According to the U.S. Centers for Disease Control and Prevention, head lice affect 6 to 12 million children between the ages of 3 and 11 every year.

What Is IPM?
Integrated pest management (IPM) uses information about the pest in order to choose methods of control that are safest and most effective. IPM methods include pest prevention, exclusion, and using nonchemical tools first. If chemical pesticides are needed, products that pose the least risk to human health are chosen. With IPM, you start by asking, "Why is this pest here?" and then try to remove the conditions allowing the pest to enter and live. This approach solves pest problems rather than just treating the symptoms. It also reduces the need to use pesticides repeatedly.

Steps for Managing Head Lice

Step 1: Pest Identification
Head lice are tiny insects that spend their entire lives on the human head. Their life cycle includes eggs, nymphs, and adults. The eggs, sometimes called nits, are about the size of a pinhead and can usually be found firmly attached to the base of the hair shaft within ¼” of the scalp. Nits take 7-10 days to hatch into a nymph. A nymph is an immature louse and looks like an adult, but smaller. Adult lice are about the size of a sesame seed. Both the nymph and the adult must feed on blood to survive. While they may cause itching and irritation, they pose no known health risks and are not considered a medical or public health hazard. Because of this, the American Academy of Pediatrics revised their guidelines and now recommends that no healthy child be excluded from school because of head lice and that no-nit policies should be abandoned.

More information.

Step 2: Pest Prevention
Head lice are not caused by poor hygiene, nor can they be prevented in advance by any type of pretreatment, spray, or shampoo. They do not jump or fly from one person to another; instead, they walk. Transfer of head lice from person to person usually occurs with head-to-head contact. They can occasionally also be transferred between people who share items such as hats, hairbrushes, and combs. Pets and other animals do not harbor human head lice.

Children who attend schools and childcare centers should be inspected weekly at home for active lice. At child care centers or in schools, keep heads and personal belongings physically separated. Children's hats, coats, and hair-grooming items should be kept in sealed plastic bags or other containers with lids.

Step 3: Controlling Head Lice Safely
1. Head lice can be physically removed by combing and/or killed by heat. Combing is a safe, nontoxic, and effective method of lice control. Use a metal lice comb specially designed for lice and nit removal. Find a well-lit area and seat the child just below your eye level.
2. Cover the hair with regular hair conditioner. Remove tangles with a regular hair comb.

3. Separate hair into small sections, the width of the metal lice comb, as you move about the child's head. It is important to separate the hair so you can more easily see lice and nits.

4. Hold the section of the hair with one hand. Insert the lice comb as close to the scalp as possible and gently pull the comb slowly through the hair several times. After combing each section, dip the comb in a bowl with a solution of soapy water and use a paper towel to remove lice and debris. Make sure the comb is clean before you use it on the hair again. Check the hair carefully. Continue combing one section at a time and then check each section again. If the hair is long, pin it up in a curl, flat against the head before moving on to the next section.

5. After combing, flush the contents of the soapy water bowl down the toilet. Shampoo the hair at least twice to remove the conditioner. When the hair is dry, check for stray nits and remove those hairs individually with a pair of small, pointed scissors. It is very important to remove all nits.

6. Boil the metal comb for 15 minutes in water only. Use an old toothbrush to clean the comb. The comb can now be used on another family member. Be sure to recheck each family member again in seven days. New heat devices for the removal of head lice are being developed. See the resource list for more information.

Head lice on comb

Removing Head Lice Safely from Items in the Home

Although head lice live on their host, it is possible for head lice to become dislodged while people are sleeping or removing clothes, or when hair is shed. Bedding, towels, and recently worn clothing should be frequently washed while you are treating your child, but it does not have to be done daily. Head lice cannot survive off of the host for more than 2 days.

Do not use pesticide sprays on beds, carpets, furniture, or any other items in an attempt to get rid of head lice. Head lice live only on human heads and cannot survive elsewhere.

- Wash bed linens, towels, hats, and recently worn clothes in a washing machine with hot, soapy water. Dry in a dryer on the hottest setting for 20 minutes to kill both lice and nits. Items such as stuffed animals, pillows, headphones, and hats that are not washable can be dry-cleaned or stored in tightly sealed plastic bags for 2 weeks.
- Family combs and brushes should be soaked in hot water for at least 10 minutes. Get every member of the home his/her own comb and brush. Tell your child not to share these items with others.
- If you are concerned about the other areas of the house, you can vacuum carpets, car seats, and furniture.

Using Chemicals on Head Lice

Most shampoos intended to treat head lice have pesticide active ingredients in them such as lindane, malathion, permethrin, or pyrethrin. All of these carry some level of health hazard to humans, especially children. New products, devices, and procedures are constantly being developed to combat head lice more safely. Do some research, checking evidence-based sites such as those that end in a.gov or.edu, and pick a strategy that will be workable and safest for your family.

Be a smart consumer and read the entire label before purchasing and using any product. Some have been properly tested, and others have not. You may need to look up the ingredients yourself and decide whether or not this is something you want to expose yourself or your child to. Remember, not everything works for everyone, and it does take time to treat head lice safely and effectively.

For More Information

Pennsylvania IPM Program at Penn State Phone: 814-865-2839 Email: paipm@psu.edu extension.psu.edu/ipm

Pennsylvania IPM Program in Philadelphia Phone: 215-471-2200 Email: pscip@psu.edu extension.psu.edu/ipm/resources/urbanphilly

Resources

Cetaphil Skin Cleanser
U.S. Centers for Disease Control and Prevention extension.psu.edu

extension.psu.edu

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