

## Research Report

### Head Lice and Melaleuca Oil

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It seems no sooner than you have said "back to school" and your child comes home infested with head lice (*Pediculus humanus capitis*). Why? Probably because it is estimated that 10-12 million children, in the United States alone, are affected each year. The number could even be much higher, because many cases are not reported to physicians, so there is no way of knowing for sure how many cases there actually are. According to Dr. Dirk M. Elston, M.D. from Geisinger Medical Center, Danville, PA, there is an epidemic of lice infestation, if not a pandemic, out there!<sup>1</sup> And, the incidences of infestations, especially during the winter months, may be on the increase.<sup>2</sup>

Suffice to say, if you have children in school, you probably have dealt with or probably will deal with at least one infestation of head lice. A few years ago, the outbreaks were blamed on the less fortunate of the population, but we now know that head lice are equally at home in any environment. Long hair, short hair, curly, frizzy, clean, greasy, you name it, those pesky creatures are not at all fussy. In fact, if you have hair they're happy! The good news is they cannot fly, jump, swim, pole-vault or hop. So, it is fairly difficult to become infested. They can, however, walk pretty fast! This is probably why elementary school children are the most likely to pass on a louse or two, because young children are quite tactile when interacting with each other. And that's all it takes!

Head lice are also passed around by children sharing hair and head accessories. Please teach elementary-school aged children not to share hairbrushes or hats. Check to see if your child's preschool has a dress-up station complete with hats. If so, you may want to forward this research report to the preschool staff!

Also be careful about hats in public places intended for communal use. One 7-year old girl became infested with lice after wearing a "birthday sombrero" at a restaurant for only the length of time it took the waiters to sing "Happy Birthday." Her parents realized she was infested days later.

One fertilized female head louse can lay up to ten eggs per day, which are literally glued to the hair shaft near to the scalp, incubating in the warmth of the child's head. The eggs (nits) take about seven to ten days to hatch into the first nymph stage. It takes another seven to ten days for the head lice to pass through two more nymph stages and become capable of laying eggs.<sup>3,4</sup> Adult head lice have a life span of approximately four weeks, but can only live about 48 hours if they become separated from the human host. Unfortunately, by the time the head starts to really itch, the infestation has already taken hold. Both nymphs and adults feed every few hours on the host's blood, and it is their saliva, and possibly a reaction to their feces that causes the itching. In some cases, a rash may appear on the scalp and around the neck area. With constant scratching, it can become infected. Fortunately, head lice have not been known to carry any major diseases. They are only an irritation and not a threat to the host.<sup>5</sup>

It is ironic that the main threat to the infested child seems to be from the organophosphate poisons used on the child's head to control the infestation!<sup>6</sup> Over-the-counter and prescription treatments containing organophosphates such as Lindane<sup>7,8,9</sup> and Malathion<sup>10</sup> are bioaccumulative, which means the organophosphates accumulate in the body. The initial treatment may not cause a problem. But a lice infestation can occur several times a year and a child may have many treatments during the course of their school days. Conversely, it has been known for a child to have a very nasty reaction from just one application.<sup>10a</sup> Children are at greater risk of neurological poisoning due to their small size and immature immune systems. Some schools operate a "no nit policy" and your child can be sent home from school until they are completely free of lice and nits. The stigma can drive a parent to use these toxic poisons in an effort to get their child back into school. Even the treatments classed as less toxic such as the pyrethroids (e.g. permethrin and pyrethrin) can cause problems for susceptible people.<sup>11,12,13</sup> But, it is more likely that they poison the child rather than the head lice! There are an increasing number of cases where the head lice are becoming resistant to these poisons.<sup>14,15</sup>

With all this in mind, parents can't be blamed for turning to the more unconventional treatments, and there are quite a few around, from combing a commercial brand of mouthwash through your hair to spreading lard on your head and donning a bath cap for three days (not something a child will easily do!). Therefore, it must be a comfort to know that Melaleuca oil<sup>16,17</sup> is becoming a much more accepted treatment for head lice as more clinical studies are carried out. Both tepinen-4-ol<sup>18</sup> and cineole 1,8,<sup>19</sup> the two major constituents in Melaleuca oil, have shown to help eradicate head lice.<sup>20</sup>

Many parents are supportive of a pesticide-free preschool environment. A summer 2007 report from PANNA (Pesticide Action Network North America) followed the efforts of one preschool during a head lice outbreak, and even recommends adding tea tree oil (Melaleuca oil) into shampoo or olive oil.<sup>21</sup>

And, because cases of scabies in schools are on the increase too<sup>2</sup> it is good that Melaleuca oil is an effective eradication treatment for scabies as well.<sup>22</sup>

Before I finish this article I would like to give you some experiential, rather than anecdotal, information for clearing a head lice infestation. Last year, I treated my daughter's hair by saturating it with **Naturals Melaleuca Oil Shampoo** for twelve minutes. She was quite squeamish at the thought of having a head full of dead and dying creatures, so I combed them out with a nit comb. **Melaleuca Oil Shampoo** also conditions the hair, so it really is not an inconvenience.<sup>23</sup> I actually repeated this at 5, 10, 15 and 20 days. On the 1st and 15th day, I added an extra three drops of Melaleuca oil to every tablespoon of shampoo (she uses quite a lot because she has long, thick curly hair). I have to stress here that when using Melaleuca oil it should initially be patch tested on a small area of skin to be sure your child does not have a reaction to it. I'm pleased to report that she has been free of head lice ever since. Knock on wood!

**Editors Note:** Since **Naturals Melaleuca Oil Shampoo** will gently and safely get rid of lice in many cases, wouldn't it make sense that hair washed with this shampoo might "repel" lice, and help your child avoid infestation in the first place? I suggest you regularly shampoo your child's hair with **Melaleuca Oil Shampoo** as a preventative.

For lice infestations that do not respond to the shampoo alone, there is an even more effective treatment using **T36-C5® Melaleuca Oil** and **Melaleuca Oil Shampoo** in our book, [The Melaleuca Wellness Guide](#).

## References

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## Comments From Your Editor

We would love to know what you thought of this report. Please [contact us](#) with any suggestions or comments.

If you have more questions, or want more information about head lice and over-the-counter treatments, check out our head lice report versions from years past. There are some very interesting links about head lice not included in this report. The following three reports are very similar to each other, so you won't need to investigate every link from all three.

[Head Lice Report 2005](#)

[Head Lice Report 2004](#)

[Head Lice Report 2003](#)

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