CDC TREATMENT FOR PEDICULOSIS (Head Lice)

Examination Of Hair And Scalp For Head Lice



Close examination of the hair and scalp is necessary to determine head lice infestation. (CDC Photo)

Misdiagnosis of head lice infestation is common. It is best made by finding a live nymph or adult louse on the scalp or hair of a person.

Because adult and nymph lice are very small, move quickly, and avoid light, they may be difficult to find. Use of a fine-toothed louse comb may facilitate identification of live lice.

If crawling lice are not seen, finding nits attached firmly within 1/4 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 more than ¼"from the base of the hair shaft are almost always hatched or dead. Head lice and nits can be visible with the naked eye, although use of a magnifying lens may be necessary to find crawling lice or to identify a developing nymph inside a viable nit. Nits are often 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are seen, and the only nits found are more than 1/4 inch from the scalp, then the infestation is probably old and no longer active and does not need to be treated.

General Guidelines

- Treatment for head lice is recommended for persons diagnosed with an active infestation.
- All household members and close contacts should be checked.
- All infested persons and their bedmates should be treated at the same time.

Treat the infested person(s): Requires using either an over-the-counter (OTC) or prescription medication. Follow these treatment steps:

!. Apply lice medicine, 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 off.

> **WARNING**: Do **not** use a creme rinse, combination shampoo/conditioner, or conditioner before using lice medicine. Do not re-wash the hair for 1-2 days after the lice medicine is removed. **VERY IMPORTANT**

2. Have the infested person put on clean clothing after treatment.
3. 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.
4. 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 lice medicine may be necessary. If your health care provider

recommends a different treatment, carefully follow the treatment instructions contained in the box or printed on the label.

5. Nit (head lice egg) combs, often found in lice medicine packages, should be used to comb nits and lice from the hair shaft. Many flea combs made for cats and dogs are also effective.
6. 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 re-infestation. Continue to check for 2-3 weeks to be sure all lice and nits are gone.
7. Retreatment generally is recommended for most prescription and non-prescription (over-the-counter) drugs after 9-10 days in order to kill any surviving hatched lice before they produce new eggs because no approved treatment will completely kill all the eggs.

Supplemental Measures: Head lice do not survive long if they fall off a person and cannot feed. Follow these steps to 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 where the infested person sat or lay. 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 time and money on housecleaning activities is not necessary to avoid re-infestation 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.

Prevent Re-infestation:

* Avoid head-to-head (hair-to-hair) contact during play and other activities to avoid spread.
* Do not share clothing such as hats, scarves, coats, sports uniforms, hair ribbons, or barrettes.
* Do not share combs, brushes, or towels.
* Do not lie on beds, couches, pillows, rugs, carpets, or stuffed animals that have recently been in contact with an infested person.
* To help control a head lice outbreak in a community, school, or camp, children can be taught to avoid activities that may spread head lice.

Treatments

The following medication approved by the U.S. Food and Drug Administration (FDA) for the treatment of head lice are available only by prescription.

1. Malathion lotion 0.5%; Brand name product: Ovide*
2. Benzyl Alcohol lotion (5%) Brand name: Ulesfia Lotion
3. Ivermectin lotion, 0.5% Brand name: Sklice. This is given as a tablet.
4. Spinosad 0.9%. Brand name: Natroba.

Over the Counter medications:

a. **Pyrethrins** combined with piperonyl butoxide.
b. **Permethrin lotion 1%**; Brand name product:

Which medicine is best?
If you aren't sure which medicine to use or how to use a particular medicine, always ask your health care provider. When using a medicine, always carefully follow the instructions contained in the package or written on the label, unless the physician and pharmacist direct otherwise.

When treating head lice
1. Do not use extra amounts of any lice medication unless instructed to do so by your physician and pharmacist. The drugs used to treat lice are insecticides and can be dangerous if they are misused or overused.
2. Do not treat an infested person more than twice with the same medication if it does not seem to be working. This may be caused by using the medicine incorrectly or by resistance to the medicine. Always seek the advice of your health care provider if this should happen. He/she may recommend an alternative medication.
3. Do **not** use different head lice drugs at the same time unless instructed to do so by your physician and pharmacist.

If the treatment for head lice doesn't seem to work, does this mean the lice are resistant and I need a different treatment?
The following are several common reasons why treatment for head lice may fail sometimes:

1. **Misdiagnosis**. The symptoms are not caused by an active head lice infestation.

2. **Applying** the treatment to hair that has been washed with conditioning shampoo or rinsed with hair conditioner. Conditioners can act as a barrier that keeps the head lice medicine from adhering to the hair shafts; this can reduce the effectiveness of the treatment.

3. Not following carefully the instructions for the treatment that is used. Some examples of this are not applying a second treatment if instructed to do so, or retreating too soon after the first treatment before all the nits are hatched and the newly hatched head lice can be killed, or retreating too late after new eggs have already been deposited.

4. **Resistance** of the head lice to the treatment used. The head lice may have become resistant to the treatment. If the treatment used does not kill the head lice, your health care provider and pharmacist can help you be sure the treatment was used correctly and may recommend a completely different product if they think the head lice are resistant to the first treatment.

5. **Re-infestation**. The person was treated successfully and the lice were eliminated, but then the person becomes infested again by lice spread from another infested person.Sometimes re-shampooing the hair too soon (less than 2 days) after correctly applying and removing permethrin can reduce or eliminate any residual (continued) killing effect on the lice.

Is there a treatment recommendation for certain age groups?
Before treating young children, consult the child's doctor for the recommended treatment based on the child's age and weight.

Are there any side affects from using these chemical treatments for head lice?
Treatments for head lice are generally safe when used correctly. Some treatments may cause an itching or a mild burning sensation caused by inflammation of the skin on the scalp. Most products used to treat head lice are pesticides that can be absorbed through the skin. Therefore, all medicines used for the treatment of lice should be used with care and only as directed.

Is it necessary to remove all the nits?
Removal of nits after treatment with a pediculicide may be done for aesthetic reasons, or to reduce diagnostic confusion and the chance of unnecessary retreatment. Treatment medications do not completely kill the nits therefore, some experts recommend the removal of nits that are attached within ¼" of the base of the hair shaft.

Why do some experts recommend bagging items for 2 weeks?
Head lice eggs (nits) cannot hatch and usually die within a week if they do not remain under ideal conditions of heat and humidity similar to those found close to the human scalp. Because a nit must incubate under conditions similar to those near the human scalp, it is unlikely to hatch away from the head. If the egg were to hatch, the newly emerged louse would die within several hours if it did not feed on human blood. Some experts recommend items that cannot be laundered or dry-cleaned should be sealed in plastic bag and stored for 2 weeks to kill any lice that already are present or that might hatch from any nits that may be present on the items.

Should my pets be treated for head lice?
No. Head lice do not live on pets. Pets do not play a role in the spread of head lice.

Should household sprays be used to kill adult lice?
No. Using fumigant sprays or fogs is NOT recommended. Fumigant sprays and fogs can be toxic if inhaled or absorbed through the skin and they are not necessary to control head lice.

Do I need to have my home fumigated or have a pest control company spray my house?
No. Routine house cleaning, including vacuuming of carpeting, rugs, furniture, car seats, and other fabric covered items, as well as laundering of bedding and clothing worn or used by the infested person is sufficient. Only items that have been in contact with the head of the infested person in the 48 hours before treatment need be considered for cleaning.

Will laundering kill head lice?
Washing, soaking, or drying items at a temperature greater than 130°F (most home hot water is 120°) can kill both head lice and nits. Dry cleaning also kills head lice and nits. Only items that have been in contact with the head of the infested person in the 48 hours before treatment should be considered for cleaning. Although freezing temperatures can kill head lice and nits, several days may be necessary depending on temperature and humidity; freezing is rarely (if ever) needed as a means for treating head lice.

**Use of trade names is for identification purposes only and does not imply endorsement by the Public Health Service or by the U.S. Department of Health and Human Services.*
Page last modified: Nov 2, 2013 Page last reviewed: Nov 2, 2013.
http://www.cdc.gov/parasites/lice/head/treatment.html