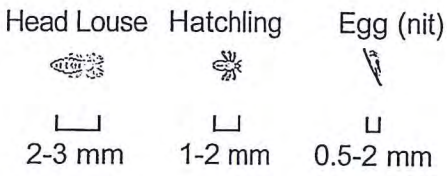
Head Lice Fact Sheet

What are head lice?

Head lice are tiny insect parasites that live on the human head, feeding on the scalp several times a day. Head lice reproduce by laying their eggs (nits) on the hair shaft close to the scalp. They are not dangerous, don't carry diseases and are not a sign of poor hygiene.



How are head lice spread?

Head lice are spread by head-to-head contact with another person who has head lice, e.g. when doing group work at school, playing, or hugging. Head lice can run from one head to another in seconds. Head lice cannot fly, jump or swim, but they can sometimes 'trapeze' from one hair to another. Brushes and combs are unlikely to transfer head lice and do not transfer viable eggs, as these are very hard to detach from the hair shaft. Head lice are not spread through bed linen, clothing or head gear, as they do not leave the scalp unless they are dead or dying. Eggs ('nits') do not fall off until weeks after they have hatched as the egg shells are glued tightly to the hair shaft.

What are the signs of head lice?

The scalp may itch as the skin reacts to the saliva of the head lice. Itchiness can take weeks to develop. If you have had head lice more than once, the skin may become desensitised and there may be little or no itch. Crawling head lice may be seen in the hair, but they can move at 30 cm per minute and can be difficult to spot. Head lice can quickly run and hide from searching hands. Adult lice are usually dark brown and about 2 to 3 mm long. Hatchlings (young lice) are often a lighter brown and about 1 to 2 mm long. Eggs (nits) may be seen attached to the hair shaft but they may be very tiny and hard to see, especially newly-laid eggs close to the scalp. They are grey-white and about the size of a grain of salt.

How do I look for head lice?

Unless numerous head lice are visible, **'dry', head checks are unreliable**, due to the speed at which head lice can move.

To check hair for head lice, carefully comb plenty of hair conditioner through the dry hair, then comb again in sections with a metal fine-tooth 'nit' comb. The hair conditioner slows the head lice down so they can be trapped in the comb (see page 3). Wipe the combings on a white paper towel and examine them with a magnifying glass in strong light, e.g. sunlight, to look for head lice and eggs.

To check more effectively for eggs, use a magnifying glass in strong light, e.g. sunlight, to examine the hair close to the scalp, especially behind the ears and at the nape of the neck.

What other things can be mistaken for head lice?

Other things in the hair can be mistaken for head lice or eggs. These include sand, dandruff, flakes of hair spray, ants, aphids, or other small insects.

What do I do if I find head lice?

- Check all household members to see if anyone else has head lice – use the hair conditioner method from page 3. Only continue with the 10 day treatment if you find head lice and/or eggs.
- Choose one of the treatments from pages 3 and 4, and follow the instructions carefully.
- Inform the school or child care centre, and any other contacts including playgroup, neighbours and relatives, so that other close contacts, both children and adults, can be checked.
- When treatment is completed, with all head lice and eggs removed, check the hair regularly, e.g. weekly, for any further head lice infestation. Early treatment can prevent spread to further close contacts.

How do I treat head lice?

There are two effective head lice treatments on pages 3 and 4 – choose the method that best suits you and your family. For successful removal of head lice, be sure to follow the directions for your preferred treatment exactly.

Household Cleaning

Head lice and eggs do not survive long away from the human scalp, as they are human parasites. It is not necessary to wash all the household linen or clothing, to vacuum, scrub or spray the house with insecticide, or to treat the dog or cat. Pillow slips and towels may be soiled with head lice debris including droppings and moulted lice skins, so they should be washed on the first day of treatment.

Exclusion from School

Under the School Education Act 1999, a principal may exclude a child with head lice from school until treatment has commenced. The Department of Health recommends exclusion at the end of the school day. The child may return to school when all live head lice have been removed. A few remaining eggs are not a reason for continued exclusion. However, the parent must continue treatment over the following 10 days to ensure that all eggs and hatchlings have been removed.

Prevention

Useful activities and ideas to help prevent infestation:

- **check your child's hair regularly** for head lice and eggs ('nits') – use a metal fine tooth 'nit' comb and plenty of hair conditioner applied to the **dry** hair, to make the task easier and more effective. To help children sit still for this, offer distracting activities, e.g. play a favourite video, provide games, encourage reading, offer a head massage.
- **tie long hair back** – braid and/or put it up if possible.
- **consider applying hair gel or mousse** – these do not prevent or repel lice but may help to keep stray hair strands from contact with other heads.
- **avoid sharing combs or brushes.**
- **immerse** brushes and combs in hot water for 10 minutes after use to kill any head lice or eggs trapped in them. An old toothbrush will also help remove any debris.
- **remind your child** to avoid head-to-head contact with other children, e.g. when working at the computer with others, or when playing, or hugging.

Repellents

There are no repellents that have been tested and proven to discourage head lice. Products including head bands and caps impregnated with insecticide may have some insecticidal effect when head lice come in contact with them. However, these products need to be worn all the time and, like all head lice insecticides, do not kill all head lice eggs. Insecticides may also cause skin irritation.

'Trouble-shooting' Checklist

If treatment is unsuccessful, check the following:

- Did the chosen treatment cover the 10 day hatching cycle of the eggs?
- Were the combings examined for adult head lice (indicating reinfestation) over the 10 day period?
- Were as many eggs as possible removed every day?
- Was hair conditioner applied to dry hair, not wet?
- Was sufficient hair conditioner applied to saturate the hair?
- Was insecticide (if used), applied exactly as instructed, particularly for the recommended application time?
- Was a metal fine-tooth 'nit' comb used?

Further Information

Contact your Community (School) Nurse for further assistance – the school office will have a contact phone number.

10 Day Hair Conditioner Treatment for Head Lice

Head lice can be more easily removed by applying plenty of hair conditioner to dry hair before combing to remove live lice and eggs (nits). Any type of hair conditioner may be used, including generic 'home' brands, together with a metal fine-tooth 'nit' comb. Suitable 'nit' combs can be purchased from most pharmacies.

How does it work?

The hair conditioner works by immobilising the lice so that it is easier to **trap** them in the teeth of the comb. Without hair conditioner to slow them down, lice can be difficult to catch – they can run about 30 cm in 60 seconds. Hair conditioner also reduces friction, making combing easier, especially when using the metal fine-tooth 'nit' comb. Even if only one or two adult lice are missed, they can lay about 6 eggs per day, and the cycle of infestation will continue.

Why the 10 day treatment period?

Generally, eggs ('nits') will hatch 7 to 10 days after being laid on the hair shaft. The 10 day period is therefore recommended as the most effective time needed to break the reproductive cycle of the head lice. The reproductive cycle is broken by combing out the emerging hatchlings every one to two days, before they mature enough to lay further eggs (about a week after hatching).

What to do:

- Apply **plenty** of hair conditioner to the **dry** hair until saturated. Using white hair conditioner may make it easier to see the head lice.
- Comb through with an ordinary comb or brush to remove tangles.
- Section and comb the hair thoroughly with a metal fine-tooth 'nit' comb in 4 directions — forwards, backwards, left, and right.
- Wipe the comb on a white paper towel to check that the dark adult lice or the paler hatchlings are being removed. Hatchlings are young lice which emerge from eggs. You may need to use a magnifying glass and a strong light to see the lice and eggs.
- Continue combing the hair in sections until the whole head has been screened.
- Rinse the hair conditioner out when finished and dry the hair.
- Repeat this process **every one to two days over** a 10 day period, to cover the hatching cycle of the eggs. Combing with conditioner traps and removes the hatchlings as they emerge from the eggs. **To save time during a school week**, consider this combing schedule: "Tuesday, Thursday, Saturday, Sunday, Tuesday, Thursday".
- Examine your findings for **adult** head lice each day after combing. If any are found, this indicates a new infestation. You will need to start again from Day 1, as new eggs may have been laid by the adult lice.
- Check for head lice **reinfestation** once a week for at least 4 weeks after completion of the 10-day treatment. Do this on the weekend when you have more time. Applying plenty of hair conditioner makes inspection by combing easier as well as more effective.
- Check all other household members for head lice infestation using the method described above.

How to remove eggs:

Some eggs will be removed by combing, but others are harder to detach. You may need to use your fingernails to remove as many eggs as possible from the base of the hair shaft near the scalp. Hatchlings that merge from any 'missed' eggs will be removed by combing with hair conditioner over the 10 day period.

Remember, only those eggs within 1cm of the scalp will hatch. Eggs that have grown further out with the hair shaft will already be hatched or dead.

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Insecticide Treatment for Head Lice

There are three groups of insecticide (i.e. permethrin, pyrethrin and malathion) that have been shown to be effective and safe for the treatment of head lice. Some other treatments may not have been properly tested and may be ineffective, expensive or even unsafe. Check the product labels for active ingredients.

WARNING – to avoid adverse reactions the following people should NOT routinely use insecticide head lice treatments:

- babies under 6 months
- people with asthma, epilepsy, insecticide allergies, scalp conditions or very sensitive skin
- women who are pregnant or breast-feeding.

People who cannot use insecticides should use the 10 Day Hair Conditioner Treatment instead (see previous page).

Some key points to remember about insecticides:

1. **No insecticide is guaranteed to kill all eggs.** Eggs which are not killed or removed manually will hatch 7 to 10 days after being laid. The hatchlings should be combed out daily using hair conditioner as they may be transferred to other children. Hatchlings will mature after about one week and start laying more eggs, continuing the cycle.
2. **Following insecticide treatment, remove as many remaining eggs as possible with your fingernails.** Use a magnifying glass in strong light, and concentrate on 'live' eggs, which are found within 1 cm of the scalp.
3. **If insecticide alone is used, treatment should be applied on Day 1, Day 7 and Day 14** to kill any hatchlings before they mature and lay more eggs. However, if the hair is combed daily with hair conditioner for 10 days to remove the hatchlings, then the second and third insecticide treatments can be omitted.
4. **To prevent skin irritation**, do not repeat insecticide treatment more than 3 times, one week apart.
5. **Insecticide resistance.** Head lice that are resistant to an insecticide will still be alive the morning after the insecticide treatment, if the insecticide was properly applied. If this happens, thoroughly wash out the first insecticide and re-treat the hair the same day with **another type** of insecticide (i.e. permethrin, pyrethrin or malathion), not a different brand of the same type of insecticide.

   Alternatively, change to the 10 Day Hair Conditioner Treatment instead.

How to use insecticide treatment:

- Rinse out any hair conditioner before using the insecticide as it may inactivate the insecticide.
- Lift the hair in sections, and saturate it with insecticide, combing through with an ordinary comb from the scalp to the ends of the hair. Work from the back of the head to the front. Pay particular attention to treating behind the ears, at the nape of the neck and close to the scalp. Leave the insecticide on for the time recommended on the label, then wash out. Section the hair again and comb through with a metal fine tooth 'nit' comb to remove dead lice and eggs.
- Check that the head lice are actually dead. Do this straight after the recommended treatment time and again the next morning. It may take a few hours for all the lice to die. **Remember**, if any head lice are found still alive the **next morning**, re-treat the hair the same day with **another type** of insecticide (i.e. permethrin, pyrethrin or malathion), not a different brand of the same type of insecticide.

  Alternatively, change to the 10 Day Hair Conditioner Treatment.
- Check all other household members and close contacts for head lice infestation using the hair conditioner method from page 3. Only continue with treatment if head lice and/or eggs are found.

You can find more information about Head Lice at *www.health.wa.gov.au/headlice*.

To order more copies of this Fact Sheet call HealthInfo on 1300 135 030 or go to www.population.health.wa.gov.au/ordering.

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