

# SUPER Lice

by Linda Crisalli

It's that time of the year again, the beginning of another new school year. In the life of most directors, this typically includes hiring and training new staff, enrolling new children and their families, purchasing materials and supplies, and so on. Just when it feels like everything is off to a grand start, the phone rings, and someone tells you that a child enrolled in your program has head lice. Now you need to write that letter that nobody wants to receive, informing staff and parents to begin checking the children's scalps. What a nuisance! And if that wasn't enough to ruin your day, now you may have to deal with a new strain of the nasty little critters: super lice.

Super lice have been diagnosed all over the United States. Like their ordinary head lice cousins, they live on human scalps and feed on blood. They look and behave the same as regular head lice.



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What's 'super' about them is that they have genetically mutated to be resistant to the active ingredients in many lice treatment products (shampoos and conditioners). Consequently, they are much harder to get rid of.

There are six to twelve million cases of lice reported in children in the United States each year. Head lice are an obligate ectoparasite of humans that cause head lice infestation; they are wingless parasites that spend their entire lives on the human scalp and feed exclusively on human blood. Head lice are very small, six-legged, grayish or brownish insects. 'Nits' are the eggs of head lice. Nits resemble tiny grains of rice; they are oval shaped and light in color. Female lice lay their nits on hair shafts near the scalp and secrete a cement-like substance to hold them in place. Lice are too small to be seen without magnification, but their nits are larger and relatively easy to see.

The lifecycle of head lice is the same whether they are 'regular' or 'super' lice: An adult female louse lays its eggs (nits) onto a hair shaft. The head lice incubation period is about eight or nine days, at which point the nit hatches, and a nymph emerges. The nymph becomes an adult louse in

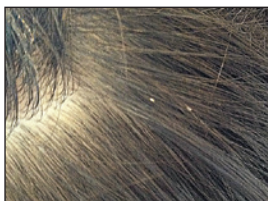
about a week. Adult lice can live as long as 30 days on their human host's scalp. During that time, they feed on human blood every three to six hours, and lay a whole lot of eggs.

Fall months are prime time for head lice, when cooler weather leads to children sharing hats, scarves, jackets, and hair accessories; however, outbreaks of head lice can and do happen all throughout the year.

## Symptoms of head lice:

- Many people with head lice have an itchy scalp, which is caused by skin irritation from the lice sucking blood. Not every person with head lice has an itchy scalp, and not every person with an itchy scalp has head lice. As a matter of fact, just knowing that head lice are going around is enough for many people to start itching!
- Some people have a rash on the back of the neck or behind the ears.
- Everyone who has head lice also has nits on his or her scalp. The way you can tell the difference between nits and dandruff (or sand from the sandbox or anything else young children tend to get in their hair) is that nits are literally glued onto the hair

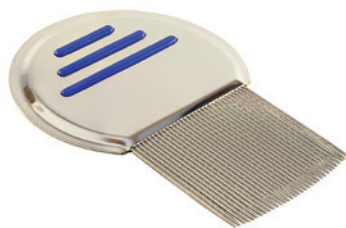
shaft. They don't fall off or wash out; *they must be combed out*. Because there is no way to tell if nits on a person's scalp are dead or alive, licensing regulations in most states require a child to be nit-free before returning to child care.



*Nits on a scalp*

If you have a confirmed case of head lice in your program, it is important to inform staff and parents to conduct scalp checks every couple of days. Start by checking behind all the children's ears and the back of their necks, and then search the rest of the scalp and hair, one section at a time. If you spot even a single nit, the child has an infestation and needs to be treated for head lice.

Finding out that their child has head lice can often lead to unpleasant emotions for parents and teachers, including anxiety, worry, and even guilt. While some folks take the news in stride, others may be upset and 'grossed out.' The notion of being infested by insects is just plain creepy. It is important to reassure parents and help them stay calm and focused on what they need to do at home to get rid of the head lice. That means following treatment directions exactly and diligently combing out the nits.



### Lice combs

Some people believe that having head lice is related to personal hygiene. *This is not true*. Head lice are simply oppor-

tunistic bugs. They are spread through close personal contact with someone who has them. According to Paradi Mirmirani, a dermatologist at the Kaiser Permanente Vallejo Medical Center in California, children are particularly easy targets for lice, because of the size of their hair shaft. "Lice are more easily able to cling to hair that's finer and thinner in diameter," Mirmirani says. Of course, the fact that children have trouble remembering to keep their hands out of each other's hair doesn't help.

### How lice are spread from one person to another:

- Head lice crawl quickly from person to person through head-to-head contact.
- Head lice can be projected from the scalp as a result of static buildup from brushing dry hair.
- Head lice can be spread by sharing clothing, hats, or hair accessories recently worn by a person who has lice, or direct contact with pillows, furniture, and stuffed animals. Lice cannot live on textiles for more than three days.

### Treating head lice, including super lice:

- **Head lice will not go away if left untreated.**
- **Whichever treatment is used, it is very important to follow directions exactly.**
- **Regardless of the method or product used to treat head lice, treatment must include frequent, thorough combing with a fine-toothed lice comb to remove every single nit.**
- Everyone who lives in the same household should be checked and treated at the same time.

- A physician should be consulted before applying chemical lice treatment pesticides if the person is pregnant, nursing, or has allergies, asthma, epilepsy, or pre-existing medical conditions.
- A lice treatment product should never be used on or near the eyes.
- The American Academy of Pediatrics recommends the use of over-the-counter medications containing one percent permethrin or pyrethrins (pyrethroids) *unless a resistance to those methods has already been confirmed in the area, which likely means you are dealing with super lice*. After applying the product following the manufacturer's instructions exactly, nit removal by wet combing must follow. The treatment should be reapplied at day nine, and, if needed, at day 18. (These three applications are considered part of the same treatment). If there is a subsequent reoccurrence, consult a pediatrician before attempting another round of chemical treatment.

**Warning:** Lice treatment pesticide shampoos and lotions should not be used *repeatedly, or in conjunction with, or as a follow-up to other chemical formulations*. There are health risks inherent with the repeated use of pesticides and these risks increase dramatically when you follow one chemical treatment with another, especially for young children, the elderly, and anyone weighing less than 110 pounds.

- Some natural lice treatment remedies:

**Vaseline, olive oil, tea tree oil, hair gel, or mayonnaise:** Coating hair and scalp completely with an oil-based product suffocates the lice. It probably won't kill them; however it will slow them down, and make it easier to comb them out.

**Combing:** Make sure you have lots of light, and separate the hair into sections. Comb the hair thoroughly, then wash and condition the hair, and comb it again. This should be done every day for at least a week to see results.

**Garlic juice is a classic method that has been used for many years.** Create a paste by smashing about ten garlic cloves and mixing it with lime juice. Apply the mixture to the scalp and leave it for half an hour before rinsing it off, combing out the nits, followed by shampooing the hair and combing it again.

■ **Head lice salons:** Head lice salons are popping up all around the country. Some are actual salons where you can go for treatment of head lice, and some are mobile units that will come to you. Some use only natural products and many offer family rates. They tend to be expensive, charging between \$100 and \$200 per treatment.

■ **Combing, combing, combing:** No treatment of head lice is complete until the entire scalp has been combed to physically remove the nits. Because you can't tell a dead nit from one that's alive, every single nit must be removed. Lice combs have teeth that are very close together and very fine. Wet the hair and group it into sections, so that you are sure you comb the whole head. Comb each section thoroughly, lifting out any eggs and disposing of them as you go. Repeat the combing procedure daily for a week, and check every other day for the next few weeks.

#### Laundry and Vacuuming:

In addition to treatments and combing, wash all sheets, blankets, pillows, towels, recently worn clothing (including hats and jackets), combs,

brushes, and stuffed animals the child recently touched in hot water (at least 130 degrees Fahrenheit) and dry them by machine. It is the heat that kills lice, so adding extra soap or bleach is not necessary.

Thoroughly vacuum carpets, area rugs, cushions, and upholstered furniture. Do not use chemical lice spray products, because they leave an insecticide residue on the fabric that can be harmful. Lice and nits only live two to three days on these kinds of surfaces because they need body heat and human blood to survive. Vacuuming every couple of days during a head lice outbreak is the safest and best way to remove lice or fallen hairs with attached nits. Be sure to empty the vacuum cleaner bag or canister into a plastic garbage bag,

seal it, and take it out to the trash after vacuuming.

#### Some additional tips for child care providers:

- Remember that the information about which child brought head lice into the center is confidential.
- Longer hair should be worn pulled back or in a ponytail to avoid hair-to-hair contact.
- Educate children in avoiding head-to-head contact and sharing personal items.
- Encourage parents and staff to consider using shampoos and conditioners that contain essential oils that may help repel lice, such as tea

Myths and Facts about Head Lice	
Myth	Fact
Head lice carry diseases.	Head lice do not transmit diseases, though scratching may increase the possibility of secondary skin infections.
Chlorine kills head lice, so going for a swim will get rid of them.	Chlorine does not kill head lice. Head lice can actually hold their breath for several hours.
If a person isn't scratching his scalp, it means he doesn't have head lice.	Some people have an allergic reaction to louse saliva, which causes the scalp to itch. This is not true for everyone.
Head lice can live in a mattress or pillowcase for a very long time.	Because they need to feed on blood to survive, head lice will only live for a few days away from a human host.
Head lice jump, hop, or fly from one person to another.	Head lice can't jump, hop, or fly. Head lice crawl quickly from person to person through head-to-head contact, or direct contact with a hat, scarf, jacket, or clothing recently worn by a person who has lice. Head lice can also be projected from the scalp as a result of static buildup from brushing dry hair.
Head lice can be spread by pets.	Dogs, cats, and other pets cannot spread head lice.

tree oil, lavender, mint, citronella, or rosemary.

- Make sure that children's jackets do not touch when they are hanging on coat hooks or in cubbies.
- When children are playing outside and take their jackets off, don't put them in a pile, and remind teachers not to carry them back inside in a pile. When it is time to go back inside, each child should wear or carry her own jacket.
- When you send a child home with head lice, remind the parents to vacuum the child's car seat.
- When you send a child home with head lice, remind the parents to machine wash and dry the child's jacket, hat, gloves, scarves, hair accessories, backpack/tote bag.
- Parents and staff should be informed that any clothing that requires dry cleaning and could have been exposed to head lice and should be sealed in a plastic bag and taken to the cleaners ASAP. Be sure to tell the cleaners about the possible infestation.
- During an outbreak of head lice, make sure dress-up clothes, hats, stuffed animals, rest mat sheets and blankets, and pillows get machine washed and dried on high heat.
- During an outbreak of head lice, ensure that extra clothes and jackets that are used as loaners are machine-washed and dried on high heat after each use.
- Items that cannot be laundered or dry cleaned should be vacuumed and tightly sealed in a plastic bag for 1–2 weeks, or sealed tightly in a plastic bag and frozen for at least four hours. After the items are removed from the plastic bags, vacuum them again, and

take them outside and give them a good shake.

- Do not allow children to share bike helmets.
- Make sure adults have their scalps checked too, even if they aren't experiencing any itching.
- During a head lice outbreak, instruct staff and parents to refrain from taking selfies. When heads come together to take a selfie, the critters can just stroll right on over to their next host.
- Most important, stay calm and do your best to keep everyone else calm.

## References and Resources

Centers for Disease Control and Prevention. Frequently asked questions (FAQs). [www.cdc.gov/parasites/lice/head/gen\\_info/faqs.html](http://www.cdc.gov/parasites/lice/head/gen_info/faqs.html)

Head lice treatment costs and the impact on managed care. *Am J Manag Care*, 2004; 10 (suppl 9): S277–S282. 5. Patient.

Checking for head lice. <https://patient.info/health/head-lice-and-nits>

Head Lice Prevention & Control, Centers for Disease Control and Prevention. [www.cdc.gov/parasites/lice/head-prevent.html](http://www.cdc.gov/parasites/lice/head-prevent.html)  
Mazurek CM, Lee NP.

The National Pediculosis Association: <http://headlice.org>

How to manage head lice. *West J Med*. 2000; 172(5): 342–345.

Lice Facts: Sklice: [www.sklice.com/head-lice-facts/head-lice-facts](http://www.sklice.com/head-lice-facts/head-lice-facts)

Home Remedies for Head Lice: <http://dailynaturalremedies.com/10-home-remedies-for-lice/10/>

### Special note regarding lice and nits found on a child's eyelashes or eyebrows

If a child has nits in her eyebrows or eyelashes, it is very important to be seen by a physician. Lice and nits in eyebrows and eyelashes are removed with specialized forceps in the doctor's office. **Important:** The kind of lice that infest eyebrows and eyelashes are not the same strain of lice that are found on an infested scalp; they are the strain found in the pubic hair, armpit hair, and/or facial hair. As is the case with head lice, a child can catch them through direct contact with the towels or sheets recently used by a person who has pubic lice (crabs). According to the Center for Disease Control (CDC), it could also be an indicator of sexual abuse, and should be reported to the proper authorities. Be sure to treat this information as confidential.

### Special note for children and adults with dreadlocks and/or hair extensions

Treating head lice requires the removal of every single nit, which is accomplished by fine-tooth combing, combing, and combing some more. The only way this can be done is by removing hair extensions and undoing dreadlocks. Therefore, children and adults with dreadlocks or hair extensions are encouraged to be extra careful to avoid head lice by keeping their hair pulled back and up, and refraining from head-to-head contact during an outbreak. Additionally, using shampoos and conditioners that contain certain essential oils may repel lice. These include tea tree oil, lavender, mint, citronella, or rosemary.

How to Find Head Lice:

[www.verywell.com/how-to-find-head-lice-2633643](http://www.verywell.com/how-to-find-head-lice-2633643)

Herbal Head Lice Remedies:

[www.thespruce.com/herbal-head-lice-remedies](http://www.thespruce.com/herbal-head-lice-remedies)

Easing Anxiety about Head Lice:

[www.verywell.com/easing-anxiety-about-head-lice-620493](http://www.verywell.com/easing-anxiety-about-head-lice-620493)

Head Lice Alert:

[www.headlice.org/special/alert.htm](http://www.headlice.org/special/alert.htm)

