
Introduction

The level of service now provided by the Public Health Department which relates with the TCDSB in dealing with head lice in the school is derived from the mandate of the *Health Protection and Promotion Act* and the *Mandatory Health Programs and Services Guidelines*, April, 1989 of the Ministry of Health consider head lice to be a nuisance and not a health hazard.

The changes in the service delivery related to head lice by the Health Departments have prompted the TCDSB to work cooperatively with the Medical Officers of Health of the Greater Toronto Area to initiate measures to provide for a basic level of service throughout Toronto. At the same time, given the local needs of certain Health Departments, additional services, where required and possible, can be provided by the Public Health Unit.

The intent of the information contained here is to:

- (i) provide an equitable level of service to all schools
- (ii) provide a systematic process for dealing with and controlling outbreaks of head lice in the school and community
- (iii) educate parents, teachers, students and other TCDSB staff about head lice

BACKGROUND

In 1984, the Ministry of Health published *The Effective Management and Control of Head Lice*. The booklet clarified that under Ontario Regulation 558/91 of the Health Protection and Promotion Act, Pediculosis (Head Lice) is not on the list of communicable diseases. As such, the Boards of Health consider Head Lice to be a nuisance and not a health hazard.

In order for a program for head lice control to be effective, it is necessary that all major groups work together:

- Local official health agency
- TCDSB (Trustees, Principals, Teachers, Students, Secretaries, Custodians)
- Local community (Parents and Health Professionals)

In the end the major responsibility for safeguarding the health, safety, and well being of the child lies with the parent or legal guardian. If a child is infested with head lice, it is the parents' responsibility to immediately provide treatment for deinfestation and to take all precautions in the home to prevent the transmission of head lice to other family members.

Guidelines

INFORMATION TO STAFF AND PARENTS

Prior to or during the first week of school in September the Principal should provide to all staff:

- Information related to head lice detection
- Protocol of school procedures for dealing with a student suspected of having head lice

Early in the school, preferably before the end of the month of September, the Principal should include in the initial newsletter to parents, a separate letter outlining: (Appendix C)

- Information about head lice;
- The parent's responsibility;
- Need to cooperate with the school;
- DOs and DON'Ts in controlling spread of head lice (Appendix K)

Also in January, after the March break, and at the end of June the Principal should provide general reminders to parents regarding head lice control (e.g. a brief paragraph in the school newsletter).

At a regularly scheduled meeting parents (e.g. Parent Teacher Nights, School Open House, School Health Fair, Kindergarten Registration, or a specifically convened meeting for the discussion of head lice, etc.)

- Principal in conjunction with the local Board of Health should inform parents of the need for their cooperation in the management and control of head lice
- Educational sessions are not routinely offered. If a school is having a serious problem with an infestation the liaison public health nurse may provide an educational session to parents/caregivers and/or school staff. e.g. educational session for parents involving audio-visual aids, discussion and distribution of public health literature, the TCDSB has previously provided all schools with video programs.) Refer to the Resources section to obtain a copy of the programs.

INFORMATION TO STUDENTS

During the year the Principal should request that each class in the school be informed about head lice, how it is spread and how to avoid an infestation (Appendix B).

REQUEST FOR SCREENING

When a pupil is *suspected* of having head lice:

- (a) The Health Care Nursing Service provided by TCDSB should be contacted by the Principal (Physical Education Department, 222-8282, ext. 3532)
- (b) the Health Care Nursing Service will check the hair of students suspected of having head lice and if a student is found to be infested the nurse will also check siblings in the school and other students in the school who have come in contact with the student (see section on Protocol for Screening by Health Care Nursing Service).

When a pupil is *identified* as having head lice:

- (a) the Principal should:
 - contact the parent or legal guardian to pick up the child and to provide the necessary treatment for the head lice;
 - if the parent/guardian cannot be contacted the child may be removed from the classroom, at the discretion of the Principal, until the end of the school day;
- (b) in all situations the Principal must notify the parent of what has happened and a copy of the letter(s) (Appendix D and F) should be sent home with the student or parent or older brother/sister;
- (c) the Principal should ensure that all students in the affected child's classroom receive a letter advising all other parents of the situation in the class (Appendix E);

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- (d) the Principal can request the TCDSB Health Care Nursing Service to check other pupils who may have been affected by contact and those of siblings and friends;
 - (e) the pupil will be re-admitted to class upon presenting a signed letter (Appendix F) from the parent or legal guardian that treatment has been administered.
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REQUEST FOR RE-CHECK

After the child has been treated and a letter attesting to such treatment has been provided to the school:

- (a) the principal will arrange for the child to return to class.;
- (b) the Health Care Nursing Service provided by TCDSB may be contacted by the Principal (222-8282, EXT 3532) for rechecks. Re-checks will be provided in situations where more than 3 children are identified within a school. The return visit would be made to the school by the Nursing Service 5 to 7 days following the identification and treatment by parent (Physical Education department, 222-8282, EXT 3532).

FURTHER ACTION

If a parent, after being directed by the Principal to provide treatment, refuses to take *effective steps*¹ to remove the lice and eggs of the lice:

- (a) the Principal should follow the directive outlined in the Ministry of Education memorandum from the Deputy Minister of Education (July 20, 1988) and may also wish to refer to the Education Law article in regards to head lice policies found in Appendix L.

Pupils, whose parents support their withdrawal from school for treatment purposes, may be excused from attendance at school under clause 21(2)(b) of the Education Act. Clause 265(m) is also available to Principals where circumstances

warrant its use. Principals may, by exercising their duty under clause 265(j) of the Education Act, cite clause 23(I)(f) of Regulation 298 which requires pupils to be clean in person and habits. Where, in the opinion of the principal, a pupil should be excused from attendance at school under clause 21(2)(b) of the Education Act, and the parents refuse to withdraw him/her for treatment, the principal may, under subsection 23(I) of the Act, suspend the pupil for conduct injurious to the physical well being of others in the school.

Although there may be occasions when it will be necessary for Principals to suspend pupils, it is expected that suspensions will be imposed only in extreme circumstances. Communication with parents in encouraging their participation and cooperation will be the most effective method in dealing with this issue.

- (b) If the parent continues to refuse to cooperate the Principal should discuss this situation with the Public Health Nurse or local Public Health Department to determine the possible course of action (e.g. a home visit or telephone call to determine the reason for the refusal).

The school social Worker can also be contacted to participate in the discussion to determine other courses of intervention.

- (c) If the parent refuses to cooperate after consultation with the local Public Health Department Official, the Principal, after discussion with the School superintendent, may take the necessary steps to suspend the student from school until the student is free of lice and nits.

It should be noted that this is the most extreme of the steps to be taken. All efforts should be made to reduce the absence from school due to a head lice infestation.

¹ "effective steps" implies:

- treating child with medicated shampoo
- ongoing attempt to continue to comb out dead nits from the hair

Head Lice Referral by Teacher

1. Teacher recognizes symptoms.
2. Teacher advises Principal in a manner so as not to arouse or bring to the attention of other students.
3. (a) Principal may consult with the school nurse, *if in the school on their scheduled day*, to discuss possible course of action and services provided by the particular health unit.
(c) Depending on the services provided by the Public Health Nurse, the Health Care Nursing Service provided by the TCDSB should be contacted: Physical Education Department, 222-8282 EXT 3532.
4. Follow procedures as outlined in the Guidelines section, under "Request for Screening".

SIGNS OF HEAD LICE

Although the presence of head lice may not be obvious, the major signs and symptoms for the teacher to be aware of are:

- intense *itching* of the scalp area (Head lice may also be found in eyebrows and beards);
- frequent and persistent *scratching* of scalp;
- *scratch marks* or an apparent *rash* on the neck, scalp, and behind ears;
- accumulation of louse fecal speck, on the collar, especially if the hair is long;
- small brownish nits (live eggs) of head lice or whitish nits (empty eggs) are attached to hair;. If treated eggs remain on the hair, at this stage they may look brownish or darkish in colour.

EXAMING FOR HEAD LICE AND THEIR EGGS (NITS)

When examining for Nits

Live nits lie on the hair strand (shaft) usually very close to the scalp but can be found farther

down the strand as well, they "POP" when pinched between finger nails or fine tweezers.

Suspect Infestation

If child is continually scratching scalp nits are most frequently seen above and behind ears and at nape of neck.

Nits are *very firmly attached* to hair shafts and cannot be flicked off or easily moved along hair shaft, even after they have been killed with deinfestation.

The *nit appears light grayish* in colour and is very tiny, no larger than ½ of the size of a pin head. Similar in size to dandruff.

The live mature *louse is not often seen* because of its mobility, therefore a person can be infested even if a live louse cannot be seen.

Parents should examine their children's hair *weekly* for nits.

Notify school if infestation is found.

The Effective Management and Control of Head Lice, Ontario Ministry of Health, Feb. 4, 1984

School Responsibilities After a Request for Nursing Service

1. Provide for use of Health Room or other private area for screening.
2. Provide class list(s), preferably in alphabetical order.
3. Provide for students to be screened initially 3 at a time and then on a rotating basis as each student returns to the class. In cases where JK/SK students are involved, the teacher may wish to accompany the students or designate a person to accompany the students.
4. The nurse/health care aide will provide screening results to the Principal/person designated.
5. Principal/person designated will take the necessary action to inform parents of an infestation and to initiate treatment. (Refer to letters in the handbook.)
6. The Principal/person designated can make arrangements for a re-check of students after 3-5 days by calling the Physical Education Department at ext. 3532.
7. The Principal/person designated should request from the local Public Health Department or school nurse for pamphlets related to head lice. The pamphlets can be attached to any letters, etc. that are sent home with the student(s).

Protocol for Screening by Health Care Nursing Service

1. After the initial request by the school for a head lice check the Nursing Service will call the school to confirm the number of classes and the time the nurse/health care aide will come to the school.
2. Upon arrival at school the nurse/health care aide will identify herself/himself.
3. Principal or person designated will provide an area for screening to be conducted (preferably the Health Room).
4. Principal or person designated will provide a class list to the nurse/health care aide.
5. After completing the screening the nurse/health care aide will provide information to the Principal regarding identified students.

Excuse of Student from School

The Principal's authority to excuse a child from school derived from the common law duty of care and the Education Act.

1. Part II - School Attendance

21.(2) When attendance excused

(b) A child is excused from attendance at school if the child is unable to attend school by reason of sickness or other unavoidable cause;

2. Part X - Teachers

265. Duties of Principal

(j) It is the duty of a Principal of a school, in addition to his duties as a teacher (Care of Pupils and Property) to give assiduous attention to the health and comfort of the pupils, to the cleanliness, temperature and ventilation of the school, to the care of all teaching materials and other school property, and to the condition and appearance of the school buildings and grounds;

(m) subject to an appeal to the board, to refuse to admit to the school or classroom a person whose presence in the school or classroom would in the Principal's judgment be detrimental to the physical or mental well being of the pupils;

3. Regulation 298 – Requirements for Pupils

23.(1) A pupil shall,

(f) be clean in person and habits

Note: Memorandum from Deputy Minister of Education, September 12, 1988 (Appendix A).

Suspension of Student Due to Head Lice

Where a parent or legal guardian refuses to cooperate with the Principal and refuses to withdraw the student to provide for the necessary treatment of the head lice, the Principal may suspend the pupil.

EDUCATION ACT

Part II, School Attendance

23.(1) Suspension of Pupil

A Principal may suspend a pupil for a fixed period, not in excess of a period determined by the board, because of persistent truancy, persistent opposition to authority, habitual neglect of duty, the willful destruction of school property, the use of profane or improper language, of conduct injurious to the moral tone of the school or to the physical or mental well being of others in the school and, where a pupil has been suspended, the Principal shall notify forthwith in writing the pupil, the pupil's teachers, the pupil's parent or guardian, the board, the appropriate school attendance counselor and the appropriate supervisory officer of the suspension, the reasons therefore and right of appeal under subsection (2).

Sample Health Lesson

Early in the year teachers should plan to incorporate the topic of Head Lice into their health lessons. The content can be geared to the level of the children.

Purpose The basic purpose of these lessons would be for information and healthy attitude development which would lead to understanding and tolerance, thereby alleviating any ridicule which may otherwise take place.

These lessons are particularly important from the grade three level upwards.

Content

- What are lice?
- Where do they come from? How do they live?
- Who can get lice?
- How do they spread?
- How long do they live?
- How can you get rid of them?
- Are they dangerous?
- Why is my mother so upset?
- How should I feel:
 - (a) if I have them?
 - (b) if my classmates have them?
- What can I do to prevent getting lice?

The content will vary according to the grade level and interests of the children.

Presentation

- (a) Teacher Presentations
- (b) Visit from the School Health Nurse
- (c) Visit from Public Health Unit Nurse
- (d) Viewing of Public Health Unit Film on Pediculosis
- (e) Student Projects and Presentations
- (f) Discussion

Student Activity

- (a) Student Projects and Presentations
- (b) Role Playing

Resources

1. TCDSB Resources (video programs) previously provided to all schools:
Head Lice
2. Head Lice Education Program
3. Your School Nurse and Local Health Unit
4. Library
5. Doctor
6. Pharmacist

APPENDIX C – Letter to Parents

Dear Parents:

A new school year has begun. Once again we want to let you know about the common problem of head lice. Head lice can affect anyone, but most often it affects younger school-age children.

Head lice are parasites. They are considered by health officials to be a nuisance when they are difficult to eliminate. They are not a health hazard and are not connected in any way with long hair, dirt, neglect, or not being clean. Head lice can spread quickly from head to head when a group of children have close contact (e.g. school, camp, day-care, etc.). They can be spread by sharing hats, brushes, combs, bedding, etc.

Prevention of head lice is everyone's responsibility. Cooperation and prompt action on the part of parents, school staff, and the public health department will help to reduce the inconvenience to children.

We encourage parents to look at their children's hair on a regular basis. When checking for nits (eggs), the hair should be dry. A convenient time for a visual check may be just before washing your child's hair.

If you find any head lice or nits (eggs), obtain and use a medicated head lice shampoo or medicated cream rinse from your pharmacist, and contact the school to inform them that your child has been treated. The school needs to be informed so that other parents and school officials can be advised to check the heads of others. Finding and treating head lice early will stop your child from getting a severe case and stop the spread of head lice to other children.

Further information and reference about head lice can be obtained from the school or local office of the Toronto Public Health Department:

Tel: **416-338-7600**

Thank you for your cooperation.

Sincerely,

Principal

EXCUSE NOTICE FOR HEAD LICE

Dear Parent,

An inspection of _____'s hair today showed that he/she has head lice (Pediculosis). Head Lice are a common problem that can affect anyone. They do not cause a health problem but can be a nuisance when they are difficult to eliminate.

To prevent other children from getting head lice, we must excuse your child from school. Treatment must be given immediately, i.e. a head lice shampoo or cream rinse should eggs close to the scalp need to be removed. Your child will be excused from school until treated.

Please read the following instructions about treatment and control carefully.

1. Read the enclosed pamphlet provided by the Toronto Public Health Department. It tells you how to find lice and nits and how to treat them.
2. Check your child's head to see if you agree that there is a problem.
3. If you find lice or nits, treat your child with one of the suggested head lice shampoos or cream rinse, carefully following the instructions that come with the shampoo. You can buy these shampoos at the drug store or inquire at your Public Health Department office. Both the pharmacist and the Public Health Nurses can answer any questions you may have.
4. Check everyone who lives in your house for head lice and nits. Treat them also *if you find they are affected. Do not treat if you do not find lice or nits* on other members of the family.
5. Wash and dry on HOT CYCLE all clothes, towels, bedding, hats, scarves and coats used in the last week by your child or anyone else who is affected. Treat brushes and combs in the medicated shampoo or rinse. Items that cannot be washed should either be dry-cleaned or sealed in a plastic air-tight bag for 2 weeks. Vacuum beds, upholstered furniture and rugs. After vacuuming, seal the used bag in a plastic air-tight bag and dispose of in the garbage.

If you have any questions or would like further information, please contact the school or the local office of the Toronto Public Health Department in your area:

Tel: **416-338-7600**

Thank you for your cooperation.

Sincerely,

Principal

A Message to Parents About Head Lice

Dear Parent:

Your child may have come into contact with a youngster who has head lice. Head lice are a common problem that can affect anyone. They are a nuisance but they do not cause any illness.

Lice spread quickly from head to head when there is close contact with others, e.g. playing in class, school activities, sharing hats, brushes, combs, toys or bedding, etc.

To stop the spread of lice, we are asking you to check your child's head. Scratching is the most obvious sign of head lice.

How to Look for Head Lice

Put the child near a strong light or by a window. Part the child's hair in sections. Look for a small gray or brown insect, slightly larger than a pin head. Lice do not jump, but they move very quickly. You may see head lice and nits (eggs). The tiny silvery-white oval nits can be found over the entire head, but are most common behind the ears and in the nape of the neck. They stick fast to the hair shaft.

If You Find Head Lice or Nits (Eggs)

φ Treat your child with a special medication made just for lice. You can buy the medication from most drug stores, or inquire at your District Public Health Office (8:30 am – 4:30 pm). The medication is very strong and it is necessary to read and follow instructions and precautions carefully. You may find that a fine toothed comb may be helpful in removing nits. The comb may be bought at the drugstore, if it is not provided with the medication.

φ Do not let the medicated treatment get into the person's eyes.

φ After using the medication, remove the nits with the fine-toothed comb. Use a vinegar rinse

(one tablespoon vinegar to one cup of water). Wash all combs and brushes in the medicated shampoo.

Vaseline also helps remove the treated eggs from the hair.

φ Clothing, towels, blankets, bed linens, etc. that has been in contact with the person having lice should also be treated by putting them through a hot wash cycle or hot dryer cycle for 20 minutes or they can be dry cleaned.

φ Stuffed toys can be sealed in a plastic bag for two weeks or placed in a hot dryer cycle for 20 minutes.

φ Beds, furniture and rugs should be vacuumed. Afterwards the vacuum bag should be sealed in a plastic bag and disposed.

φ Brushes and combs should be washed in the medicated shampoo or cream rinse.

A Few Facts and Tips

φ Lice like all hair, clean or dirty or in between, short, long, braided or curly. Anybody can get lice. Everybody can work together to keep the incidence down.

φ Lice are found in young children more frequently because of their close contact through play activities.

φ Lice can live off the body for about 48 hours and eggs hatch in about 7 days.

φ If you have treated the hair, the nits (eggs) are more than 10 mm down the shaft of the hair, the eggs are dead and will not hatch.

φ Teach your children not to share hats, combs and brushes. Encourage them to hang up their clothing separately, if possible, from the other children's at school.

φ Check other family members and playmates for signs of lice. The infestation is not always obtained at school.

φ If you find lice, tell your child's teacher and/or day care staff and let them know when and if you have treated the infestation

Be on guard – check weekly for Head Lice and Nits

For more information call your physician, pharmacist or Toronto Public Health Office:

Tel: 416-338-7600

RETURN TO SCHOOL NOTICE

Dear Parent:

Your child may return to school the day after having received an application of one of the products for head lice deinfestation and the necessary treatment for the removal of the NITS (eggs) is taking place.

Please complete the form below and return it with the child. The child is to report to the Principal's or designate's office before going to class.

If you have any questions please call the school at _____.

Thank you for your cooperation.

Sincerely,

Principal

I have applied a recommended medication from a pharmacist, doctor, or Public Health Department. I am taking the necessary steps to treat the head lice infestation, according to the instructions provided and trying to remove all eggs (nits) from my child's hair.

Medication applied: _____

Signature of Parent/Guardian

Date

Educational Resources

Videos

Head Lice
(16 mm film)

English

TCDSB Audio Visual Department

Websites

www.pediculosis.com
www.headlice.org
www.vh.org/Patients/IHB/IntMed/Infections/STDS/Pediculosis.html
www.netmedicine.com/pt/PTINFO/pedi.htm
www.headlice.org/faq/scabies.html
www.licemeister.com
www.mtnhigh.com/poisons.html
www.drgreene.com/970213.html
www.health.state.ny.us/nysdoh/consumer/pedi.html
www.mtnhigh.com/la_apply.html

Pamphlets/Brochures

Various pamphlets and brochures are available from the Toronto Public Health Department:

Tel: **416- 338-7600**

Program Coordinator of Health/Physical/Outdoor Education has information related to head lice that can be borrowed by schools:

Tel: **416-222-8282 ext.2498**

Health Units Within Toronto - Head Lice Program

Whose Job is it Anyway?

Head Lice control works best when everyone helps. Parents, teachers and students, and health units all have a part to play to control the ongoing problem.

Public Health/Community Health Unit Role

1. Assist in providing educational material and consultation to staff and to students and parents on request.
2. Provide education presentations to students, staff and parents on request.
3. Provide training in head lice control to school personnel, volunteers and parents on request.

Parents' Role

1. Examine children's heads weekly for signs of infestation.
2. Notify the school of suspected cases.
3. Carry out treatment for elimination of lice and inform school that treatment has been completed.

School's Role

1. Distribute head lice information to families of students at the beginning of the school year or as needed.
2. Distribute information in classes where head lice is suspected.
3. Advise parent/guardian by letter (or form) when their child is identified as having head lice. Advise parent/guardian on school's policy about exclusion policy and when to return to school,.

Teacher's Role

1. Report suspected cases to principal.
2. Assist in distributing notification and literature as appropriate.

Head Lice: Information for Schools/Child Care Centres

Head Lice infestation is a common nuisance among young children. It is not caused by a lack of cleanliness. It does not cause disease. It can be controlled.

What Head Lice Infection Looks Like

Head Lice are tiny insects (pinhead size) that live on the scalp. They lay eggs (nits) on hair shafts very close to the scalp especially behind the ears and in the nape of the neck where it is warm.

The eggs look grayish-white and are glued to the hair shaft. Nits are different from dandruff or other whitish specks because they cannot be flicked off or removed easily from the hair shaft.

Head Lice are hard to find as they move very rapidly. The person's scalp may or may not have itching.

How Head Lice Spread

They move very rapidly by direct contact between people or through shared hats, combs, hair brushes, etc. head Lice cannot jump or fly.

Head Lice Control

Medications (shampoo or rinse) are very effective. They are available without prescription at the drug store. Consult your pharmacist.

What to do When a Child has Head Lice

- Notify parent to take child home for treatment.
- Give literature on head lice available from your health unit.
- Give literature to other parents advising them to check their children and other family members. Check other playmates and caregivers.
- Ensure that children are treated before returning to school or daycare.
- Provide children with a place to hang coats that are about 30 centimetres apart if possible, or
- Place hats and scarves in a plastic bag or in the sleeve of a coat.
- Ensure that rugs and upholstered furniture are vacuumed.
- In daycare centre, put pillows and all non-washable fur toys in a clothes dryer at the hottest setting for 20 minutes.
- Send home all children's personal clothing, blankets and stuffed toys to be washed by parents.

Head Lice Education Program

GOAL: Prevention, Treatment, and Control of Infestation

RATIONAL: Head Lice affect everyone, but especially children who may be excluded from day care and school if infested. Education reduces the occurrence of head lice infestations.

PROGRAM TARGET: Elementary school-aged children, their parents, care-givers and teachers.

PROGRAM OBJECTIVES	EVALUATION CRITERIA	ACTIVITIES	RESOURCES
1. Learn basic information about head lice.	Describe life cycle of head lice and how they spread.	Discuss with teacher/leader; Anatomy and life cycle of head lice. Draw picture. Watch film video. Discuss myths.	Handouts · Life cycle of the head louse · Facts about head lice Overheads · Drawings of head louse · Treatment · Grooming tips · Prevention
2. Learn how to identify infestation of head lice and how to get rid of them.	List signs of infestation. Describe how to do the treatment. Describe how to inspect.	Discuss: · What to look for (identify) · How to treat · Prevention of spread among individuals · Film/Video	Educational resources Local Health Unit Pamphlets Heads Up: Head Lice
3. Learn how to treat the environment to reduce the spread of head lice.	List methods of treating the environment to reduce the spread of head lice.	Teacher/Leader Discuss ways to reduce the spread of head lice. Discuss video.	Ontario Ministry of Health 965/3101
4. Understand the importance of behaviours that reduce spread e.g. brushing and combing (grooming)	Demonstrate grooming. List behaviours that reduce spread of head lice.	Discuss taking responsibility for self-grooming, regular washing of hairbrush and comb. Using one's own brush and comb, hats.	Videos, Slides and Pamphlets where to obtain (see attached list)

Facts About Head Lice

Head lice are tiny insects that live on the scalp. These insects lay eggs, called nits, which stick to hair very close to the scalp. Head lice do not spread disease.

Head lice are very common in child care centres because the Lice spread easily among children who are together in one place. Head lice are not spread because children have not washed properly.

Head lice spread from person to person by direct contact among children or on items such as hats, combs, hairbrushes and headphones. Head lice may or may not make a child's scalp itchy.

There are a number of very effective treatments for head lice. All the treatments contain an insecticide that kills the lice. If a child has head lice, parents can contact their physician, local public health agency, or pharmacist for advice about treatment.

How to Determine if Your Child Has Head Lice:

Where to Look

- close to the scalp
- behind the ears
- the back of the neck
- top of the head

What to Look For

- One of the first signs is itching and scratching the head.
- Adult lice – 1 mm (1/8 in.) long – are hard to see.
- The nits (or eggs) are easier to see.
- Nits are **firmly** attached to the hair close to the scalp.
- Nits are grayish white in colour and are oval in shape.
- Nits may look like dandruff but they cannot be flicked off.

How to Check

- Spend a few minutes every week checking your child's head.
- Good lighting is important.
- Look for nits by parting hair in small sections going from one side of the head to the other. Check carefully, looking close to the scalp.

Things Parents Can Do

- Check your child's hair for nits immediately, after one week, and then again after two weeks if another child has head lice.
- Do not treat anyone with a head lice product unless you find lice or nits in their hair. All family members (adults

and children) must be checked if one member has head lice.

- Get a treatment for head lice. A prescription is not needed.
- Follow the directions on the product. Do not leave the shampoo or rinse in hair longer than directed. Rinse hair well after the treatment.
- Remove nits from hair after treatment by using a special fine toothed comb. Put the nits in a bag, tie it up and throw it out.
- Consult your Physician, local health agency or pharmacist about whether to repeat the treatment or what other steps to take if live lice or new nits are found at least seven days after the first treatment.
- If anyone in your family has head lice, do the following on the same day that you give the treatment:
- Collect all clothes, towels and bed linens used by the person with head lice in the last two days. Wash these items in hot water and dry in a dryer at the hottest setting.
- Clothes that cannot be washed may be dry cleaned or put in a clothes dryer at the hottest setting for at least 20 minutes. Non-washable items should be put in a sealed plastic bag for two weeks.
- Put pillows and non-washable furry toys in a clothes dryer at the hottest setting for at least 20 minutes.
- Clean combs and brushes by soaking them overnight in the head lice treatment. Never share combs, brushes or hats.
- Vacuum carpets, mattresses, upholstered furniture and car seats thoroughly. The bag should be sealed in a plastic bag and disposed.
- Check all family members daily for the next two weeks.
- Avoid using insecticide sprays to get rid of lice; they may be harmful to people and pets.
- If your child has head lice, treatment must be given before he or she returns to school or the child care facility.
- Consider establishing a regular routine of checking your children for nits. This could be done, for example, when shampooing hair.

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Head Lice Facts

What are head lice and nits?

- tiny gray or brown bugs about 1-3 mm long
- live in human hair close to the scalp
- do not jump or fly, but crawl rapidly
- bite the scalp to obtain food which often causes a great deal of itching
- lay many eggs (nits) which are firmly attached to hair strands close to the scalp
- the grayish-white nits are 0.8-1.0 mm long and hatch in 7-10 days

How do people get lice?

- usually through close head -to-head contact with someone who has lice
- occasionally by sharing personal items such as hats, brushes, towels, or pillows

What do I look for?

- check the head carefully in bright light, one small segment of hair at a time.
- look for nits (eggs) on the hair especially behind the ears, on top of the head and at the back of the neck
- tiny red spots (bites) or scratches may be seen on the scalp
- nits stick to the hair and will not brush off like dandruff
- live lice move very quickly and are not often seen

What do I do if I find them?

- get a special lice-killing shampoo or cream rinse from your drug store
- follow the instructions carefully
- remove all nits using your fingers or a very fine-toothed comb
- check all family members but treat only those who have signs of lice
- continue to check the hair daily for the next 2 weeks and remove all nits
- treat again in 7-10 if lice or any nits are still present

What else do I need to do?

- wash personal items (e.g. brushes, bedding, towels) and clothing used in the past 2 days in hot, soapy water
- vacuum furniture and rugs, special sprays should not be used
- avoid sharing things like hats, combs and brushes

Remember...

Any one can get head lice!

Head lice are a nuisance. They do not cause disease or illness.

Always check your child's hair every week just in case head lice have found a home there... the sooner you find them, the easier it is to get rid of them.

Don't be embarrassed if you find lice or nits. Use the special shampoo or cream rinse, tell the school and ask the parents of close playmates to check for signs of head lice.

When everyone works together, the spread of head lice can be stopped.

A Message from the Public Health Nurse...

Head Lice

Anyone can get head lice. When children play and work closely together, head lice may spread more quickly. To prevent the problem from getting out of hand, it is important to check your child's head for lice and nits (eggs) once a week.

If you find head lice or nits you should inform the school. A special shampoo or cream rinse which kills lice and nits is available from the drug store. The pharmacist will tell you which product is best for you and how to use it. A new information sheet on head lice can be obtained from the school if you need more advice.

Remember, this problem can be kept under control if everyone works together.

Myths and Facts

MYTH: Keeping hair clean and short will prevent head lice.

FACT: People with clean hair can get head lice. People with short hair can get head lice. Head lice are tiny insects that live and breed in human hair. They spread from one person to another by direct contact (head to head touching) or indirect contact (sharing combs, hats, hair bands, pillows, bedding, sleeping bags, etc.)

MYTH: Head lice jump or fly from one person to another.

FACT: Head lice do not have wings, so they cannot fly. They have 6 legs, but they do not jump. Head lice crawl very quickly, and are not often seen. The nits (eggs) stay **firmly** attached to the hair close to the scalp until removed by hand or a fine toothed comb.

MYTH: Only children get head lice.

FACT: Anyone can get head lice, but most cases are found in school age children. This is because younger children are more likely to be in direct contact (head to head touching) with each other when they play. Younger children are also **more likely** to share combs, brushes, hats, helmets, jackets, head phones and bedding etc. which carry head lice from one person to another.

A Lousy Problem

Despite the best efforts of health authorities, head lice continue to plague human beings, especially school-age children. Getting rid of them is tedious, but new medications and a little understanding of louse biology go a long way in eradicating these unwelcome visitors.

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Part of the human condition since time immemorial, lice are still very much with us. Anthropologists report signs of lice in most past societies, recording their presence on Egyptian mummies and the Greek philosopher, Aristotle, thought they emerged spontaneously from human flesh. In 1770, when Thomas A Becket was murdered in Britain's Canterbury Cathedral, a contemporary wrote that "to the horror and amusement of spectators, the lice boiled over like water in a simmering cauldron.", escaping from the thick clothing as his body cooled. Lousiness remained widespread in Europe up to the last century, even the upper classes being so notoriously louse-ridden that some observers wondered whether such a constant parasite might not benefit humankind. Linnaeus, the 18th century botanist, even suggested that their lousy inhabitants might protect people from certain diseases. But

Laying to rest some lousy myths

MYTH: Head lice attack people of poor social standing.

FACT: No! Head lice indiscriminately infest all levels of society.

MYTH: Head lice only infect unhygienic people.

FACT: No! Lice feed equally well on blood from dirty short- or long haired scalps.

MYTH: People often get head lice from animals!

FACT: No! Human head lice do not live on other animals – you can't get them from a dog, cat, hamster or other pet.

MYTH: If one gets head lice, the head must be shaved.

FACT: No! While shaving the head may help in getting rid of lice, it is needlessly drastic. Several medications can now safely remove head lice.

MYTH: Once treated, head lice never return.

FACT: No! Repeat infestations can occur, no available treatment prevents re-infestation.

Linnaeus was wrong. Although he didn't know it, the human body louse is the vector (carrier) of several diseases including epidemic typhus, trench fever and relapsing fever (sporadic bouts of fever lasting two to nine days).

Lice Today

Lice that live on human blood are small, flat-backed insects and include the body louse, *Pediculus humanus pubis* and the head louse, *Pediculus humanus capitis*.

Body lice live primarily on coarse body hair and in the seams of clothing. Thanks to improved sanitation, hygiene, personal cleanliness, frequent bathing and changing of clothes, body lice are rarely around any more. Great epidemics of louse-borne diseases such as typhus are a thing of the past, at least in North America. When seen at all in our society, body lice infest mostly the very poor, the homeless and the mentally ill. (Body lice are even harder to detect than head lice since they tend to hide in the seams of clothing, especially collars.)

Pubic Lice (known as "crabs") are still with us, transmitted by sexual contact, mainly among adolescents and young adults. They may spread to the body hair, even the beard, moustache, eyelashes and eyebrows.

Human head lice, which infest the scalp and head hair cause no serious health problems or disease.

Head Lice in Particular

A blood-sucking parasite, the human head louse is a grayish-brown insect about two to four millimeters long which depends on warmth and frequent blood meals for survival. Although the term "lousy" conjures up images of filth, and outbreaks of lice in daycare centres, households or communities are commonly greeted with disgust and hysteria, head lice do not carry diseases. Despite popular myths equating lice with un-cleanliness, these insects infect clean as well as dirty heads. They are more a social nuisance than a health hazard. Head lice cannot survive at or below room temperatures but thrive in warm conditions such as those of the human scalp – behind the ears or close to the hairline being cozy spots. A louse-ridden human head may give hospitality to about 24 lice at one time.

The mature female louse lays minute, teardrop-shaped, whitish eggs close to the scalp which are securely attached to individual hair shafts by a tough, gray cement. Each louse lays about six eggs a day, which will hatch at human body temperature. Popularly called "nits", louse eggs hatch in a week to 10 days and in another week, when they reach maturity, the reproductive cycle begins over again. Once a louse egg hatches, its casing or "nit" is left empty and in contrast to the glistening pearly look of live eggs, nit cases are dull gray. Lice infestations typically begin close to the hairline and the duration of a louse infestation can be

A Lousy Problem *cont'd*

calculated by observing the distance of the eggs or nits from the scalp surface. Hair grows about five to six mm a week so any nits found more than six to 10 mm (about a quarter to half an inch) from the scalp are more than seven days old, have already hatched or are no longer viable (alive). Both live and hatched eggs remain so firmly attached to the hair that they're hard to remove by ordinary shampooing.

Who Gets Lice?

Today's head louse is an urban rather than a rural dweller, affecting mainly city children. Although able to live on any human head, lice tend to infest children crowded together in urban daycare centres and primary schools. Head lice are more common in girls than boys, although not necessarily more often in those with long hair. Possibly girls tend to have closer physical contact with each other than boys, making it easier for lice to get around, although boys switch baseball helmets and other gear. Why lice are uncommon among adolescent boys remains a mystery, although some experts speculate that the male hormones secreted in adolescence may be distasteful to lice or that older boys have less rough and tumble play and less physical contact once they reach puberty. North American blacks are less likely to become infected than whites, possibly because their hair shafts are oval in cross section (that's why it is kinky) and less easy for lice to grasp.

How Lice Spread

The human head louse has no wings, nor can it jump or hop like a flea from host to host. It moves by grasping a shaft of hair with its tiny front claws, swinging from hair to hair, unable to wander far from its host's scalp. Lice often travel by direct head to head contact (as when children sit or play with their heads close together), sharing lockers, beds and stuffed animals which gives ample opportunity for lice to spread. Probably most schools in large urban centres identify some children with head lice every year. A head lice problem usually surfaces in the early fall when children return to school. Occasionally, a lice epidemic forces a school to close for a couple of days until all the children have been adequately treated. Frequently, the school nurse, a teacher or school friend is alerted to the problem by seeing a child looking uncomfortable and scratching incessantly.

Health departments and schools are now switching from a "hands on" head-searching policy to better education for teachers and parents in ways to spot lice or their nits and how to handle infestations. Each school and education authority has its own regulations, many excluding lousy children from class until they've had a thorough de-lousing treatment. A "no nits" policy ensures that children are both louse and nit free when they return to class (checked by the principal or

school nurse). Some schools are less strict than others, children being allowed back after a single treatment – kinder and less stigmatizing, although it may increase the risk of spread. Many believe it's useless just to treat infested children as studies show that more than half the children with head lice have family members similarly infected. Thus checking all members of the family for signs of lice is a wise strategy.

Symptoms and Diagnosis

The major sign of head lice is itchiness and scratching particularly around the hairline and ears. As the itching only starts up a week or two after infestation there may be no symptoms at first. But scratching may lead to secondary

Nit-picking

While parents hate to be "nit-pickers", nit-picking is usually the worst problem associated with head lice. To get rid of all the nits left after a de-lousing shampoo, either a special fine-toothed metal *nit comb* is used to dislodge the eggs or they are picked off with fingernails or tweezers – a tedious procedure! Nit combs (tine-toothed metal combs, sometimes with tiny blades at the base) may cut the individual hairs to which a louse egg is attached. But nit combing can take *hours per head*, depending on the length of hair and the number of nits. Although effective for thick hair, nit combs are useless for the very fine hair of a young child. Each egg-bearing hair can be cut out with scissors or one might end up using the fingernails! Some experts recommend soaking the hair in warm, diluted vinegar to make nit-picking easier – a strategy of unproven usefulness. A haircut may make nit removal less time-consuming, but stigmatizes children. For lice of the pubic variety on the eyelashes or eyebrows *petroleum* or Vaseline may be used to suffocate them (cuts off their oxygen supply).

infections and some louse-ridden people develop scalp scabs, skin infections and enlarged neck nodes. Confirmation of head lice requires sighting a louse and/or its eggs – just visible to the naked eye. But spotting a louse and detecting the eggs isn't easy and on blonde hair they hardly show up at all. Although chances of finding a live louse are slim, after a blood meal it becomes slightly rust-coloured, resembling a small freckle. Generally, only a few lice are found at one time on an infected head. To identify an infestation one searches for the lice eggs or nits: tiny, white glistening objects (or little gray hatched ones) cemented to the hair

APPENDIX K

A Lousy Problem *cont'd*

shaft, usually close to the scalp. Louse excrement looks like flecks of brown dust. Nits must not be confused with dandruff or hair casts which – in contrast to nits – are easily dislodged with a fingernail. Nits are extremely difficult to remove and long-standing infestations with matted hair, louse discharge and a scalp infection can make a dreadful mess of hair – usually associated with extreme neglect.

Treatment

Many insecticidal or pediculicide shampoos are available for eradicating live lice, but getting rid of the eggs is more cumbersome, lengthy and complicated. *The standard treatment* is an extra thorough hair wash with a medicated, louse-killing shampoo or application of an anti-lice lotion once (and possibly again a week later – to eradicate any new lice that hatch from remaining eggs). Effectiveness varies with the product and thoroughness of application. Most products (except for Nix and Prioderm, which are *ovicidal* and kill nits) will not kill lice eggs and a repeat treatment may be needed. Household members should be checked for signs of lingering nits or lice *for several weeks*. Lice-killing products in Canada include shampoos containing lindane (Kwellada) – an old standby used for 30 years, which is primarily a louse and not as good a nit-killer – are gradually being replaced by newer products. Some pharmacies store louse-killers behind the counter and although no prescription is needed, the pharmacist must sometimes be asked for them.¹

A reputed lice rise

It is fortunate that *P. capitis* is relatively harmless, because reports of head lice among Canadians have become more prevalent in the last two decades. Following high levels of infestation during World War II (lice are always more common in wartime because of households doubling up and close contact in the trenches or when taking refuge), the parasite was almost eradicated in North America during the 1950's. But there are signs of a comeback in the early '70's shown by greater sales of lice-killing (pediculicide) agents. The reason for rising lice infestations remains unclear but these insects may have developed resistance to the *organochloride insecticides* such as DDT used heavily in the 1960's. They may also spread because of increasing travel to areas where head lice are still rampant. Some blame overcrowding in schools. Large classes in daycare centres give lice an excellent chance of circulating among even younger children. In the U.S. in 1989, three million households and 11 percent of white school children had lice, with comparable numbers in Canada, although it's not a reportable condition. The harmlessness of head lice may explain their continuing existence in hygienic 20th century life. Not being a major health problem, head lice haven't attracted much scientific interest or efforts at eradication.

Preventive Strategies

- Teach children not to share hats, headphones, combs, brushes or bicycle helmets and to report any head itching
- Wash all clothing and sheets in use at the time of a louse outbreak in very hot water above 52° C or 125° F and dry in a hot dryer for 20 minutes at least. (Lice and their eggs are killed by high temperatures.)
- Since lice can't survive away from humans for more than a few days, articles such as stuffed toys, woolens and other non-washable items can be sealed in plastic bags for about 10 days or so or dry cleaned.
- Alternatively, in winter, coats, hats and clothing can be left outside all day or overnight in the freezer.
- Soak all brushes and combs in hot water containing pediculicidal shampoo or two per cent Lysol solution for a couple of hours.
- Vacuum items such as rugs, furniture, mattresses, pillows thoroughly; don't forget the car seats. (Public health authorities agree there's no need to fumigate.)
- Certain anti-lice sprays can also be used on furniture, pillows and mattresses.
- Check children's hair regularly for tell-tale signs of nits and lice, especially if a child is scratching a lot.
- Report lice to the school nurse or principal.