



## COOTIE CRUSHER

# *Permethrin, Pyrethrins, and Piperonyl Butoxide – Oh, My!*



Most of us don't have to worry about lions, tigers, and bears these days, but if your kids come home with lice, you could be facing a bigger danger: the chemical insecticides most often used to treat these pests. The worst part is that most parents don't understand what they're exposing their children and their families to when they use lice shampoos.

With names like Nix and Rid, these products may sound adorably harmless, but don't forget that their sole purpose is to kill lice. Permethrin and Pyrethrins are the most common chemicals used for this purpose.

Also common are pyrethroids, which are synthetic versions of pyrethrins. Piperonyl Butoxide, on the other hand, is an organic compound that acts as a synergist. While it is not harmful in and of itself, it is paired with Permethrin and Pyrethrins to boost their effects, making them more powerful lice-killing agents.

I know what you're thinking. The FDA has deemed these products safe for use. Unfortunately, there are two major problems with using these chemical pesticides to treat lice.

### *Super Lice*

One reason you might want to look for alternatives to chemical lice treatments is that they no longer work thanks to a super lice epidemic. Lice have become resistant to the pesticides commonly found in chemical shampoos. This means that treatment after treatment will do nothing to stop lice from propagating.

### *Health Concerns*

Do you know how pesticides like Permethrin and Pyrethrins work? They are neurotoxins that penetrate insects and attack their nervous system, causing the nervous system to lose function and resulting in death.

A better question, however, might be what can these toxic chemicals do to people? If you've ever applied such chemical shampoos to your head, you might have noticed side effects like itching or burning right off the bat, but this is a mere annoyance. Allergic reactions are also a possibility.

When these toxins are absorbed into your body you could start to experience more severe symptoms like nausea, dizziness, headache, and fatigue, or even muscle twitches or tremors. In extreme cases, convulsions could occur or you might fall unconscious.

This is because permethrin, pyrethrins, and pyrethroids attack the nervous system and affect brain function in large enough doses. Using a pesticide shampoo to treat lice has been deemed safe by government authorities, but is it?

What if you use these products multiple times? What if one round of treatment isn't enough to kill lice because they've become immune? What happens when you are exposed to these toxic chemicals repeatedly or over a long period of time?

Most of the chemicals that are absorbed into the body will likely be eliminated through urine as waste, but continued exposure can cause buildup of toxins in the fatty tissue, and release at a later time, potentially resulting in the symptoms listed above.



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### *What's the Solution?*

For starters, you should stop using chemical lice treatments immediately. Not only is there a good chance they'll have little effect on lice, but they could have a negative impact on your health and the health of your family.

Next you'll want to look into non-toxic alternatives like the use of natural oils or even visits to clinics that offer heat treatments to kill lice and nits. These options will help you to rid your home of lice without exposing your family to toxic chemicals and further adding to the super lice epidemic.