Pediculosis

Also known as lice

What is pediculosis?

Pediculosis is the medical term for an infection or infestation with lice which are blood feeding parasites.

What causes pediculosis?

Lice do not jump or fly from person to person but require direct contact for transfer. They cannot be transmitted via animals. They can be transferred by some objects and clothing such as hats, combs and sheets.

The three lice species that infest humans are:

Pediculus capitis (head louse) is by far the most common infestation. It does not discriminate between socioeconomic groups and occurs most commonly in school-aged children.
Pediculus humanus (clothing or body louse) is commonly associated with poverty, overcrowding (e.g. refugee camps and crowded buses/trains) and poor hygiene (e.g. infrequent washing and/or changing of clothing and shared bedding and/or clothing).
Pthirus pubis (pubic or crab louse) is transmitted by intimate and/or sexual contact and to a lesser extent via contaminated clothing, towels and bedding. Condom use does not prevent transmission.

How does it present?

Intense itch is the usual symptom but the degree of itch does vary among individuals. With the first infestation, it may take 2 to 6 weeks before itching starts. In repeat infestations, itching develops within the first 24 to 48 hours. In some people, infestations do not produce symptoms.

Head lice: Evidence of head lice infestation includes scratches, redness and scaliness of the scalp and back of the neck. Head lice, eggs (nits) and empty egg cases are visible in many cases. The bites can occasionally become infected. This results in small sores with tender glands in the neck (lymphadenopathy).

Body lice: The body louse causes night time itch, particularly in the underarms, trunk and groin regions (i.e. areas most often covered by clothing). Nits are rarely found on the individual's skin as the louse lives primarily on the clothing. Bites present as tiny red lumps with a red base. Crusts and scratches are occasionally complicated by bacterial infections and lymph node enlargement.

Pubic lice: The lice are most often found within the pubic hair. However, they can spread to other hairy parts of the body. Eyelashes or eyebrows can also be infested. Blood specks on underclothes and live lice may be seen moving in the pubic hair. Tiny bleeding spots or bite marks, scratches, secondary bacterial infection and enlarged lymph glands may be present. When the eyelashes are affected, dark flecks can form that look like mascara. Blue spots may be

visible at feeding sites.

How is it diagnosed?
Diagnosis of infestation requires identification of a live louse and/or a viable nit under the microscope. It is easier to identify and remove live lice by wet combing using a lice comb.

What other problems can occur with pediculosis?
Itching commonly leads to excoriations (scratch marks) and secondary bacterial infection.
Upon diagnosis of pubic lice a screen for other STDs should be done
In some countries the body louse transmits diseases such as epidemic typhus, trench fever and louse-borne relapsing fever.

How is pediculosis treated?

General considerations and prevention
All people infested with lice in a household and their infested close contacts and bedmates should be treated at the same time.
Items used by the infested person must be machine washed with hot water and tumble dried.
Items that cannot be laundered can be dry-cleaned or sealed in a plastic bag for 2 weeks.
The floors and furniture should be vacuumed. However, the risk of getting infested by a louse that has fallen onto a rug, carpet or furniture is very small.
Children should be taught not to share combs, brushes, hair accessories and towels.
Soak combs and brushes in hot water (at least 60°C) for 5 to10 minutes.
Dead nits may continue to adhere to hairs and this does not imply treatment failure.
Nits can be removed with a comb designed specifically for that purpose. Use of a hair conditioner makes wet-combing easier. It is best done after treating with anti-lice insecticides.
Repeat the combing at least twice more on consecutive nights if possible and then at least weekly until no lice are found on 3 consecutive occasions.
When head lice are detected, notify the child's school of the infestation. It is not necessary to exclude children from school after the initial treatment of head lice.
Individuals with pubic louse infestation should be advised to avoid close body contact until they and their current sexual partner(s) have completed treatment and follow-up.
Shaving pubic hair is beneficial as well as applying topical treatment to all hairy parts of the body apart from the eyelids and scalp. Any remaining nits should be removed by using a fine toothed comb.
Use of a topical treatment is usually unnecessary with body louse infestation because the lice live on clothing. Treatment of clothing, bed linens and education about hygiene is most important.

Topical agent

It is important to read the instructions before applying the treatment to ensure that the medication has been left on for the appropriate amount of time and washed off properly.
Not all eggs are killed with one application of topical medicine, therefore a second application is recommended 7 to10 days later (the time needed for the eggs to hatch).
Various topical pediculicidal agents are available: Pyrethrum shampoos and permethrin 1% are

available over the counter; permethrin 5%, malathion 0.5% (Ovide®), lindane, topical ivermectin (Sklice®), and spinosad are prescription agents.
Occlusive products offer an alternative to pediculicides and include: benzyl alcohol lotion 5%, and 4% dimethicone lotion.
Other occlusive treatments include vinegar, mayonnaise, petroleum jelly, olive oil, butter, etc. However, most of these have not been scientifically evaluated.
The same pediculicides used for head louse infestation are also used for pubic and body louse infestation
Eyelash infestation can be treated effectively with ophthalmic-grade petrolatum.

Oral agents

Ivermectin is an option for individuals whose disease is resistant to topical therapies.

What happens when head lice treatment fails?

Failure to eradicate lice is a common and frustrating problem. There may be a number of reasons for this:
Re-infestation from another person or from contaminated clothes, hats, etc.
Resistance of lice to insecticides or improperly applied treatment. If a course of one kind of insecticide treatment fails, a different insecticide may be selected for the next course.
Incorrect diagnosis of inactive infection. It is important to look for active lice not just nits.