

Alternative Lice and Scabies Treatment and Prevention Measures

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Potential Interventions: Head Lice

❧ I. Pesticide Treatments

❧ II. Physical Methods

❧ III. Suffocating Techniques

❧ IV. Miscellaneous Methods

- Homeopathics
- Herbals
- Neon Product
- Dangerous Interventions

I. Pesticide Lice Treatments

❧ A. Lindane

❧ B. Malathion

❧ C. Synergized Pyrethrins

❧ D. Permethrin

A. Lindane

- ☞ Resistance since the 1970s
- ☞ Toxicity: Personal and environmental
- ☞ Reports of seizures, irritability, nervousness

B. Malathion (Ovide, Prioderm)

- Residual activity; highly odorous
- Prescription-only in the U.S. as Prioderm around 1983, discontinued, then reintroduced as Ovide in the late 1980s, removed again, reintroduced in 1999
- OTC in England

B. Malathion

- ❧ 1990: Failures reported (Goldsmid; Med J Aust 153:233-234)
- ❧ 1990: Eggs remained (Kyle; J R Soc Health 110:62-63)
- ❧ 1991: Failures reported (Burgess; Pharm J 247: 630-632)
- ❧ 1994: 8% failure rate (Chosidow, et al.; Lancet 344: 1724-1727)

B. Malathion

- ❧ 1999: 64% failure rate (Downs, et al.; Parasitol Today 15: 1-4)
- ❧ 1999: 64% failure rate (Downs, et al.; Br J Derm 141:508-511)
- ❧ 2000: Case report of resistance (Bailey, et al.; Australas J Dermatol 41:250-254)
- ❧ 2001: Resistance widespread in U.K. (Dodd; Cochrane Review Issue 2)

B. Malathion

- 2001: In vitro resistance in U.K. may be as high as 64% (Dodd; BMJ 323:1084)
- 2002: Resistance in many parts of England (Downs, et al.; Br J Dermatol 146:88-93)

B. Malathion

☞ Is resistance present in the U.S.?

☞ Reports are anecdotal at the present time

B. Malathion

∞ Safety:

- Flammable; must remain on hair until dry; shampoo only after 8-12 hours
- Keep out of eyes
- Skin irritation, stinging
- Do not use if pregnant or nursing without physician prescription
- 2nd treatment required if lice present after 7-9 days

C. Synergized Pyrethrins

- ❧ 1986: Several reports of resistance (Rasmussen; Adv Dermatol 1:109-125)
- ❧ 1995: Resistance in body lice (Mumcuoglu, et al.; Med Vet Entomol 9:427-432)
- ❧ 1997: Treatment failures are common (Anon; Medical Letter 39:7)
- ❧ 1999: Efficacy questionable due to many failure reports (Pollack, et. al; Arch Pediatr Adolesc Med 153: 969-973)

C. Synergized Pyrethrins

- ❧ 2000: Resistance appears to be prevalent (de Berker, et al.; Australas J Dermatol 41:209-212)
- ❧ 2000: Case report of resistance (Bailey, et al.; Australas J Dermatol 41:250-254)
- ❧ 2001: Case report of resistant pubic lice (Speare, et al.; Aust Fam Physician 30:572-574)

C. Synergized Pyrethrins

☞ Safety:

- Do not use near eyes; protect eyes with towels
- Do not contact nose, mouth, vagina
- Do not use if allergic to ragweed
- If swallowed call poison control

D. Permethrin 1% Crème Rinse (Nix)

- ✧ Rx since 1986 in the U.S.
- ✧ OTC since 1990 in the U.S.
- ✧ Residual effect



D. Permethrin

- ❧ 1990: Failures occurring (Goldsmid; Med J Aust 153: 233-234)
- ❧ 1995: Failure in Israel in 1993 (Mumcuoglu, et al.; Med Vet Entomol 9:427-432)
- ❧ 1995: Failures in Czech Republic (Rupes, et al.; Centr Eur J Pub Hlth 3:30-32)

D. Permethrin

- ❧ 1995: Resistance in Britain (Anon; Pharm J 255:490)
- ❧ 1995: Resistance in Britain (Burgess, et al.; BMJ 311:752)
- ❧ 1997: Resistance is increasing (Anon; Medical Letter 39:7)
- ❧ 1998: Resistance in Wash. State (Bell; Pediatr Infect Dis J 17:923-924)

D. Permethrin

- ❧ 1999: Very high concentrations of permethrin unable to overcome resistance (Downs, et al.; Parasitol Today 15:1-4)
- ❧ 1999: Almost useless in the U.K. (Dawes, et al.; BMJ 318:385-386)
- ❧ 1999: Confirmed permethrin resistance (Lee, et al.; Pesticide Biochem Phys 66:130-143)

D. Permethrin

- ❧ 2000: Case report of resistance (Bailey, et al.; Australas J Dermatol 41:250-254)
- ❧ 2000: Resistance in Argentina (Picollo, et al.; J Med Entomol 37: 721-725)
- ❧ 2001: Resistance widespread in Britain; resistance develops rapidly [in as little as 2.5 years in Israel] (Dodd; Cochrane Review: Issue 2)

D. Permethrin

- ❧ 2001: In vitro resistance in U.K. may be as high as 87% (Dodd; BMJ 323:1084)
- ❧ 2002: Significantly less than 95% effective (Meinking, et al.; J Pediatr 141:665-670)
- ❧ 2002: Resistance in many parts of England (Downs, et al.; Br J Dermatol 146:88-93)

D. Permethrin

☞ Safety:

- Do not use near eyes
- Keep out of nose, mouth, vagina
- Itching, redness or swelling of scalp may occur
- May cause breathing difficulty or an asthmatic episode

Defenses of Manufacturers to Resistance Reports

- They have reports of efficacy: BUT Lab-bred lice are different from free-living lice
- Blaming the victim: An old manufacturer defense
 - Misapplication (failure to use a 2nd treatment, use of too little product)
 - Re-exposure
 - Failure to remove nits
 - Failure to clean the environment

Pesticide Summary

- Any study of efficacy is dated because of growing problem of resistance
- Resistance to a specific chemical does not disappear or lessen in severity; it can only increase

II. Physical Methods

❧ A. Individual Nit/Louse Removal

- Time-consuming
- Difficult

❧ B. Combing

- Shows most promise at present

B. Combing

- ❧ 1995: Any efficacy from pyrethrins may be due to combing (Burgess; BMJ 311:752)
- ❧ 1995: Free combs packaged with pesticides don't work (Burgess; Adv Parasitol 36:271-342)
- ❧ 1998: One comb [LiceMeister] is superior to others (Bell; Pediatr Infect Dis J 17: 923-924)

B. Combing

➤ Advantages of combing:

- No topical irritation to scalp
- No systemic absorption
- No danger to the environment
- Can simultaneously detect and treat, depending on the comb chosen

B. Combing

➤ Superior comb: LiceMeister

- FDA-approved medical device
- Excellent removal of lice AND nits
- Stainless steel teeth locked into plastic handle
- Maintains integrity
after boiling: reusability
- Detects and treats



B. Combing: Robi-Comb

➤ Efficacy anecdotal



III. Suffocating Methods

- ❧ Unproven and extremely unpleasant
- ❧ Olive oil
- ❧ Vaseline: Overnight under a shower cap
- ❧ Mayonnaise (full-fat): Overnight
- ❧ Dippity-Do Hair Styling Gel
- ❧ Salad dressings: Overnight under Saran wrap
- ❧ Baby oil, Mineral oil

III. Suffocating Methods

- Removal of suffocating agents is difficult
- May involve many exposures to harsh shampoos that will leave the scalp more irritated than if they had kept the lice!

IV. Miscellaneous Methods

❧ Homeopathics

❧ Herbals

❧ Neon Product

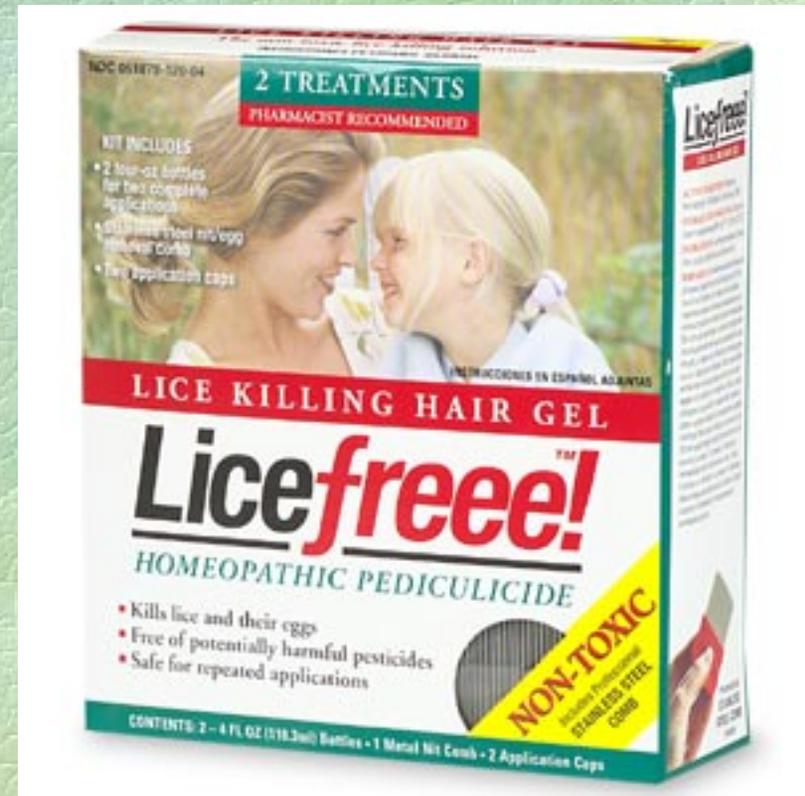
❧ Dangerous Methods

❧ Efficacy of all anecdotal; potentially toxic

Homeopathic Lice Products

☞ Salt water: Licefreee!

☞ Efficacy unknown



Herbal Lice Products

- ❧ Rid Pure Alternative: dimethicone
- ❧ Efficacy unknown



Herbal Lice Products: All Unknown

☞ Rue

☞ Tea tree oil

☞ Paw Paw

☞ Sage

☞ Rosemary

☞ Thyme

☞ Pennyroyal

☞ Essential oils



HairClean 1-2-3
WORKS IN 15 MINUTES

Completely Natural **Lice KIT**

- Non-Toxic
- University Proven
- Professionals' Choice
- Fast • Easy • Safe

Family Size
3 APPLICATIONS - 1 year

- Works in 15 minutes!
- Clinical data proves it works.
- Doctor recommended, school nurse tested.
- All natural, made from essential oils.
- Contains no synthetic pesticides.
- Kids Love It
- Leaves hair soft and manageable - easy to nit pick.
- Lice are not resistant.
- Instructions in English and Spanish.



Neon Lice Product!

- ❧ Neon Nits
- ❧ Efficacy unknown
- ❧ Noxious when sprayed on hair



Dangerous Interventions

☞ Gasoline

☞ Kerosene

☞ Lantern oil

☞ Industrial strength diazinon

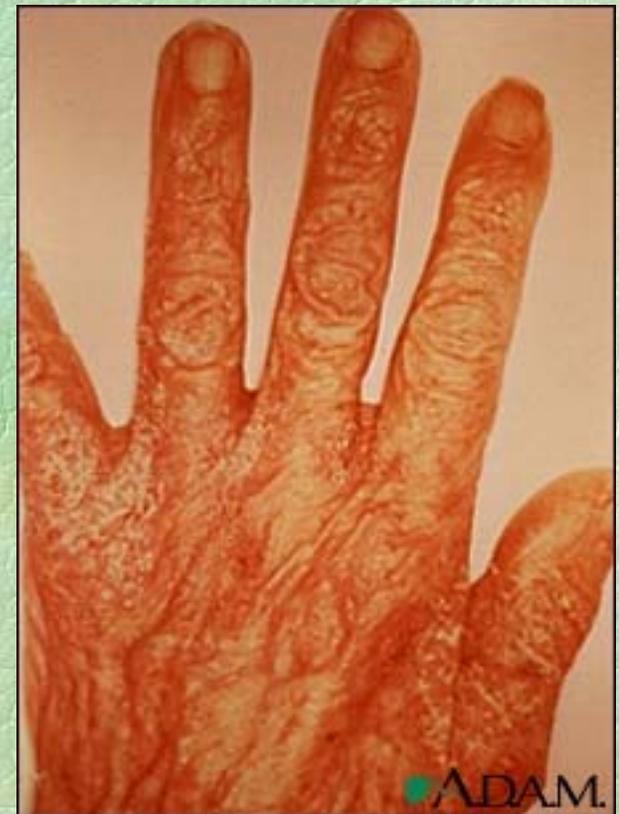
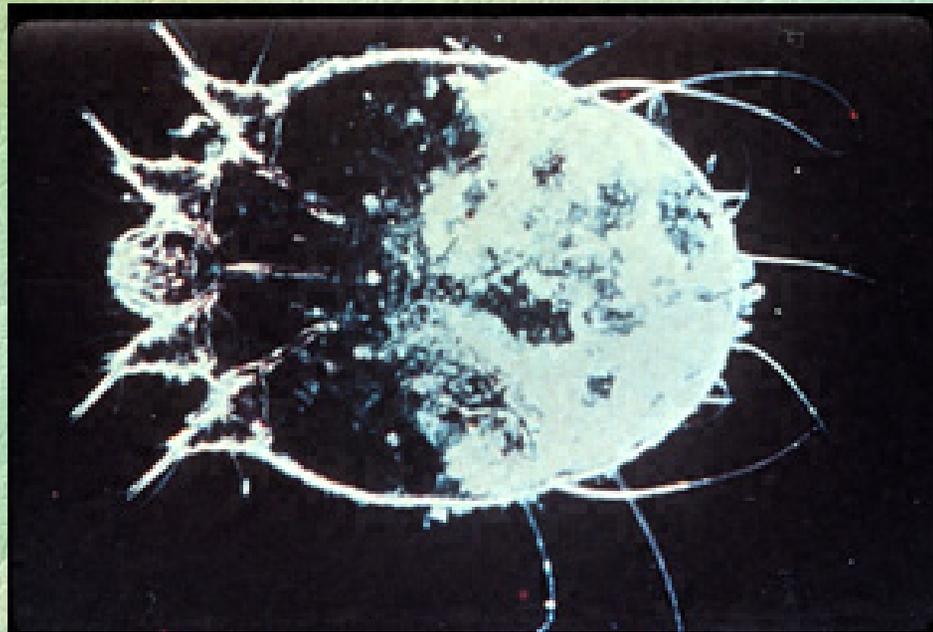
☞ All have caused severe burns, death, disfigurement, or mental disability

Head Louse Summary

- ❧ Avoid gasoline, kerosene, etc.
- ❧ Avoid pesticides
- ❧ Avoid unproven methods
- ❧ Consider thorough combing

Scabies: Beneath the Skin Surface

➤ 0.3-0.4 mm long, just visible to the eye



Potential Interventions: Scabies

❧ Lindane

❧ Permethrin 5% (Elimite): CDC says agent of choice

❧ Crotamiton (Eurax Cream): less efficacious

❧ 10% Sulfur in Petrolatum: pharmacy compounded

❧ Ivermectin (Stromectol)