

Head Lice: Practical Approaches in Management

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Faculty

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Objectives

- **Verbalize the scope of the problem with head lice**
- **Describe the life cycle and transmission of head lice**
- **Verbalize the assessment and signs and symptoms of head lice**
- **Verbalize how to manage head lice**

Head Lice: The Problem

- **Parasitic infection of scalp**
- **Responsible for cost of \$367 million dollars per year in the United States**
 - **Treatment**
 - **Lost wages**
 - **School expenses**

Urban Legends: Head Lice

- **Patients who have head lice are dirty**
- **Patients who have head lice do not wash their hair**
- **Only poor people have head lice**
- **Head lice jump from scalp to scalp**
- **All nits must be removed from the scalp**

Physical Characteristics: Head Lice

- **About the size of a sesame seed**
- **6 legs**
- **Tan or gray color**

Eggs to Adults: Head Lice

- Eggs incubate - body heat
- Nymph
 - Casing and goes through three stages
- Female louse
 - Laying eggs about 1.5 days after becoming adult

Eggs to Adults: Head Lice

- If no treatment, cycle repeats after three weeks

Life Cycle: Head Lice

- Eggs - 7 to 10 days
- Nymphs - 9 to 12 days
- Adult - 4 weeks

Incubation Period: Head Lice

- 7 to 12 days
- Mature head lice at 9 - 12 days

Signs and Symptoms: Head Lice

- Itching
- Nits attached to hair shaft 4 mm or less from scalp
- Crawling lice
- Excoriated scalp

Signs and Symptoms: Head Lice

- Crusting from secondary bacterial infection
 - Enlarged lymph nodes

Transmission: Head Lice

- Scalp to scalp most common
- Can be transmitted on fomites such as hats, combs, pillowcases
 - Not as common due to inability of louse to remain viable

Practical Points: Head Lice

- Do not transmit other human disease
- Feed on blood
- Crawl
- Attach close to the scalp
- Length of infestation can be predicted by where the nit is on the hair

Diagnosis: Head Lice

- Visual inspection
- Adult lice do not like light and will crawl quickly
- Easier to see with wet hair

Over the Counter Treatments: Head Lice

- Permethrins
- Pyrethrins and piperonyl butoxide
- Over the counter treatments - advantage of less cost and ready availability
- The disadvantage - some lice are resistant

Just Say Yes to the Nits!!!

- Nits can be difficult to remove even after effective treatment
- The American Academy of Pediatrics states that a healthy child should not be restricted from school because of head lice or nits

Head Lice After Treatment

- Living lice in the hair 24 hours after treatment
 - Consider incorrect usage of product
 - Consider hatching after treatment
 - Consider reinfestation
 - Consider resistance

Recommended Measures: Persistent Head Lice

- Retreat after 24 hours
- Use a different product
- Strongly consider prescription product

Prescription Agents: Head Lice

- Malathion
- Benzyl alcohol 5%
- Spinosad
- Ivermectin
- ?Oral Ivermectin?

After Head Lice Treatment: Other Considerations

- Persistent scalp itching
- Burning scalp
- May require topical steroids and oral antihistamines

Treatment of Close Contacts: Head Lice

- Treat all infested people in the household
- Treat the bedmate / bedmates
- Do not treat all people in the house unless head to head contact

Environmental Cleaning: Head Lice

- Use reasonable household cleaning measures
- Machine wash bedding
- Vacuum floors and surfaces
- Chemical treatment of the environment has not been shown necessary

References

- Devore, Cynthia, "Head Lice," *Pediatrics*, Volume 135, Number 5, May 15, 2015.
- Heymann, David, *Control of Communicable Diseases in Man*, 20th Edition, pages 446-448.
- Red Book, 2015 Report on the Committee of Infectious Diseases, American Academy of Pediatrics, pages 597-601.
- Public Health Image Library