



MANAGEMENT OF HEAD LICE UNDER THE NI MINOR AILMENTS SERVICE

here are two elements of this service protocol:

Stage 1: Detection

Stage 2: Treatment

Depending upon whether the patient/carer confirms the presence of a live louse, the patient will either enter the service at Stage 1 or Stage 2. At each stage, the pharmacist may supply product (if required) and claim a consultation fee. For a Stage 1 Detection Consultation, it will frequently cover a family. For a Stage 2 Treatment Consultation, it may cover either an individual treatment or a family treatment depending upon the circumstances.

The following information is guidance which supports each stage and should be read in conjunction with the summary table and algorithm.

Stage 1: Detection of Head Lice

Detection combing will aid the detection of lice. The patient/carer should be asked if a live louse has been found. If a live louse has been found, the patient should proceed under Stage 2 of the scheme. If no live louse has been found, a 'Bug Busting Kit' may be offered for detection combing and the following information given:

- 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 wide toothed comb to straighten and untangle the hair.
- When the hair is untangled, switch to a fine tooth detection comb.
- Slot the teeth of the detection comb into the hair at the roots so it is touching the scalp.
- Gently draw the detection comb through to the tips of the hair.
- Check the comb for lice after each stroke. A magnifying glass may help.
- If any lice are detected, clean the comb by wiping it on a tissue or rinse it before the next stroke.
- Comb over white paper, so that any lice flicked out by the comb are easy to see.
- After the whole head has been combed, rinse out the conditioner.
- While the hair is still wet, use an ordinary comb to get rid of tangles.
- Repeat the detection combing in the rinsed hair to check for any lice that you may have missed the first time.
- It takes about 10 - 15 minutes to do detection combing properly, depending on how thick the hair is.
- It is advised that this should be done to children's hair regularly, about once a week.
- Check all family members at the same time and treat when lice are found.

Note: One 'Bug Busting Kit' can be used for a whole family as long as the combs are washed thoroughly between use.



There are a number of misconceptions about head lice infection. The following should be used to reinforce the right information:

Mistaken Advice	Correct Advice
Treat the whole family on suspicion of infection	<ul style="list-style-type: none"> • Find a live louse to prove infection is active before using a medication. • Learn how to check efficiently.
Remove all nits	<ul style="list-style-type: none"> • Removal of empty eggshells is of cosmetic value only; removing live eggs is difficult and unreliable. • Learn how to break the life cycle by removing hatched lice.
Disinfest clothing	<ul style="list-style-type: none"> • Head lice do not voluntarily leave a head except during close contact with another head. • There is no need to fumigate clothing or other articles touched by a person who has head lice.
Don't share hats or scarves	<ul style="list-style-type: none"> • Head lice that wander into clothing and bedding are dying and can be rinsed off • Lice that live in hats are clothing lice and rare in developed countries.
Ordinary combing mortally damages lice	<ul style="list-style-type: none"> • Head lice caught on combs and brushes of any kind are rarely damaged, and can re-establish if brushed back on within 24 hours. • Check and rinse any lice off before re-using brushes and combs. Avoid sharing.
Less than one transmission in ten takes place in school	<ul style="list-style-type: none"> • No scientific substantiating data supports this theory.
Head lice are not easily transmitted widely in school	<ul style="list-style-type: none"> • Head lice are a community and family problem, but about 80% of cases affect the 4 - 16 year olds.

Stage 2: Treatment of head lice

Treatment is only needed if one or more live moving lice are seen. Nits (empty eggshells) do not always mean infection, since nits stick to hair even when lice are gone (after treatment).

There are two treatment options for head lice:

1. Treatment with lotions:
 - A) Chemical insecticide lotions
 - B) Non-chemical based lotions
2. Wet combing treatment using the 'Bug Busting' treatment method



Patients may present to the Minor Ailments Service (MAS) if there is a possibility or suspicion of head lice infection. The pharmacist should establish what actions have already been taken by the patient i.e.

- has **Detection Combing** been carried out.
- is this a presentation due to perceived **Treatment Failure** or **Re-infection**?

If detection combing has not been carried out and the presence of live moving lice is not confirmed, then the pharmacist should supply a 'Bug Busting Kit' to the patient so that detection combing may be completed. Following detection combing, if the presence of live moving lice is confirmed, then the patient may follow the wet combing treatment using the 'Bug Busting' treatment method (i.e. follow the instructions on the 'Bug Busting Kit' they have received) or they may re-refer to the MAS for further advice or treatment.

1A. Chemical insecticide lotions

These lotions may be water based or alcohol based. Alcohol based lotions may work slightly better than water based lotions but they should not be used on a patient with asthma, eczema or broken skin. The active ingredients in the lotions are malathion, phenothrin or carbaryl (carbaril) (prescription only medicine). Head lice shampoo and mousse do not work very well and are not recommended. **All experts agree no medication should be used unless a live louse has been detected to prove infection is active.** Malathion may work better than other treatments because it kills the lice eggs too. However, malathion might not work if head lice have become resistant to it in certain areas.

Note: Alcohol based lotions are flammable, so keep children away from fires, cigarettes, flames etc when lotion is in their hair. Do not use artificial heat.

Quantities to dispense: 2 x 50mls per patient, or 2 x 200mls for patients with very long hair.

Instructions on the packet of head lice lotion should be followed carefully. This may include the following:

- Apply to dry hair. Part the hair near the top and pour a few drops onto the scalp. Rub well into the hair. Part the hair again a little further down and repeat. Repeat this until the scalp and roots of the hair are fully saturated. Apply down to where a pony tail band would be. Leave on for 12 hours (overnight) and then wash off.
- Each person needs about 50ml of lotion and up to 150ml for long thick hair.
- Do not go swimming before applying a lotion, since chlorine from the swimming pool may stop it working.
- Do not use a hairdryer to dry hair after applying treatment.
- Re-apply the same treatment after 7 days. (Although lice are usually killed by one application, not all eggs may be. The second application makes sure that any lice that hatch from eggs which survived will be killed before they are old enough to lay further eggs).
- Inspect the hair by detection combing 2-3 days after the second application. If any live moving head lice are found, despite treatment, then contact the community pharmacist again for further advice.



1B. Non-chemical based lotions – Dimeticone 4% lotion

Dimeticone 4% lotion acts as a physical inhibitor by fully encapsulating the louse, preventing its ability to excrete surplus water. However, because it works in a purely physical way, resistance is no longer a factor in head lice control and efficacy is not diminished even in lice resistant to other treatments. Dimeticone is not absorbed through the skin, and can be used on children as young as six months, asthmatics, pregnant and breast-feeding mothers.

In order to ensure that the lice are effectively eradicated, a second dose of dimeticone 4% lotion should be applied after 7 days to deal with any eggs which may have hatched since the first application. Lice can be washed or combed out easily after 8 hours and any nits (empty egg cases) can be removed with the fingers or fine toothed comb. If reinfestation does occur, dimeticone may be used again immediately.

Quantities to dispense: 2 x 50mls per patient, or 2 x 150mls for patient with very long hair

2. Wet combing treatment using the ‘Bug Busting’ treatment method

‘Bug Busting’ is a head louse detection and eradication method. ‘Bug Busting’ is a way of systematically removing head lice from the hair, without having to use a medicated lotion to kill them. It works by combining specially designed combs with normal shampoo and conditioner. Successful ‘Bug Busting’ requires that you follow the method (described in the ‘Bug Busting Kit’) rigorously. You only need one ‘Bug Buster Kit’ per family because it is reusable. Combs should be washed thoroughly between use on different family members.

The ‘Bug Busting’ method requires the wet combing routine (as described above for Detection Combing) to be **carried out every 4 days for at least 4 sessions (approximately 2 weeks)**.

- The first combing session should remove all hatched head lice, but does not remove eggs.
- Any young lice that hatch from eggs after the first session are removed at the second, third and fourth sessions. **This is why it is important to ensure the full 4 sessions are completed.**
- If full-grown lice are seen at the second, third or fourth session, this means that some have been missed on the first session, or the child has become re-infected from someone else. If this occurs, the number of sessions should be increased. Following any session where adult head lice are found, a further 3 sessions at 4 day intervals should be carried out where adult lice are not seen.

‘Bug Busting’ is more than just a detection method, and by ‘Bug Busting’ four times spaced over two weeks, the life cycle of the lice is broken, stopping them from spreading and reproducing.

Combing wet, conditioned hair with a ‘Bug Buster’ comb is a reliable detection method even when very few lice are present (wet lice stay still); dry or damp lice move quickly away from disturbance evading detection.



Treatment Failure / Re-infection

It is important to establish the reason for perceived treatment failure or re-infection. The following may be considered:

- **Inadequate treatment** – see below for treatment failure options.
- **Incorrectly applied treatment** – patients must be carefully counselled on the correct method of application of insecticidal lotions. They must be advised to follow all instructions correctly.
- **Misdiagnosis** - Only the presence of live lice indicates active infection, as the presence of nits alone does not. It is important to eliminate conditions such as dandruff or seborrhoeic dermatitis.
- **Re-infection** - The actual size of a louse is a good predictor of whether a patient has been re-infected or if their treatment has failed. Head lice are pin-head sized when they hatch and less than match-head size when fully grown. Eggs take 7 days to hatch; young lice which have not been killed whilst in the egg may be found after the first and before the second application of lotion. No product kills 100% of eggs even if the strain of lice is sensitive to the active ingredient. Therefore, starting from 1 day after treatment to about 7 days, nymphs may be hatching to come back onto the hair. Re-treatment at 7 days is a mandatory part of the treatment regime. At this treatment if things are going well, you should expect to find young lice, but no adults. Presence of adult lice may indicate re-infection. Patients should be advised that these recommendations may differ from the instructions included in the packaging of some insecticide products.
- **Resistance** - The policy of rotating insecticides on a district-wide basis is now considered outmoded. To overcome the development of resistance, a mosaic strategy is now required whereby, if a course of treatment fails to cure, a different insecticide is used for the next course.

Treatment Failure - Option 1:

- Give a different class of insecticide, in a course of two applications, to be used 7 days apart.
- Check that there are no lice 2 - 3 days after the second application of insecticide.

Treatment Failure - Option 2:

- Use 'Bug Busting' method.
- Comb every 4 days for at least 2 weeks and continue until no lice are found for three consecutive sessions.

Treatment Failure - Option 3:

- Re-issue dimeticone 4% lotion.
- Provide advice as appropriate to patient/carer.

Note: Not all chemical insecticidal products are licensed for re-application after 7 days. The companies producing these products are attempting to change the product licenses to reflect national guidance and recommendation for re-application of a second course of treatment after 7 days. However, these products may not be used more than once a week for 3 consecutive weeks.

If live lice persist after two full treatments then the patient should be referred to their GP.



Contact Tracing

Contact tracing, i.e. tracing family and friends who have been in close contact with the index case, may control transmission of head lice. All proven cases should be treated at the same time with the same insecticide. Anyone who has head to head contact with an infected individual over the previous month should be contacted and advised to examine their own hair and that of their family for live lice, using detection combing. It is important to encourage people to do this; many people are reluctant to do it because they feel there may be a social stigma attached to admitting to having head lice. Patients should be encouraged to use the checklist below to make sure they get in touch with everyone who has been in close (head to head) contact with the infected person. This helps stop the chance of becoming re-infected. Anyone who is infected with living, moving lice should be treated straight away.

	Name(s)	Contacted (Yes/No)
Parents		
Grandparents		
Brothers/Sisters		
Sons/Daughters		
Aunts/Uncles		
Cousins		
Nieces/Nephews		
Friends		
Lodgers		
School/Nursery		
Babysitter		
Clubs		
Guides/Scouts		
Other		

Acknowledgements:

1. Prodigy Guidance www.cks.library.nhs.uk/
2. Community Hygiene Concern www.nits.net/bugbusting
3. "Management of Head Louse Infection" *Nurse Prescribing Bulletin* NPC 1999
4. British National Formulary 53: March 2007
5. The Department of Health www.dh.gov.uk
6. "Treatment of head louse infestation with 4% dimeticone lotion: randomised controlled equivalence trial" *British Medical Journal* 2005; 330:1423-1427
7. "Head Lice: a report for Consultants in Communicable Disease Control (CCDCs)" *The Stafford Group* 1998
<http://www.phmeg.org.uk/Documents/Headlice/phmeghl.htm>
8. "Single blind, randomised, comparative study of the Bug Buster kit and over the counter pediculicide treatments against head lice in the United Kingdom" *British Medical Journal* 2005; 331:384-387
9. Health Protection Agency www.hpa.org.uk
10. NHS Direct www.nhsdirect.nhs.uk
11. National Prescribing Centre www.npc.co.uk



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www.dhsspsni.gov.uk

AN ROINN

**Sláinte, Seirbhísí Sóisialta
agus Sábháilteachta Poiblí**

MÁNNYSTRIE O

**Poustie, Resydënter Heisin
an Fowk Siccar**