

Anyone can get head lice. Head lice are found on all types of people and having them is not a reflection on cleanliness.



## Dealing With Head Lice - A Physician's Perspective

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### What are head lice?

Head lice are parasitic insects that infest humans. Head lice are limited to the hair of the head. There is no apparent association with cleanliness or socioeconomic class. Though lice usually stay on the head they originally infected, transmission can occur to other individuals usually directly from hair to hair contact with an infested person. The louse lives on the blood of the host by piercing and sucking from the scalp. The scalp can be very itchy, and if scratched with dirty nails, can result in a secondary infection on the skin of the scalp, like impetigo. Once lice infest hair, pesticide treatment is necessary for eradication.

### How can I tell if my child has head lice?

Because it can take six weeks for a child to develop sensitivity and itchiness to the bites of a louse, you may not know your child has an infestation unless you check the scalp often. Head lice are smaller than a sesame seed, from 2.4 mm to 3 mm in length. They have six legs with claws that they use to grasp the hair and pull to move. They take on the color of their background, so they may be whitish, yellow, brown, or black. Because they blend into their surroundings, they can be hard to find. They flee light, moving at a rate of about an inch in five seconds, and hide behind hair strands, so you need to check and recheck the same area repeatedly. You can most easily find lice on or near the scalp, especially at the nape of the neck, behind the ears, or on the crown of the head, although in more advanced cases,

the entire head may be involved. During an infestation, you may find three different forms of the louse: the egg ("nit") on the hair shaft, the baby (nymph), and the adult. The number of adult head lice in an average infestation is only about ten, but there may be several hundred eggs. The nit can be yellowish, whitish, or grayish, shaped like a teardrop, and measuring 0.8 mm. When nits are fresh, they may be clear in color, and blend in with the hair color. The louse cements the nit to the hair shaft close to the scalp. Nits found farther away than 1/4 inch from the scalp are less likely to be able to hatch. There may be only one nit on the hair shaft or there may be three or four. It is important to search almost hair by hair in areas where you have found lice or a nit. You can tell the difference between a nit and other material like dandruff, because you can pull dandruff or dust off the hair shaft easily. A nit will not fall off. The nit also has a uniform size and shape compared to flecks of foreign material.

### What do I do if I find head lice or nits on my child?

First, do not panic. Lice are an annoyance, but are treatable, are not life threatening, and do not transmit disease. Treatment is a three-part process: pesticide treatment, nit removal, and bedding clean up.

### Treatment

You must treat exactly according to package instructions, four ounces per six inches of hair. Never use an over-the-counter preparation (OTC) on an infant under six months without clearance from the pediatrician. The current first treatment of choice is an OTC preparation with a good safety record such as permethrine (NIX®) or synergized pyrethrins (RID®).

Following the treatment, comb wet hair with a wide toothcomb to get rid of tangles, and a fine toothcomb to get rid of nits. OTC treatment kills live lice, but not nits. You must repeat treatment at day seven to ten (ideally day nine) to kill any newly hatched nits, and again a third time at day 14-21 if you continue to see new insects or nits following the second treatment. If the infected person sleeps at other peoples' homes notify those people that they need an examination for lice. For at least two weeks following the last treatment, avoid shampoos with conditioners, or other home remedies or hair products that might de-activate the pesticides.

Head lice medicines are pesticides that can be toxic if used more frequently than the recommended dose. Furthermore, if you do not use the medicine exactly according to package instructions, like applying a product to wet hair when it is supposed to be dry hair or vice versa, or if you do not repeat treatment in approximately a week, or if you do not use enough product, and/or if you do not wash bedding, you might have treatment failure or re-infestation. When used adequately and properly, OTC medicines can clear virtually all the cases of head lice in our region, with two treatments a week to ten days apart. Resistance to OTC products is occurring; however, in our area, so far resistance is low. If you have used two OTC treatments seven to ten days apart according to package instructions, and cleaned bedding, but still find live lice, it is necessary to contact your physician.

### Nit Removal

The easiest way to remove nits is to use a fine toothcomb (and your fingernails for stubborn ones) on wet hair. Children feel better about themselves if they are nit free. You may find a few slow moving live lice on the hair during nit removal within the first day after treatment. Do not worry. Remove them along with the nits, but do not retreat with a pesticide before seven to ten days.

### Environmental Clean-up

Consider any place where your child has spent extend-

ed time outside of school and/or slept over a possible source (babysitters, daycare, grandparents, non-custodial parents, and friends). Avoid using bug sprays or doing major environmental clean up. Cleaning bedding should be sufficient. You can put large blankets in a sealed plastic bag for 72 hours to kill lice.

### Follow Up Care

Make sure that your child understands not to share personal items, like clothing, headgear, hats, combs, brushes. Lice like certain types of hair, and if your child had lice once, s/he may get them again. It is no one's fault, and a recurrence can happen even if you follow the recommendations of properly educated your child, treating hair according to package instructions, and maintaining clean sleeping areas. If you find new lice one week or more after completing two adequate treatments, you might have either a treatment failure (the same case where lice were resistant to the medication, were not re-treated, or the product was not used correctly) or a new infestation (a brand new case). At that point, it is time to talk to your physician for guidance. The best defense against head lice is to look at your child's hair and scalp regularly and especially after a sleep-away. Wash their hair at least twice a week.

### Use of Home remedies

There is no proof that any home remedies work. However, regular mayonnaise, (more pleasant to use than olive oil, Vaseline, or hair gel, among others) put on the hair, covered with a shower cap and left on for twelve hours may suffocate the live lice. You also need to repeat this treatment in seven to ten days to get rid of newly hatched live lice, since home remedies do not kill nits. Bedding clean up, nit removal, and careful monitoring for treatment failure or re-infestation are essential. Contact your physician if a home remedy approach fails. Using a home remedy ten days after a pesticide treatment may improve overall results, although there is no conclusive evidence that this helps.



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