There are three types of lice that infest humans:

- The head louse
- The body louse
- The pubic louse or "crab"

**HEAD LICE**—are usually spread from one person to another through casual contact. Although head lice can be unpleasant, there are effective treatment options available. It is important to find and treat lice quickly to avoid spreading them to others.

**HEAD LICE DESCRIPTION** — The head louse is a tiny, grayish-white insect. Female head lice typically live for about one month and lay 7 to 10 eggs (called nits) per day. The eggs are attached to the base of a hair, near the scalp. The eggs hatch after about eight days.

After the eggs hatch, the egg cases become easier to see. Since the eggs are firmly attached to the hair, they move away from the scalp as the hair grows. Head lice do not jump or fly, and they cannot spread from person to person by attaching to pets.

Direct contact with the hair of a person with lice (hair to hair contact) is thought to be the most common method of spreading head lice. The degree to which contact with objects used by people with head lice, such as clothing, bedding, combs, or brushes, contributes to the spread of head lice is unclear.

**HEAD LICE SYMPTOMS** — Most people with head lice do not have any symptoms. Some people feel itching or skin irritation of the scalp, neck, and ears. This is caused by a reaction to lice saliva, which the lice inject into the skin during feeding.

**HEAD LICE DIAGNOSIS** — Head lice are diagnosed by examination of the scalp and hair. Special "nit combs" can be used to assist with the diagnosis.

- Before using the fine-toothed comb, use a regular brush or comb to remove tangles. This can be done while the hair is wet or dry. If the hair is wet, apply hair conditioner to make the hair easier to comb.
- Place the fine-toothed comb at the top of the head, touching the scalp. Pull the comb through the hair from roots to ends. After each stroke, carefully examine the comb for lice or eggs.
- Comb the entire head at least twice.

Finding eggs (nits) without lice does not necessarily mean that there is an active infestation; nits can be found for months after lice are treated. Because lice lay eggs at the base of the hair shaft, the identification of nits within ¼ inch of the scalp suggests (but does not confirm) an active infestation.

Lice can be more difficult to see than nits since they can move and hide from view. A doctor or nurse can examine the head under a special lamp, which causes nits to glow a pale blue color. Finding head lice can be upsetting but it is important to keep the following in mind:

- Head lice are not a sign of being dirty or sick.
- You can get rid of head lice with proper treatment.
- There are no serious or long-term health problems associated with head lice.
TREATMENT -- There are several options for getting rid of head lice, including creams and liquids, combing, and oral medicine (pills). It is important to follow directions carefully to be sure that the treatment works. Adults can use a nonprescription lice treatment.

Insecticides — A topical insecticide (pediculicide) is a substance, usually a lotion or gel, that is applied to the scalp to kill lice. Available insecticides include:

- Permethrin (Nix)
- Pyrethrin (RID, A-200, Pronto, Triple X, R&C)
- Malathion (Ovide, prescription required in the United States)
- Benzoyl alcohol (Ulesfia, prescription required)
- Spinosad (Natroba, prescription required)
- Topica (Sklice, prescription required) Topical ivermectin

How to use — Only one insecticide treatment should be used at a time. Follow the manufacturer's instructions for applying the insecticide carefully. You should also avoid use of hair conditioner or shampoo-conditioner combination products before application of the insecticide.

Most insecticides are rinsed or washed out of the hair after 10 minutes; however, malthion (Ovide) should be left on the scalp for 8 to 12 hours or overnight. Clean clothing should be put on after an insecticide treatment. Hair should not be rewashed for at least one to two days after

Malathion has a bad smell, which can be hard for some people to tolerate. Malathion is also flammable and should never be applied in close proximity to fire or electric heat sources (such as a lit cigarette, curling iron, or hair dryer).

Use of a nit comb to remove lice and nits after treatment may help to decrease risk for reinestation. Nit combing can be performed every two to three days for two to three weeks. Nit combing is not considered necessary after treatment with spinosad.

When to treat again — A few live lice may be seen 8 to 12 hours after using an insecticide, and there is no need to immediately reapply the insecticide if they are moving slower than they were prior to treatment. However, if lice are as active as before treatment, the treatment may not be effective. Your health care provider will provide guidance regarding the selection of a new treatment.

Some insecticides must be applied twice to be effective.

- A second treatment is needed with permethrin, pyrethrin, and benzyl alcohol seven to nine days after the first treatment. This is because some lice are able to survive the first treatment.
- A single application of malathion often is sufficient. However, malathion should be reapplied if live lice are seen seven to nine days after treatment.
- Treatment with spinosad should be repeated if live lice remain after seven days.
- Topical ivermectin is given as a single treatment; patients should consult with a healthcare provider before repeating treatment.

Wet-combing — Wet-combing is a way to remove lice from the hair with careful and repeated combing. It is a good option if you want to avoid using insecticides. However, wet-combing is time consuming and must be repeated multiple times over a period of a few weeks.

Wet the hair and add a lubricant, such as hair conditioner or cream rinse, vinegar, or olive oil. Use a fine-toothed comb to comb through the hair. A lice comb may be provided in the lice medication package, or a flea comb can be used. See above for a description of how to wet-comb.

The combing session should take 15 to 30 minutes, depending on the length and thickness of the hair. Comb every three to four days for two weeks after you find any large, adult lice.
**Oral medicines** — A medicine taken by mouth called ivermectin might be prescribed for people whose lice are resistant to topical insecticide treatment but topical treatments are usually effective.

**Other treatments** — Studies have examined lotions and other materials (olive oil, butter, mayonnaise, petroleum jelly [Vaseline]) that are applied to the head, and then allowed to dry, with the goal of suffocating lice. However, lice are difficult to suffocate; wet-combing probably works as well and is less messy.

Lice treatments that use gasoline or kerosine are toxic and can lead to serious injury and should not be used.

Because there is no evidence that these treatments are predictably effective, we do not recommend any of these treatments.

**PUBIC LICE**— The medications and instructions are the same as for head lice, although an effort must be made to apply to all affected hairy areas, sparing the head hair and the mucous membranes of vulva and rectum. Occasionally these lice also infest facial hair, eyebrows and eyelashes. Medication should not be used around the eyes, and “nit picking” may be the best treatment. Thick application of an ophthalmic grade petrolatum product can help smother lice around the eyes.

**PREVENTING LICE SPREAD** — Anyone who lives with a person diagnosed with lice should be examined for lice and treated if needed. Anyone who sleeps in the same bed should be treated for lice, even if no lice or eggs are found. Hats and grooming aids, such as brushes and combs, should not be shared.

Clothing, bedding, and towels used within 48 hours before treatment should be washed in hot water and dried in an electric dryer on the hot setting. Dry cleaning is also effective. You can use a vacuum to clean furniture and carpet. Items that cannot be washed or vacuumed can be sealed inside a plastic bag for two weeks. Items that the person used more than two days before treatment are not likely to be infested because head lice cannot survive off the body for more than 48 hours. You do not need to have your home or belongings sprayed with insecticide.

Questions? Please call our Nurse Advice Line at 831-459-2591