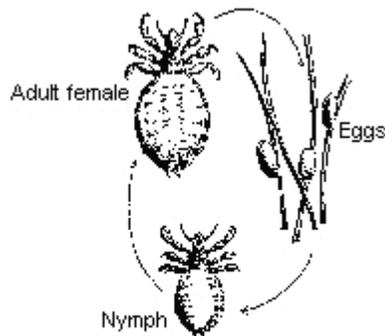


About Head Lice

This section will tell you what head lice are, how to nit pick, how to clean house and how to prevent infestation.

In a 1998 National PTA survey, Principals named head lice as the top problem. Head lice (*Pediculus humanus capitus*) infest as many as 12 million Americans each year. Worse yet, many lice are now resistant to the standard treatments. Studies in Europe, Israel and America have confirmed lice resistance to permethrins and pyrethrins. A recent study from Harvard University proved that some lice in America are now resistant to these treatments. The most effective way to control head lice infestation is to provide treatment as soon as the lice or nits are detected. Usually the school nurse or teacher makes this first diagnosis.



Lice Life Cycle

A Head Lice Dictionary

Host: You, your children, anybody with a head full of lice.

Lice: Parasitic, blood-sucking, six legged, wingless insects.

Louse: The singular of lice.

Nit: A louse's egg. The average female louse will produce 200 to 300 eggs in her 30-day life, gluing her tiny eggs to strands of hair.

Nit-picking. The act of combing, or picking, lice nits from the hair.

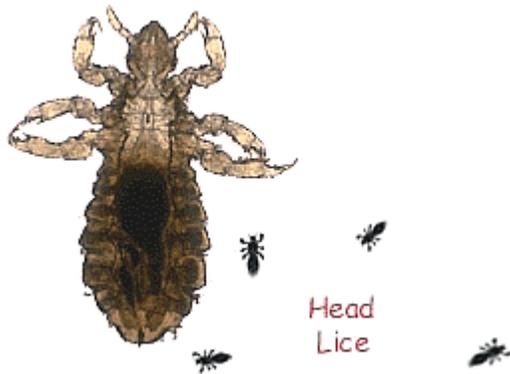
Nymph: A baby louse, but it grows up fast. In two weeks, it can be laying more eggs.

Pediculicide: Lice treatment that will kill the lice.

Pediculosis: Medical term for having head lice.

Head lice are bloodsucking, wingless insects. Pediculosis, the infestation of man by lice, has been documented for thousands of years. Lice are very host specific; human lice cannot be transmitted to or from pets or other animals. Like all insects, head lice have six legs. Lice cannot fly or jump; they move only by crawling. Head lice lay their eggs on hair shafts, usually within a quarter-inch of the scalp. These tiny white eggs, known as nits, hatch before the hair grows more than half an inch. Any nits farther than half an inch from the scalp are in all likelihood shells of eggs that have already hatched. They generally hatch within a week of being laid, but it may take up to a month after contact before any symptoms of itching begin.

Lice tend to adapt their color to their surroundings; lice found on dark-haired, dark-skinned individuals are darker than those found on people with lighter skin or blond hair.



How do you get head lice? Direct head-to-head touching spreads lice. They do not fly or jump, they crawl. Children at play have closer contact than adults, so they're more likely to get lice, though this does not exempt adults from infestation. Head lice can be spread by sharing the following items:

- Personal items (clothing, combs, headbands, hats, scrunchies and or scarves).
- Towels, linens, pillows, carpeting, and naptime blankets.
- Stuffed animals, dolls and cloth toys.
- Earphones used for personal radios.
- Lockers or hanging clothes together on coat hooks.
- School uniforms, costumes, or gym clothing.

Head lice prefer clean, healthy heads and will actually leave the head of malnourished individuals in search of a more nutritious host. Children aged 3 to 11 are the head louse's primary victims. This is probably the result of head-to-head and body contact while playing, as well as sharing of combs, brushes, hats, helmets, and other head gear. Infestation occurs most commonly through direct contact with an infested person.



What are the symptoms of head lice? Persistent itching or scratching at the back of the head or around the ears, along with scratch marks that may look like a rash are one of the first signs of head lice. A tickling feeling of something moving in the hair and sores on the scalp, usually caused by scratching. Check the hair shafts for head lice or their nits (eggs). Lice are hard to see. With good light or a magnifying glass you can see them. They hold on

to hair with hook-like claws found at the end of each of their six legs. To the eye, the nits look like dandruff, and can't be removed easily. Nits are cemented to the hair shafts, and can be moved up and down along the hair but usually need to be removed with special combs.

How long is a person considered "contagious" with head lice? As long as lice or nits are present on person or their clothing, they can spread it to others. Until live lice and viable nits (eggs) are properly removed, infested persons should not return to school or work. You can acquire head lice repeatedly if the process is not followed.

How do I treat head lice and keep our family free of them at home? Treat with HairClean 1-2-3 and follow the instructions in the box. Be sure to follow up with a meticulous combing through the hair. Everyone in the household needs to be checked for lice and nits, with a careful combing. Of course, combing out may take time--especially with long hair--but it's very important! Better to do it now than risk re-infestation later. If you find lice or nits on any member of the family, treat each person with HairClean 1 2 3. Retreat those infested again in 7 days, to be certain all nits and lice have been completely removed. Don't worry, your pets cannot get head lice!

Machine-wash all bedding, clothing, (including the clothing they are wearing), and towels. Then dry in hot dryer for at least 20 minutes.

Put all stuffed animals, pillows, dolls, hats, comforters and any other non-washable personal items in a plastic garbage bag and seal for 14 days. After 14 days, open the bag outdoors and shake items vigorously.

Soak all brushes, combs and hair accessories in rubbing alcohol or scrub in hot soapy water.

Vacuum, Vacuum, Vacuum! Be sure to thoroughly vacuum all carpets and furniture, then carefully remove the vacuum cleaner bag and throw it out immediately.

Follow-up Make sure you tell others about the outbreak. It is very important. Babysitters, Grandparents, school, daycare center, playmates and sports or other children's groups will be grateful for the opportunity to check their families early in order to prevent another outbreak.

Teach children how to avoid them. Tell your child not to borrow or use other children's things, such as: barrettes, hair ribbons, headbands, combs, brushes, or other personal items. Teach your child how to notice if a friend or classmate shows the early signs of head lice. Be sure to check your family weekly for nits and lice if there have been reports of lice at school or friends have had it. Have your child ask for a separate coat hook or locker at school. MOST OF ALL, LET YOUR CHILD KNOW THEY ARE LOVED AND SPECIAL.

Nit Picking Tips



Separate hair into small sections and look carefully for lice and nits

1. Comb, Comb, Comb, with the HairClean comb. Head lice and nits are small and difficult to find and remove. After we treat with HairClean we comb every strand of hair from scalp to end. A thorough combing is the best way to guard against re-infestation.
2. Check the head daily. Check each family member's head every day for at least two weeks. Carefully look through small sections of hair. Start at the scalp and scan all the way down the hair shaft. Then comb again!
3. Look for Lice and their eggs. Be sure to check "favorite louse spots": the nape of the neck and behind the ears. In hot and sunny weather or in cold weather when folks wear knit caps, head lice search for the right spot to lay their eggs.
4. Patience is a virtue: It takes time and patience to deal with head lice. We ask all our families to carefully perform all of the recommended procedures. This will reduce the chance of re-infestation.
5. When the lice infestation is over, set a date once a month to inspect and comb your family's hair. Mark the date on the calendar and pamper your family!

Head Lice: Pass the Mayo, Hold the Oil

University Team Works With Community to Compare Effectiveness of "Home Remedies" to Brand Name Head Lice Treatments

Miami, Florida: Reports of parents using mayonnaise and olive oil to treat head lice intrigued Research Professor Terri Meinking of the University of Miami School of Medicine, Department of Dermatology. Meinking, who is one of the world's leading experts on head lice treatments, decided to organize a community-based investigative program to test the validity of these home remedies and compare them to drug store brands.

"People try unsafe alternative remedies such as kerosene and veterinary products for pets, because they find it increasingly difficult to kill lice using some name brand treatments. Lice have developed a resistance to certain products, and a frustrated parent will try anything to get rid of lice so their children can get back to school", Meinking explained.

Although those who work with head lice have long known that resistance was on the rise, a recent Harvard study exposing the fact confirmed their suspicions. "Unfortunately head lice have become a fact of life for millions of school children, especially those in the 3 - 11 year old age group. So it's important to help people understand which treatments work and are safe; that's why I wanted to explore these alternatives", said Meinking.

According to Meinking, the purpose of the program was twofold: to assess the efficacy of several treatments including home and alternative remedies, and the name brands Nix, and [HairClean 1-2-3](#) in killing head lice, and test the feasibility of a school/community based head lice eradication program.

Over 1,000 students in the Florida communities of Key Largo and Homestead were screened and 53 were eligible. Each participant was treated with mayonnaise, olive oil, Nix or [HairClean 1-2-3](#) and shampooed with a baby shampoo after the indicated time. Nix is a product whose active ingredient is permethrin and HairClean 1-2-3 is a natural products whose ingredients are essential oils; anise oil, coconut oil, ylang ylang oil and isopropyl alcohol. Both products are available in major drug retailers. The children assigned to the mayonnaise and olive oil groups were asked to wear shower caps overnight to keep these

remedies in place and their bed pillows clean. Upon their return to school the next day, the caps were removed and the hair was shampooed and rinsed. Although some juvenile lice appeared dead, adult lice were found to be still alive and active. These home remedies immobilize the lice and make them easier to comb out but require repeated overnight treatments. In addition, they are not cosmetically attractive to most people. These children were switched to HairClean 1-2-3 or Nix after the first overnight treatment. "Since the olive oil and mayonnaise people had live lice the next day, they were re-treated using the name brands so that they could go back to their classroom. We could see the home remedies weren't working as well as the name brands", Meinking explained.

But which product worked best? HairClean 1-2-3 and Nix were applied to dry hair for 15 minutes. The process was repeated a week later. HairClean 1-2-3 was 98% effective at killing the lice while Nix was 89% effective. (Meinking did not follow the directions on Nix's package requiring a 10 minute application on damp hair, because she believes that lice have shown resistance to the directed treatment). "HairClean 1-2-3 has proven to be one of the best of the new non-pesticide products I've studied", Meinking reported.

