



## PEDICULOSIS (Outbreaks only)

1. **Agent:** *Pediculus humanus capitis*, the head louse; *Phthirus pubis*, the pubic louse; *Pediculus humanus corporis*, the body louse.

2. **Identification:**

a. **Symptoms:** Itchiness (or may be asymptomatic) or infestation of the scalp or the hairy parts of the body (including eyebrows) with adult lice, larvae, or nits (eggs). Sores on the head caused by scratching. Patients with pubic lice may have bluish-colored macules on chest, abdomen, or thighs (maculae ceruleae).

b. **Differential Diagnosis:** Scabies, eczema, impetigo, and insect bites.

c. **Diagnosis:** Visualization of nits or lice microscopically or clinically. These are commonly found behind the ears and near the back of the neck.

3. **Incubation:** From egg (nit) to first nymph is 6-9 days. It takes 2-3 weeks from hatching of eggs to mature louse capable of reproduction.

4. **Reservoir:** Human. Children ages 3–11 years are considered highest risk.

5. **Source:** Infested person.

6. **Transmission:** Direct contact with hair of infested person; less commonly, indirect contact with their personal belongings, especially head coverings, clothing, combs, brushes, helmets, and head phones. Lice cannot jump or fly.

7. **Communicability:** While viable lice and eggs remain on infested person and clothing. (Head lice survive only 1-2 days away from the scalp, and nits are unlikely to hatch away from the scalp.)

8. **Specific Treatment:** Permethrin lotion 1% (Nix<sup>®</sup> creme rinse), or pyrethrin (RID<sup>®</sup>, A-200<sup>®</sup>, R&C<sup>®</sup>) pediculicidal shampoo can be used to treat both head and pubic lice. Treatment may need to be repeated one week later for resistant or newly hatched lice, as it does not affect nits. Results are best when combined

with nit combing every 3 days for 2 weeks. Permethrin is approved for use on children 2 months of age and older.

Spinosad topical suspension, 0.9% (Natroba<sup>®</sup>) is approved for the treatment of children 6 months of age and older. It is applied and worked through dry hair, and may not require nit combing or repeat treatment.

Ivermectin lotion 0.5% (Sklice<sup>™</sup>) is FDA approved for children 6 months of age and older. The prescribed lotion is applied to dry hair, thoroughly coating the hair and scalp, then removed after 10 minutes.

Benzyl Alcohol Lotion 5% (Ulesfia<sup>®</sup> Lotion) applied to the scalp and hair is a prescription medication for treatment of head lice in children over 6 months of age and adults. Treatment may need to be repeated one week later for resistant or newly hatched lice. Results are best when combined with nit combing every 3 days for 2 weeks. It can be irritating to the skin.

Treatment with Malathion lotion (Ovide<sup>®</sup>) may be considered when other treatment failures occur. Ovide<sup>®</sup> is not indicated for neonates or infants. While it has the benefit of effectiveness on nits, it must be followed with caution as the lotion is flammable. Do not expose the lotion and wet hair to open flames or electric heat sources, including hair dryers and electric curlers. Do not smoke while applying lotion or while hair is wet; allow hair to dry naturally and remain uncovered after application.

Body lice need no specific treatment except improving hygiene and cleaning clothes.

9. **Immunity:** None.

### REPORTING PROCEDURES

1. **Outbreaks reportable.** *California Code of Regulations*, Section 2500. Investigation can be conducted by telephone. In-person site visits might be considered for locations that require extra guidance, have special considerations, or if requested. Outbreaks



include a minimum of 5 confirmed cases occurring within a 3 to 5-day period and epidemiologically linked (i.e., within a single classroom, team, or group).

2. **Report Form:** **OUTBREAK/UNUSUAL DISEASE REPORT (CDPH 8554)**<sup>1</sup> (outbreaks only).

3. **Epidemiologic Data:**

- a. Site of infestation.
- b. Contact with infested persons or fomites.
- c. School or other group contacts should be identified (e.g. day-care centers).

## CONTROL OF CASE, CONTACTS & CARRIERS

### CASE:

1. Delouse person, clothing, and other personal articles (possible fomites).
2. The California Department of Public Health recommends following a “no-lice” policy for school and public gatherings and does not recommend excluding children if only nits (eggs) are present. If necessary, school exclusion should occur at the end of the school day.
3. The California School Nurses Organization recommends that students not be unnecessarily excluded from school *once appropriate treatment is initiated* and parents are educated in the appropriate follow up procedures.
4. With the presence of pubic lice, it is recommended to be tested for other sexually transmitted infections.

**CONTACTS:** Household members may need to be treated prophylactically if they share bedding, toilet articles, clothing, etc.

### PREVENTION-EDUCATION

1. Discuss the recognition of infestation, especially with school nurses or aides.

<sup>1</sup> <http://publichealth.lacounty.gov/acd/Diseases/EpiForms/OBUusualDiseaseReportCDPH8554.pdf>

<sup>2</sup>

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/SchoolGuidanceonHeadLice2018.pdf>

2. Instruct infested individuals or family to delouse head or body according to medical or label instructions. All active cases should be treated at the same time.
3. Consult with pediatrician or family physician, reporting to them any skin irritations. Do not repeat treatment unless indicated or instructed by the physician.
4. Launder bed linens, towels, and clothing at proper temperature (130°F) then dry on hot cycle for at least 20 minutes; or dry clean or place items in tightly closed plastic bag for 2 weeks. Disinfest personal articles (combs, brushes, hair bands and barrettes, etc.) by boiling for 5 minutes or by soaking them in rubbing alcohol or Lysol® disinfectant for 1 minute. Vacuum rugs and upholstered furniture. Insecticide sprays are not recommended.
5. Advise parents to check child's scalp for lice and/or nits for 2 weeks following treatment.
6. The California Department of Public Health school recommendations are: early detection of head lice infestations through routine screening, distribution of educational materials regarding head lice to school staff and parents, nit combing and treatment, treatment of children with lice infestation, and a no-lice (as opposed to no-nit) policy. For more information see [Guidance on Head Lice Prevention and Control for School Districts and Child Care Facilities, 2018](#)<sup>2</sup>.
7. There is no convincing scientific evidence to support the use of products such as vinegar or other agents to dissolve the glue on nits or kill them. Also, there is no scientific data to support the claim that mayonnaise, oils, or any other product on the hair will suffocate nits and lice.

### DIAGNOSTIC PROCEDURES

None other than clinical observation.