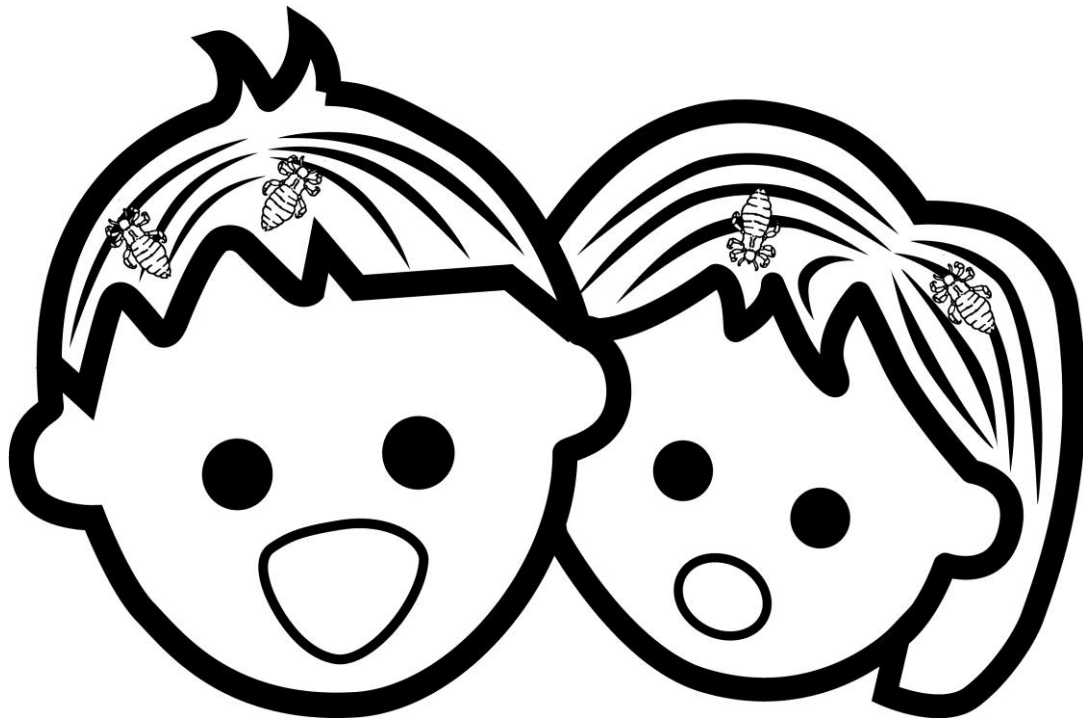


The Greater Glasgow & Clyde Head Lice Service



Service Guidance

September 2013

With insecticides

- the product should be applied at the scalp and hair closest to the scalp and then combed through to ends of hair using an ordinary comb.
- it should be left on for at least 12 hours
- the hair should then be shampooed, rinsed and left to dry naturally
- conditioner or a shampoo with built in conditioner, should not be used immediately before or at any time between day 1 and day 8 of treatment
- treatment to be repeated seven days later
- check if the customer swims & refer to the Specific Product Characteristics. If applicable, anyone who has been swimming in the three days before treatment should wash their hair and let it dry before treatment

With Hedrin

- The product should be applied to the full head of hair
- It should be left for 8 hours or overnight
- Treatment to be repeated seven days later

a) Remember

As with other pharmacy medicines, some groups of patients will be unable to access head lice treatments through the pharmacy service. The list below gives some examples but the pharmacist may want to add more to the list. It would be good policy for each pharmacy to discuss this section with all staff who will be involved on the project.

- Infants less than six months old
- Pregnant women

Also, remember to familiarise yourself with the Specific Product Characteristics.

b) Fast Track Referral System

If a practice nurse / health visitor / GP etc diagnose a patient as having head lice, a letter is given to the patient who then brings it to the pharmacy. The prescription form is completed in the usual way but the products dispensed immediately for the number of family members shown to have the infection. (no need for patient to prove infection to pharmacy)

Check that other family members have been checked for head lice. If not, advise accordingly.

Management of Head Lice Infection



Public concern about head lice has increased in recent years. Although they are found on both clean and dirty hair, head louse infection is still falsely associated with uncleanliness and social stigma.

Community pharmacists and their staff are ideally placed to provide information on both the detection and treatment of head lice.

How prevalent is head louse infection?

This is difficult to estimate as it has not been monitored nationally since 1989. It is however probably lower than common perception.¹

It is most common in children aged 3-11, however all members of the community are at risk of infection.

Head lice will infect long, short, clean, dirty permed or dyed hair. It is thought that spread may be easier in those with short hair.¹ In general it is more common in girls than boys, and in children from urban rather than rural areas.

Key Points

- **Head lice treatment should not be prescribed unless a living, moving louse is detected.**
- Regular detection combing and thorough treatment of confirmed cases with an appropriate insecticide, is the best way to prevent head louse infection.
- **Insecticides must not be used for prophylaxis of head louse infection.**
- Each case should be assessed individually within the ‘**mosaic**’ model of treatment to avoid prolonged use of the same agent. **A treatment course consists of two applications of insecticide, one week apart.**
- Detection combing should be done 2-3 days after the second application to check if treatment has been successful.
- All related cases of **confirmed** infection should be treated at the same time using the same insecticide.
- Contact tracing over the previous month is essential to prevent re-infection.

Life Cycle of a head louse

Understanding the life cycle of head lice is vital to ensure their elimination. The adult female louse can live for up to 30 days and in that time can lay 100 eggs which she glues to the hair shaft. They are normally laid close to the scalp as the eggs need warmth to thrive. The eggs take 7-10 days to hatch leaving behind the empty egg casing or 'nit' attached to the hair.

The nymphs stay on the original host as they mature to adults over the next 7-10 days. The adult head lice are contagious and are spread by head to head contact which allows them to walk from one head to another. Head lice cannot hop, jump or fly. Although they can survive for a couple of days without a host, head lice are probably not viable as soon as they leave the head¹.

How is it diagnosed?

To confirm diagnosis a living moving head louse must be found. The presence of nits (empty egg casing) or dead head lice may indicate a previous infection.

The head louse should be taped to a piece of paper or the 'Stop Nit-picking' leaflet and taken to the pharmacy.

What do they look like?

The eggs of the head louse are pinhead size, the adult lice are about the size of a sesame seed and the nymphs are between the two. Lice droppings - black specks on collars or pillows, may also be seen but these do not however, confirm the presence of head lice.

Detection methods

Many cases of head lice are asymptomatic therefore we cannot rely on the patient scratching their head to indicate head lice are present. Itching is caused by hypersensitivity to louse saliva and can take up to three months to occur.

In the developed world, head lice is rarely associated with serious clinical consequences although in rare cases inflammation of the scalp and secondary infection can occur.

Wet combing is thought to be the most effective method of detection (see the 'Stop Nit-picking' leaflet for further information).

Families should be encouraged to use wet combing on a weekly basis using a fine tooth comb.

What treatment do we have available?

Treatment should only be started if an infection has been confirmed by a healthcare professional.

In NHS Greater Glasgow & Clyde the current treatments recommended are all of 8 or 12 hours application time:-

Chemical insecticides	Malathion P	12 hour application
Non – Chemical treatment	Dimeticone (Hedrin GSL)	8 hour application

To ensure the effective elimination of lice and eggs, it is vital that all treatments are used correctly and in sufficient amounts.

Chemical insecticides normally require 2 x 50ml per person to complete the course of treatment. Two treatments are required 7 days apart.

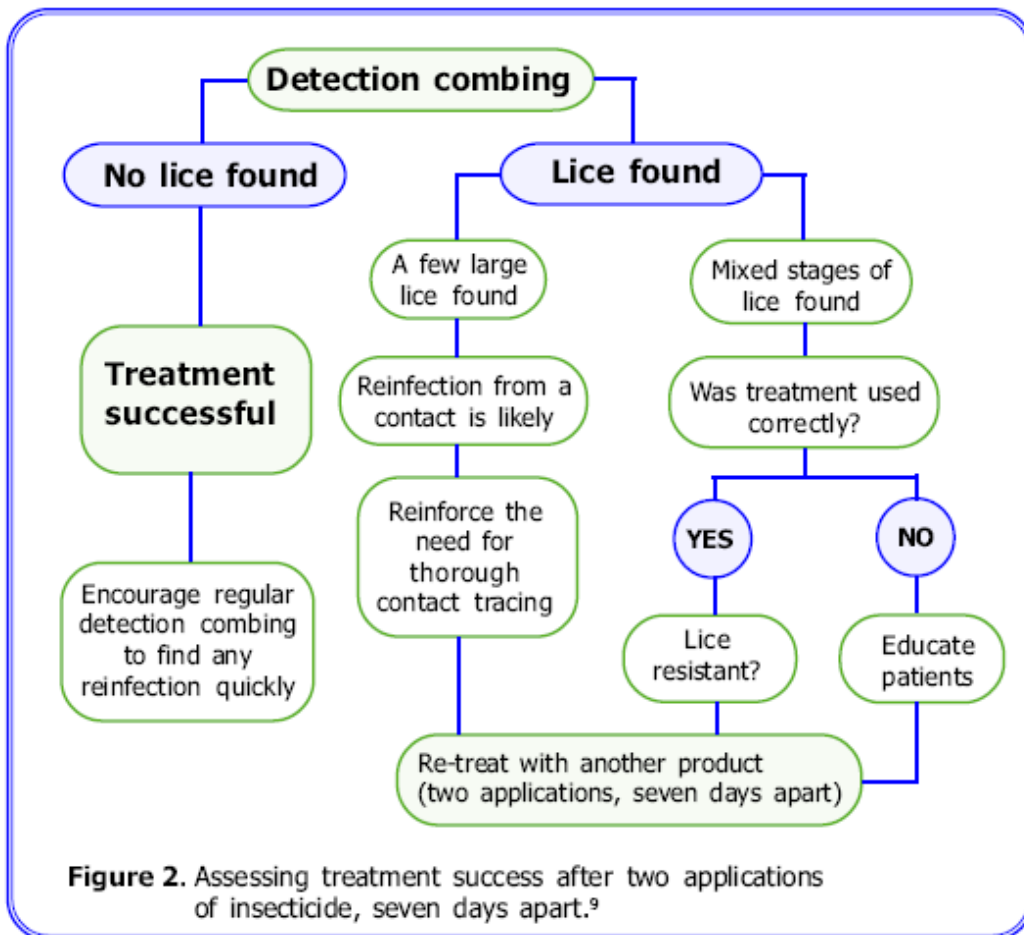
The product is applied to dry hair, systematically to the scalp and the hair closest to the scalp and then combed through the hair to the ends using an ordinary comb. The hair is then allowed to dry naturally and the product is washed off 12 hours later.

The volume of product for the non-chemical treatments depends on the length of the hair. In general a 50ml bottle is suitable for 2 applications to short hair, 2 x 50mls for medium length hair etc.

The product is applied to dry hair, systematically to the scalp and to the whole length of the hair combing through to ensure even coverage. The hair is then allowed to dry naturally and the product is washed off 8 hours later.

Dimeticone kills head lice by disrupting their air and water systems but has little effect on the eggs. It is therefore vital that the second application is made to kill any nymphs hatching after the first application before they can mature and continue the cycle.

Two to three days after the second treatment the hair should be wet combed and the flow chart below followed.



How can we prevent resistance?

Genuine insecticide resistance is indicated where both young and adult lice are seen 24 hours after insecticide use.

Resistance to insecticides used to treat head lice have been reported in some parts of the UK. We do not currently appear to have any proven resistance in the NHS Greater Glasgow & Clyde area.

In line with the NHS Greater Glasgow (2001) head lice policy the use of the mosaic policy is recommended to prevent resistance. This is the rotation of products on an individual basis for each customer. The most effective treatment is used first time around and if a second course of treatment is needed, a different product should then be used.

Mechanical clearance

Mechanical methods of lice clearance are recommended in some areas. Hair is wet combed using a fine tooth detector comb until all the lice are removed. This is repeated every third or fourth day over a minimum two week period and will probably take at least 30 minutes each time.

One specific method of this is Bug Busting which is promoted by Community Hygiene Concerns. This involves washing and conditioning the hair, leaving the conditioner on the hair and wet combing to remove lice. (Bug Busting kits consist of a number of combs of varying sizes and a plastic shoulder cape. Shampoo and conditioner are not included in the kit but they are prescribable). This method requires motivation and skill on the part of the parent or carer for it to be effective.

There is no good quality clinical trial evidence to suggest that mechanical treatment methods are effective. There have been anecdotal reports of both success and failure of mechanical lice removal.

Other treatments

There is no published evidence that alternative remedies such as tea-tree oil, essential oils or herbal remedies are effective in treating head lice infection.

Electric combs which claim to kill the lice with a small electric charge are expensive. Hair must be very clean and dry for them to operate and again there does not appear to be any reliable evidence that they are effective.

How safe are head lice treatments?

There has been some controversy with regard to the possible harmful effects of both malathion and carbaryl. Media reports of the risk of neurotoxicity with malathion and cancer with carbaryl appear to be greatly exaggerated. Any risk appears to be very small if chemical insecticides are used correctly i.e. two applications only, used seven days apart. If a further application of chemical insecticide is required due to treatment failure a gap of ten days would be recommended before a further application is made and the use of wet combing as a mechanical means of removal used in that time. Alternatively the use of dimeticone for the second round of treatment would be advised.

Adverse effects to head lice treatments are often to the excipients, therefore only water based products should be used for young children or patients with asthma or eczema.

Why does treatment fail?

Treatment failure is rarely caused by head lice resistance to an insecticide.

The most common reasons for treatment failure include

- Initial misdiagnosis
- Inadequate or incorrect application of treatment
- Re-infection (often due to inadequate contact tracing)
- Use of an ineffective insecticide formulation e.g. shampoo

Contact tracing

Contact tracing is essential to prevent re-infection. All members of a household should have their hair checked and be treated at the same time with the same insecticide.

Anyone who has had head to head contact with an infected individual should be contacted and advised to examine their hair for live lice.

Some people may be reluctant to do this because of the social stigma attached to having head lice. A checklist may help to ensure all contacts are considered. (school friends, grandparents, babysitters etc).

Prevention of head lice

Prevention of head lice is best achieved by regular detection combing and early intervention.

None of the insecticides provide protection from being infected by head lice so there is nothing to gain by using them if no head lice are found, in fact this type of use may encourage resistance and increase the risk of toxicity.

The use of repellent sprays and shampoos is not recommended.

In conclusion

Head lice infection is not dangerous although it can however cause distress.

It is important only to treat confirmed cases with a suitable insecticide for that individual.

Bug Busting or similar treatments have not been shown to be a reliable method as they require a high level of motivation and may be considered an option by families not wishing to use insecticides or on individuals where insecticide treatment has repeatedly failed.

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