



RECOMMENDED

HEAD LICE

MANAGEMENT

INTRODUCTION

Head lice can affect anyone, and are most common in the 3-11 year old age group. Head lice are annoying and may cause itching, but they do not cause disease. Reactions to head lice can subject children to teasing, bullying and isolation. 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 and daycares are discouraged by both the Canadian Pediatric Society and American Academy of Pediatrics.

INTERIOR HEALTH'S POSITION STATEMENT

Interior Health does not support school exclusion, early dismissal or no-nit policies as these disrupt the education process and adversely affect children's self-esteem and social status in the classroom.

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. Less than 50 percent of individuals scratch their scalp when they have head lice. As children are often in the classroom 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.

PARENTS' ROLE IN MANAGING HEAD LICE

- Take a proactive approach in understanding lice facts and myths.
- 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 only when live lice or live nits are found. Learn what these look like as it is easy to misdiagnose. Use a recommended treatment.
- Teach your child about prevention of head lice (avoiding head to head contact, not sharing hats, brushes, helmets, etc.). Tie long hair back.
- Refer to the Interior Health School Health Website for more information
<http://www.interiorhealth.ca/YourHealth/SchoolHealth/HeadLice/Pages/default.aspx>

SCHOOLS' ROLE IN MANAGING HEAD LICE

- Send home information and links to parents early in the school year about head lice and school district policy.
- Include an article about lice in the school newsletter. Your School nurse can supply with one.
- Distribute classroom letters and treatment information to parents when head lice are identified.
- Implement head lice management protocols and guidelines based on best practices and health recommendations.
- Refer to the Tips for Schools found at:
<https://www.interiorhealth.ca/YourHealth/SchoolHealth/HeadLice/Documents/Tips%20for%20schools%20on%20Head%20Lice.pdf>

See Appendix A for Sample School Letter.

See Appendix B for Sample School Newsletter Insert.

PUBLIC HEALTH NURSE ROLE

In the school:

- Ensure schools are provided with standardized, evidence based head lice information for staff, teachers, parents and students.
- Act as a resource for the management of head lice and speak to parents and advisory committees as requested.
- Provide support and resources for schools for development of head lice management practices.
- Build capacity of school staff, parents and other caregivers in the treatment and management of head lice.
- The school public health nurse does not perform individual or group checks, support mass screening head checks or provide treatment to individuals or groups.

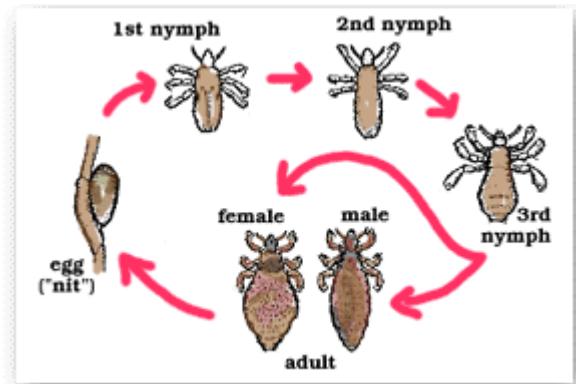
With families:

- Offer 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

HEAD LICE FACTS

- Head Lice are very common and can occur in people of all ages, races and classes.
- 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 **do not** jump or fly. They are spread by close head to head contact between humans.
- Head lice can move quickly on dry hair, so they are difficult to see.
- Head lice bites can make the scalp itchy.

Life Cycle of Head Lice



Permission requested from www.headlice.org

To see head lice photos click here <https://identify.us.com/idmybug/head-lice/head-lice-images/index.html>

- Adult female head lice lay about 3-10 eggs (called nits) every day. Live nits are glued to the hair very close to the scalp (within 6mm or $\frac{1}{4}$ inch).
- It takes 7-10 days for the nits to hatch into a nymph, and another 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.
- After the head lice hatch, the shell of the nit stays glued to the hair. If it is more than 6 mm or $\frac{1}{4}$ inch away from the scalp, it is probably empty or dead.
- Head lice are most commonly transmitted between family members, overnight guests and close playmates who spend a lot of time together.

How to Check for Head Lice

What you need:

- Bright light
- Regular comb
- Lice or nit comb
- White hair conditioner
- Paper tissues, white is best
- Plastic bag for garbage
- A magnifying glass can be helpful

What to look for:

You are looking for both live lice and lice eggs, also known as nits

- Adult lice are 2-4 mm long, about the size of a sesame seed. Lice move quickly and can be difficult to see.
- Lice eggs (nits) are shaped like tiny tear drops about the size of a poppy seed. They are glued firmly to the hair and will not move unless you pull them off with your fingernails or a nit comb.

What to do when checking for head lice:

- Apply a generous amount of conditioner to dry hair, soaking the scalp to the ends of the hair. Conditioner stuns the lice for about 20 minutes, and this makes it easier to find them.
- Remove tangles with a regular comb.
- Start behind the ears and comb the hair section by section. Separating the hair with clips is helpful.
- Place the lice comb against the scalp and pull through to the end of the hair.
- With every stroke, check the comb for lice and wipe it off on a tissue. Looking at what is on the tissue helps to identify if you are finding lice or just regular hair debris.
- Place used tissues in a plastic bag (when finished tie off bag and toss).
- Repeat the process moving round the whole of the head, at least 5 times. Work section by section, so that the whole head of hair is combed through. It will take at least 15 minutes to do it properly.
- If head lice are detected and a drug store treatment is used make sure that **all conditioner is washed from the hair prior to treatment.**

If you find head lice:

- If you find live lice, you have a **confirmed** case that should be treated.
- If you only find nits and they are close to the scalp (less than $\frac{1}{4}$ inch or 6 mm) you have a **probable** case of lice. If your child has not been treated in the last month you should treat for head lice now (nits found further away from the scalp are probably dead and do not require treatment).
- Check everyone else in the household for lice, even if they do not feel itchy.
- Treat everyone in the household who has a confirmed case on the same day.
- You have choices in how you treat head lice; you can buy treatments at the drug store or choose to wet-comb the hair.

Treatment Options

OPTION A	OPTION B	OPTION C	
Head Lice Treatment Products: shampoos or cream rinses	Wet Combing with a special nit comb and regular conditioner	Head Lice Treatment Spray	Alternative Treatments
Works to kill the lice, nits must be manually removed with daily combing.	Remove the head lice and live nits.	Spray kills both lice and nits.	No scientific evidence on safety or effectiveness of these treatments. Interior Health cannot recommend alternative treatments.
Do Not combine treatment options at the same time as this can reduce effectiveness			

OPTION A
**HEAD LICE SHAMPOO or CREAM
RINSE**

Kill the Head Lice and Remove the Nits

Head lice products should only be used when live lice and/or lice nits are found.

This option involves using two treatments with a special head lice shampoo or cream rinse, 7 to 10 days apart. These products are available without a prescription from a drug store. The shampoo or cream rinse kills the lice on the head but may not kill all of the nits. The nits need to be removed using a special nit comb and by using your fingernails. Resistance and reinfestation can occur, consult a public health nurse.

Ask your pharmacists about head lice products.

STEPS TO FOLLOW

DO	REMEMBER
<p>1. Check the heads of all family members. Check the entire head, especially behind ears and back of neck. You are looking for live lice and/or live nits (eggs).</p>	<p>1. If one person in the family has head lice, there is a good chance that other family members have head lice too. Head lice move very quickly. Combing hair with a fine-toothed nit comb can help find live lice. <i>Wetting hair prior to combing may help.</i> Nits are glued to the hair; while dandruff can be flicked off the hair. Use good lighting when doing head checks.</p>
<p>2. Treat all <u>infested</u> family members the same day.</p> <p>Read and follow the directions of the head lice product carefully.</p> <p>Apply to dry hair</p>	<p>2. 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.</p> <p>Conditioners can reduce the effectiveness of treatments. Wash off conditioners and any hair products before starting treatment.</p>
<p>3. Remove all dead lice and nits (within $\frac{1}{4}$ inch or 6 mm of scalp) using a nit comb or your fingernails. Rinse nit comb or fingers in a bowl of warm water and wipe dry after each stroke, or wipe on tissues and throw these away in a sealed bag.</p>	<p>3. Nit combs are available at your local pharmacy. It may help to untangle the hair first by combing with a regular comb. . <i>Experts differ in their opinion on the need to remove nits. Nit removal is included here as it helps ensure fewer eggs will hatch. .</i></p>
<p>4. Wash clothing, sheets, towels and pillowcases used in the past 3 days, in water at least 55 C or 130 F and then dry in the <u>hot</u> cycle of the dryer for at least 20 minutes or put the items in a sealed plastic bag for 10 days or in the freezer for 48 hours.</p> <p>Disinfect combs and hair accessories by</p>	<p>4. There is no reason to do a major clean-up of the house to get rid of head lice. It is more important to treat the head lice and remove the nits. Only items that have been in direct contact with the affected person need to be washed e.g. shirts, jackets, hats, towels, combs, brushes. Vacuum floors, furniture, mattress, and car seat</p>

soaking in rubbing alcohol for 1 hour.	where the infested child has spent time in the last 3 days.
5. Treat a second time 7 – 10 days later. Repeat step 2 and 3 above.	5. A second treatment will make sure that any head lice, which hatch after the first treatment, will be killed before they have a chance to lay 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.
6. If live head lice or new nits are found consult your Public Health Nurse or try another recommended option.	<p>6. If a few live lice are still found 8–12 hours after treatment, but are moving more slowly than before, this means the treatment is working and the medicine may take longer to kill all the lice.</p> <p>If active live lice are found in the combings after treatment has been properly applied, the head lice may be resistant to the product chemicals.</p> <p>If, after 24 hours following the treatment, no dead lice are found and lice seem as active as before, the medicine may not be working. Do not retreat right away with same product. Wash off the first product and retreat as soon as possible using a product with a different active ingredient group than the one used. Or go to option B or C</p> <p>Speak with your public health nurse or pharmacist before you try another treatment and carefully follow the treatment instructions contained in the new product box. .</p> <p>.</p>

OPTION B WET COMBING

Remove the Head Lice

Wet combing is based on the life cycle of head lice. It is about removing the live head lice from the head. Combing treatments are done every 3-4 days over a three-week period. This breaks the life cycle of head lice by removing them before they are fully-grown and able to lay more eggs. This option is low cost and safe but takes time and requires that the steps below be followed **carefully and completely**.

Talk to your Public Health Nurse if you require further information.

STEPS TO FOLLOW

DO	REMEMBER
1. Wash hair with normal shampoo and rinse.	1. Note: On average, a wet combing session takes about $\frac{1}{2}$ hour per person.
2. Apply at least $\frac{1}{2}$ cup (125 ml) of conditioner (any brand) to cover and wet all of the hair. Do not rinse out the conditioner.	2. Untangle hair with a regular wide tooth comb. Conditioner will slow the lice down..
3. Comb sections of hair using a fine toothed lice comb. 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 bowl of warm water, and wipe dry or wipe on tissues and throw tissues away in a sealed bag. . Continue section by section until the entire head is done. Make sure hair stays wet with conditioner during combing.	3. Metal or plastic nit combs are available at your local pharmacy. If the nit comb tugs the hair, use a wide toothed comb first and more conditioner, then try the nit comb again. Make sure you have good lighting.
4. Rinse hair. Leave hair dripping wet. Repeat Step 3 combing <u>without conditioner</u> , 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. Wash clothing, sheets, towels and pillowcases used in the past 3 days, in water at least 55 C or 130 F and then dry in the <u>hot</u> cycle of the dryer for at least 20 minutes or put the items in a sealed plastic bag for 10 days or in the freezer for 48 hours. Disinfect combs and hair accessories by soaking in rubbing alcohol for 1 hour.	5. There is no reason to do a major clean-up of the house to get rid of head lice. It is more important to treat the head lice and remove the nits. Only items that have been in direct contact with the affected person need to be washed e.g. shirts, jackets, hats, towels, combs, brushes. Vacuum floors, furniture, mattress, and car seat where the infested child has spent time in the last 3 days
6. Repeat Step 1 – 4 at least every 3-4 days for three weeks.	6. Follow the schedule below.

	See https://identify.us.com/idmybug/head-lice/head-lice-FAQS/mechanical-removal-lice.html
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DAY TO WET COMB: **at least** every 3-4 days (or more often). Three weeks of wet combing has been shown to have the better results than just two weeks..

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21

**OPTION C
HEAD LICE SPRAY**

Kill the Head Lice and Nits

This option involves using a special head lice spray purchased from a drug store. Two treatments must be used 8-10 days apart. The spray works by suffocating and killing the head lice and nits (eggs).

Ask your pharmacists about head lice spray products.

DO	REMEMBER
<p>1. Check the heads of all family members. Check the entire head, especially behind ears and back of neck. You are looking for live lice.</p>	<p>1. If one person in the family has head lice, there is a good chance that other family members have head lice too. Head lice move very quickly. Combing hair with a fine-toothed nit comb can help find live lice. <i>Wetting hair prior to combing may help.</i> Nits are glued to the hair; while dandruff can be flicked off the hair. Use good lighting when doing head checks</p>
<p>2. Treat all <u>infested</u> family members the same day Read and follow the directions on the head lice spray carefully. Apply to dry hair</p>	<p>3. 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. Wash off conditioners and any hair products before starting treatment.</p>
<p>4. Wash clothing, sheets, towels and pillowcases used in the past 3 days, in water at least 55 C or 130 F and then dry in the <u>hot</u> cycle of the dryer for at least 20 minutes or put the items in a sealed plastic bag for 10 days or in the freezer for 48 hours.</p> <p>Disinfect combs and hair accessories by soaking in rubbing alcohol for 1 hour</p>	<p>3 There is no reason to do a major clean-up of the house to get rid of head lice. It is more important to treat the head lice and remove the nits. Only items that have been in direct contact with the affected person need to be washed e.g. shirts, jackets, hats, towels, combs, brushes. Vacuum floors, furniture, mattress, and car seat where the infested child has spent time in the last 3 days.</p>
<p>4. Treat a second time 8 – 10 days after the first treatment. Repeat step 2</p>	<p>4. A second treatment will make sure that all eggs and live lice are killed. Two treatments and a follow-up check of the head is the best way to make sure head lice are all gone.</p>

ALTERNATIVES NOT RECOMMENDED FOR USE

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

- ◆ Olive oil
- ◆ Mineral oil
- ◆ Vinegar
- ◆ Mayonnaise
- ◆ Melted Butter
- ◆ Vaseline
- ◆ Robi comb
- ◆ Follicel
- ◆ Cetaphil
- ◆ Shaving Gel
- ◆ Garlic

UNDESIRABLE REMEDIES or DANGEROUS METHODS DO NOT USE

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

Insect Sprays (Raid)	Dyes
Oil (WD40)	Bleaches
Gasoline	Chinese Chalk
Flea Soap	Heat Directly on Scalp
Alcohol	Kerosene

Essential Oils (Pine, Tea Tree, Thyme, Rosemary, Eucalyptus, Chick Chack etc.) are not recommended as there is limited scientific evidence and safety information on their use.
Shaving the head is not recommended as a treatment strategy.

WHEN TREATMENT DOESN'T WORK...

The most common causes of treatment failure include:

Reason #1: Not having enough information about head lice or the treatment methods.

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

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

The most common errors with using the treatments include:

- The hair had conditioner or a hair product in it before treatment was started. As conditioner and other products can coat the hair, they can make the treatments less effective if they are not washed off first.
- Applying the treatment to wet hair: Applying the product to wet hair dilutes the chemicals in the treatment. When exposed to water, head lice close their breathing holes which also make it harder for the chemicals to penetrate and kill the lice.
- Not using enough treatment to thoroughly cover all the hair: Thick and long hair will require more head lice product. Make sure you use enough head lice treatment 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 treatment on long enough: Chemicals in the treatment take time to work. Make sure you follow the product instructions.
- Not applying the second treatment 7-10 days later: With option A and C you need to use the treatment again 7-10 days after the first treatment. This is because no product kills 100% of eggs and eggs take 7-10 days to hatch. Therefore, re-treatment in 7-10 days is a mandatory part of treatment.

Reason #3: The lice are resistant to the chemicals in the treatment.

Head lice may be resistant to the chemicals in the lice treatment. 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 moving less or are all dead the shampoo is working. If the lice are still very active they may be resistant to the chemicals in the treatment. Switch to another product with a different "active ingredient" or try one of the other options listed. 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 treatment is 100% effective. Nit removal will help ensure effectiveness of head lice treatments and that there will be fewer eggs on the head to hatch. Daily lice combing is a must!

Reason #6: The head lice treatment is too old.

The active chemicals in many treatments weaken over time. Check the expiry date on the product before you use it.

Reason #7: Misdiagnosis (no active infestation or it is a case of misidentification); **It is easy to mistake hair debris for nits. Nits cannot be flicked off or removed easily; they are cemented onto the hair.** Also, the symptoms (like itching) may be caused by something other than an active head lice infestation.

Reason #8: Another infestation has occurred.

If the above reasons don't explain why the treatment hasn't worked, re-infestation has likely occurred. Reinfestation 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 with favorite play mates and within the family.

EDUCATIONAL AND SUPPORT RESOURCES and REFERENCES

BCCDC: A Quick Guide to Common Childhood Diseases

http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Epid/Other/Epid_GF_childhood_quickguide_may_09.pdf

Canadian Pediatric Society Parent Handout http://www.caringforkids.cps.ca/handouts/head_lice

Canadian Pediatric Society Position Statement <http://www.cps.ca/documents/position/head-lice>

Entomology Society of America <http://www.entsoc.org/press-releases/ordinary-conditioner-removes-head-lice-eggs>

HealthLink BC: Head Lice

<http://www.healthlinkbc.ca/healthfiles/hfile06.stm>

Identify Us: Head Lice Information by Dr. Richard Pollack

<https://identify.us.com/idmybug/head-lice/head-lice-FAQS/index.html>

Interior Health School Health Website: Head Lice Information

<http://www.interiorhealth.ca/YourHealth/SchoolHealth/HeadLice/Pages/default.aspx>

Journal of Pediatrics, Head Lice, Clinical Report. Pediatrics August 2010 Vol 126(2) retrieved February 9, 2016 from <http://pediatrics.aappublications.org/content/126/2/392>

Journal of Pediatric Nursing, Demystifying Pediculosis: School Nurses Taking the Lead. Pediatric Nursing, September-October 2014, Vol 40, (), pp 226-235 Retrieved February 9, 2016 from <https://www.pediatricnursing.net/ce/2016/article4005226235.pdf>

Manitoba Head Lice Guidelines <http://www.gov.mb.ca/health/publichealth/cdc/protocol/pediculosis.pdf>

Mayo Clinic <http://www.mayoclinic.org/diseases-conditions/head-lice/basics/definition/con-20030792>

North Shore School Health Manual on Head lice <http://www.vch.ca/your-health/school-health/north-shore---school-health-manual/head-lice/>

Nova Scotia Guidelines for Head Lice Treatment http://novascotia.ca/dhw/publications/Public-Health-Education/Head_Lice_Guidelines_for_Treatment.pdf

Tropical Health Solutions Guide to head Lice <http://www.tropicalhealthsolutions.com/headlice>

University of California Management of Head Lice

<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7446.html>

UpToDate Resources on Head Lice <http://www.uptodate.com/contents/pediculosis-capitis>

Guidelines updated in 2016. Originally adapted, with permission, from the Northern Health Authority "Is There a Louse in the House? A Head Lice Information Package for Parents/Family" August 2003

Appendix A Sample School Letter

Dear Parent/Guardian

Date:

Re: Head Lice in Classroom

There has been a case of head lice in your child's classroom. Please check your child's hair and scalp carefully.

STEP 1: Find a comfortable well-lit area

STEP 2: Check the hair from the scalp to the end of the hair strand. It helps to wet hair and comb through to untangle hair first. . Then use a nit comb to look at the hair at the back of the neck, behind the ears and above the forehead. These are the most common spots to see lice. Then, check the rest of the head.

STEP 3: You are looking for **live head lice**.

Adult lice are hard to see as they move quickly. They are the size of a sesame seed and are tan, brown or grey.

STEP 4: If you find live head lice, check all household members. Treat only those who have head lice by following Option A – Head Lice Shampoo/Rinse, Option B - Wet Combing, or Option C – Head Lice spray (see attached).

If you do not find lice, it does not mean that your child does not have lice or that they will not get them. Check again in a few days.

STEP 5: Let the school know if your child has head lice.

More detailed steps on how to check for lice can be found here:

<https://www.interiorhealth.ca/YourHealth/SchoolHealth/HeadLice/Documents/How%20to%20check%20for%20head%20lice.pdf>

Remember:

- Make weekly head checks part of your routine.
- Scratching and itching of the scalp may be a sign of head lice.
- If your child has long hair, keep it tied back.
- Only treat if you find live lice

For more information, please contact your nearest Health Unit or see:

<http://www.interiorhealth.ca/YourHealth/SchoolHealth/HeadLice/Pages/default.aspx>

Appendix B

Sample School Newsletter Insert

Head lice are tiny insects that can live on human heads. They lay eggs (called nits) close to the scalp. Head lice do not spread disease, and they love washed or unwashed heads just the same! Head lice are very common among children aged 3-11. Scratching the head can be a sign of head lice, but children can also have them without any itching.

While you cannot prevent getting lice, you can teach your child not to share personal items they use on their heads (like brushes, and hats). Also, teach your child to put their hats and scarves in their coat sleeves at school. Be sure to braid or tie long hair back, and develop a routine of checking your child's head for lice at least once a week.

Make sure to only treat for head lice if you find live, moving lice on the head. Lots of other things can be mistaken for nits (head lice eggs) like dandruff and lint. More information about checking for lice and head lice treatment can be found on the Interior Health public website here:

<https://www.interiorhealth.ca/YourHealth/SchoolHealth/HeadLice/Pages/default.aspx>