

# Community **IPM**

## Head Lice – Frequently Asked Questions

### **What are head lice?**

Head lice, *Pediculus humanus capitis*, are small insects that infest human hair and feed on blood from the scalp. Adults lay their eggs (nits) along the base of hair, gluing them in place. Depending on temperature, the life cycle from nits to adults takes 16 to 21 days. They usually die within 36 hours when removed from the human host.

### **What do head lice look like? Can I see them?**

Head lice adults are about the size of sesame seeds. They have six legs and no wings. Nymphs (or juveniles) are smaller versions of adults. Nits are about the size of a comma ( , ) on this page, and are white or cream colored. All stages are visible to the naked eye, but a magnifier makes them much easier to see.

### **How do you get head lice and who is at risk?**

Head lice cannot jump or fly. Since they move from person to person through direct contact with the hair of infested person, they are most easily spread between children and their families. In fact, the CDC estimates that 6-12 million children in the US get head lice each year. Children often play close together and can easily spread lice to each other. It is less likely (although possible) that hats, scarves and other clothing, or brushes and combs can spread head lice when shared. It is best to instruct children not to share these items.

### **Are people with head lice unsanitary?**

NO. Anyone can get head lice and personal hygiene does not influence who gets them.



Head lice at various stages of development from egg to adult. Photo: Kevin Dyer/iStock Images.

### **What are the signs and symptoms of head lice?**

People who get head lice experience itching from bites and a tickling sensation from the movement of lice through the hair. Head lice are more active at night. Irritation and scabs can form on the scalp. Looking closely, you would see adult head lice, nymphs and eggs or nits glued to the hair shaft about ¼ inch from the scalp. Nits are sometimes confused with dandruff or droplets of hair spray. It is important to correctly diagnose head lice before starting treatment.

### **Are head lice dangerous to our health? Can head lice spread diseases?**

Head lice do not spread bacteria or viruses that cause diseases in humans. Irritation from their bites and subsequent scratching can lead to open sores on the scalp that can become infected. The incorrect use of pesticides for the treatment of head lice poses a greater risk to human health.

### **Can head lice survive the treatments we use to kill them?**

Research has shown that head lice vary in their tolerance or susceptibility to pesticides used to kill them, especially pyrethrins and pyrethroids. Treatment failures can happen due to pesticide resistance, inadequate treatment, and from re-infestation.

## What is the best way to treat head lice?

First, a person should only be treated for head lice when diagnosed with an active infestation. All people sharing a household with a person who acquires head lice should be inspected. All who are diagnosed with head lice should be treated at the same time.

Second, there is no single best way to treat head lice. There are several options for treating and eliminating head lice and a process that involves several strategies will be most reliable.

### Physical Removal

**Combing** – A head lice comb is an essential tool for removing lice and some nits from the hair. These combs differ from standard combs because the tines or teeth are very close together. Metal combs are recommended over plastic combs because the tines are stronger. Regardless of other treatments used, combing should be part of your strategy. It will greatly increase the efficacy and help prevent the spread of lice to other people.

**Wet Combing** for detection and elimination of head lice – Frequent combing removes active head lice, but may not remove all of the living eggs. When combing is done every few days the life cycle of lice is interrupted. A recent study (see References) demonstrated that both wet and dry combing 4 times in 2 weeks can be an effective alternative to pesticides for children with lighter infestations. See the [Greater Vancouver Lice Clinic webpage](#) for wet combing instructions.

### Chemical Treatment

#### MEDICATIONS

Head lice medications come in the form of shampoos and lotions to be used externally only. It is important for you to read the full set of instructions and to follow the directions exactly. Incorrect use can result in treatment failure (more lice) and overuse of such products can be dangerous to a child's health. Also pay attention to the limitations on the age of a child who can be treated. See the [Centers for Disease Control website](#) for a more complete description of products available.

#### OVER THE COUNTER MEDICATIONS

Listed by active ingredient (Brand names - no endorsement is implied by listing brand names)

##### **Pyrethrins (A-200, Pronto, R&C, Rid, Triple X)**

Pyrethrins are naturally occurring chemicals that can kill insects. Although mild, pyrethrins can be irritating to humans, especially sensitive individuals. Research suggests



Kids huddle before a game. Photo: Popofatticus/Flickr

that pyrethrins kill only some of the lice in a single treatment and cannot kill the live, unhatched eggs. A follow-up treatment is required 9-10 days after the first treatment. It is labeled for use in ages 2 and older.

##### **Permethrin (Nix)**

Permethrin is a synthetic insecticide related to, but stronger than, pyrethrin. Permethrin can kill head lice but will not kill the unhatched eggs. Retreatment must be performed 9-10 days after the first treatment.

#### LOWER RISK PRESCRIPTION MEDICATIONS

##### **Benzyl alcohol lotion (Ulesfia Lotion)**

Formulated as a lotion, benzyl alcohol will kill lice but not the eggs. Follow up treatment should occur on day 8. It is approved for children over 6 months of age.

##### **Ivermectin lotion (Sklice)**

Ivermectin has been used for many years to treat humans for worms. It is approved as a topical head lice medicine, as a single application on dry hair. It does not kill the eggs, but appears to prevent newly hatched nymphs from surviving. No retreatment or combing is needed.

##### **Spinosad topical suspension (Natroba)**

Spinosad is a naturally occurring chemical from soil bacteria that is used in a topical formula to kill live lice and eggs. No combing or retreatment is needed unless live lice are observed after 7 days.

#### HIGHER RISK (LAST RESORT) PRESCRIPTION MEDICATIONS

##### **Malathion lotion**

Malathion is part of a group of strong insecticides (organophosphates) used in agriculture. It can kill head lice and some of the eggs. Malathion must be used according to directions and only on children older than 6 years of age. A follow-up treatment may be needed. Malathion is

flammable and should not be used when smoking or near electric heat sources, such as a hair dryer.

### **Lindane shampoo**

Lindane is an organochlorine (like DDT) and although Lindane shampoos are still available for last-resort treatments, the American Academy of Pediatrics no longer recommends this treatment. Lindane is neurotoxic and treatment guidelines exclude many people due to age and health conditions. Alternate products are available today that pose lower risks and work as well.

### ***How often should I reapply the treatment I have for head lice?***

Always follow the label instructions, which typically recommend one retreatment if live head lice are seen 7-10 days after the first treatment. Do not use a product more than twice. Be sure to treat the whole head with recommended amounts of product on the first application as inadequate coverage can be a cause of treatment failure. If live lice continue to be found, a different treatment should be used.

### ***What about home remedies, such as coating the child's hair in mayonnaise or oil?***

Home remedies are not recommended to treat head lice. Mayonnaise and oils have not been proven to effectively kill and remove head lice, and can be quite dangerous. In a tragic recent case, the bag placed over a toddler's head to hold the mayonnaise in her hair slipped over her face and she died while sleeping. Oils and conditioners can be used along with combing with a lice comb because the oil will make combing easier. However, these household goods do not suffocate lice and do not kill eggs.

### ***What makes a head lice comb different than a regular comb?***

A lice comb is a very fine toothed comb that can pull tiny particles from the hair. Similar combs are used to comb fleas from pet fur. Lice combs will help remove lice from the hair but can miss some nits. Frequent combing of the hair with a lice comb is part of an effective lice elimination strategy.

### ***Should I treat everyone in the home if one of us develops head lice?***

It is best to use a head lice comb to monitor other members of your family for head lice and only treat if someone is found to have an active infestation. Before using a comb on different family members, it is best to clean the comb with isopropyl alcohol, or warm, soapy water.



A mother combing a child's head and checking for head lice. Photo: Mypurgatoryyears/iStock

### ***Should I have my home treated for head lice?***

NO, head lice cannot survive if they are separated from their human host. They quickly die from the lack of warmth and humidity they get from the human scalp. The best option is to vacuum your home in and around places where lice might have fallen. Bed linens should be washed and dry pillows can be placed in a hot dryer for 20 minutes to eliminate risks of lice.

### ***Should stuffed animals and toys be treated?***

It is unnecessary to treat stuffed animals, toys, and other household items for head lice, as long as items are put aside for 24-36 hours. If there is any question, soft items can be placed into a hot dryer for 20 minutes or isolated in plastic bags or bins for 36 hours.

### ***Shouldn't my child's classroom be treated for head lice?***

Head lice will not survive in a classroom setting for more than 24 hours. It would be nearly impossible for a head louse to crawl back onto a person if it had fallen because their tarsi (claws) are not adapted for walking or climbing on smooth or carpeted surfaces.

### ***Should cases of head lice be reported to the health department?***

Head lice infestation (pediculosis) is not a reportable condition for health departments.

## Can my child pick up head lice from sports equipment or activities?

It is extremely unlikely that head lice will be transferred from person to person during sports or on sporting equipment, with the exception of huddling or sharing helmets. To avoid this situation, children should keep their heads apart and each child should have their own helmet if lice are an issue.

## Are lice repellents effective?

According to the [Mayo Clinic](#), claims of head lice repellency for products aren't supported by scientific studies. The FDA regulates chemical products, but not those classified as "natural", usually containing plant-based products. Therefore natural head lice repellent products are not recommended at this time due to a lack of research. The best way to prevent head lice is to instruct children to avoid head-to-head contact and sharing hats and brushes when known lice outbreaks occur. It is also advisable that parents regularly inspect their child's hair for the presence of head lice.

## Do pets get head lice?

No, head lice are specifically adapted to humans and do not survive in the fur of animals.

## No Nit Policies

The "No-Nit Policy" is a guideline that bars children with live head lice, eggs and/or nits (including empty egg shells) from school, camp, child care and other group settings until the child is nit free. [The National Pediculosis Association](#) advocates for No-Nit Policies as a preventative measure to stop the spread of head lice among children.

The U.S. Centers for Disease Control advocate that No-Nit Policies are unnecessary and contribute to the burden of absenteeism. Reasons for avoiding No-Nit Policies in schools are described on the [CDC's website page, Head Lice Information for Schools](#).

The NY State IPM Program does not take a stance on No-Nit Policies, but encourages school officials and parents to understand the issue in order to make informed decisions.

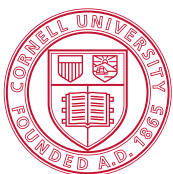
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### Helpful Links

<a href="#">Greater Vancouver Lice Clinic</a>	<a href="http://greatervancouverliceclinic.ca/wet-combing-instructions">greatervancouverliceclinic.ca/wet-combing-instructions</a>
<a href="#">Centers for Disease Control</a>	<a href="http://www.cdc.gov/parasites/lice/head/treatment.html">www.cdc.gov/parasites/lice/head/treatment.html</a>
<a href="#">Mayo Clinic</a>	<a href="http://www.mayoclinic.org/diseases-conditions/head-lice/expert-answers/head-lice-prevention/faq-20058386">www.mayoclinic.org/diseases-conditions/head-lice/expert-answers/head-lice-prevention/faq-20058386</a>
<a href="#">The National Pediculosis Association</a>	<a href="http://www.headlice.org">www.headlice.org</a>
<a href="#">Head Lice Information for Schools</a>	<a href="http://www.cdc.gov/parasites/lice/head/schools.html">www.cdc.gov/parasites/lice/head/schools.html</a>

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