



HEALTH SERVICES

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# Policy for the Control of Head Lice on the Isle of Man

*For the Health of the Nation ~ Cour Slaynt yn Asboon*



**Isle of Man  
Government**

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DEPARTMENT OF HEALTH AND SOCIAL SECURITY

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## **Introduction**

Although head lice infection is an infectious condition, most of the problems associated with the infection are due to society's reaction to it rather than the organism itself.

The word "infection" has been used throughout the document in an attempt to reduce the stigma associated with the word "infestation."

This policy is based on guidance provided nationally by an expert group. The National Group of experts reviewed all the evidence available with regard to Headlice and incorporated these into a document; the present document draws heavily on this and is, hence evidence based.



## General Information

### Head louse - *pediculus humanus capitis*

Head lice are small insects with six legs and no wings, they can only live on human head as and cannot be caught from animals. They cannot swim, fly, hop or jump, and can only be transferred by close contact with the head of any infected person.

There are three forms of lice: the nit, the nymph and the adult.

**Nit:** Nits are head lice eggs. They are hard to see and often confused for dandruff or hair spray droplets. Nits are found firmly attached to the hair shaft. They are oval and usually yellow to white and take about 1 week to hatch. Even after hatching the empty shell cases remain attached to the hair.

**Nymph:** The nit hatches into a baby louse called a nymph. The nymph looks like an adult louse but is much smaller. Nymphs mature into adults by about 7 days after hatching.

**Adult:** The adult louse is about the size of a sesame seed, has six legs and is tan to greyish white in colour. In persons with dark hair, the adult louse looks darker. Adult lice can live up to 30 days on a person's head.

The true prevalence of head lice infection is not known; it is estimated that at anyone time about 2-5% of school age children have head lice. It is common in girls. There is no difference between socio-economic groups and there is no association with length or cleanliness of hair.

Head lice rarely, if ever, cause physical health problems other than itching of the scalp. Initially there may not be any symptoms - the individual is unaware of the infection. Itching is the cardinal feature caused by sensitisation to the bites of the lice. Itchy red papules typically occur on the nape of the neck. Secondary infection may occur. In neglected cases there may be severe impetigo, with pus and exudate matting the hair.

Adverse health effects mainly derive from the human perception of lice infection; it is hence a problem resulting from society's reaction to the infection rather than the infection itself. Some children and adults may react excessively to the knowledge that they (their children) have headlice infection. Physical problems can result from misuse and over use of treatments.



## Diagnosis

The only reliable method for the diagnosis of current acute infection of head lice infection is by detection combing. This should be done by parents/family members following advice.

**A diagnosis of head lice infection can only be made** (no matter how many nits are present, or how bad the itch is) **if a living, moving louse is found.**

Imaginary lice may be caused by the following:

- psychogenic itch - caused by hearing of other cases in the school. May be exacerbated by the head teacher's "Alert Letters"
- Louse phobia created by the above
- itchy scalp due to other scalp conditions - seborrhoea, eczema, "dandruff". (These can be caused by repeated treatments with insecticides)
- Effectively treated infections but nits visualised
- Effectively treated infections but itching persists. Itching may normally persist 2-3 weeks after effective treatment, due to continued sensitisation to the lice or sensitivity to the insecticide used.



## Interventions and Treatment

A clear distinction should be made between treating head lice infections and “treating” the public reaction to perceived infections and “outbreaks”.

Actions may seem effective simply because “something has been seen to be done” - in effect public agitation has been reduced. This is bad clinical practice and it is not ethical to recommend actions which are not known to be effective.

Clinical trials of insecticides for treating head lice infections have shown that over the counter preparations containing Malathion and Pyrethroids (Permethrin and Phenothrin) are effective with high cure rates, together with a prescription only medicine Carbaryl. The most recent evidence in the United Kingdom indicates that no resistance has been noted for Malathion plus Turpenoids (Suleo M) and only isolated pockets of resistance to Carbaryl have been recorded. The effectiveness probably compares favourably with that of most commonly used broad-spectrum antibiotics used for other infections.

Insecticidal treatments are available in:

- **Lotion formulation** which have an alcohol base and are not recommended for asthma and eczema sufferers or young children (**malathion** - Suleo-m, Prioderm, Quellada-m; **phenothrin** - Full Marks; **carbaryl** - Carylderm lotion)
- **Liquid formulation** which have an aqueous (water) base and are suitable for everyone (**malation** – Derbac-m; **carbaryl** – Carylderm liquid)
- **Cream rinse** (**permethrin** – Lyclear)

A contact time of 12 hours or overnight treatment is recommended for lotions and liquids – always follow manufacturers recommendations. The present treatments available are not ovicidal (do not kill the living eggs) and therefore 2 applications of the product 7 days apart is necessary to prevent lice emerging from any eggs that survive the first application. All contacts with living moving lice should be treated at the same time.

When treatment is recommended, malathion or one of the pyrethoids should be used as first line treatment. Carbaryl (only available on prescription) should be recommended when treatment has definitely failed with first line



formulations. Shampoos are also available but are too dilute to be effective and should never be recommended.

## **Treatment should only be used when a living, moving louse has been found on the head.**

### **Treatment failure or reinfection?**

Treatment failure is often caused by:

- misdiagnosis e.g. itch or nits still present after successful eradication of living lice.
- Lice not being present in the first place ('imaginary lice')
- inadequate or inappropriate application.
- The finding of young lice which have not been killed whilst in the egg after the first and before the second application of the lotion

True re-infection is usually from close contact in the community rather than specifically from school contact. Carriers of lice are likely not to be aware that they are infected.

Insecticide preparations should not be used for more than one complete treatment of two applications 7 days apart unless a careful assessment has been made, including:

- Was there in fact a true infection before application?
- Is there in fact a current active infection now?
- Are the detected lice simply those which have hatched after a first application?
- If treatment failed, why? (enough lotion? properly applied? all infected contacts treated?)
- It is more probable that the first infection was cleared, but reinfection has occurred. Were close contacts treated at the same time?



## Management of true reinfections

If it is certain that chemical treatment has failed for an individual or a particular family, then the following actions should be considered:

- Re-treatment with the same preparation, but ensuring that it is undertaken adequately and for all contacts simultaneously
- Re-treatment using a different chemical preparation
- Supervision and assistance may be appropriate, such as a domiciliary visit to the family by the school nurse/ health visitor
- Further thorough attempts to define if there may be a source of recurring infection e.g. a 'best friend' and attempts to reduce the likelihood of re-infection of the case/family
- If the problem remains, consider teaching the process of continued physical removal of lice.

There is no evidence that vinegar or essential oils such as lavender oil and tea tree oils, which can be quite toxic especially as concentrates, are effective at preventing or treating head lice. As such these should be discouraged

### Note:

- After treatment the scalp itch may persist for 2 to 3 weeks.
- After treatment, egg cases (nits) may persist on the hair for several weeks, but further treatment should not be used if a living louse cannot be detected.
- Other causes of itchy scalp, such as eczema, seborrhoea and dandruff may be made worse using head louse lotion, and repeated use of lotion may itself cause dermatitis and itch.
- If infection does recur it is almost always from a member of the family, or a close friend who has not been treated.
- Insecticidal shampoos and proprietary chemical repellents are not recommended.



## Responsibilities for the Control of Head Lice

- 1. The Communicable Disease Control Team:** is responsible for advising on the control of head lice in the community. Detection and treatment protocols should be prepared for health professionals and for members of the public. Information should be made available via all media opportunities throughout the year and not as a campaign which can create pseudo-outbreaks
- 2. Parents/Carers:** The primary responsibility for the prevention, identification and treatment of head lice infection resides with parents/carers, if only for reasons of practicality. Parents cannot be expected to do all this without being adequately instructed and supported by the primary health care team.
- 3. Primary Health Care Team:** The primary professional responsibility for the diagnosis and management for any disease lies with the general practitioner with whom the patient is registered. Traditionally, because the focus on head lice was within the schools, primary health care teams have not been involved to any great extent. The whole team needs to be knowledgeable and competent in the control of head lice and be able to teach parents/carers the technique of detection combing, and be prepared to advise appropriate treatment. Treatment should only be advised if living, moving louse are present on the head.
- 4. School Nurses:** have responsibility for professional advise to staff, parents and children and for carrying out local policies. This should be done on an ongoing basis and generally be integrated with the management of other school health problems rather than as a special separate topic. School nurses are also available to advise schools and parents on the current policy for treatment and prevention.
- 5. Schools:** must remember that most lice are caught in the family and the local community, not in the classroom. Children who may have lice should not be excluded from school; if they do have lice, they will probably have been there for weeks already. **It is not the school's fault!** Schools should advise parents according to the local policy.

### “Head Inspections” in School

Routine head inspections, usually by the school nurse traditionally focussed the problem within schools. This as a screening measure is of no value when you consider the life cycle of the louse. Most active infections are of only a few lice, routine head inspections by the School Health Adviser are ineffectual at identifying these.



### **“Alert letters”**

This was a practice followed in the UK and the Isle of Man. Every time a child is diagnosed as being infected with headlice, letters were sent to parents of other children. This is totally illogical since:

- (a) it is done in response to reported cases of head lice which are not easily transmitted, but not done for other diseases which are highly transmissible eg. impetigo, chickenpox
- (b) most schools will have a few pupils with head lice at any one time. Because of this “Alert letters” would need to be sent daily.
- (c) It leads to a perception that the school is riddled with head lice. It creates a pseudo-outbreak.
- (d) Parents can become convinced that their child has head lice when in fact they have a ‘psychogenic itch’. Treatments will be used inappropriately for imaginary head lice or for prevention treatment - ‘just in case’

**School Exclusion** should not be used: No child should be excluded from school for reasons of being infected with headlice. It is punitive and unnecessary.

- Exclusion cannot ensure elimination of infection from the family of a child
- Is an over reaction to a problem which is not a public health threat
- Is inappropriate in that it is admission of failure to deal with the infection in the community. It does not actually solve the problem
- Is not used for other conditions with low transmissibility eg. verrucae

Families with continuing or recurrent infections need support and assistance. The appropriate member of the primary health care team should be involved to give extra support.



- 6. Local pharmacists:** should be guided by local policy and every opportunity should be taken to give accurate information to the public. Customers should be dissuaded from the inappropriate, repeated, or unnecessary use of insecticidal preparations. Treatment should never be advised unless there is proof that living lice are present on the scalp.

## Detection combing - how to do it

You need:                    Head lice detection comb (from the chemist)  
   good lighting  
   ordinary comb

- wash hair well, then dry it with a towel. The hair should be damp, not dripping
- conditioner on hair eases combing and removal of lice
- make sure there is good light. Daylight is best
- comb the hair with an ordinary comb
- then start with the teeth of the detection comb touching the skin of the scalp at the top of the head. Draw the comb carefully towards the edge of the hair (white comb shows up darker lice).
- look carefully at the teeth of the comb in good light
- do this over and over again from the top of the head to the edge of the hair in all directions, working round the head
- do this for several minutes. It takes 10 to 15 minutes to do it properly for each head
- if there are head lice, you will find one or more lice on the teeth of the comb
- head lice are little insects with moving legs
- clean the comb under the tap. A nail brush helps to do this
- if you find something and are not sure what it is, stick it on a piece of paper with clear sticky tape and show it to any member of the primary



health care team. There can be other things in the hair which are not lice

- if you need help and advise to do this technique, please contact any member of the primary health care team

(A video is available to demonstrate this technique)

## **Resources**

A range of health promotion resources are available from the Public Health Directorate or from your school nurses

Resources include:

**Video:** Head Lice - a Guide for Schools

**Leaflets:** The Facts About Head Lice

To borrow a video or for free copies of the leaflets please contact:

Health Promotion Department  
Public Health Directorate  
Crookall House  
Demesne Road  
Douglas  
IM1 3QA  
Tel: 642592

School Health Department  
Crookall House  
Demesne Road  
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IM1 3QA  
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