Performance Standards and The American Academy of Pediatrics say that no healthy child should be barred from school. Since a child with active head lice infestation is likely to have the infestation for a month or more prior to be discovered, it poses little risk to others from the infestation. The child should remain in class but be discouraged from close direct head contact with others.

Here are some very important questions to help facilitate the team effort in dealing with lice:

- Has the child already been treated with a pesticide? How many times?
- Has the child been seen by a health care provider for this?
- Are the parents willing to use the pediculicides, and can they afford to buy them or will their health insurance cover a prescription?
- Is the vision of the parents or guardians sufficient to find and remove all the nits?
- Are you and your staff experienced at identifying infestations and comfortable communicating with families about them? Do you need training?
- Do you know where you can get help for yourself or your families in dealing with an outbreak, or persistent reinfestation?

For assistance in dealing with an outbreak or persistent reinfestation:

1. Contact your local Resource and Referral Agency to see if your county has a Child Care Health Consultant or a Child Care Health Advocate available for consultation and training.
2. Call your local Public Health Nurse (find under “County Offices: Health Care Services Agency” in your local phone book) or look online at www.dhs.cahwnet.gov/home/hsites/lhdlinks.htm.
3. If you are part of the local school system, ask the school nurse for assistance.

For more information on head lice and clear guidelines for successful combing techniques, call the Healthline at (800) 333-3212 or visit www.ucsfchildcarehealth.org.

References

Caring for Our Children, National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs (2nd Ed.). AAP/HRSA, 2001.

AAP (2010), Clinical Report—Head Lice online at <http://pediatrics.aappublications.org/cgi/reprint/peds.2010-1308v1>

The National Pediculosis Association at www.headlice.org.

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