



[Lice \(./index.html\)](#) > [Head Lice \(index.html\)](#) > Treatment

## Treatment

- [General Guidelines \(#general\)](#)
  - [Treatment of the infested person\(s\) \(#treat\)](#)
  - [Supplemental measures \(#supplement\)](#)
  - [Prevention of infestation \(#prevent\)](#)
- [Over-the-counter Medications \(#otc\)](#)
- [Prescription Medications \(#prescription\)](#)
- [Which medicine is best? \(#best\)](#)

## General Guidelines

Treatment for head lice is recommended for persons diagnosed with an active infestation. All household members and other close contacts should be checked; those persons with evidence of an active infestation should be treated. Some experts believe prophylactic treatment is prudent for persons who share the same bed with actively-infested individuals. All infested persons (household members and close contacts) and their bedmates should be treated at the same time.

Retreatment of head lice usually is recommended because no approved pediculicide (peh-DICK-you-luh-side) is completely ovicidal. To be most effective, retreatment should occur after all eggs have hatched but before new eggs are produced. The retreatment schedule can vary depending on the pediculicide used.

When treating head lice, supplemental measures can be combined with recommended medicine (pharmacologic treatment); however, such additional (non-pharmacologic) measures generally are not required to eliminate a head lice infestation. For example, hats, scarves, pillow cases, bedding, clothing, and towels worn or used by the infested person in the 2-day period just before treatment is started can be machine washed and dried using the hot water and hot air cycles because lice and eggs are killed by exposure for 5 minutes to temperatures greater than 53.5°C (128.3°F). Items that cannot be laundered may be dry-cleaned or sealed in a plastic bag for two weeks. Items such as hats, grooming aids, and towels that come in contact with the hair of an infested person should not be shared. Vacuuming furniture and floors can remove an infested person's hairs that might have viable nits attached.

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

1. Before applying treatment, it may be helpful to remove clothing that can become wet or stained

during treatment.

2. Apply lice medicine, also called pediculicide, 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 condition before using lice medicine. Do not re-wash the hair for 1-2 days after the lice medicine is removed.

3. Have the infested person put on clean clothing after treatment.
4. 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.
5. 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 (pediculicide) may be necessary. If your health care provider recommends a different pediculicide, carefully follow the treatment instructions contained in the box or printed on the label.
6. 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.
7. 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-reinfestation. Continue to check for 2-3 weeks to be sure all lice and nits are gone.
8. 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. However, if using the prescription drug malathion, retreatment is recommended after 7-9 days **ONLY** if crawling bugs are found. Click here for instructions on how to use malathion to treat head lice.

**Supplemental Measures :** Head lice do not survive long if they fall off a person and cannot feed. You don't need to spend a lot of time or money on housecleaning activities. 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, particularly where the infested person sat or lay. However, the risk of getting infested by a louse that has fallen onto a rug or carpet or furniture is very small. 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 much time and money on housecleaning activities is not necessary to avoid reinfestation 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.

[Back to Top \(#\)](#)

### ***Prevent Reinfestation:***

- Avoid head-to-head (hair-to-hair) contact during play and other activities at home, school, and elsewhere (sports activities, playground, slumber parties, camp). Lice are spread most commonly by direct head-to-head (hair-to-hair) contact and much less frequently by sharing clothing or belongings onto which lice or nits may have crawled or fallen.
- Do not share clothing such as hats, scarves, coats, sports uniforms, hair ribbons, or barrettes.
- Do not share infested 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.

[Back to Top \(#\)](#)

## **Over-the-counter Medications**

Many head lice medications are available over-the-counter without a prescription at a local drug store or pharmacy. Each over-the-counter product approved for the treatment of head lice contains one of the following active ingredients.

1. **Pyrethrins** (pie-WREATH-rins) combined with piperonyl butoxide (pie-PER-a-nil beu-TOX-side); Brand name products: A-200\*, Pronto\*, R&C\*, Rid\*, Triple X\*.

Pyrethrins are naturally occurring pyrethroid extracts from the chrysanthemum flower. Pyrethrins are safe and effective when used as directed. Pyrethrins can only kill live lice, not unhatched eggs (nits). A second treatment is recommended in 9-10 days to kill any newly hatched lice before they can produce new eggs. Treatment failures can be common depending on whether lice are resistant to pyrethrins in the patient's geographic location. Pyrethrins generally should not be used by persons who are allergic to chrysanthemums or ragweed.

2. **Permethrin lotion 1%** (per-meth-rin); Brand name product: Nix\*.

Permethrin is a synthetic pyrethroid similar to naturally occurring pyrethrins. Permethrin lotion 1% is approved by the FDA for the treatment of head lice. Permethrin is safe and effective when used as directed. Permethrin kills live lice but not unhatched eggs. Permethrin may continue to kill newly hatched lice for several days after treatment. A second treatment often is necessary in 9-10 days to kill any newly hatched lice before they can produce new eggs. Treatment failures can be common depending whether lice are resistant to permethrin in the patients geographic location. Permethrin is not approved for use in children less than 2 years old.

[Back to Top \(#\)](#)

## Prescription Medications

The following medications 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\*

Malathion is an organophosphate. Malathion lotion 0.5% is approved by the FDA for the treatment of head lice. The formulation of malathion approved in the United States for the treatment of head lice is a lotion that is safe and effective when used as directed. Malathion is pediculicidal (kills live lice) and partially ovicidal (kills some lice eggs). A second treatment is recommended if live lice still are present 7-9 days after treatment. Malathion is intended for use on persons 6 years of age and older. Malathion can be irritating to the skin and scalp; contact with the eyes should be avoided. Malathion lotion is flammable; do not smoke or use electrical heat sources, including hair dryers, curlers, and curling or flat irons, when applying malathion lotion and while the hair is wet. See our information on treating with **Malathion** ([./head/treatment\\_malathion.html](#)) for more details.

2. **Lindane shampoo 1%**;  
Brand name products: None available

Lindane is an organochloride. Although lindane shampoo 1% is approved by the FDA for the treatment of head lice, it is not recommended as a first-line therapy. Overuse, misuse, or accidentally swallowing lindane can be toxic to the brain and other parts of the nervous system; its use should be restricted to patients who have failed treatment with or cannot tolerate other medications that pose less risk. Lindane should not be used to treat premature infants, persons with a seizure disorder, women who are pregnant or breast-feeding, persons who have very irritated skin or sores where the lindane will be applied, infants, children, the elderly, and persons who weigh less than 110 pounds.

[Back to Top \(#\)](#)

### Which medicine is best?

If you arent sure which medicine to use or how to use a particular medicine, always ask your physician, pharmacist, or other health care provider. CDC does not make recommendations about specific products. 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 2-3 times 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.

**[Back to Top \(#\)](#)**

*\*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: October 7, 2008

Page last reviewed: May 16, 2008

Content Source: **Division of Parasitic Diseases (DPD)** (<http://www.cdc.gov/ncidod/dpd/>)  
**National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ZVED)**  
(<http://www.cdc.gov/nczved/>)

Page Located on the Web at <http://www.cdc.gov/lice/head/treatment.html>

---

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**  
**CENTERS FOR DISEASE CONTROL AND PREVENTION**  
**SAFER • HEALTHIER • PEOPLE™**