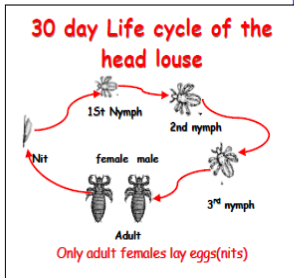


# APPENDIX A

## More Facts About Treating Head Lice:

- ◊ Pediculicides are not considered 100% effective
- ◊ When using pediculicides – more is not better
- ◊ Environmental spraying is not necessary
- ◊ Headgear, pillowcases and towels can be washed in hot water
- ◊ Soak combs and brushes in hot water for 10 minutes or wash with a pediculicide shampoo
- ◊ Head lice are not dangerous and can be eliminated with persistence and good information.



## A Guide to Managing Head Lice

It is the responsibility of families to detect and treat head lice however, the school can play an important role in supporting families in this process.

### What are Head Lice?

Head Lice are tiny insects that live on the human scalp. These insects lay eggs called nits, which stick to the hair close to the scalp. Head Lice do not spread disease. Having head lice does not mean you are not clean.

### How are Head Lice Spread?

Head Lice are spread by head-to-head contact with another person who has head lice. They can not fly, jump or swim. Brushes and combs can transfer mature head lice.

### What are the Signs of Head Lice?

- ◊ Itching or scratching
- ◊ Crawling head lice are hard to see because they can run quickly (up to 30 cm per min.)
- ◊ Adult lice are about 2-3 mm long. Hatchlings (young lice) are often lighter brown and about 1-2 mm long.
- ◊ Eggs (Nits) are firmly attached to the hair close to the scalp and are easier to see.
- ◊ Nits are grey-white, oval in shape and about the size of a grain of salt
- ◊ Nits may look like dandruff but can not be flicked off

### Facts I Should Know About Head Lice

- ◊ They are not new. They have been around for many, many years.
- ◊ They aren't produced by dirt or from air
- ◊ Pets do not transmit head lice
- ◊ Life span of head lice:
  - lives on a head for about 30 days
  - lives off a human head for up to 48 hours
  - it takes 8-10 days for an egg to hatch, and another 8-10 days for a louse to mature enough to lay eggs of its own
- ◊ All children are vulnerable

### What Supplies are Recommended to Check for Head Lice?

- ◊ Hair Conditioner, white in colour and inexpensive
- ◊ Wide-toothed comb to untangle the hair
- ◊ Metal fine-toothed comb with smooth round teeth that are about 4-5 cm long and have a separation of 1 mm. An example of this is the LiceMeister® Comb

### How Do I look For Head Lice?

- ◊ Shampoo the hair
- ◊ Rinse and towel dry
- ◊ Put a generous amount of conditioner on the scalp
- ◊ Untangle the hair with a wide-toothed comb
- ◊ Section and comb the hair with a fine-toothed metal nit comb. After each stroke, wipe the comb on a paper towel and look for lice.

### What Do I Do If I Find Head Lice?

- ◊ Children can return to school when all live lice have been removed and treatment has started.
- ◊ Check all family members to see if anyone else has head lice. Treatment is necessary for only those who have head lice and/or eggs. It is important that these people be treated at the same time.
- ◊ Choose one of the treatments on the reverse and follow the instructions carefully
- ◊ Inform others who have come in close contact with your child's head recently (e.g. neighbours, and relatives).
- ◊ When treatment is complete, with all head lice and eggs removed, check the hair regularly, e.g. weekly for any further head lice infestation. The earlier detection the better.

## Insecticide Treatment For Head Lice:

There are three families of insecticides approved for use in Canada for treating head lice:

Family Name (Active Ingredient)	Trade Name	Formulation
Permethrin	Nix Kwellada-P	Cream Rinse
Pyrethrin	R&C Shampoo	Shampoo / Conditioner
Lindane	Hexit PMS-Lindane	Shampoo

### How to Use Insecticides:

- ◊ Rinse or wash out any hair conditioner that may be on the hair before using the insecticide. Dry hair well.
- ◊ Apply the insecticide generously
- ◊ Don't leave the insecticide shampoo or rinse in the hair longer than directed. Rinse the hair well after treatment. It's best to do the treatment over the sink, not in the bath or shower, so that other parts of the body do not come in contact with the product.
- ◊ Following the treatment, section the hair and comb through with a nit comb to remove the dead lice and eggs. The nit comb recommended would have a round metal teeth that are 4-5 cm long and have a separation of 1 mm. An example of this would be the Lice Meister®Comb.

- ◊ If any head lice are found still alive the next morning, re-treat the hair that day with an insecticide from a different family. Alternatively, the 10 Day Conditioner Method could be used.
  - ◊ Continue daily to remove the nits
- Important Points:**
- ◊ No insecticide is guaranteed to kill all eggs. Eggs which are not killed or removed from the head will hatch in 7-10 days after being laid. As hatchlings may be transferred to other children, they need to be combed out of the head every day by using hair conditioner and a nit comb. If not removed, the hatchlings will mature in about one week and start laying more eggs, continuing the cycle.
  - ◊ Following insecticide treatment remove all eggs.
  - ◊ It is not recommended to use an insecticide treatment more than three times.
  - ◊ The treatment must be repeated in 7-10 days

### Resultz® Non-insectical treatment

#### How does it work?

- ◊ Resultz® works by mechanically smothering live lice, dissolving the waxy exoskeleton that covers the bugs, dehydrating them and eventually leading to their death. The active ingredient is isopropyl myristate, which is widely used in cosmetic and skin care products.
- ◊ Not for use with children under 4 years of age. For more information on this method check with your local pharmacist.
- ◊ Resultz® does not kill the eggs. For that reason, the eggs must be removed from the hair. See below: *How to remove the eggs*.

### Noninsecticidal Treatments:

#### 10-day Conditioner Treatment

- ◊ Head lice can be more easily removed by applying plenty of hair conditioner to hair before combing to remove live lice and eggs (nits). Any type of hair conditioner may be used along with a metal fine-tooth 'nit' comb. An example of this would be the Lice Meister®Comb.

#### How does it work?

The hair conditioner works by slowing down the lice so that it is easier to trap them in the teeth of the comb. Without the hair conditioner to slow them down, lice can be difficult to catch. Hair conditioner also makes combing easier, especially when using the metal fine-tooth 'nit' comb. Even if only one or two lice are missed, they can lay about 6 eggs per day, and the cycle of getting head lice will continue.

#### Why the 10 Day treatment period?

Generally, eggs or 'nits' will hatch 7-10 days after being laid on the hair shaft. The 10-day period is therefore recommended as the most effective time to break this cycle of the head lice.

#### What to Do:

- ◊ Apply plenty of hair conditioner to the hair
- ◊ Comb through with an ordinary comb or brush to remove tangles
- ◊ Section and comb the hair thoroughly with a metal fine-tooth comb. Use additional conditioner if the comb tugs the hair or the hair is too dry.
- ◊ Wipe the comb on a white paper towel to check that the dark adult lice or the paler hatchlings are being removed. Hatchlings are young lice which emerge from eggs.
- ◊ Using white hair conditioner makes it easier to see the head lice.

- ◊ Rinse the hair conditioner out and dry the hair.
- ◊ Repeat this process every day for 10 days to cover the hatching period of the eggs. This removes the hatchlings which emerge from missed eggs.
- ◊ After completion of the 10-day treatment, check for lice once a week for at least four weeks.
- ◊ Check all other household members for head lice using the this method.

#### How to remove the eggs:

Some eggs will be removed by combing, but others are harder to detach.

You may need to use your fingernails to remove as many eggs as possible from the base of the hair shaft near to the scalp.



Notify your child's school, camp, child care provider, or neighborhood parents, to report a lice outbreak.

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## Head Lice Fact Sheet

### What are head lice?

Head lice are tiny insects that live on the human scalp. These insects lay eggs called nits, which stick to the hair close to the scalp. Head lice do not spread disease. Having head lice does not mean you are not clean.

### How are head lice spread?

Head lice are spread by head-to-head contact with another person who has head lice. They cannot fly, jump or swim. Brushes and combs can transfer mature head lice. Lice are not likely to leave a warm head to lurk in clothing, furniture and bed linen where it is cold and there isn't any food. Therefore these items are less likely to spread head lice.

### What are signs of head lice?

- One of the first signs may be itching or scratching
- Crawling head lice are hard to see because they can run quickly (up to 30 cm per minute) and hide from searching hands. Adult lice are usually dark brown and about 2-3 mm long. Hatchlings (young lice) are often a lighter brown and about 1-2 mm long.
- Eggs (nits) are easier to see.
- Nits are firmly attached to the hair close to the scalp.
- Nits are grey-white, oval in shape and are about the size of a grain of salt.
- Nits may look like dandruff but cannot be flicked off.

### How do I look for head lice?

1. Shampoo the hair.
2. Rinse and towel dry.
3. Put a generous amount of inexpensive conditioner to cover the whole scalp.
4. Untangle the hair with a wide tooth comb.
5. Section and comb the hair with a metal fine-tooth nit comb which easily separates the hair and has teeth that do not bunch together. An example of this is the LiceMeister® Comb. After each stroke, wipe the comb on a paper towel and look for lice. Pay particular attention to the hair behind the ears and at the nape of the neck, and be sure to comb out the whole head.

### What do I do if I find head lice?

- Using the conditioner method, check all family members to see if anyone else has head lice. Treatment is necessary for only those who have lice and/or eggs. It is important that these people be treated at the same time.
- Choose one of the treatments on the attached pages and follow the instructions carefully.
- Inform the school or daycare and all close contacts including friends and relatives
- When treatment is completed, with all the head lice and eggs removed, check the hair

regularly, e.g., weekly, for any further head lice infestation. The earlier the detection, the better.

### **Household Cleaning**

Head lice do not live long away from the scalp and nits are unlikely to hatch at room temperature. Excessive cleaning of personal, school and household items is therefore not necessary. As a precaution, wash bed linen, hats, combs, or brushes in hot water and dry in a hot dryer. Storing items in plastic bags for 10-14 days also kills the lice.

### **Exclusion from School/Daycare**

Students will be excluded from school if live lice are found on their head. They may return to school once treatment has been initiated, and there is no longer evidence of live lice. **The parent must continue treatment until all nits have been removed.**

### **'Trouble-shooting' Checklist**

If treatment is unsuccessful, check the following:

- Was the insecticide/non-insecticide treatment applied exactly as directed and repeated in 7-10 days?
- Was the hair combed and checked **daily** using plenty of conditioner, and all visible nits removed for 10 days (the hatch cycle of the eggs)?
- Was a good quality metal fine tooth 'nit' comb used?
- Have **all** other household members been checked and treated if necessary?

### **Prevention Activities/Ideas to Help Prevent Infestation**

- **Check your child's hair every week** for head lice and eggs (nits) – use a metal fine tooth nit comb and plenty of hair conditioner to make the task easier and more effective. To help children sit still for this, offer distracting activities, e.g., play a favorite video, provide games, encourage reading, etc.
- **Tie long hair back** – braid and/or put up if possible.
- **Consider applying hair gel or mousse** – these do not prevent or repel lice but help keep stray hair strands from contact with other heads.
- **Avoid sharing combs, brushes, hats, elastics and headbands.**
- **Remind your child to try to avoid head-to-head contact** with other children, e.g., when working at the computer with others, when playing, hugging, group “selfies”, or sleep-overs.

## **Hair Conditioner Treatment for Head Lice**

### **10 Day Hair Conditioner Treatment for Head Lice**

Head lice can be more easily removed by applying plenty of hair conditioner to hair before combing to remove live lice and eggs (nits). Any type of hair conditioner may be used, including inexpensive 'generic' brands, together with a metal fine-tooth 'nit' comb such as the LiceMeister® comb.

#### **How does it work?**

The hair conditioner works by immobilizing the lice so that it is easier to trap them in the teeth of the comb. Without the hair conditioner to slow them down, lice can be difficult to catch – they can run about 30 cm in 60 seconds. Hair conditioner also reduces friction, making combing easier, especially when using a metal fine-tooth 'nit' comb that the teeth don't bunch together and the hair separates easily. An example of this type of comb is the LiceMeister® Comb. Even if only one or two lice are missed, they can lay about 6 eggs per day, and the cycle of infestation will continue.

#### **Why the 10 day treatment period?**

Generally, eggs 'nits' will hatch 7-8 days after being laid on the hair shaft. However, some researchers have found that a few eggs may hatch as late as 9-10 days after being laid. The 10-day period is therefore recommended as the most effective time to break the reproductive cycle of the head lice.

#### **What to do:**

- Apply plenty of hair conditioner to the hair until saturated.
- Comb through with an ordinary comb or brush to remove tangles.
- Section and comb the hair thoroughly with a metal fine-tooth 'nit' comb in 4 directions – forwards, backwards, left and right. Use additional conditioner, if the comb tugs the hair or the hair is too dry.
- Wipe the comb on a white paper towel to check that the dark adult lice or the paler hatchlings are being removed. Hatchlings are young lice which emerge from eggs. You may need to use a magnifying glass and a strong light to see the lice and eggs.
- Using white hair conditioner may make it easier to see the head lice.
- Rinse the hair conditioner out and dry the hair.
- Repeat this process every day for 10 days to cover the hatching period of the eggs. This removes the hatchlings which emerge from missed eggs.
- After completion of the 10-day treatment, check for lice reinfestation once a week for at least 4 weeks. Hair conditioner makes the inspection easier.
- Check all other household members for head lice infestation using the method described above.

**How to remove eggs:**

Some eggs will be removed by combing, but others are harder to detach. You may need to use your fingernails to remove as many eggs as possible from the base of the hair shaft near to the scalp. Remember, only those eggs within 1 cm of the scalp will hatch. Those eggs which have grown further out the hair shaft will already be hatched or dead; however, it is recommended that **all nits** be removed.