

Supporting Training Initiatives



the otc treatment clinic

Common conditions and their treatment options



This module has been endorsed with the NPA's Training Seal as suitable for use by medicines counter assistants as part of their ongoing learning. Complete the questions at the end to include in your self-development portfolio



Welcome to *TM's* OTC Treatment Clinic series. This handy, four-page section is specially designed so that you can detach it from the magazine and keep it for future reference.

Each month, *TM* covers a different OTC treatment area to help you keep up-to-date with the latest product developments. In this issue, we focus on head lice. At the end of the module there are multiple choice questions for you to complete, so your progress can be monitored by your pharmacist.

You can find out more in the *Counter Intelligence Plus* training guide.

The last six topics we have covered are:

- Acne
- Hay fever
- Ovulation and pregnancy testing
- Smoking cessation
- Oral care
- Daily fatigue and stress.

You can download previous modules from www.tm-modules.co.uk

module 207

Head lice

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for this module

OBJECTIVES: After studying this module, assistants will:

- Be aware of the prevalence and symptoms of head lice
- Understand the life cycle of head lice and how an infection spreads
- Be familiar with common detection methods for head lice and how to determine if an individual is infected
- Know when to recommend appropriate OTC head lice treatments
- Be able to offer advice on how to check if a treatment has been successful.

The summer holidays are in full swing, but while children enjoy playing in the sunshine, many parents will already be thinking about the new school term starting and the dreaded head lice that so many children catch.

Of course, head lice are nothing new, yet they can make many parents shudder at the thought of carrying out time-consuming treatments and comforting a distressed child.

Although infections can disrupt a sufferer's sleep and cause a general feeling of malaise, head lice in themselves are not a serious health concern. In fact, head lice rarely cause any physical symptoms other than an irritating, itchy scalp. It's more often the social stigma associated with head lice that causes distress rather than the symptoms.

The 2012 update of *The Stafford Report* by the Public Health Medicine Environmental Group (PHMEG) confirmed that many of the issues

associated with head lice are due to society's reaction to the infection. Pharmacy teams should reassure customers that head lice are common and are not an indicator of poor hygiene.

It's difficult to determine exact head lice infection rates as they can often be treated successfully at home, with people only contacting a healthcare professional if treatments are ineffective. However, according to NHS Choices, around one in three children will get head lice at some point each year. But despite their high prevalence, there is still a lot of confusion surrounding the onset of head lice, how they spread and how best to treat them.

This month's OTC Treatment Clinic takes a closer look at head lice and outlines how pharmacy teams can help to educate customers on how to prevent, detect and treat head lice effectively.

reflective exercise

Six-year-old Zoe comes to the pharmacy with her dad. He tells you that Zoe has developed an itchy rash on the back of her neck and asks if you can recommend a cream. He thinks Zoe may be allergic to the new shampoo she's using, although she's not complaining of having an itchy head. He mentions that her brother had head lice a month ago, but that's all cleared up now.

What would you recommend?

Zoe may have caught a head lice infection from her brother and could now be suffering from a rash on her neck due to a reaction to lice droppings. Refer Zoe to the pharmacist and explain to her that Zoe's brother had head lice recently.

What if:

The pharmacist recommends that you supply a soothing cream to reduce the skin irritation on Zoe's neck. Zoe's dad should also check her head thoroughly for signs of live lice. The pharmacist is needed urgently elsewhere and asks you to provide the necessary advice and treatment options.

Zoe's dad is also interested in hearing about prevention treatments for head lice.

What would you recommend?

Suggest they try an antihistamine-containing cream to see if that's effective at soothing the irritation and minimising the rash. Remember, creams containing corticosteroids are not generally suitable for children (especially those under 10 years of age). Explain to Zoe's dad that head lice treatments should only be applied if a live

louse is detected in the hair. The easiest way to determine this is to regularly, and methodically, carry out wet combing using a detection comb.

What if:

Zoe and her dad return to the pharmacy two weeks later after finding several lice close to her scalp. He is concerned that his son's head lice may have returned and also that his pregnant wife may have caught the infection. Both children have asthma. Ideally, he wants only one product to treat the whole family.

What would you recommend?

All members of the household should be checked thoroughly for signs of head lice. However, treatments should only be applied if a live louse is found.

Show Zoe's dad the range of products which are suitable for use during pregnancy and for asthmatics. Dimeticone lotion or spray is likely to be the most effective, although a water-based malathion treatment would also be suitable.

Zoe's dad opts for the dimeticone lotion as they have used it before and found it easy and effective. Remind him that it needs to be left on the hair for eight hours, or overnight, before being washed out using normal shampoo.

Everyone in the family should be treated as soon as head lice are confirmed and again seven days later. Detection combing should be carried out two to three days after completing the treatment and again seven days later to ensure the treatment has been effective.

Who gets head lice?

Studies show quite a variation in the number of people affected by head lice at any one time and, according to the PHMEG report, there is evidence that head lice are becoming more prevalent.

Two separate studies among Welsh schoolchildren found head lice rates of 4.1 per cent and 8.3 per cent respectively. In a separate survey of 14 English schools, the proportion of pupils affected ranged from four to 22 per cent.

In addition, a 2003 study from one district health authority found that two per cent of children were affected at the time of the survey but that 37.4 per cent reported an infection at some time in the previous year.

While head lice are most common in children aged four to 11 years, all ages could potentially become infected. The following factors are thought to increase the risk of an infection:

- Being younger than 12 years old
- Being female – this may be due to the way girls interact with their family and friends
- Coming from a family with four or more children
- Belonging to a lower income family.

A head lice infection is not the result of dirty hair or poor hygiene. In fact, there is no evidence to suggest that head lice have a preference for either clean or dirty hair – they will infect all types of hair, regardless of its condition or length.

Head lice can only infect humans and cannot be passed on to, or caught from, animals. They are also different to other types of human lice, including body or pubic lice (crabs).

What are head lice?

Head lice are tiny, wingless insects that live in human hair. They live close to the scalp for warmth, as well as to feed on their host's blood several times a day. While lice may be found anywhere on the scalp, their eggs are commonly found behind the ears and at the nape of the neck.

Head lice are grey-brown in colour and are around the size of a pinhead when hatched and a sesame seed when fully grown.

Lice cannot fly, jump or swim. They are spread by head-to-head contact, as they climb from the hair of an infected person to the hair of somebody else. Each louse has six legs, ending in a claw that helps it to grip tightly. An adult louse can live for about 30 days, but will usually die within a day if it falls off its host. Head lice do not spread disease.

The life cycle of a head louse

A female head louse lays eggs and cements them to a person's hair, often close to the roots, where they are kept warm by the scalp. These eggs are pinhead-sized, making them difficult to see.

After seven to 10 days, the lice hatch, but their empty eggshells remain glued in place. These are known as nits and are white in colour. Nits become more noticeable as the hair grows and they are carried away from the scalp.

Head lice feed by biting the scalp and feeding on blood. They take between six and 10 days to become fully grown. Once mature, a head louse is able to crawl to a different host. A female louse may begin laying eggs as few as seven days after hatching.

How does a person get head lice?

The only way that a person can become infected with head lice is through prolonged, close head-to-head contact with an infected person. Therefore, head lice are typically acquired by children from someone they know well, such as a close friend or family member.

It is extremely unlikely that head lice will be transmitted by sharing clothing or personal items such as combs or pillows. Most experts agree that lice that fall off the head are probably ill or dying and are therefore unlikely to reproduce.

Symptoms of an infection

The main symptom of a head lice infection is an itchy scalp. This is not the result of being bitten, but is actually the sufferer's allergic



Regular detection combing can help to confirm a head lice infection

reaction to the lice. However, not everybody is allergic to them and therefore the itching associated with head lice does not always develop, and the lice may go undetected. Even if a person is allergic to head lice, it can take up to three months from infection for the itching to begin.

In rare cases, a rash may appear on the back of the neck due to a reaction to lice droppings.

Diagnosing an infection

Even when the head is closely inspected, head lice can be easy to miss. It can be difficult to distinguish whether eggs and nits are alive or dead. Nits can also remain glued to hairs even after successful treatment. Therefore, unhatched eggs or nits alone are not enough to confirm an active head lice infection. An accurate diagnosis depends on a live louse being found via a reliable method, such as detection combing.

Parents may be unaware of how to look for head lice effectively, so it's important that pharmacy teams are able to offer help and advice.

Do nits mean lice?

The presence of nits indicates that lice were present at some time, but is not proof that the individual currently has an infection. It is difficult to distinguish between nits that have hatched and those that still contain live lice. The closer the nits are to the scalp, the more likely it is that they are waiting to hatch.

Nits that are firmly attached to the hair shaft within a quarter of an inch of the scalp suggest, but do not confirm, a head lice infection. However, it is easy to confuse nits

with dandruff or particles of hair styling products.

Detection combing

Detection combing involves combing the hair with a special fine-toothed detection comb which has teeth spaced less than 0.3mm apart. This can be carried out on wet or dry hair. Wet combing

requires more preparation, but it is a more reliable method as lice become motionless when wet.

For wet detection combing:

- Wash hair using an ordinary shampoo, then apply plenty of conditioner. Use a wide-toothed comb to straighten and detangle the hair. Once the comb moves freely through the hair without dragging, begin using the louse detection comb
- Ensure the teeth of the comb slot in the hair at the roots and lightly touch the scalp
- Draw the comb down to the ends of the hair with every stroke and check the comb for lice
- Work methodically through the hair, section by section, until all the hair is combed through
- Rinse out the conditioner and repeat the procedure in the washed, wet hair.

For dry detection combing, repeat the above procedure on dry hair. Be cautious that as the comb is removed from the hair, lice may be repelled by static electricity.

What if lice are found?

If a live louse is found in the hair, this probably indicates an active infection. Parents should check the hair of every other member of the household, alert close friends and notify the child's school.

There is no need to keep children with head lice off school. They may have had the infection for several weeks, so keeping them at home is unlikely to affect transmission.

OTC treatment options

Head lice can be difficult to treat due to their high re-infection rate and ability to develop resistance to the insecticides in some

treatments. Head lice are unlikely to develop immunity to silicone or oil-based formulations as these have a physical action, rather than a chemical one.

NB: No treatment method will be effective if head-to-head contact is made with an infected person during the treatment period.

● Wet combing (e.g. Nitty Gritty Nitfree Comb)

The wet combing removal method is the same procedure as that used for detection. This should be repeated on days five, nine and 13 so that young lice are cleared as they hatch, before they can reach maturity. The procedure should be repeated until no live lice are found for three consecutive sessions.

For wet combing to be effective, it needs to be carried out regularly and thoroughly. The length of time it takes to comb the hair depends on how long and thick the hair is.

This method is suitable for all ages and as it involves no chemicals or insecticides, there is no risk of skin irritation or lice resistance.

self care tips

- Brush hair twice daily. Remember, 'break their legs, they can't lay eggs'
- Discuss with children the importance of not making head-to-head contact with other children
- Good hair hygiene won't prevent an infection, but it may make lice easier to detect
- Do not share grooming products or clothing (e.g. hats)
- Carry out weekly detection combing to ensure lice are found quickly. Wet combing is more accurate as the lice become immobilised
- Following infection, try not to scratch the head as this can lead to secondary bacterial infection
- Treatment products are not effective at preventing head lice and should only be applied if a live louse is found on the head
- Use treatments according to the manufacturer's instructions to reduce the risk of treatment failure
- Check the heads of other household members if an active infection is identified and alert close friends
- Schools should be notified if a child is found to have a head lice infection. However, there is no need to keep children off school.



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● Non-insecticide treatments

Dimeticone (e.g. Hedrin 4% Lotion, Hedrin Once Spray Gel, Lyclear Spray) works by blocking the tiny holes (spiracles) that head lice breathe through, leading to suffocation and dehydration.

Dimeticone can be sold OTC for adults and children aged over six months. It is also suitable for those with skin conditions and asthma.

It should be applied twice, seven days apart. The lotion formulation should be left on the hair and scalp for at least eight hours, or overnight, and then washed out using a normal shampoo. The spray gel should be applied as directed and left on the head for at least one hour.

Isopropyl myristate and cyclomethicone (e.g. Full Marks Solution) also works by blocking spiracles. It should be applied twice, seven days apart to dry hair for 10 minutes. The hair should then be systematically brushed with a fine-toothed comb to remove lice.

These products are not suitable for children younger than two years or for anyone with a skin condition. However, it can be used by people who have asthma.

Coconut, anise and ylang ylang spray should be applied twice, seven days apart and left on for 15 minutes before the hair is shampooed and combed to remove lice. It is not suitable for children younger than two years old or individuals with skin conditions or asthma.

The above treatments have a physical mode of action. It is therefore unlikely that lice will develop resistance to them.

● Insecticide treatments

Malathion (e.g. Derbac-M) – water-based

preparations of malathion are suitable for customers from six months of age and those with asthma. They can be used by pregnant women or those who are breastfeeding, but only if other treatment options have failed. Derbac-M should be applied to the hair and scalp until thoroughly moistened. The hair should then be left to dry naturally in a warm, well-ventilated room and shampooed out after 12 hours.

Permethrin (e.g. Lyclear Crème Rinse) works in 10 minutes and is suitable for use from six months of age.

All medicated treatments should only be applied if a living head louse is found.

Was the treatment successful?

To check if a head lice treatment has been successful, customers should carry out detection combing two to three days after completing the course of treatment and again seven days later.

If a customer says that the treatment didn't work, refer them to the pharmacist, who will consider:

- Do they still have live lice? Sometimes people see nits and think this means that lice are still present. Also, the customer may mistakenly think that itchiness means they have live lice
- Was the treatment used correctly? Did they apply sufficient product, follow the instructions properly and perform the second, follow-up treatment?
- Has the person been re-infected? It is important to check all household members and close friends to see if anyone else has head lice
- Could the lice be resistant? If resistance is

suspected, a different treatment may be recommended.

Can head lice be prevented?

Preventing a head lice infection is difficult as lice are spread by head-to-head contact. Weekly detection combing helps to ensure that new lice are found quickly. Head lice treatments are not effective in preventing infections and should only be applied if a live louse is found in the hair. Washing clothing and bed linen on a high temperature setting (at least 50°C) will kill any living head lice. However, lice that fall off the head are unlikely to survive for longer than 24 hours.

Hedrin Protect & Go helps to prevent infections by disrupting the life cycle of head lice before an infection can establish. This can be applied regularly as part of a child's hair hygiene routine or during periods when head lice are prevalent, such as the start of new school terms, or before parties and sleepovers.

Many schools take part in Bug Busting Days to help inform parents and children about the behaviour of head lice and how to detect and remove them. For more information, see: www.chc.org.

Who to refer

- Infants under six months old
- Pregnant women
- Anyone with asthma or allergies
- Anyone who has developed a rash at the back of their neck
- Anyone suffering adverse reactions from treatments
- Anyone who found treatments to be ineffective.

assessment questions: head lice

For each question, select one correct answer. Discuss your answers with your pharmacist.

1. Which of the following is NOT a recognised risk factor for a head lice infection?

- a) Being younger than 12 years old
- b) Having clean hair
- c) Being female
- d) Coming from a family with four or more children

2. Which of the following statements is FALSE?

- a) Head lice survive by feeding on the blood of their human host
- b) Head lice eggs are commonly found behind the ears and at the back of the neck
- c) Head lice can move between hosts by flying, jumping or through head-to-head contact
- d) Head lice will usually die within 24 hours if they fall off their host

3. Which of the following statements is TRUE?

- a) Eggs take around two to three days to hatch
- b) Following hatching, eggshells loosen and fall off the head
- c) Lice take between 12 to 15 days to become fully grown
- d) A female louse may begin laying eggs as few as seven days after hatching

4. Which of the following treatment ingredients has a physical, rather than chemical, action?

- a) Dimeticone
- b) Isopropyl myristate
- c) Coconut, anise and ylang ylang
- d) All of the above

5. Which of the following customers do NOT need referring to the pharmacist following a head lice diagnosis?

- a) A 10-year-old girl who has had head lice twice in the past year
- b) A pregnant woman
- c) A 14-year-old boy with a rash at the back of his neck
- d) A five-month-old baby

6. Which of the following is NOT a recognised self care tip?

- a) Following a head lice diagnosis, all members of the household should be treated, regardless of whether they are infected or not
- b) Carry out weekly detection combing
- c) Brush hair twice daily
- d) Tie back long hair

