Study shows that suffocating head lice works in new treatment

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A new non-neurotoxic treatment for head lice has been found to have an average of 91.2% treatment success rate after one week, and to be safe in humans from six months of age and up. This is the finding of a study published today in *Pediatric Dermatology*.

Benzyl Alcohol Lotion 5% (known as Ulesfia) works by suffocating lice, a method which has been attempted by treating with household items such as mayonnaise, olive oil and petroleum jelly. Studies have shown that overnight treatments with these home remedies may initially appear to kill lice, but later a "resurrection effect" occurs after rinsing, because lice can resist asphyxiation. This is accomplished by the louse's ability to presumably close its spiracles, the external entry points to the breathing apparatus, when submerged. Unlike commonly used asphyxiant remedies, scanning electron microscopy appears to indicate that benzyl alcohol lotion effectively asphyxiates lice by "stunning" the spiracles open, allowing the lotion, comprised of mineral oil and other inactive ingredients, to infiltrate the "honeycomb" respiratory apparatus and kill lice.

The phase III trials were comprised of two multicenter, randomized, double-blind, placebo-controlled trials, conducted among ten geographically diverse sites which assessed the clinical effectiveness and safety of benzyl alcohol lotion. 250 participants took part in the trials and were randomised to treatment or vehicle (lotion but with no active ingredient) groups, treatment was given at day one and day seven, and participants were checked for success at day eight and day 14. On day

eight the treatment group had a success rate of 91.2% as an average of both trials, and a 75.6% success rate on day 14; in the vehicle group the success rates were 27.9% and 15.5% respectively.

"Existing over-the-counter head lice treatments contain neurotoxic pesticides as active ingredients, resulting in potential toxicity and other problems, including lengthy applications, odor, ineffective treatment. Resistance has also become a problem now that lice have had such prolonged exposure to these products," said study author Terri L Meinking, PhD, of Global Health Associates of Miami, USA. "This leaves practitioners, parents and patients hoping for a safe, non-neurotoxic cure."

"Since the most popular products have been made readily available, their overuse has caused lice to become resistant just as bacteria have become resistant to many antibiotics," added Meinking. "Because benzyl alcohol lotion kills by suffocation, resistance should not be an issue."

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