

## **Pediculosis (head lice infestation)**

*Disease Fact Sheet Series*

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### **What is pediculosis (head lice)?**

Pediculosis is an infestation of head lice on the hair of the head. The lice feed on human blood that can cause severe local itching.

### **Who gets pediculosis?**

Anyone may become infested with head lice, regardless of age, sex, race, or standards of personal hygiene. Head lice are frequently found in schools and day care centers, and are easily spread from person-to-person.

### **How are head lice spread?**

Head lice spread through direct head-to-head contact with an infested person or indirect contact with lice-carrying objects such as combs, brushes, hats or scarves. Since nits, (louse eggs) are laid by the adult lice the chances of nits being spread from person-to-person are minimal.

### **Do animals spread head lice?**

No. Lice from animals do not infest humans.

### **What are the symptoms of pediculosis?**

The first indication of an infestation is usually itching at the back of the head and around the ears. Itching in these areas should lead to an examination of the scalp for louse nits (eggs). Severe scratching may result in secondary bacterial infection in these areas. Head lice do not carry or spread disease.

### **How soon do symptoms appear?**

It may take 2-3 weeks for a person to notice the intense itching associated with pediculosis.

### **How long is a person able to spread head lice?**

Lice can be spread as long as they remain alive on the infested person or their clothing.

### **How long do head lice live away from the body?**

Unattached to the body and without a blood meal, head lice survive for approximately 6-24 hours (averaging about 12-15 hours).

### **What can be done to prevent the spread of head lice?**

Avoid physical contact with infested individuals and their belongings, especially clothing, headgear, brushes, combs and bedding. Combs and brushes used on infested persons should be immersed in hot water (>130°), Lysol®, rubbing alcohol or a lice-killing chemical for 1 hour. Floors, rugs, pillows and upholstered furniture should be thoroughly vacuumed, and the vacuum bag discarded when complete. Clothing, linen and cloth toys worn or handled by an infested individual within 2 days of being diagnosed with head lice should be washed in hot water (>130° F) or machine dried at the hottest setting for 20 minutes. Other articles may be dry cleaned or sealed in plastic bags for at least 10 days to destroy lice and eggs. In addition, parents should perform regular lice checks on the scalp of children who attend school and day care centers, especially when excessive itching is noticed. Fogging with insecticides or spraying the environment with lice-killing chemicals is not recommended.

### **What is the treatment for pediculosis?**

There are several medicated shampoos commonly used to treat head lice. Shampoos or creme rinses that contain 1% permethrin have the fastest killing time against adult lice and the highest nit-killing capability. Permethrin has a residual effect that will continue to kill nits for several days after the first application. While one application should be sufficient to kill lice and nits, some experts suggest a second treatment one week after the first. Although resistance to permethrin has been reported from other countries, no resistance has been reported in the United States.

Shampoos that contain pyrethrin kill lice quickly but do not leave a residual that will continue to kill nits, resulting in a less effective treatment. Two applications of these types of shampoo 7-10 days apart are recommended to kill nits.

Shampoos containing malathion and lindane are available by prescription only. Lindane has the slowest killing time for head lice (up to several hours) and lowest nit killing capability. Lindane is not recommended for young children, or pregnant or nursing women, and should only be used if other approved therapies did not work or cannot be tolerated. Misuse or overuse of lindane may be toxic. There are widespread reports from countries other than the United States of lice being resistant to lindane.

Alternate treatment methods such as the use of tub butter or margarine, mayonnaise, Vaseline® and olive oil, designed to smother head lice and nits can be used with discretion for those persons for whom lice-killing medications have failed. The effectiveness of alternate treatments is unclear. Kerosene, gasoline and other flammable products should never be used to treat head lice. Avoid using powder to remove alternate treatments from the hair. Grease cutting shampoos or dish soap may be used to remove alternate treatment. Avoid wearing plastic wrap and shower caps when using lice-killing medication. Lice-killing medications have not been safety-tested for use with plastic wrap or shower caps. Such devices should never be used on young children, and used with discretion on older children and adults when alternate treatments are used.

Manual removal of nits with a nit comb, fingernails, or by cutting strands of hair that contain nits is essential following treatment with pediculocides or alternate treatments. To aid in the removal of nits, hair can be soaked in a 3% to 5% white vinegar solution followed by application of a damp towel soaked in the same solution for 30-60 minutes before attempting nit removal.