



Lake McDonald – Glacier National Park

## PIC QUESTION OF THE WEEK: 6/27/11

Q: What are the current guidelines for the treatment of head lice?

A: According to the Centers for Disease Control and Prevention (CDC), the parasite *pediculus (p.) humanus capitis*, commonly known as *head lice*, infests an estimated 6 to 12 million children yearly in the United States. *P. corporis (body louse)* is a subspecies of *pediculus humanus* while the *pubic louse* belongs to another species known as *p. pubis*. The transmission of head lice generally occurs through direct head to head contact and is predominantly found in children due to their tendency for group play. Close contact is necessary because the parasite is incapable of jumping or flying. Its only means of movement is crawling. In suspected cases, all close contacts and family members should be evaluated immediately. This parasite exists in two forms: an unhatched *egg* known as a *nit* or in adult form referred to as lice. When evaluating the scalp, the nit will be attached to the hair shaft while adult lice will be continually crawling. The ideal treatment regimen includes pharmacologic therapy combined with appropriate supplemental measures. Pharmacologic options are classified based on their ability to kill live lice (*pediculocidal*) or nits (*ovicidal*). Pyrethrins (A-200, Pronto, Rid, etc.) and permethrin lotion 1% (Nix, etc.) are over-the-counter (OTC) pediculocides. All OTC preparations are limited to use in children at least 2 years of age. They must be applied twice (day 1 and day 9) in order to kill newly hatched lice. Malathion lotion 0.5% (Ovide), benzyl alcohol lotion 5% (Ulesfia), and lindane shampoo 1% are available only through prescription. Malathion provides dual activity; however, it only partially kills nits. The other two prescription options are only pediculicidal. Lindane is reserved for therapy in those who have failed other treatment options. The National Pediculosis Association advises against the use of lindane due to possible neurologic toxicity. Benzyl alcohol is the only treatment option approved for use in children *6 months* of age and above while malathion is limited to use in children at least *6 years* of age. As with OTC medications, these products should be reapplied on day 9. Adverse effects of topical pediculocides include irritation of the skin, scalp, and eyes and numbness at the site of application. In addition to pharmacologic therapy, supplemental measures must be employed to ensure complete eradication of the parasite. These consist of using *nit* combs following application of medication use as well as machine washing and drying of all clothing, bed linens, and other items the patient may have contacted. Water temperature must be at least 130° F. Vacuuming of the floor and furniture are also necessary. Head lice continue to be a major public health concern. Identification and appropriate treatment are crucial for eradication of this parasite.

### References:

- Food and Drug Administration. Treating Head Lice. <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm171730.htm> Accessed June 8, 2011.
- Centers for Disease Control and Prevention. Head Lice: Treatment. <http://www.cdc.gov/parasites/lice/head/treatment.html> Accessed June 8, 2011.
- Frankowski BL, Bocchini JA, Council on School Health and Committee on Infectious Diseases. Head lice. *Pediatrics* 2010;126:392-403.

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