



BACK-TO-SCHOOL ISSUE: FIND OUT ABOUT HEAD LICE!

The head louse infests 10-12 million people each year in the United States. Pediculosis, or "lousiness", is one of the most prevalent communicable conditions in this country.

IT CAN HAPPEN TO ANYONE!

Many families with young children have at least one encounter with the head louse, *Pediculus humanus capitis*. Head lice can infest people of all ages, but children are prone to infestations because of their habit of playing in close contact, sharing hats, headphones, combs and brushes, sleeping bags, stuffed animals, and clothing. In fact, the problem of head lice can be so rampant among preschool and school-aged children that often schools must work in conjunction with many families to control an infestation.

African Americans are reported to have a much lower incidence of head lice than Caucasians, Hispanics or Asian Americans. Pediatric Dermatology cites various studies that suggest the incidence among African American schoolchildren is less than half of one percent, while the incidence among their non-black schoolmates is usually more than 10 percent. Even though African Americans may be less susceptible to infestations, this should not be grounds for complacency as African Americans can, and do, get head lice.

Back-to-school seems to be when lice are most commonly transmitted, resulting in widespread infestations by December and January. With September being National Head Lice Prevention Month, we are encouraging parents, teachers, and childcare professionals to be aware of this lousy pest and know how to manage it.

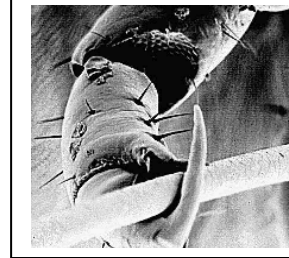
Lice eggs are called **nits**. Female lice lay 6-7 nits per day and may lay a total of 50-100 eggs during their life, and females may live up to 40 days. Nits are oval white-dark cylinders (1/16 inch long), usually glued to hairs of the head near the scalp. Nits are quite often found on hair around a person's ears and back of the head. **You cannot "catch nits." They must be laid on the hair by live lice.**

Under normal conditions lice eggs will hatch in 7-10 days. Nymphs are immature forms, which look like small adults; both nymphs and adults have piercing-sucking mouthparts to pierce the skin for a blood meal. Within 24 hours of hatching, a young louse will take its first blood meal, and periodically thereafter as it grows from nymph into adult (10-12 days).

Adult head lice are approximately 1/8 inch in length (about the

size of a sesame seed) and, like nits, range in color from white to brown to dark gray. They do not have wings or powerful jumping legs so they move about by clinging to hairs with specially adapted claw-like legs. Adult lice are swift-moving and tend to avoid light.

Tarsal claw



Adult louse



People previously unexposed to lice experience little irritation from their first bite. After additional bites, individuals may become sensitized and experience an allergic reaction; this includes reddening of the skin, itching, and overall inflammation. The reaction of individuals to louse bites can vary considerably.

The head louse is not considered a serious vector of disease in the United States, although severe infestations may cause irritation, scratching, and secondary infections.

It is common knowledge that head lice **do not** prefer dirty hair. Head lice prefer to live on the hair of the human head, and do not normally live within rugs, carpet, or school buses. They are unable to survive away from a human host for more than about 24 hours. Furthermore, lice are **not** found on animals or household pets and are not transmitted from pets to humans.

Checking for Head Lice

Periodic inspections will aid in early detection of any individual lice, which are more easily controlled than advanced infestations. **During the early fall months (August to November) children should be inspected weekly.**

- Shampoo hair first. Do not use a product with conditioners if you are going to use lice treatment.
- Begin with good lighting for your inspection. A lamp or good natural light from a window works.
- Use a hand lens or magnifying glass. Magnification may help detect nits and lice.
- Remove tangles with a comb or hairbrush.
- Divide the hair in sections and fasten the hair that is not being worked on.
- For nits, look near the scalp. *Eggs more than one-half of one inch away from the scalp are nearly always hatched and do not - by themselves -*

indicate an active infestation or need for treatment.

- If either adults or nits are found, check everyone else in the household.

Controlling Nits and Adult Lice

There are four critical steps to controlling head lice infestations:

1. the use of an effective head louse treatment;
2. lice removal from the head (combing);
3. removal of lice and nits from the household environment by vacuuming, washing, or freezing objects suspected being of infested;
4. daily head checks and nit removal until infestation is gone, followed by weekly head checks to detect reinfestation.

1.) Head lice shampoos contain insecticides and if they are not used properly they can be hazardous. Most of the over-the-counter products contain either pyrethrin or permethrin (NIX and Rid). Lindane is available with a prescription, but has been associated with a variety of adverse reactions suffered both by people being treated and by people applying the treatment. Pyrethrin and permethrin are safer and more effective than lindane.

When using a head louse shampoo, minimize body exposure by confining the insecticide to the head hair. Wash the infested person's hair in a basin or sink so insecticide residues do not reach other parts of the body. The person doing the treatment should wear rubber gloves. Never apply an insecticide to anyone who has open cuts, scratches, or inflammations, and never use these materials on infants without consulting a doctor. **In all cases, follow label directions completely and carefully.**

While pyrethrin and permethrin are effective, they do not kill all the eggs. In addition, they may not kill all the nymphs and adults; lice should die within 10 to 30 minutes after treatment with pyrethrin or permethrin. If you find live lice after 30 minutes, resistance may be occurring and you should discontinue use of that product. If you need a follow-up treatment at the recommended interval on the product label, use a pyrethrin if you used permethrin the first time, or vice versa. **Never resort to dangerous practices such as applying other insecticides, or materials such as kerosene!**

If you want to avoid insecticides entirely, you could try using soap shampoos that contain coconut or olive oils. Four shampoos, each about 3 days apart, should kill most of the lice as each successive shampooing kills newly-hatched nymphs.

2.) Special combs needed for louse removal will be effective in eradicating head lice infestations only if used diligently **each day for up to two weeks.** The LiceMeister™ comb is a great choice.

Using a lice comb to remove the insects can take up to several hours a day, depending on the thickness and curliness of the hair. Combing is critical to controlling head lice because **20 to 30% of lice can still be alive after shampooing** with pyrethrin or permethrin based products.

- After removing tangles and dividing hair into manageable portions, comb hair from scalp to the end of the hair.
- Dip comb in a container of hot soapy water to drown lice and remove nits.
- Look through that same section of hair for remaining nits and lice and repeat combing section, if necessary.
- Repeat all steps until all hair is systematically combed through.
- Clean nit removal comb with hot soapy water or soapy ammonia. An old tooth brush may help dislodge hair, nits and lice that may be caught in the teeth of the comb.

3.) What needs to be done in the home? Once an infestation is detected, all clothes should be washed in hot soapy water. Pillowcases, sheets, blankets and other bedding material should also be washed and placed in the clothes dryer on the "high heat" cycle to kill the lice and their eggs. Any non-washable items should be dry cleaned or sealed in plastic bags and placed in the freezer at 5⁰F or lower for 10 hours or more (a good option for headphones). Vacuuming the home will remove shed hair that has nits attached.

4.) Continue weekly head checks of the whole family.

To find out about YOUR school's policy and procedures for children discovered with lice, check with your school nurse's office.

Information taken from:

Pollack, Richard J. August 2000. Harvard School of Public Health

Scherer, C. W., P. G. Koehler and F. M. Oi. August 1997. Head Lice. University of Florida: <http://edis.ifas.ufl.edu>.

The National Pediculosis Association,® Inc.: <http://www.headlice.org/>

Your IPM in Schools Project

IPM stands for Integrated Pest Management. It is an approach used by pest management experts who want high levels of pest control and low levels of chemical pesticides in the environment. Your school district has decided to implement an IPM program in your school to reduce risks associated with pests and chemical pesticides. For more information contact your district IPM specialist or collaborating IPM specialists at the University of Arizona (Jen jsnyder@ag.arizona.edu or Dawn dhgouge@ag.arizona.edu).



Few bugs are bad! More than 95% of all insect species are beneficial to humans.



Cooperative Extension
Urban Integrated Pest Management

