

Head lice?

Not me!



LICENER®

Effective, proven
treatment for
head lice and
nits





Dear parents,

A half-eaten sandwich, an invitation to the parent-teacher conference, the good marks and the bad ones: there are many things children bring home from their school or nursery. Unfortunately, head lice are all too often one of our unwelcome guests, since they strike fear year-round in schools and nurseries even in Germany.

No need to panic!

One thing you ought to know in particular is that although head lice are bothersome, they are actually completely harmless. They are not a sign of deficient hygiene and cannot spread any diseases to us. In this guide, we would like to explain how to identify these parasites on your children and, most importantly, how to get rid of lice quickly without any stress.

Sincerely,
Dr med Kai Schleenhain

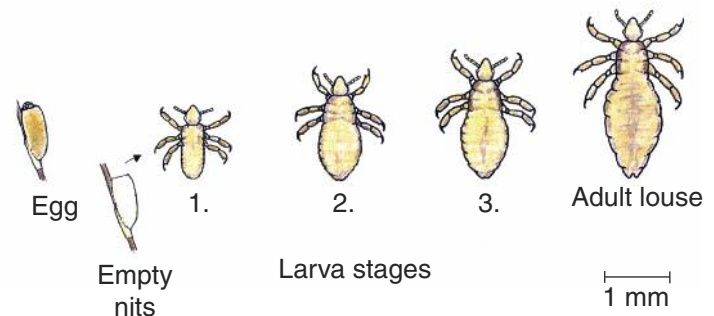
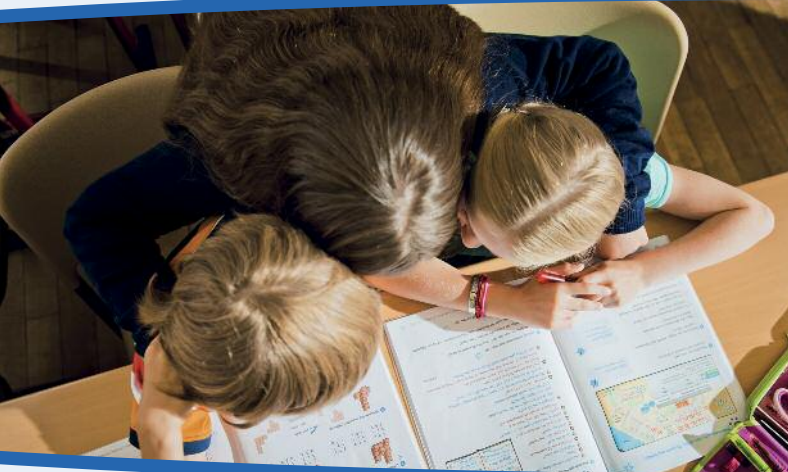
HENNIG ARZNEIMITTEL

Working for human health since 1898

Head lice emergency plan

- Stay calm and do not cause your children to worry unnecessarily!
- If head lice are found at your school, your child should also be examined.
- **The LICENER® nit comb** can help you detect lice and nits.
- If lice were found on your own child, you should take immediate action.
- Buy **LICENER® head-lice shampoo** over the counter at the chemist's.
- Use **LICENER® shampoo** on your child according to the package insert.
- After this treatment, your child can go back to their school/nursery.
- Confirm to your school/nursery that your child has been treated.
- Your child can be treated a second time with **LICENER® shampoo**, but this is not necessary.





Section	Page
Head lice emergency plan	3
Table of contents	4
What are head lice?	5
How do head lice spread?	6
How to spot lice infestations.....	7
How to get rid of head lice	8
LICENER® by HENNIG ARZNEIMITTEL	9
How does LICENER® work?	10
Overview of all benefits	11
How to use LICENER® shampoo	12
Important notes on usage	15
Obligation to report head lice infestation	16
Going back to school and nursery	17
Unnecessary precautions	18
Studies on effectiveness	19

Find more information at www.licener.de

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Head lice are wingless insects measuring roughly 1–4 millimetres in length. They only develop on the head of a human and can survive there only by feeding on blood every 2–3 hours. Depending on how long it has been since they last fed, head lice appear light brown to almost black.

After mating, females lay their eggs and use a water-insoluble substance to attach them to the hair shaft close to scalp. The larvae (nymphs) hatch about 6–9 days later. The empty nits are left behind and lifted away from the scalp by the hair as it continues to grow.



The larvae develop into fertile lice another 7–10 days later. Over the following 2–3 weeks, a female can then lay up to 150 new eggs.



How do head lice spread?



It is a fact that head lice cannot fly or jump. They cannot survive without the heat of the scalp and regularly feeding on blood. As such, head lice can only spread through direct body contact or when people personally share hats and hairbrushes. Since children often have head-to-head contact when playing or



learning, head lice are more common among them than among adults. Infestation mainly spreads from person to person through female lice that have already mated. After feeding on blood, they climb out of the protected areas near the scalp. This is where they position themselves in order to move on to a new host more easily.

It is practically impossible for them to spread through bed linens, sofas or stuffed animals (see page 18).

How to spot lice infestations



Head lice infestations begin subtly. It often takes several weeks for the crawling lice to be noticed or to make themselves known through itching. If head lice are reported at your school, your child should definitely be examined thoroughly.



Head lice prefer warm, dark areas near the scalp. This is why simply looking at your child's head is not enough to confidently rule out a head lice infestation. Make a part in your child's hair and look for light-brown eggs (nits) that are stuck close to the hairline. Then, thoroughly comb through your child's hair over a bowl or a white towel using a special comb that has sturdy metal teeth spaced fairly tightly, e.g. the LICENER® nit comb. If your child has a head lice infestation, you will find crawling lice in the bowl or on the towel (see image).



How to get rid of head lice

LICENER® by HENNIG ARZNEIMITTEL



If you find live lice or lice eggs, you need to use a reliably effective treatment on your child. Choose a product that kills all lice and nits, since even just one female louse is enough for a re-infestation.

There are various products on the market that kill lice either chemically using insecticides (e.g. pyrethrum or permethrin) or by physically suffocating them (e.g. dimethicone or vegetable oils). These vary considerably in their effectiveness, application times and frequency of application. It is not uncommon for them to have long application times and to require repeat applications. Some strains of lice have even become resistant to certain products now. Many lice products also involve a risk of skin irritation or could pose an actual hazard due to their high flammability, e.g. if a lit candle is near the child.

LICENER® shampoo does away with these time-consuming and awkward procedures!

LICENER® head-lice shampoo is a unique, naturally effective shampoo for removing head lice and nits (louse eggs), combining all benefits into one product. The formula was developed by parasitologists Prof. Dr Heinz Mehlhorn and Dr Jürgen Schmidt at Düsseldorf University. It is already on the market in several European countries and is distributed by Hennig Arzneimittel in Germany.

In just a single application lasting only 10 minutes, LICENER® shampoo quickly and reliably kills all head lice and nits (louse eggs). It has been clinically proven to be highly effective in multiple scientific studies*. At the same time, LICENER® is particularly gentle on the scalp and lends hair a silky shine. It is not flammable, is odourless and can be rinsed out again without any effort.

You can buy LICENER® head-lice shampoo over the counter at your chemist's.

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LICENER® head-lice shampoo contains a naturally effective extract from the seeds of the neem tree. Unlike neem-oil-based products on the market up until now, it is obtained from de-oiled seeds using a special extraction process.



LICENER® forms a coating over lice and nits. By interacting with mild detergents, the active components contained in the neem extract – polyphenols – are able to enter the lice's breathing orifices and effectively block the transport of oxygen. LICENER® also circumvents the protective shell of the eggs. This causes lice to suffocate in just a few minutes. The lice eggs dry out and die.

No second application is needed thanks to its exceptional effectiveness in all the stages of development of head lice, including lice eggs.



LICENER® head-lice shampoo

- **Highly effective, clinically tested***
- **Natural active ingredient**
- **Application time of only 10 minutes**
- **Just a single application**
- **Treats head lice and eggs**
- **No resistance**
- **Non-flammable**
- **Odour-neutral**
- **Rinses out with no effort**
- **Gentle on hair and scalp**
- **Lends a silky shine**



Suitable for children ages 2 and up





1. Apply **LICENER®** head-lice shampoo to dry hair. The active ingredient becomes too diluted in wet hair.



2. Be sure to use enough shampoo to completely cover all hair. Depending on hair length, an entire bottle of **LICENER®** is recommended per person.

3. Carefully massage **LICENER®** in from the scalp through to the hair tips. Wet all areas of the scalp up to the hairline, including behind the ears and on the neck.



4. Then leave **LICENER®** shampoo to work for 10 minutes.



Rinse and dry hair



5. Thoroughly rinse LICENER® out with lukewarm water. You do not need to additionally wash the hair with a conventional shampoo after treatment.



6. Then use a towel and blow dryer to dry the hair as usual.



Important notes on usage



7. If needed, you can comb hair with the LICENER® nit comb after drying to remove any dead lice and nits.

Please also note the following:

Empty eggs may still be seen after a successful treatment and are not a sign of insufficient effectiveness.

If multiple family members have head lice, they should all be treated with LICENER® shampoo on the same day to prevent re-contagion.

Be sure not to get shampoo in eyes since this can cause eye irritation, as with any shampoo.

In the event of re-infestation with head lice, LICENER® shampoo can be reapplied at any time with no issues.





If you find head lice on your children, you are obliged under the Infection Protection Act to notify the community facilities they have visited, e.g. their school or nursery.

We also recommend that you notify the parents of friends and playmates – including sports clubs and football teams – that your child has a head lice infestation, so they can also be examined and treated if needed. Anyone infected should be treated promptly – ideally the same day that the lice are found.

It is only by communicating openly as soon as possible that head lice can be stopped from spreading further. Head lice are not uncommon among children and thus should not be cause for unfounded embarrassment!



Community facilities are obliged to notify the health authorities of every case of head-lice infestation. The facility will then take all actions needed to prevent further spreading, in consultation with the competent health authorities.

In order for your child to return to their school or nursery as soon as possible once a head-lice infestation is detected, it must be proven that there is no longer a threat that the head lice will spread further.

Your school's/nursery's administration will tell you what format this proof must be in for your child. In most cases, it is sufficient for the parents to confirm that a suitable product was used for treatment, e.g. LICENER® head-lice shampoo. Your child can return to school the very next day.





- Lice can only survive on the head of a human. You can go ahead and change bed linens, towels and pyjamas once – mostly for your own peace of mind. There is no need to change and wash them every day. This will merely cause stress for parents and children.
- Lice do not find dolls and stuffed animals very inviting since they cannot survive on them. Any louse that inadvertently lands on one will be too weak to attach to a new host and crawl towards its scalp in just a few hours. So it is entirely excessive to seal stuffed animals or articles of clothing in plastic bags for several days or to go so far as freezing them.
- No special detergents are needed for clothing, furniture, carpets and rugs. Only combs and brushes should be carefully rinsed off with 60°C water.
- Pets cannot spread head lice.



*These scientific studies prove LICENER® shampoo to be highly effective against head lice and nits in just a single application lasting only 10 minutes:

Heukelbach J, Oliveira FA, Speare R 2006, A new shampoo based on neem (*Azadirachta indica*) is highly effective against head lice in vitro. *Parasitol Res* 99:353-356

Abdel-Ghaffar F, Semmler M 2007, Efficacy of neem seed extract shampoo on head lice of naturally infected humans in Egypt. *Parasitol Res* 100:329-332

Mehlhorn H, Abdel-Ghaffar F, Al-Rasheid KA, Schmidt J, Semmler M 2011, Ovicidal effects of a neem seed extract preparation on eggs of body and head lice. *Parasitol Res* 109:1299-1302

Abdel-Ghaffar F, Al-Quraishy S, Al-Rasheid KA, Mehlhorn H 2012, Efficacy of a single treatment of head lice with a neem seed extract: an in vivo and in vitro study on nits and motile stages. *Parasitol Res* 110:277-280

Al-Quraishy S, Abdel-Ghaffar F, Mehlhorn H 2015, Head louse control by suffocation due to blocking their oxygen uptake. *Parasitol Res* 114:3105-3110

Abdel-Ghaffar F, Abdel-Aty M, Rizk I, Al-Quraishy S, Semmler M, Gestmann M, Hoff N 2016, Head lice in progress: what could/should be done – a report on an in vivo and in vitro field study. *Parasitol Res* 115:4245-4249

Semmler M, Abdel-Ghaffar F, Gestmann F, Abdel-Aty M, Rizk I, Al-Quraishy S, Lehmacher W, Hoff NP 2017, Randomized, investigator-blinded, controlled clinical study with lice shampoo (Licener®) versus dimethicone (Jacutin® Pedicul Fluid) for the treatment of infestations with head lice. *Parasitol Res* (2017) 116(7):1863-1870

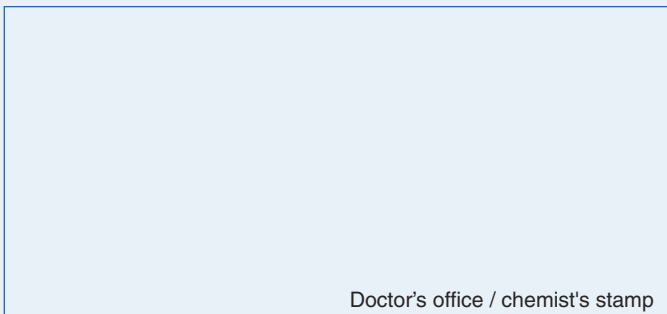


LICENER® by HENNIG ARZNEIMITTEL



The team at **HENNIG ARZNEIMITTEL** always wishes you and your children the best of health!

You can buy **LICENER® head-lice shampoo** and the **LICENER® nit comb** over the counter at your chemist's:



Doctor's office / chemist's stamp



You can also find more information at
www.licener.de

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