

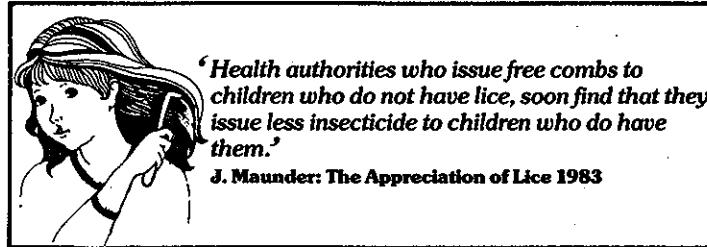


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HEAD LICE IN THE CLASSROOM

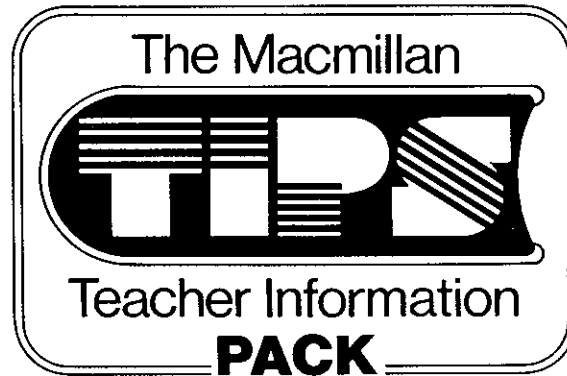
Joanna Wickenden



'Health authorities who issue free combs to children who do not have lice, soon find that they issue less insecticide to children who do have them.'

J. Maunder: The Appreciation of Lice 1983

With the assistance of Joanna Wickenden's comprehensive treatise on head lice, and her hair care classroom topic programme, schools can play an active part in overcoming harmful attitudes, and in promoting good grooming practice amongst their pupils.



HEAD LICE IN THE CLASS ROOM

INTRODUCTION

Throughout the developed world school teachers are finding the rising incidence of head lice is interfering with classroom education. In many countries, such as Spain, teachers are expected to alert parents when they note the signs of an outbreak and vice versa. This is, at least, conducive to a healthy open attitude to the subject.

In Britain, however, the problem has long since been allocated to the province of the School Nursing Service. Most school nurses, or health visitors carrying out the duties of school nurses, consider that this is a cross that they must bear, albeit discreetly.

DISTRIBUTION

The commonest method of control employed in the UK is still the traditional school head inspection, but as long ago as 1941 Kenneth Mellanby established that the age group most likely to catch head lice is 4–6 years

old (he also established that this louse (*Pediculus humanus capitis*) shows a preference for girls over boys). Mellanby therefore advocated extending control measures beyond school into the community. Little heed was taken of his advice until John Maunder enlarged on this teaching from the 1970s to the present day, and statistics collected from 1980 onwards prove its validity.

The head louse of the developed world is most prevalent among suburban and rural children, largely of middle-class parentage. The chief reason for this is probably that this sector of society enjoyed a blissful unawareness of the louse for three decades or more. These parents were not taught precautions against the louse and never expected to have to take them. In Britain the myth that clean hair is a protection is particularly deeply engrained.

INFECTION

We can identify two distinct areas of infection within the community:

- (a) families which are constantly lousy and unable to cope with this problem among many others
- (b) large numbers of people who have caught lice and would be glad and able to remedy the situation with self treatment, *but who are unaware that they have lice.*

Examination of the lifestyle of the head louse explains the reason for the existence of this second large group of infection. Head lice depend for transmission on head to head contact. They cling to hairs with the claws on their six legs and swing across when heads touch. The warmth of the scalp keeps them agile and, since the insect is very susceptible to inbreeding, the fully grown louse will never miss the chance to change hosts. The relaxed and sociable way we live today gives them ample opportunity to spread. Thus there are large numbers of light but contagious cases in the community (Wickenden, 1982).

The lice themselves are well camouflaged against the skin and move away rapidly if disturbed. Their eggs are laid close to the scalp and do not become noticeable until they have hatched, leaving a white eggshell, known as a nit, glued fast to the hair at a distance of $\frac{1}{2}$ cm or more from the root. A nit can easily be confused with a flake of dandruff at the onset of an infection, but can be distinguished from dandruff because it cannot be flicked off or slid down the hair.

The host will not begin to itch until he has been bitten sufficiently for his body to learn to react. *This may take as long as three months* the first time he catches head lice (Maunder, 1983).

DIAGNOSIS AND TREATMENT

The detection of head lice by inspection during the first three months of infection is a lengthy operation. If the child has only just caught lice it may take repeated inspection over three days to establish the fact. It is not surprising, therefore, that the school nurses rarely discover cases that are less than four months advanced (Maunder, 1971), which is probably only around half those in the school and a quarter of those in the community at the time of an outbreak. Nowadays the routine inspection is necessary only as a statistical yardstick or to monitor the efficacy of modern eradication techniques.

It is due to John Maunder that the older insecticides DDT and γ BHC (lindane) have been replaced by malathion and carbaryl. He demonstrated that head lice had become resistant to the former (1971). Malathion and carbaryl have the advantage of killing both lice and their eggs in a single application of a lotion formulation. These lotions are simple to use, making torturous nit combing unnecessary except for cosmetic purposes. Their introduction marks a new era in the management of head lice infection or *pediculosis capitis** and *detection* rather than treatment becomes the central issue. As detection is time consuming, the success of a community's anti-lice programme now depends on the information for diagnosis possessed by parents. Labour-intensive nursing must be reserved for those parents who cannot manage without it, although counsel still needs to be available for those seeking guidance from the School Health Service. It is unhelpful that nurses should be held responsible for tracing contacts because the maximum they can do is to check the classes of patients' siblings, whereas parents can warn neighbours, friends and relatives. Likewise a school can alert all parents to the need to make repeated inspections when notified of an outbreak, thus efficiently coordinating the effort to stamp it out.

The following letter was written at the request of a summer play scheme in Haringey, North London. It could be adapted for use in schools, play groups and other organisations where children meet regularly.

* This made the old fashioned 'professional' nit comb, designed to remove live eggs obsolete. The pleasanter modern 'cosmetic' nit comb, however, still has a certain part to play.

Dear Parent or Guardian,

We have a case of head lice amongst the children attending the play scheme. This is not surprising: we have a nice bunch of kids on the scheme who all get their hair washed regularly and LICE LOVE CLEAN HAIR. Moreover the whole country is experiencing an upsurge in head lice, so there are a lot of them about.

Now, DON'T PANIC. Treatment is simple and effective. The real problem is detecting these little insects which are very good at hiding. You can have them for three months before the bites even begin to itch.

The discovery of one case indicates that there must be others. Head lice can't live on just one head; there will always be several infected heads in regular contact. The lice move between them when the heads touch. Often an exchange of lice takes place in one touch. They get across very quickly in the warmth of the scalp. Short hair is certainly not a protection.

Now that we know that we have head lice in our midst, the secret of eradication is for every parent to inspect his or her child's head carefully as soon as possible. Teach your kids to check each other as well. Look for the eggs (sometimes called 'nits') because they are easier to find than the lice. The accompanying leaflet, *The Little Louse*, tells you how to do it and what treatment to follow if you find live eggs or lice. The trade names of the lotions in use in Haringey at present are

and

Please help us to get rid of the lice!

Happy hunting,

Play Leader

HEALTH EDUCATION

The traditional procedure of a school head inspection, instruction of individual parents on the treatment of detected cases, and exclusion of children who are infected until a nurse has checked that treatment has been

carried out is geared to the family that cannot or will not cope. When this strategy is carried over to the caring, intelligent parent, however, it magnifies the social distress the problem causes by policing its management.

Health education is the key to harnessing the willingness of most parents to overcome the problem. Unfortunately, much of the material available for the purpose is still based on the premise that people might not wish to treat lice (!) and hardly mentions recognition of the problem. An itchy scalp is *not* the first symptom of *pediculosis capitis*; it is, however, a suspicious sign which children should be taught to report to their elders for closer investigation. This is just one way in which teachers can help to establish an enlightened partnership between professionals, parents and children to beat the head louse.

Working within the law

In 1977 Regional Health Authorities were made responsible for statutory head louse control in State schools (Burr, 1982). Head teachers have a legitimate right to demand that the School Health Service (SHS) should solve the louse problems in their schools. What is not widely known, however, is that exclusion from school of children with head lice and their readmittance thereafter must be authorised by a Medical Officer (Carlisle, 1981). A teacher wishing to console a parent suffering the consequences of ill-informed attitudes should refer her to some up-to-date literature (*see HEAD LICE (Parents notes)*) and, thus armed, the parent may complain to the Medical Officer in charge of the local SHS.

Head teachers permit hygiene inspections *in loco parentis*. It would be ill-advised, however, for anyone not on the Health District staff to attempt an inspection without written permission from all the parents of the children concerned, for the inspection could be construed as assault.

'Combing' inspections

Plastic combs with closely spaced teeth, known euphemistically as 'dust combs', are available from leading chemist shops. They are intended for combing out dandruff and lice. It is wise to keep one in the sickroom. Should there be a strong suspicion that a child has lice, or has not been treated after detection, he can be gently withdrawn to the sickroom and asked to comb his own hair thoroughly with the dust comb over a sheet of paper. If he combs out lice, this is the signal to warn all parents of the outbreak or, in the case of unsuccessful treatment, to alert the school nurse. The child may return to the classroom with his lice: head lice live on a pool of heads in regular contact and so the isolation of one case from the pool for a few hours will make little difference (Wickendon, 1982). Should you fear that

you yourself have caught lice, but do not like to ask someone to have a look, use a dust comb as a method of self-diagnosis.

The modern approach

Unfortunately until September 1982, when the Human Louse Control Management courses were first run by London University in conjunction with the DHSS, no in-depth teaching on modern methods was available to nurse managers, let alone their staff. During the previous 40 years school nurses had tended to rely on what they learnt on the job and from insecticide sales representatives. The influx of new information and resulting policy revision may not have yet reached your local SHS. It is, of course, hardly the place of the teacher to tell a nurse what her job is and it may be more tactful to await a request from the Health Authority for help in educating parents about head lice. In the interim, however, a teacher can ask her class to report home each time the school nurse visits the school with a reminder that parents can help by inspecting too.

INSECTICIDES

Insecticides used on the person are specialised medicines and consequently should be treated with the same respect that other medicines merit. They are best stored in the chemist's shop, not the first aid cupboard. They should never be put into the hands of children to take home.

Lousicides can be bought over the counter from a retail pharmacist or obtained free for a child with a doctor's prescription. It is incorrect for a school to accept offers of insecticides to dispense, even if it is only an 'emergency' pack left by the school nurse. On the other hand, it is essential that teachers are aware of current insecticide policy in order that they can advise parents what to request from the chemist or doctor. This is not a question of brand loyalty, but of safeguarding mankind from Superlouse.

There are five groups of insecticide that are suitable for louse control and head lice are already resistant to two of those groups (the ones to which DDT and γ BHC belong). A further two groups have been in use long enough for resistance to become a possibility, the organophosphates, of which malathion is a member, and the carbamates, of which carbaryl is a member. By judicious alternation of the organophosphates, the carbamates and the last remaining group, the pyrethroids, we can prolong their useful life. It is therefore of great importance that while a customer continues to exercise the right to use the product of her choice, the choice is made between products within the insecticide group in use by the Health District.

Schools can be of exceptional help to the Health Authority by explaining to parents who have successfully used a malathion product in the past, that they should nevertheless move on to a carbaryl product if the District or Region has changed to a carbaryl policy.

PREVENTION OF INFECTION

The use of insecticidal shampoos to prevent head lice is a probable source of insecticide resistance. A single application of an insecticidal shampoo is not even a cure for diagnosed lice. Not only is the insecticide diluted it is only in contact with the egg for a maximum of five minutes which is not long enough to ensure penetration of the egg. The correct way to use such a shampoo is in three applications at three-day intervals to kill the lice as they emerge from the eggs. (The eggs take from seven to ten days to hatch (Maunder, 1983). Not all manufacturers of insecticidal shampoos make this clear in the instructions they enclose with their products.

Genuine prevention of head lice depends on the grooming activity of the potential host. It is in this area of *prevention*, therefore, that the school teacher has a central role to play, for teachers, just as much as parents, can teach hair care. The injured louse cannot nurse itself back to health; it will cease to mate or lay eggs when the wound is sustained and finally die. *A good way to dislodge* head lice is to thoroughly brush and comb the hair, a procedure which most children from five years on can begin to learn to do for themselves morning and evening. Within the louse context, it is perfectly acceptable that a whole family should share the same brush and comb – the suggestion that these can transmit *pediculosis capitis* is quite wrong (Maunder, 1983).

Recommendable health educational material explaining the importance of combing is available. *Head Lice Advice* includes this item in a comprehensive guide. The best time to show this slide/tape might be at the end of the school day, enabling interested parents to view it too at the hour when they would be collecting their children from school. (It would be wise to enlist your school nurse's help before showing it so that she can make local insecticide policy clear to parents. She might also be able to supply nits on hairs for demonstration to parents new to recognition.) *Let's get rid of head lice* is available on hire from Napp Laboratories Ltd., Cambridge Science Park, Milton Road, Cambridge. *Head lice Advice* is available from BLM Publications, 14 Crusader Gardens, Croydon CR0 5UJ.

A HAIR CARE PROGRAMME

A possible scheme for classroom topic work on the comb follows. In connection with such work it would be natural to encourage each child to keep a comb in school and set aside a sensible moment or two in the day for its use (perhaps after coming in from play). Thought needs to be given to where the comb shall be kept. If shoe bags are obligatory a pocket in the bag would seem the obvious place. One teacher solved the problem by constructing a special comb holder and hanging it on the class room wall.

You must also consider the type of comb to recommend, especially if the school or Education Authority intends to buy in bulk and ask parents to contribute to the cost. The ideal child's hair care comb must have teeth that are finely enough spaced to injure lice. There are many combs available with such spacing, but they usually have the drawback of wider spaced teeth at the other end allowing the child to make use of the fine end as a handle, or possess long tail handles making them difficult, even dangerous, to keep in a pocket.

The quality of the comb is also of great importance. It is irresponsible to induce children to comb their hair regularly with a tool that will damage the scalp and hair shaft. Some more expensive combs turn out to have painted teeth and, as the paint may eventually peel off, should be avoided. Currently a quality comb for a child retails at between 35-55p.

CLASS TOPIC WORK: THE COMB

Draw a comb your family uses.

What is it made of? Why is plastic a good comb material? (Flexible so the teeth do not break easily, easy to clean with washing-up liquid which does not damage it, colourful, cheap)

What were combs made of before plastic was available? (Horn, bone, shell, wood, metal)

What are combs for?

To get out tangles

To remove dust and dandruff

To tidy and style the hair

To decorate the hair as part of head-dresses

this is *grooming*

The best reason for using a comb is to make yourself attractive to others – so people like your appearance

PEOPLE WHO BOTHER TO DO THEIR HAIR ARE NICE PEOPLE TO KNOW

COMBING IS FUN

Mammals like grooming

Stroking is soothing

Cats like licking themselves

We are mammals too

Do you know how to groom with a comb?

This means using it very thoroughly, especially over the ears and back of the neck. Comb underneath your hair upwards, then downwards. This way you will *dislodge* invading lice and 'IF YOU BREAK THEIR LEGS THEY WON'T LAY EGGS'

Do you know how to wash a comb with a nail brush, washing-up liquid and warm water?

What kinds of combs are there?

Ordinary pocket combs – for grooming and tidying the hair

Special combs for styling – like tail combs, afro combs

Medical combs – ‘dust’ combs for looking for lice, nit combs

Decorative combs like combs under mantillas

Where do you keep your comb? It is important to brush your teeth and brush or comb your hair before you go to sleep.

Do you know how to play a comb?

Combs have a history as long as people themselves

A big change came over the comb-making industry with the introduction of materials that could be poured or injected into moulds. Previous to plastic, combs had to be carved. Sometimes as well as carving the teeth, beautiful artwork was done on the spine (back or handle).

Today we are beginning to bring back the decorated comb for grooming, but made of plastic in large numbers

Help to find a nice design for a comb that appeals to you

Collect ideas together – actual combs, pictures of combs, cuttings about combs, mermaid stories, magic combs, combs your grandparents used . . . look at combs in the shops and decide which one you would buy if you could, where would you go to buy a comb? . . .

Towards the end of this YEAR OF THE COMB you can design your best comb ever, using these ideas and your own.

FURTHER INFORMATION

A wide variety of educational aids on head lice and hair care is now available. As most papers or articles on the subject include misconceptions about lice, however, it is worth enquiring if any material you wish to use carries the seal of approval from the Human Louse Control Management course team, led by Dr Maunder, whereupon you can make use of it with confidence. (The Health Education Adviser of the Medical Entomology Centre can be contacted at 160 Inderwick Road, London N8 9JT, Telephone: 01 341 5717.)

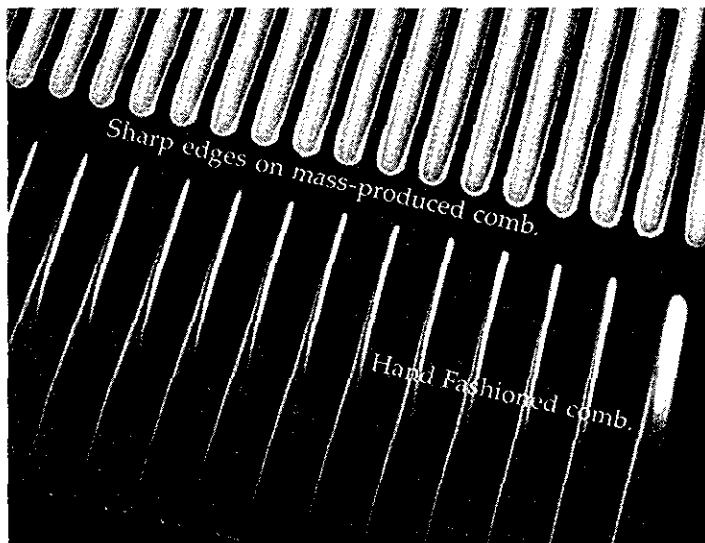
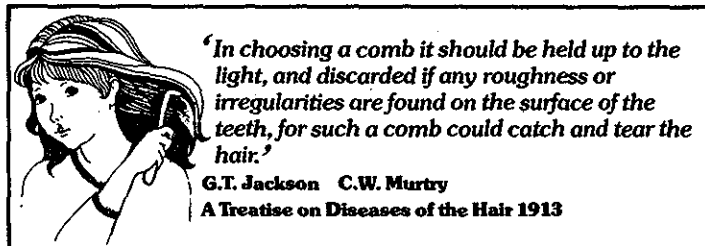
Further copies of this Unit are available from Joanna Wickenden, 160 Inderwick Road, London N8 9JT.

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Joanna Wickenden

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ALBYN OF STONEHAVEN specialise in the manufacture of best quality combs. As part of a programme to promote healthy hair in the classroom, ALBYN offer to supply each Health Authority with a free kit of grooming combs for school children. For further details, write to:

**Albyn of Stonehaven Ltd., Spurryhillock,
Stonehaven, Kincardineshire AB3 2NH Tel 0569 63320**

The need to reduce the production costs of TIPS led to the loss of the illustrations designed for inclusion in Head Lice in the Classroom. Albyn of Stonehaven have kindly restored them by providing a cover for the reprints of the Unit.

Front cover line drawing by Eva Rickford, Visual Aids Department, London School of Hygiene and Tropical Medicine.
