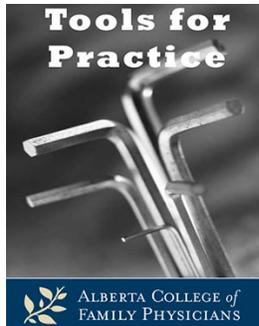


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The louse is (no longer) in the house

Clinical Question: What is the best treatment for head lice?

Bottom-line: Dimeticone (or dimethicone) appears superior to traditional lice treatments (like permethrin or malathion), getting one more in 3-4 patients lice free with no increased adverse events. Dimeticone is a silicone-based product that suffocates lice and is applied to dry hair, left eight hours, and often repeated after one week.

Evidence:

- Statistically significant results:
 - Dimeticone versus permethrin: Two Randomized Controlled Trials (RCTs):
 - British RCT of 90 patients (age 2-45),¹ 4% dimeticone once or 1% permethrin twice (one week apart), found:
 - More dimeticone patients lice free at day nine: 80% versus 36%, Number Needed to Treat (NNT)=3.
 - Adverse events similar and none serious.
 - Brazilian RCT of 145 children (age 5-15),² two applications (one week apart) of 92% dimeticone or 1% permethrin found:
 - More dimeticone patients lice free at day nine: 97% versus 68%, NNT=4.
 - Adverse events: Two cases of ocular irritation from dimeticone.
 - Dimeticone versus malathion: One British RCT of 73 patients (age 1-48),³ two applications (one week apart) of 4% dimeticone or 0.5% malathion. Analysis (considering drop-outs to have lice) found:
 - More dimeticone patients lice free at day nine: 70% versus 33%, NNT=3.
 - Other European dimeticone RCTs found cure rates of 83-92%⁴ and 70% in patients predominantly with longstanding lice and previous failed treatments.⁵

Context:

- 99% of North American lice express genes associated with traditional pediculicide

- resistance.⁶
- Dimeticone is a silicone-based product that acts as an occlusive to suffocate lice.⁷
 - Other occlusive agents like isopropyl myristate also appear more effective than traditional pediculicides.⁸
- In one study <20% children with nits developed active lice.⁹
 - Wet combing better than visual inspection for diagnosing lice.¹⁰
- Head lice primarily transmitted from head to head contact in play, sharing beds, and occasionally by sharing objects like hats, combs.¹¹
 - To decrease re-infestation: Wash clothes worn and linens used two days prior in hot water and dry with high heat. Put un-washable items in a sealed bag for two weeks.^{12,13}
- Lice treatments: Cost ~\$30 most covered by drug plans.¹⁴

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Disclosure:

Authors do not have any conflicts to disclose.

(Kolber's kids have had lice, Nickonchuk's kids have been spared (so far), and Pierse's lack of hair is a natural defense against infestation.)

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