Head lice and nits

What are head lice?

Head lice are tiny wingless insects (2-3mm long) that live in the hair and feed on human blood. They vary in colour from cream to brown/black. They crawl quickly on the scalp and are difficult to see. They can only survive on humans. They do not jump, hop or swim and cannot be caught from animals.

What are nits?

‘Nits’ is the common name for the small eggs that are laid by head lice. They are the size of a grain of salt, yellow-white in colour and are found firmly attached to the hair close to the scalp. Common places for nits to be found are behind the ears, the back of the neck and the fringe. Dead nits are often black in colour and are found well away from the scalp.

Life cycle of head lice

Nits are laid on the hair shaft within 1cm of the scalp and take about 7-10 days to hatch into head lice. They will only hatch in a moist, warm environment such as the scalp. If the lice are isolated from the head they die very quickly, generally within 24 hours, although in our hot environment they can live longer than in other places in Australia.

How are head lice spread?

Anyone can catch head lice; they cannot be prevented by cleanliness. Head lice are spread by direct hair to hair contact with another person who has head lice. Head lice cannot jump or fly from head to head but may be passed on by sharing hats and brushes. They are unlikely to be spread through bedding, furniture or carpets.

Head lice are commonly found in primary school children because of their often close, personal contact with each other.

What are the symptoms?

Head lice may cause itch and irritation, leading to sleep disturbance and behaviour problems. They do not transmit any infectious diseases. Scratching resulting in breaks in the skin may lead to skin and lymph gland infections.

However, they occasionally do not cause any symptoms so it is important to look for them.

Recommended treatment

Occlusive products are now the recommended head lice treatment in the NT. Occlusive products kill lice by smothering them. The safest and most effective products are from the Hedrin 15® range, which contain the active components dimeticone and nerolidol. The dimeticone kills the adult lice and nerolidol kills the lice eggs.

These are silicone based products and are applied to clean, dry hair. These products are effective, have no evidence of resistance, are safe and are able to be used repeatedly.

A second treatment 7 days later is recommended just in case any eggs have hatched.

Treatments should be used according to the instructions on the packet. All household members should be checked for head lice and everyone with head lice should be treated at the same time.

If a child is found to have head lice, their school, playgroup, childcare centre etc should be notified so other children can be checked and treated if necessary.

Insecticidal treatments

Previously, insecticidal products were the main treatment option. They kill lice chemically but unfortunately, these products have become less effective as lice have become resistant to them. The active compounds found in insecticidal head lice treatments include:

- Permethrin – least toxic to people
- Pyrethrin – moderately toxic to people
- Malathion – most toxic to people.

Overuse of insecticidal head lice treatments does not assist in getting rid of head lice and increases the risks of side effects. Side effects may include mild irritation of the eyes, skin, nose and throat or if alcohol based products are used, pain or irritation of open sores and cuts.
Pregnant women, people with sensitive skin and parents of young babies should consult with a doctor before applying insecticidal head lice treatments.

Care should be taken to avoid having the product come in contact with the user’s eyes, nose or throat.

The person applying the insecticidal treatment product should wear protective gloves (to avoid unnecessary exposure to the treatment).

**Manual removal of head lice**

Hair conditioner or silicone based occlusive products can be used with a fine tooth, head lice comb to manually remove lice. Conditioner does not kill lice but it does stun the lice (for about 20 minutes) so that they can be combed out before they lay eggs. Eggs may be removed by the combing process or can be picked off by hand. This treatment should be carried out every second day until no live head lice have been found for 10 consecutive days.

The wet combing technique:

1. Apply conditioner or occlusive product to dry hair – use enough to cover the whole scalp and all hair from roots to tips (do not use together or each sequentially as one can counter-act the other)
2. Use a normal comb to remove tangles and evenly distribute the product throughout the hair
3. Use a fine tooth/head lice comb to systematically comb hair from scalp to tips
4. Wipe the comb onto a tissue after each stroke to remove immobilised lice
5. Comb all hair at least twice
6. Wash remaining product from hair.

**‘Natural’ and other products**

Treatments involving ti-tree oil, eucalyptus oil or kerosene are not recommended. These products have not been proven to be as safe or effective as standard treatments, are more toxic and are likely to burn the skin.

**If treatment does not work**

True treatment failure has occurred when live lice are found immediately after treatment.

Treatment failures may result from:

- Inappropriate treatment
- Hatching of lice from eggs since the last treatment
- Resistance of head lice to a particular treatment product
- Re-infestation from others who have been inadequately or not treated
- Eggs found more than 1 cm from the scalp do not represent treatment failure, they are usually dead or hatched eggs. Dead nits are dark/black in colour.

Suggested management:

- Change to a different category of treatment product. If you have used an insecticidal product, change to an occlusive product.
- Increase fine combing (eg twice daily).
- Seek advice from a doctor or pharmacist.

**Prevention of head lice**

There are no products available to prevent head lice. When lice are present in the community, simple measures for prevention include:

- Weekly hair and scalp checks
- Wet combing frequently with nit combs
- Avoid sharing brushes, combs, hats, pillows
- Washing brushes and combs once a week in hot soapy water
- Keeping long hair braided or tied back.

For more information contact the Centre for Disease Control in your region

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