

# Head Lice and Nits Information & Treatment

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Head lice are common. They can usually be cleared with treatment.

## What are head lice and nits?

- **Head lice** are tiny grey/brown insects. They are about the size of a sesame seed (the seeds on burger buns). Head lice cling to hairs but stay close to the scalp which they feed off. Head lice lay eggs which hatch after 7-10 days. It takes about 10 days for a newly hatched louse to grow into an adult and start to lay eggs.
- **Nits** are the empty white eggshells which are left when the lice hatch. Nits look like dandruff but stick strongly to hair. Unlike dandruff, you cannot easily brush out nits.

## Who gets head lice?

Head lice are common in children but can affect anyone of any age. They are not a sign of dirty hair or poor hygiene. Close hair-to-hair contact is usually needed to pass lice on. **Head lice cannot jump or fly but walk from one head to another. They soon die when away from hair, and do not live in clothes, bedding, etc.** Most head lice infections are caught from family or close friends who are not aware that they have head lice.

## What are the problems with head lice?

**Many people with head lice do not have any symptoms. An itchy scalp occurs in some cases. This is due to an allergy to the lice, not due to their biting. It often takes about three months for an itch to develop after you are infested with lice. Therefore, you may not notice that you have head lice for a while and you may have passed them on to others for some time.** Head lice and nits do not wash off with normal shampoo. Head lice do not cause any other medical problems. The number of lice that may be on one person can vary greatly. However, commonly, there are fewer than 15 lice present.

## How can you tell if you have head lice?

Head lice are difficult to find just by looking in the hair. If you suspect that your child (or you yourself) have head lice, **it is best to do detection combing. Some people advise that you do this to children's hair regularly, about once a week.**

### **Detection combing: wet hair method**

This will take 5-15 minutes to check each head, depending on hair length and thickness. It is also used as a treatment for head lice - see later.

- Wash the hair in the normal way with ordinary shampoo.
- Rinse out the shampoo and put on lots of ordinary conditioner.
- Comb the hair with a normal comb to get rid of tangles.
- When the hair is untangled switch to a detection comb. This is a special fine-toothed comb. (The teeth of normal combs are too far apart and the teeth of 'nit combs' are too close together.) Some pharmacies stock detection combs.
  - Bug Buster® detection combs are available on prescription. You can also get them by mail order from Community Health Concern (see under 'Further help & information', below).
  - The Hedrin® detection comb is not available on prescription but can be bought from pharmacies.
- Slot the teeth of the detection comb into the hair at the roots so it is touching the scalp.
- Draw the detection comb through to the tips of the hair.
- Make sure that all parts of the hair are combed by working around the head.
- Check the comb for lice after each stroke. A magnifying glass may help.
- If you see any lice, clean the comb by wiping it on a tissue or rinse it before the next stroke.
- After the whole head has been combed, rinse out the conditioner.

- Repeat the combing procedure in the wet hair to check for any lice that might have been missed the first time.

### Detection combing: dry hair method

This will take 3-5 minutes to check each head, depending on hair length and thickness. Although useful to detect head lice, it is not useful as a treatment.

- Straighten and untangle the dry hair using an ordinary comb.
- Once the comb moves freely through the hair without dragging, switch to a detection comb, as described above.
- Starting from the base or the side of the scalp, comb the hair from the scalp down to the end of the hair. Comb each section of hair 3-4 times before moving to an adjacent section.
- Look for lice as the comb is drawn through the hair.
- If a possible louse is seen, trap it against the face of the comb using the thumb. This avoids the risk of the louse being repelled by static electricity as the comb is withdrawn from the hair.
- Continue combing the hair section by section until the whole head of hair is combed through.

## What are the treatment options for head lice?

Treatment is needed only if you see one or more live lice. Empty eggshells (nits) do not always mean that you are infested with lice. Nits can stick to hair even when lice are gone (for example, after treatment that kills the lice).

Currently, there are five main recommended options for clearing head lice:

- Dimeticone 4% lotion (trade name: Hedrin®)
- Wet combing using the Bug Buster® comb and method.
- Isopropyl myristate and cyclomethicone solution (trade name: Full Marks Solution®).
- Coconut, anise and ylang ylang (CAY) spray.
- Malathion 0.5% aqueous liquid (has various trade names).

The treatment chosen may depend on your personal preference, and what you have tried before (if appropriate). Each treatment has a good chance of clearing head lice if applied or done correctly *and* if all affected people in the household are treated at the same time. Each treatment is now briefly discussed but for details of how to use each treatment, read the instructions that come with the packaging.

### Dimeticone lotion

Dimeticone is a silicone-based product. It is classed as a physical insecticide and is not classed as a chemical insecticide. Dimeticone has a good safety record and is widely used in cosmetics and toiletries. You should apply the lotion twice - seven days apart. Each application is left on for at least eight hours (overnight) and then washed off with shampoo and water.

Dimeticone is thought to kill lice by a physical process rather than by any chemical effect. It is thought to work by blocking the tubes used by the lice to breathe and by blocking the way the lice pass out water, which kills them. However, it is not thought to kill unhatched eggs. This is why **two applications are needed, seven days apart**. The second application makes sure that any lice that hatch from eggs which survived the first application will be killed before they are old enough to lay further eggs.

Dimeticone is suitable for all ages, those with skin conditions and those with asthma. It is available on prescription. You can also buy dimeticone over-the-counter (although not for children younger than 6 months of age).

### Wet combing treatment (using 'bug busting' or similar kits)

Wet combing is a way of removing head lice without having to use a lotion to kill them. Briefly, the method is similar to wet combing (detection combing) described earlier. But, **you need to do this several times, four days apart. You will need to do this on every member of the household who has head lice.**

It takes up to an hour to do a wet combing session properly. You need the correct toothed detection comb as described earlier. Only one kit is needed for a family, as it is washable and reusable.

- Wash the hair in the normal way with ordinary shampoo.
- Rinse out the shampoo and put on lots of ordinary conditioner.
- Comb the hair with a normal comb to get rid of tangles.
- When the hair is untangled switch to the detection comb.
- Slot the teeth of the detection comb into the hair at the roots so it is touching the scalp.
- Draw the detection comb through to the tips of the hair.
- Make sure that all parts of the hair are combed by working around the head.
- Check the comb for lice after each stroke. A magnifying glass may help.
- If you see any lice, clean the comb by wiping it on a tissue, or rinse it before the next stroke.
- After you have combed the whole head, rinse out the conditioner.

You need to do the above routine **at least** four times, every four days. The number of sessions required depends on the last time you see lice:

- The first combing session should remove all hatched head lice but does not remove eggs. Therefore lice that hatch from eggs after the first session may still be present.
- Subsequent sessions clear newly hatched lice. Keep doing the combing sessions every four days until you have had three sessions where no lice are detected.
- Once you have had three sessions where you do not see any lice, it usually means that you are then free of lice.

The downside to this treatment is that it is time-consuming. Fuller details of wet combing (bug busting) treatment can be obtained from: Community Hygiene Concern (contact details are under 'Further help & information', below).

### **Isopropyl myristate and cyclomethicone solution**

This is classed as a physical insecticide and is not classed as a chemical insecticide. It works in a similar way to dimeticone. You apply the solution to the scalp and leave in place for 10 minutes. The hair is then combed with a fine-toothed comb to remove lice. Then wash using shampoo to remove the solution. **Treatment should then be repeated in seven days time.** The second application makes sure that any lice that hatch from eggs which survived the first application will be killed before they are old enough to lay further eggs.

This treatment is suitable for those with asthma. It is not suitable for children younger than 2 years of age or people with skin conditions. It is available on prescription and also to buy over-the-counter

### **Coconut, anise and ylang ylang (CAY) spray**

This too is a physical insecticide and works in a similar way to dimeticone. You apply the spray to the hair and scalp and leave in place for 15 minutes. The hair is then combed with a fine-toothed comb to remove lice. Then wash using shampoo to remove the spray. Treatment should then be repeated in seven days time. The second application makes sure that any lice that hatch from eggs which survived the first application will be killed before they are old enough to lay further eggs.

This treatment is not suitable for children younger than 2 years of age, people with skin conditions, or those with asthma. It is available on prescription and also to buy over-the-counter.

### **Malathion 0.5% aqueous liquid**

Malathion is a chemical insecticide that has been used for many years to treat head lice. The malathion kills the lice. There are various brands.

It is suitable for all ages and those with skin conditions. **Malathion liquid** is available on prescription. You can also buy malathion over-the-counter (although not for children younger than 6 months of age). You should apply the lotion twice - seven days apart. Each application is left on for at least 12 hours (overnight) and then washed off with shampoo and water. The second application makes sure that any lice that hatch from eggs which survived the first application will be killed before they are old enough to lay further eggs.

**(Note:** shampoo, mousse and creme rinse preparations of malathion or other insecticides are not recommended, as they do not work as well as lotions or liquids.)

## What about other treatments?

There are various other treatments that are said by some people to work. For example, tea tree oil, quassia, other essential oils, herbal remedies, and electric combs. However, there is a lack of research studies to confirm that they work well in most cases. Therefore, until more research is done, these other methods cannot be recommended.

## Do family and friends need treatment?

Only if they have head lice. All people in the same home and other close head-to-head contacts of the previous 4-6 weeks should be advised to look for lice and treat if necessary. (It used to be advised to treat all close contacts even if they had no symptoms. This has changed to just treating people who have head lice.) All people with head lice in the same home should be treated at the same time. This stops lice being passed around again.

## Checking for treatment success

The wet combing method of treatment discusses above how to check for success. For other methods of treatment (lotions, sprays, etc), check that treatment was successful by detection combing 2-3 days after completing a course of treatment and again after a further seven days. Treatment has been successful if no lice are found at both sessions.

## What about school?

Children with head lice should carry on going to school. Contrary to popular belief, head lice do not spread quickly through schools. Alarming head lice letters from schools are usually unhelpful. You need close head-to-head contact to pass lice on to others. Young children who play closely together may pass lice on. If your child has head lice, a common-sense approach is to tell the parents of their close friends to look out for lice in their children.

## Can head lice be prevented?

There is no good way of preventing head lice. Lice repellent sprays do not work very well. If you do detection combing of children's hair every week or so, you will detect head lice soon after they have affected the hair. You can then start treatment quickly and reduce the risk of passing them on to others.

## Some other points about head lice

- Use an anti-lice treatment only when you are sure that you have, or your child has, head lice. Do not use them to prevent head lice.
- A common reason for head lice to recur in one person is because close contacts (family and close friends) are not checked for head lice and not treated if they have head lice. The treated person may then get head lice back again from untreated family or friends.
- After treatment and when the lice have gone, it may take 2-3 weeks for the itch to go fully.
- Nits may remain after lice have gone. They are empty eggshells and stick strongly to hair. They will eventually fall out. If you prefer, a fine-toothed 'nit comb' can remove them.