



# INTEGRATED PEST MANAGEMENT: HEAD LICE

Head lice are blood-sucking insects that are common among children. Young children are especially prone to getting head lice, because they play in close physical contact and share things like hats, combs and brushes. Anyone can get head lice regardless of hygiene, socioeconomic status or ethnic background.

## When are head lice a problem?

Head lice do not transmit any diseases, but they are bothersome because children with head lice scratch their scalps. Head lice are a problem because it takes time for parents to treat and remove head lice from their child's hair, clean clothing and bedding.

## Characteristics

- ▶ Head lice spend their whole lives on the hairy part of the head and can only survive for 1-2 days without a blood meal. They can live up to a month, and are about the size of a sesame seed.
- ▶ Head lice crawl quickly, but do not hop, fly or jump.
- ▶ Head lice are most often spread by direct contact between children, or sometimes spread by sharing combs, brushes, scarves, hats or bed linens.
- ▶ Head lice cannot live on family pets.

## IPM Strategies

### ① PREVENT HEAD LICE INFESTATIONS

- ▶ Avoid head-to-head contact during an infestation.
- ▶ Avoid sharing combs, brushes, hats and helmets with others.
- ▶ All close contacts of a child with head lice should be checked. Those with evidence of an active infestation should be treated.

### ② MANAGEMENT

Remove lice and nits from hair.

#### NON-PESTICIDE METHODS

- ▶ Mechanical removal of lice and nits can be an effective method. This is time-consuming, but safest for young children. Use a nit comb, a

good light and magnification, since lice and nits are small and hard to see.

- ▶ Divide the hair into sections. To remove a nit, pull it along to the end of the hair or use a special fine-toothed lice comb. You can't just "pick off" a nit.
- ▶ Once you're done combing through all of the hair, discard plastic combs in a plastic bag.
- ▶ Haircuts are an old-fashioned approach to preventing infestations. Short hair is more readily searched for lice and eggs, but does not prevent infestation.
- ▶ Heat from a hand-held hair dryer may be sufficient to kill lice and their eggs.
- ▶ Alternative treatments involving the use of herbal shampoos, mayonnaise, food grade oils, kerosene and hair gels are not proven to be effective.

#### LEAST TOXIC PRODUCTS

- ▶ Use less toxic shampoos, such as: Dimethicone, an odorless, non-irritating and hypoallergenic moisturizer that suffocates lice, followed by blow drying.
- ▶ Benzyl alcohol lotion, which kills lice but not nits, so two treatments are required. Can be used on children as young as 6 months of age.
- ▶ As a last resort, use pesticide liquids or lotions that use chemicals such as permethrin or pyrethrins.
  - ▶ Follow product instructions very carefully. Repeat as directed.
  - ▶ Sometimes pesticides don't work because the head lice have developed a resistance to the chemicals (this means that the chemicals no longer kill all the head lice and nits).



[IPM strategies continued]

### 3 REMOVE LICE AND NITS FROM THE ENVIRONMENT

- ▶ Vacuum areas around nit combing area and discard vacuum bag.
- ▶ Clean lice combs and other nit-removing tools using hot soapy water (or rubbing alcohol, if a metal comb) between each stroke. Use an old toothbrush to scrub the lice comb and remove nits or lice that may be caught in the teeth of the comb.
- ▶ Wash clothing and bedding in hot water (at least 149°F) and dry in hot dryer.
- ▶ Place earphones and helmets in plastic and put in a freezer that's 5°F or lower for at least 10 hours.
- ▶ Clean stuffed animals or put them in plastic bags, out of the reach of children, for 2 weeks.
- ▶ Treatments may not always kill head lice eggs. Inspections and nit removal should be done daily for at least two weeks. Remember if lice or nits are found, all family members and close contacts should be inspected.

#### RESOURCES

University of California Statewide IPM Program: *Head Lice*  
[www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7446.html](http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7446.html)

American Academy of Pediatrics: *Head Lice*  
[pediatrics.aappublications.org/cgi/content/full/126/2/392](http://pediatrics.aappublications.org/cgi/content/full/126/2/392)

California Childcare Health Program: *Head Lice*  
[www.ucsfchildcarehealth.org/pdfs/factsheets/HeadLice\\_EN\\_o83007.pdf](http://www.ucsfchildcarehealth.org/pdfs/factsheets/HeadLice_EN_o83007.pdf)

Center for Disease Control Head Lice  
[www.cdc.gov/lice/head](http://www.cdc.gov/lice/head)

Head Lice  
[www.headlice.org](http://www.headlice.org)

Kids Health  
[kidshealth.org/parent/infections/common/lice.html](http://kidshealth.org/parent/infections/common/lice.html)

eXtension School Integrated Pest Management Action Plans  
[www.extension.org/pages/School\\_Integrated\\_Pest\\_Management:\\_Action\\_Plans](http://www.extension.org/pages/School_Integrated_Pest_Management:_Action_Plans)

California Childcare Health Program, University of California, San Francisco School of Nursing • [www.ucsfchildcarehealth.org](http://www.ucsfchildcarehealth.org)



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