

# Recommended Head Lice Management

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northern health  
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partners in wellness

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## INTRODUCTION

**Head lice can affect anyone.** Head lice are annoying and may cause itching, but they do not transmit or cause disease. Children and adult's reactions to head lice can subject children to teasing, bullying and isolation. Reactions to head lice can significantly interfere with a child's emotional well-being, social status in the classroom and ability to learn. For these reasons, head lice infestations should be treated.

Current research shows that school exclusion, early dismissal and no-nit policies do not prevent or control head lice infestations. In fact, these practices further stigmatize children, erode their self-esteem and interfere with learning. No-nit policies in schools are discouraged by both the Canadian Pediatric Society and American Academy of Pediatrics.

## NORTHERN HEALTH POSITION STATEMENT

The Northern Health does not support school exclusion, early dismissal and no-nit policies as these disrupt the education process and adversely affect children's self-esteem.

Due to frequent misdiagnosis and over diagnosis of head lice, school screening teams are not encouraged.

### RATIONALE

1. Lice may be present on the scalp for weeks before they are discovered. Only 30 percent of individuals scratch their scalp when they have head lice. As children are often in the school for days or weeks before head lice are detected, there is no benefit in sending them home early.
2. Head lice infestations are often misdiagnosed. The presence of fluff or dandruff in the hair is often mistaken for nits. Also, the presence of nits does not mean a child has an active infestation. It is difficult to differentiate between nits and empty egg casings. Even under ideal conditions, 10-30% of nits do not hatch.
3. Head lice are frequently over diagnosed, which leads to overuse of pediculocides (chemical head lice products). Overuse of pediculocides can be hazardous to a child's health and can cause resistance.
4. Negative reactions to head lice adversely affect children by subjecting them to teasing and bullying.

## **WHAT PARENTS CAN DO...**

- **Be aware of the symptoms of head lice and the treatment procedures.**
- **Check the heads of all family members on a weekly basis. Increase this to daily head checks when a case of head lice has occurred in your child's classroom or one of the family members has been in contact with head lice.**
- **Treat the infested heads.**
- **Contact PHN for resources and further information when treatment has failed to rid your child's head of head lice.**
- **Teach your children not to share hair accessories, hats, coats, combs, brushes, etc. with others.**
- **Inform all possible contacts so other cases can be found and treated (e.g. teachers, parents of classmates and playmates)**

## **WHAT THE SCHOOL CAN DO...**

- **Discuss with Public Health Nurses the management of head lice in schools.**
- **Develop an understanding of the symptoms of head lice infestation.**
- **Distribute classroom letters and treatment information to parents when head lice are identified.**
- **Encourage families to contact PHN for information on treatment failures or other concerns pertaining to controlling/managing head lice.**

**See Appendix A for Sample School Letters (2).**

**See Appendix B for Preventing/Controlling Transmission in the Classroom**

## **WHAT THE PUBLIC HEALTH NURSE CAN DO...**

### **In the school:**

- Discuss the management of head lice in cooperation with the school principal, staff and parents.
- Determine if the staff has an adequate knowledge of head lice and the control of infestations.
- Provide information as needed, including information on environmental control i.e. dressup centers, cloak rooms, hanging jackets on the back of desk chairs.

### **With families:**

- Group presentations about head lice and head lice control. This would be particularly effective with kindergarten parents early in the school year.
- Follow-up for treatment failures or other concerns pertaining to controlling/managing head lice ie: provision of information through written handouts, videos, or individual counseling.

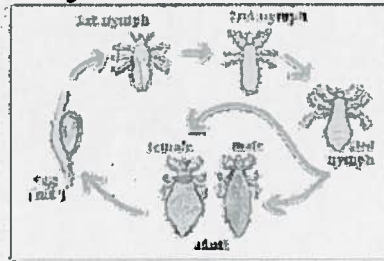
### **Active versus Inactive Head Lice Infestation**

A person has an active infestation if head lice are found crawling on their head or there are many nits within 6mm of the scalp. Nits found further down the shaft of the hair (more than 6 mms from the scalp) have already hatched. Treatment is not recommended for people who have nits further than 6mm from the scalp.

# HEAD LICE FACTS

- Head lice do not spread disease.
- Head lice are tiny insects about the size of a sesame seed and can vary from white to brown in color.
- Head lice live only on a person's head and may only survive 1-2 days away from the scalp as they need human blood in order to survive.
- Head lice do not jump or fly.
- Head lice can move quickly on dry hair, so they are difficult to see.
- Head lice bites can make the scalp itchy (but not always).

## Life Cycle of Head Lice



Permission requested from [www.headlice.org](http://www.headlice.org)

To see head lice photos click here: [www.hsph.harvard.edu/headlice.html](http://www.hsph.harvard.edu/headlice.html)

- Adult head lice lay about 5-6 eggs (called nits) every day. These nits are glued to the hair very close to the scalp (within 6mm or 1/4 inch).
- It takes 7-10 days for the nits to hatch into a nymph.
- It takes 7-10 days for a nymph to become an adult. During that time, it stays on the head, but does not lay eggs.
- You can find nits anywhere on the head especially behind the ears or on the back of the neck.
- You can't get rid of nits by brushing, or with a hair dryer.
- After the head lice hatch, the shell of the nit stays glued to the hair. If it is more than 6 mm or 1/4 inch away from the scalp, it is probably empty.
- You can get head lice by touching heads with someone who has head lice, or by sharing combs, brushes and hats.
- Lice are not inclined to move off the head where they hatch until nearly full grown. It takes 7 days minimum to become fully grown.

## MYTHS AND FACTS ABOUT HEAD LICE



*"Sometimes I'm Misunderstood"*

**Myth 1** The presence of head lice is a sign of poor personal hygiene.  
**Fact:** We head lice prefer a clean scalp. It doesn't matter to us your sex, age, race or how much money you have.

**Myth 2:** Only children get head lice.  
**Fact:** We like adults as much as children, but it's easier to move from one child to another because of their close contact in daycare, preschools or schools.

**Myth 3:** If your head isn't itchy, you don't have lice.  
**Fact:** Contrary to common thinking, we may be in your hair for weeks or months without making you itch. In fact, even though we are in your hair, only 1/3 of you will be scratching.

**Myth 4:** Long hair encourages infestation.  
**Fact:** We are more interested in your scalp than your hair so cutting hair will not get rid of us.

**Myth 5:** Head lice can be "caught" from plants, pets and other animals.  
**Fact:** I can live on YOU, but I can't live on your plants, pets or other animals.



**Myth 6:** Head lice can jump and fly from one person to another.  
**Fact:** We don't have wings. We can't jump, but we can run quickly from one head to another "*wherever and whenever heads meet*". We may hide in hats and other headgear, scarves, hair accessories, helmets, head phones, etc. We can only survive for up to 48 hours away from your head.

**Myth 7:** An itchy scalp following treatment is a sign of treatment failure.  
**Fact:** Your scalp may be itchy for up to 10 days after successful treatment. If your head is itchy past 10 days, it may be a sign that I am still there or my friends have moved in!

**Myth 8:** Head lice cause disease. An outbreak of head lice is a public health emergency.  
**Fact:** I am a nuisance but I do not carry germs or spread disease.

**Myth 9:** No nit policies are effective in eliminating head lice.  
**Fact:** There is no evidence that shows no-nit policies reduce head lice infestations. Nits are removed to enhance the effectiveness of treatment, but should not be a reason to keep a child out of school.

**Myth 10:** The presence of nits means an active infestation.  
**Fact:** 10-30% of children with nits never develop an active infestation.



**TREATMENTS**

**Two Acceptable  
Treatment Options**



**OPTION A**

**Chemical  
Shampoos**

**Kill the Lice  
&  
Remove the Nits**

Special lice shampoos are used because they have been tested and determined to be an effective and acceptable treatment

**OPTION B**

**Wet-combing**

**Remove the Lice  
&  
Forget the Nits**

Non-chemical ways to find and eliminate head lice

Wet combing with hair conditioner immobilizes lice

*Note: the research to support this method is unclear, but many people say it works*

## OPTION A HEAD LICE SHAMPOO

### ***Kill the Lice and Remove the Nits***

This option involves using two applications of a chemical head lice shampoo, 7 to 10 days apart. The shampoo kills the lice on the head but may not kill all of the nits; therefore, the nits need to be removed using a special "nit" comb or with your fingers. Head lice shampoos should only be used during active infestations. **Overuse and improper use of these shampoos can be dangerous. Ask your pharmacist about head lice shampoos**

#### STEPS TO FOLLOW

<u>DO</u>	<u>REMEMBER</u>
<p>1. <b>Check the heads</b> of all family members. Check hair, especially behind ears and back of neck for lice eggs (nits) – look for white to light brown oval specks "glued" to the strands of hair, very close (within 6mm or <math>\frac{1}{4}</math> inch) to the scalp.</p>	<p>1. If one person in the family has head lice, there is an increased chance that other family members have head lice too. Dandruff can be flicked off the hair; nits are glued to the hair. Use good lighting when doing head checks.</p>
<p>2. <b>Only family members with live head lice or live nits should be treated. Carefully read and follow directions of the head lice shampoo. Do not use 2&amp;1 shampoo/conditioner prior to treatment. Do not rewash hair for 1-2 days following treatment or use conditioners for 1 week.</b></p>	<p>2. Products differ in terms of whether to apply to dry or wet hair, and length of time. Unless you treat all family members who have head lice at the same time, head lice can be passed on from one person to another when heads touch. Conditioners can reduce the effectiveness of treatment.</p>
<p>3. <b>Remove all nits.</b> Gently use "nit" comb (metal works best) or use your fingers to pull nits from the single strands of hair. Rinse nit comb or fingers in a sink or bowl of warm water and wipe dry after each stroke.</p>	<p>3. Metal nit combs are available at your local pharmacy. If the nit comb tugs the hair, it may be upside down. <i>Experts differ in their opinion on the need to remove nits. Nit removal is included as it helps ensure that less eggs will hatch, thereby improving the effectiveness of the treatment.</i></p>
<p>4. <b>Wash clothing worn in the past 2 – 3 days, bed sheets and pillowcases and then dry in the hot cycle of the dryer. If articles cannot be washed in hot water or dried on a hot cycle in the drier, put the items in a sealed plastic bag for 14 days or place the sealed bag in the freezer for 48 hours.</b></p>	<p>4. There is no evidence that a major clean up of the house is necessary to get rid of head lice. It is more important to <b>treat the head lice and remove the nits.</b> Only items that have been in direct contact with the affected person need to be washed e.g. shirts, jackets, hats, towels, combs, brushes.</p>
<p>5. <b>Treat with head lice shampoo a second time 7 – 10 days later. Repeat step 3.</b></p>	<p>5. A second treatment will make sure that any head lice, which hatch after the first shampoo, will be killed before they have a chance to lay any eggs. Two treatments and a follow-up check of the head with nit removal for 2-3 weeks is the best way to make sure head lice are gone.</p>
<p>6. <b>If live head lice or new nits are found consult your Public Health Nurse or try Option B Wet Combing.</b></p>	<p>6. Wet combing breaks the life cycle of head lice by removing them before they are grown and able to reproduce.</p>

## OPTION B WET-COMBING

### ***Remove the Lice and Forget the Nits***

This option is cheap and safe but is time consuming and requires that the steps be followed **carefully and completely**. Wet combing is based on the life cycle of head lice. It focuses on removing the live head lice and does not require removing the nits from the head although some people still choose to remove the nits. Combing treatments are done every 3 – 4 days over a two-week period. This breaks the life cycle of head lice by removing them before they are fully grown and able to reproduce. **Talk to your Public Health Nurse if you require further information.**

#### STEPS TO FOLLOW

<u>DO</u>	<u>REMEMBER</u>
1. Wash hair with ordinary shampoo and rinse.	1. Note: On average, a wet combing session takes about 1/2 hour per person.
2. Apply at least 1/2 cup of conditioner (any brand) to thoroughly saturate the hair. Use more if long hair. Do not rinse out the conditioner.	2. Untangle hair with a regular wide tooth comb. Wet conditioner will immobilize the lice.
3. Comb sections of hair using a "nit" comb (metal works best). Divide hair into small sections. Firmly draw the comb from the scalp to the end of the hair. After each stroke, rinse the comb in a sink or bowl of warm water, and wipe dry. Continue section by section until the entire head is done. Make sure hair stays wet during combing with conditioner.	3. Metal nit combs are available at your local pharmacy. If the nit comb tugs the hair, it may be upside down.
4. Rinse hair. Leave hair dripping wet. Repeat Step 3 combing without conditioner, until no lice are found.	4. Check the comb and your fingernails for head lice (you don't want to give them a ride back to the head).
5. Repeat Step 1 – 4 every 3 – 4 days for two weeks.	5. Wet combing breaks the life cycle of head lice by removing them before they are full grown and able to reproduce.
6. After two weeks of wet combing if live head lice or new nits are found, try Option A: Head Lice Shampoo or talk to your Public Health Nurse.	

#### DAYS TO WET COMB

1	2	3	4	5	6	7	8	9	10	11	12	13	14
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The eggs laid before the start of the conditioning treatments will hatch on DAY 10

All lice cleared on DAY 14. Only empty egg shells left on hair.

## ALTERNATIVE TREATMENTS

There is not enough scientific evidence to support the use of the following methods, therefore Northern Health does not recommend them as treatment options.

- ◆ Olive oil
- ◆ Mineral oil
- ◆ Vinegar
- ◆ Mayonnaise
- ◆ Melted Butter
- ◆ Vaseline
- ◆ Robi comb
- ◆ Follicel
- ◆ Nuvo Lotion
- ◆ Shaving Gel
- ◆ Garlic
- ◆ Enzyme Treatments

## DANGEROUS AND UNDESIRABLE REMEDIES: DO NOT USE

The following treatments are not effective and/or not safe.

Insect Sprays (Raid)  
Oil (WD40)  
Gasoline  
Flea Soap  
Alcohol  
Shaving the head

Dyes  
Bleaches  
Chinese Chalk  
Heat Directly on Scalp  
Kerosene

Essential Oils (Pine, Tea Tree, Thyme, Rosemary, Eucalyptus, Chick Chalk etc....) are not recommended due to limited scientific evidence and possible toxicity concerns.

## WHEN TREATMENT DOESN'T WORK...

The most common causes of treatment failure include:

**Reason #1: Inadequate information or understanding about head lice or the treatment method used.**

The treatment methods can be confusing for many people, especially Option B which is based on understanding the life-cycle of the head lice. If unsure about the treatment or prevention of head lice, please talk to your Public Health Nurse.

**Reason #2: The head lice shampoo was not applied properly.**

The most common errors with using the shampoo include:

- Applying the shampoo to wet hair: Applying the shampoo to wet hair dilutes the chemicals in the shampoo. When exposed to water head lice close their breathing holes which also makes it harder for the chemicals to penetrate and kill the lice.
- Not using enough shampoo to thoroughly cover all the hair: Thick and long hair will require more head lice shampoo. Make sure you use enough head lice shampoo to thoroughly wet all hair – especially behind the neck and ears. One way to make sure that you have covered all the hair is to comb the product through the hair with a regular comb.
- Not leaving the shampoo on long enough: Chemicals in the shampoo take time to work. Make sure you follow the product instructions.
- Not applying the second treatment 7-10 days later: With option A (using lice shampoos), you need to use the shampoo again 7-10 days after the first treatment. This is because no product kills 100% of eggs and eggs take 7 days to hatch. Therefore, re-treatment in 7-10 days is a mandatory part of treatment.

**Reason #3: The lice are resistant to the chemical in the shampoo.**

Head lice may be resistant to the chemicals in the lice shampoo. If this happens, the chemicals are no longer able to kill all the lice. You can tell if the head lice are resistant by treating the head as directed, then checking for live lice. Use a fine tooth comb and look for movement. If the lice are all dead the shampoo is working. If the lice are still moving they may be resistant to the chemicals in the shampoo. If the lice are resistant switch to another brand with a different "active ingredient" or try one Option B. Ask your pharmacist for help.

**Reason #4: The hair was previously washed using shampoo with built-in conditioner.** Conditioners in regular shampoos can coat the hair and make it more difficult for chemicals in the head lice shampoos to cover the hair and scalp.

**Reason #5: The nits weren't removed.**

No shampoo is 100% effective. Nit removal will help ensure effectiveness of head lice shampoos and that there will be less eggs on the head to hatch.

**Reason #6: The head lice shampoo is too old.**

The active chemicals in many shampoos weaken over time. Check the expiry date on the head lice shampoo before you use it.

**Reason #7: Another infestation has occurred.**

If the above reasons don't explain why the treatment hasn't worked, re-infestation has likely occurred. Re-infestation almost always results from head to head contact with a person who has lice (re-infestation from the environment is very rare). If hair is clear one week after treatment, then head lice are found later, re-infestation has probably occurred. If you suspect re-infestation, ask your child with whom she/he has had head to head contact, and see if they can be checked. Look beyond your child's classroom; look at direct head to head contact opportunities your child has had during play and within the family.

**What you should do**

Immediate re-treatment with a different pediculocide followed by a second treatment 7-10 days later is recommended. If infestation recurs or persists, alternative remedies like option B, are recommended to avoid excessive exposure to chemical head lice treatments.

**A WORD ON COMBS**

Some general things to keep in mind with combs are:

- regular combs will not remove head lice and nits (lice eggs)
- there are two types of special head lice combs: a head **lice** comb has more space between the teeth and will remove lice but not nits, which are much smaller than lice. A **nit** comb's teeth have less space between the teeth and will remove both lice and nits
- plastic combs are not useful because they are so flexible that the teeth separate, break off and head lice and nits are bypassed as the comb is dragged through the hair
- lack of research regarding effectiveness of "zapper combs"

**A metal NIT comb is recommended** – The best nit combs have closely spaced metal teeth (about .15mm between teeth) that are about 1" to 1 1/2" long. With a short-toothed comb, it is difficult to completely comb through most types of hair. The metal toothed comb is more durable; the teeth won't spread, bend or break. The best metal combs have one side of the teeth beveled (on an angle). This allows you to place the teeth of the comb closer to the scalp each time you start to comb through the hair.

## EDUCATIONAL AND SUPPORT RESOURCES

Interior Health School Health Website: Head Lice Information  
[www.interiorhealth.ca](http://www.interiorhealth.ca)

BC Health Files: Head Lice Number 06 March 2007  
<http://www.bchealthguide.org/healthfiles/httoc.stm>

Harvard School of Public Health: Head Lice Information by Richard Pollack  
<http://www.hsph.harvard.edu/headlice.html>

Canadian Pediatric Society Head Lice Parent Handout  
<http://www.caringforkids.cps.ca/whensick/headlice.htm>

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