

HEAD LICE



What are head lice?

Head lice infestation (pediculosis capitis) is caused by a parasitic insect *Pediculus humanus capitis*. They live in the hair on the head and feed off the blood from the scalp.

Louse eggs (ova or nits) are small, oval and yellowish white and they are attached to the hair shafts close to the roots to keep warm. The eggs are pinhead size and are difficult to see.

The eggs hatch in about a week and the lice mature to adulthood over the next seven days. The empty eggshells remained glued to the hair-shafts. These remains are known as nits.

Adult lice feed by biting on the scalp and feeding on the blood. A female louse may start to lay eggs from nine days after hatching. Therefore, to break the cycle and stop them spreading, they need to be removed within nine days of hatching.

Adult female lice can lay 7-10 eggs per day and may live for up to one month.

Only the adult or near mature juveniles can crawl and transmission of the lice requires head-to-head contact. Head lice can only live on humans and their lifespan is very short (2-4 days) once they are detached from the human head.

Who gets head lice?

Head lice infestation is common in children but can affect any age. School aged children tend to play very closely with each other and share items that touched their heads. There is also an increased risk for family members of school-aged children. People who work in day care centres, pre-school or elementary school also have an increased risk.

They are not a sign of dirty hair or poor hygiene. All types of hair can be affected, regardless of its length or condition. Head lice only affects human and cannot be passed onto animals or be caught from them.

Head lice cannot fly, jump or swim and are spread by close head-to-head contact, climbing from the hair of an infected person to the hair of someone else.

Other ways of contracting head lice includes:

- Sharing personal items eg. brushes, combs, headbands, headphones and hats of an infected person
- Using a fabric item after an infected person
- They can live for a time on upholstered furniture, bedding, towels and clothing.

Presentation

Head lice often cause person's scalp to itch. Itching is not caused by the lice biting on the scalp, but by an allergy to the lice.

However, not everyone is allergic to head lice so you or your child may not notice a head lice infestation.

It can take up to three months for an itch to develop after you are infested with head lice, so you may have unknowingly passed the lice onto others during this period. Sores and scabs can occur on the scalp from scratching.

In some cases, a rash may appear on the back of the neck. This is caused by a reaction to lice droppings.

How is head lice diagnosed?

A diagnosis of active head lice infestation can only be made if a live head louse is found (nits are not sufficient to diagnose active live head lice infestation as it is difficult to distinguish between dead and live eggs with the naked eye) Detection combing can be used to confirm the presence of head lice.

Head lice and nits do not wash off with normal shampoo.

Treatment options

There are two types of preparations recommended for the treatment of head lice – physical and chemical.

- Physical treatments act by blocking the oxygen supply eg. by obstructing the airway of the louse.
- Chemical treatments act by exerting a neurotoxic action to kill off the louse.

Dimeticone lotion (Hedrin Lotion)

This is a silicone-based product and is a physical insecticide. It acts against the lice by coating the insects, disrupting their ability to manage air and water exchange across their body surface. The lotion is applied twice – seven days apart. Each application is left on for at eight hours and washed off with shampoo and water. Dimeticone is suitable for all age, those with skin conditions and those with asthma.

Isopropyl myristate and cyclomethicone solution (Full Marks Solution)

This is a physical treatment. It is not suitable for children younger than two years of age or those with skin conditions. It should be applied twice, with seven days between applications. It is left in place for 10 minutes and the hair is systematically combed with a fine-toothed comb to remove the lice.

Coconut, anise and ylang ylang spray (Lyclear Spray)

This is a physical treatment. It is not suitable for children younger than two years of age, people with skin conditions or those with asthma. It should be applied twice, with seven days between applications. The hair and scalp is sprayed and left for 15 minutes and the hair is then systematically combed with a fine-toothed comb to remove the lice.

Malathion 0.5% aqueous liquid

This is chemical treatment. It is an organophosphorous compound. It interferes with the neuromuscular transmission in the head louse, paralyzing and preventing it from feeding. Malathion is poorly absorbed through the human skin and it is also much more efficiently detoxified by human metabolic processes than by those of insects. It is safe to use at low concentrations as a pediculocide.

It is suitable for all ages and those with skin conditions. The lotion is applied twice – seven days apart. The lotion is left on for at least 12 hours (overnight) and then washed out with shampoo and water.

Wet combing method.

If you want to avoid using pesticides, you can use the wet combing method.

- This involves methodically combing the wet hair with a fine-toothed comb.
- The hair is washed using an ordinary shampoo and after rinsing, a large amount of conditioner is applied.
- Start combing at the scalp and work through the end of the hair. Make sure that all parts of the hair are combed through by working around the head.
- Check the comb for lice after each stroke – clean the comb by wiping on a tissue or rinsing it before the next stroke. After the whole head has been done, rinse out the conditioner.
- Repeat the whole process every four days.
- Continue combing sessions until no head lice have been seen for three consecutive days.
- The downside to this method is that it is time-consuming.

Checking to ensure treatment has been successful

To check whether treatment was successful – perform detection combing on day 2 or 3 after completing a course of treatment and again after an interval of seven days. Treatment has been successful if no lice are found on both occasions.

After treatment and when the lice have gone, it may take 1-2 weeks for the itch to resolve.

Management

Treat the person only if a live head louse is found. Treat all affected household members simultaneously.

There is no need to use pesticides around your home. Head lice cannot survive for more than a few days off the human head. The following methods can be used to kill lice on different household items:

- Wash clothes and bedding in hot water and dry on high heat in the dryer for 20 minutes
- Seal plush toys or items not washable in a plastic bag for two weeks.
- Soak hair brushes, combs, hairclips and other hair accessories in hot water (65 degrees) for 10 minutes
- Vacuum floors, upholstered furniture, rugs, mattresses and car seats
- Cover furniture with a plastic cover for two weeks
- Consult a doctor if there are signs of a bacterial infection on the scalp

Protect yourself

- Proper treatment can eradicate the infestation quickly and effectively.
- Ensure that all affected household contacts are treated simultaneously.
- Reduce your risk by cleaning your house and avoiding contact with other infected people until they have been treated.
- Do not share personal hygienic items with others. Give each family member their own bedding, towels and hairbrushes to prevent the spread of head lice.