

Managing Head Lice in the School Setting

*“AN OUNCE OF PREVENTION IS WORTH A POUND
OF CURE”*

What is Head Lice



- A small parasitic insect that lives on the scalp and neck hairs of a human host
- Originated and co-evolved with human existence

What is Head Lice

- Requires human blood to grow, develop and lay eggs (nits)
- Cannot survive more than a day without a blood meal
- Cannot survive more than a day or so at room temperature
- They *do not* have wings, so they *cannot* fly
- They *do not jump*, but move very quickly on the scalp making them difficult to find

What is Head Lice

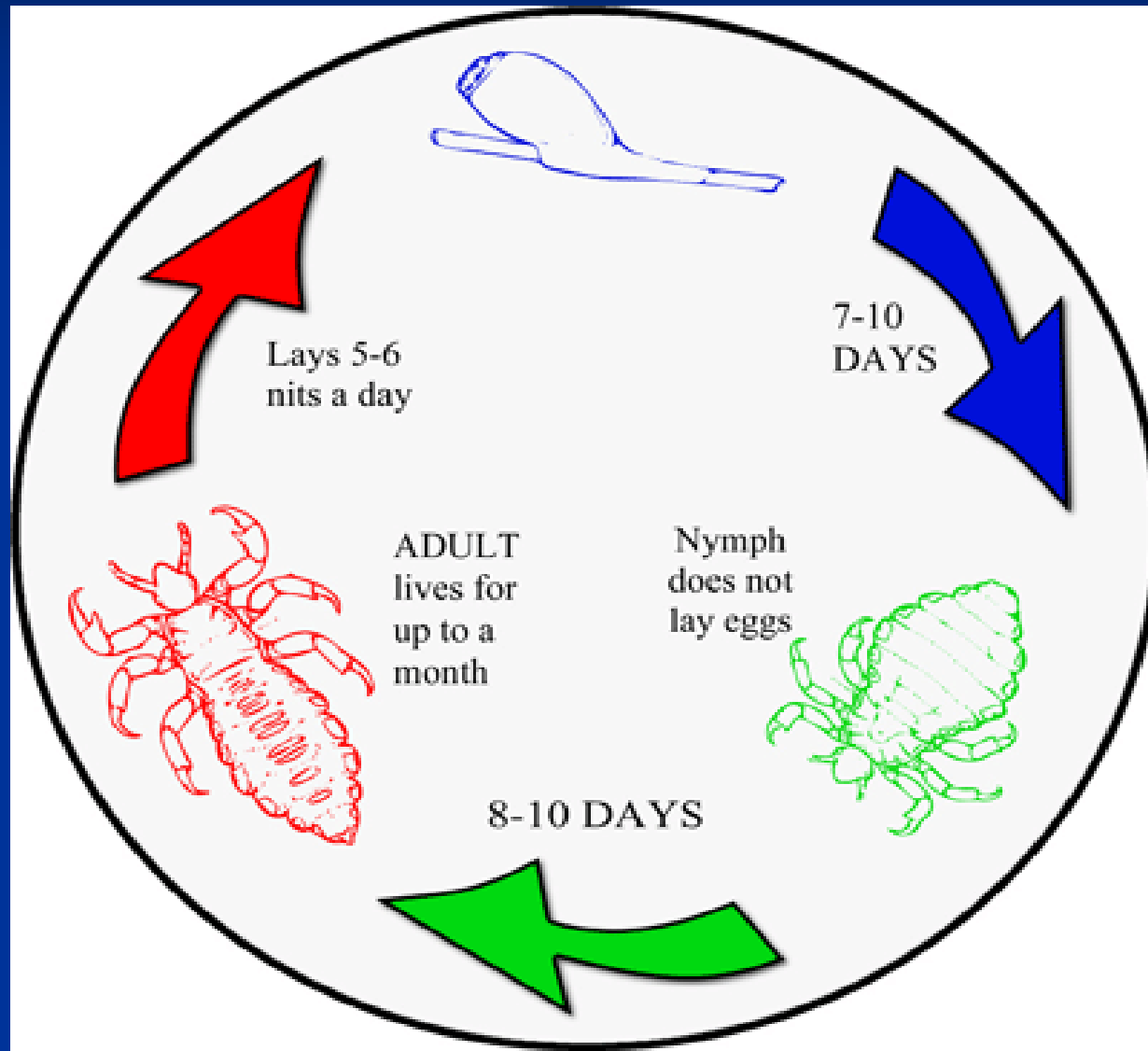
- Does not discriminate among socioeconomic groups
- More commonly found in children of preschool and early elementary age
- Not known to transmit infectious agents, therefore is *not disease producing*
- Not considered a medical or public health problem (Harvard Public Health, 2007; CDC, 2008)

Signs and Symptoms

- Students with head lice are usually symptomatic
- Some experience itching from an allergic reaction from the bites or irritation from sores caused by bites



The Life Cycle of a Louse



Nits (Louse Egg)

Images to assist in the identification of head lice and their eggs.

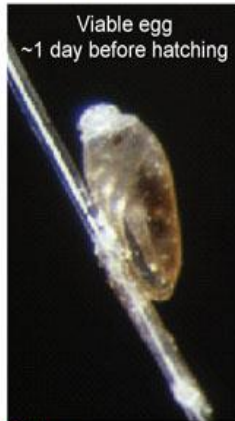
<http://www.hsph.harvard.edu/headlice.html>



Adult female louse
on nit comb



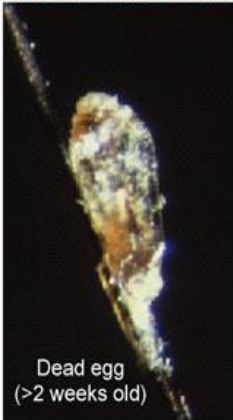
Viable egg
on hair
~2 days old



Viable egg
~1 day before hatching



Empty egg
(hatched)



Dead egg
(>2 weeks old)



'Pseudo-nit'
(Debris often confused
as eggs)

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- Oval in shape
- Nits are cemented onto the hair shaft, close to the scalp
- Develop and hatch in 8-12 days
- Egg remnants (cases) that have died or have previously hatched, remain firmly attached to the hair; but will never again produce another louse

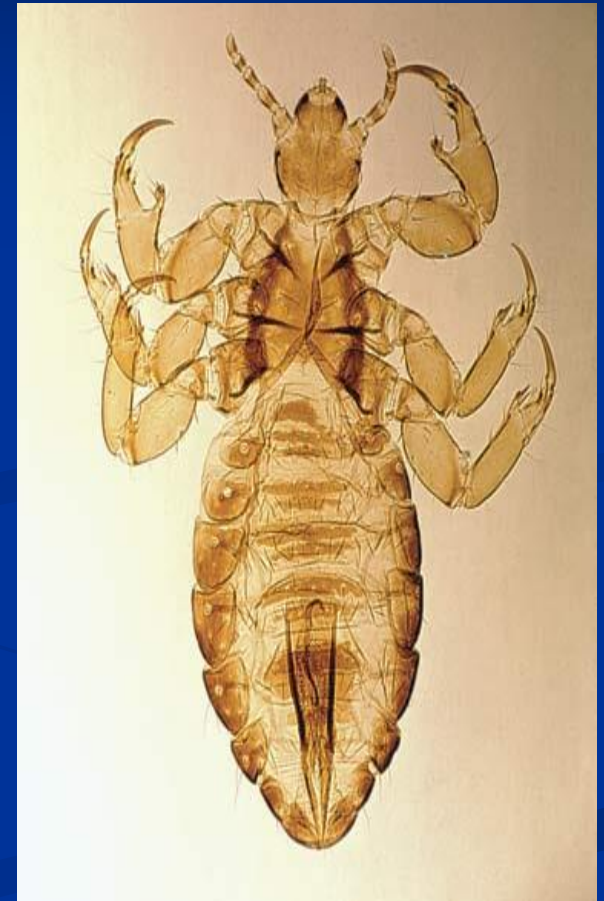
Nymph (Young Adult)

- Immature stage of a louse
- Look like an adult, only smaller and are unable to reproduce
- Mature into adults about 9-12 days after hatching
- Must feed on human blood to survive and grow



Adult Louse

- Difficult to see-move quickly
- Fewer than a dozen active lice on the head at any time
- Size of a sesame seed
- Tan to grayish
- Adult females live up to 30 days
- Feed once or more a day.
- Will die within a day when off the head
- Lay about 6 eggs a day



How do you get Head Lice?

- Direct contact
 - Head to head contact with an infested person
- Indirect contact
 - The transmission from hats, combs, pillows, etc is possible – but much less likely
- According to CDC, most transmissions occurs in the home environment. (friends, sleep-overs, camps, etc)

Transmission of Lice

- Only *LIVING LICE* can transfer from one person to another
- Nits cannot be passed onto someone else

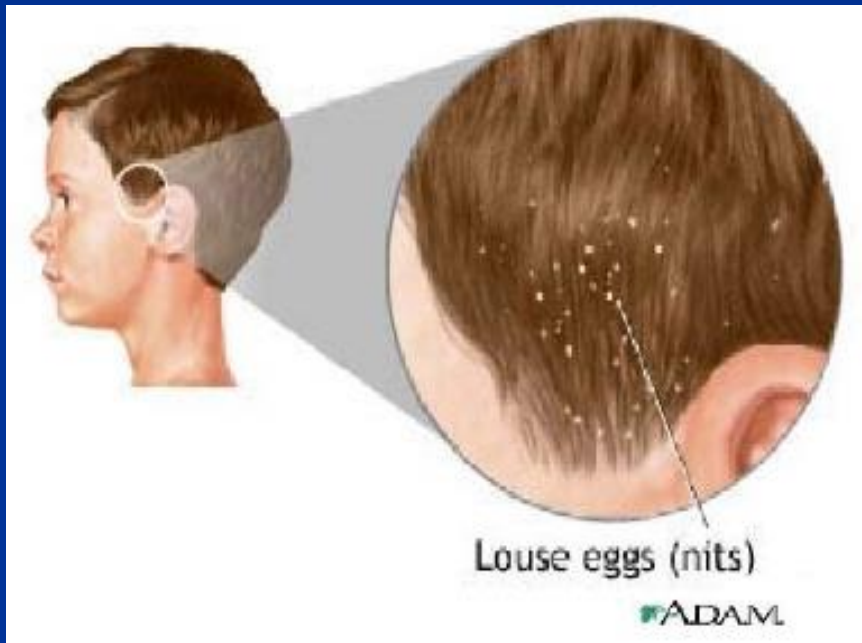


Diagnosis of Head Lice

- Head lice can be found anywhere in the hair
- Easiest to locate on the scalp and behind the ears and near the neckline at the back of the neck



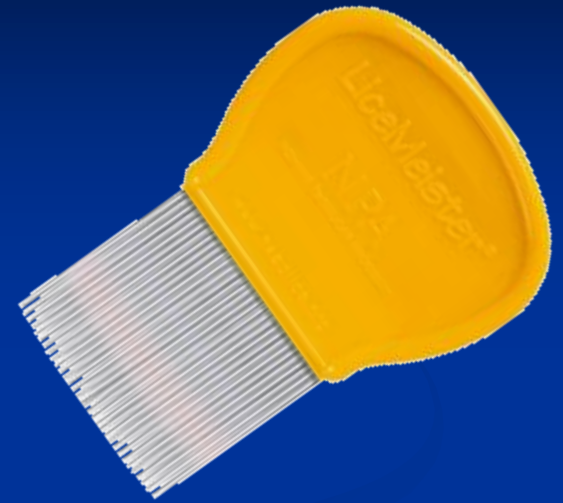
Diagnosis of Head Lice



- Nits are deposited on the hair shaft about 1mm from the scalp
- Eggs more than $\frac{1}{2}$ of an inch away from the scalp are nearly always hatched and do not by themselves indicate an active infestation

Mechanical Removal

- Obtain a lice comb from your local pharmacy
- Make sure you have plenty of light – natural light is best
- Wash hair with normal shampoo and towel dry
- Remove tangles with ordinary comb



Mechanical Removal

With the teeth of the detection comb touching the scalp at the top of the head, start combing towards the end of the hair, keeping the teeth in contact with the scalp for as long as possible. Watch for any signs of head lice.



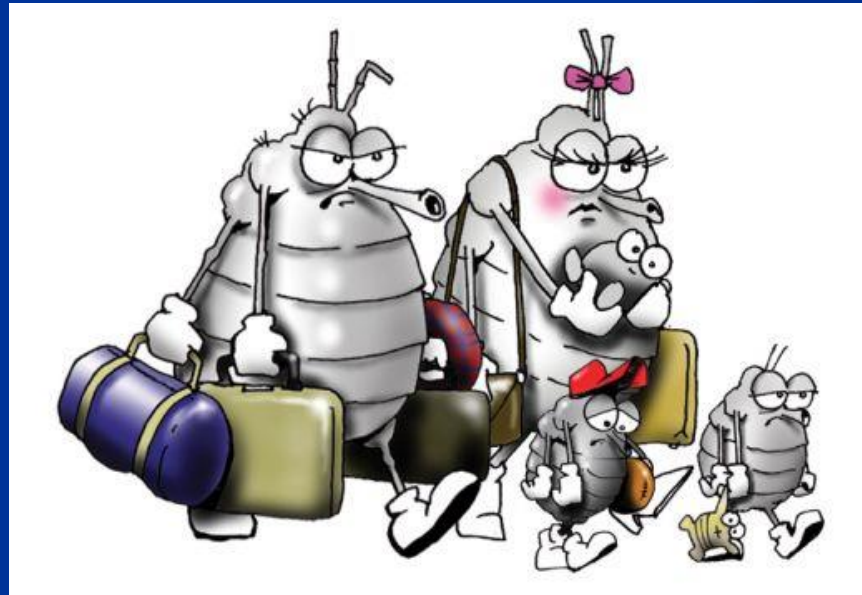
Mechanical Removal

- Repeat process moving around the whole head
- This will take 10-15 minutes to do properly
- Keep checking the comb and wipe on tissue. If a moving louse is found, you have active head lice.



Treatment

- Treatment is recommended only for individuals found with live lice or viable eggs
- Nits further than ½ inch from head have probably hatched and are no longer viable



Prescription Treatments

- If live lice persist following treatment with over-the-counter products, parents should discuss with HCP...



Alternate Treatments

- Mayonnaise
- Olive Oil
- Vaseline
- Margarine
- Butter
- Essential Oils
- Enzymes
- Other suffocating agents

Data is lacking to support the claims of their efficacy
(Harvard School of Public Health, 2007)

CDC does not have clear scientific evidence to determine if suffocation of head lice with mayonnaise, olive oil, margarine, butter or similar substances is an effective form of treatment
(CDC, 2008)

Treatment Necessities

- Daily inspection and combing to remove all live lice until no live lice are discovered for two weeks
- Eggs that are more than $\frac{1}{2}$ - 1 inch from the scalp are nearly always hatched and do not indicate an active infestation

Reasons Treatment Failure

- Failure to follow-up with combing
- Misdiagnosis
- Hair conditioners – prevent insecticide from working
- Not following treatment instructions
- Reinfestation
- Resistance of the head lice to treatment

National Recommendations for School Policies

The American Academy of Pediatrics

“A child should not be restricted from school attendance because of lice, because head lice have low contagion within classrooms”

(AAP, 2010)

National Recommendations for School Policies

Center for Disease Control

“Current evidence does not support the efficacy and cost-effectiveness of classroom or school-wide screening for head lice....” “No-nits” policies are not recommended....excluding children from school because of head lice is not recommended.” (CDC, 2008)

National Recommendations for School Policies

The National Association of School Nurses

It is the position of the National Association of School Nurses that the management of pediculosis should not disrupt the education process. Children found with live head lice should be allowed to remain in class and referred to parents for treatment.Classroom wide or school-wide screening is not merited.

(NASN, 2011)

National Recommendations for School Policies

Health and Health Care in Schools

“Most children with nits alone will not become infested; therefore, excluding these children from school and requiring them to be treated with a pediculicide is probably excessive.”

(HHCS, 2001)

School Responsibilities

■ Awareness and Education

- Back to school head lice letter
- Educational sessions for parents

■ Prevention

- Classroom hygiene practices
- Mini-lessons to our students on how to protect themselves

Parent Responsibilities

- Contact school and others who had contact with your child
- Appropriate treatment
- Daily inspection and combing
- Hygiene protocols to reduce head to head contact (ponytails, personal articles in backpack)
- Educating your child in awareness in head lice prevention

Evidence-based Research

- Harvard's School of Public Health obtained “lice and nits” samples from health care professionals and the public
- Most samples came from schools.
- Lice or eggs were present in *less than two thirds*
- *Less than half* had either a louse or potentially viable egg.

- The researchers found that over-the-counter medications were used *as much* in those with active infestations as those without viable lice or eggs.
- Misdiagnosis leads to the possibility of *overuse of pediculocides* and *inappropriate exclusion from school*
- The same researchers have found that the children sitting next to children with live lice are *NOT* more likely to get it than anyone else.

More Evidence-based Research

- Head lice is transmitted when there is direct head to-head contact where *LIVE* lice are concerned.
- Nits cannot be passed to another person.
- According to the Center For Disease Control most transmission occurs in the home environment. (friends, sleep-overs, camps, etc..)



Finally

The greatest harm associated with head lice is
from well-intentioned but misguided use of
caustic or toxic substances to eliminate the lice

and remember

We need to base practices on scientific evidence.

Resources

Centers for Disease Control (2013). Fact sheet: treating head lice. Retrieved November 30 2016 from: http://www.cdc.gov/ncidod/dpd/parasites/headlice/factsheet_head_lice_treating.htm

Frankowski, B.L and Joseph A. Bocchini Jr. MD Pediatrics 2010; 126: 392-403

National Association of school nurses (revised 2016) Position statement: pediculosis in the school community.from:

<http://www.nasn.org/PolicyAdvocacy/PositionPapersandReports/NASNPositionStatementsFullView/tabid/462/ArticleId/40/Pediculosis-Management-in-the-School-Setting-Revised-2016>

Pollack, R. 2014. Harvard School of public health: head lice information. Retrieved November 30 2016 from: <http://www.health.harvard.edu/diseases-and-conditions/head-lice>