

DEFINITION

Pediculosis is the infestation with human parasitic lice.

IMMEDIATE CONSULTATION REQUIRED IN THE FOLLOWING SITUATIONS

- None

CAUSES

There are 3 types of lice:

- Head lice (*Pediculus humanus capitis*)
- Body lice (*Pediculus humanus corporis*)
- Pubic lice (*Phthirus pubis*)

PREDISPOSING AND RISK FACTORS

Head and Body Lice:

- Crowded housing (e.g., shared beds, crowded schools)
- High pediatric population
- Failure to recognize an infestation
- Faulty application of treatments
- Failure to treat close contacts simultaneously
- Failure to eradicate lice from linens and clothing at time of treatment
- Lack of running water, which can predispose to poor hygiene and secondary skin infection

Pubic Lice:

- Sexual contact

HISTORY

- Most lice infestations are asymptomatic, pyoderma around the neck and the ears, and nuchal lymphadenopathy may be the only symptoms.
- Head lice: involves the scalp. Nits appear as small eggs on the hair shaft.
- Body lice: involves the body. Nits can be found in the seams of clothing.
- Pubic lice: involves the pubic area and may be found in hairs of abdomen, thighs, axillae, eyebrows, and eyelashes. They are usually found at the base of the hair shaft where they lay nits.
- Severe itching of involved area
- Secondary bacterial infection may occur

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- Client may find lice or nits on bedclothes and in seams of clothing.
- Other household members with similar symptoms

PHYSICAL FINDINGS

- Small grey-white nits are difficult to dislodge as they are cemented to base of hair shafts and are found in seams of clothing.
- Lice may be visualized.
- Excoriation of skin in affected areas.
- Pruritus of affected area (allergic reaction).
- Cervical and nuchal lymph node enlargement.
- Febrile episodes secondary to staphylococcal infections.

DIFFERENTIAL DIAGNOSIS

- Dandruff
- Scabies
- Bed bugs
- Allergic contact dermatitis
- Seborrheic dermatitis
- Eczema
- Dried hairspray
- Dirt, lint, sand
- White piedra (fungi, *Trichosporon beigelii* on the hair shaft)
- Anogenital pruritus
- Pseudonits

COMPLICATIONS

- Recurrent infestation
- Secondary skin infection

INVESTIGATIONS AND DIAGNOSTIC TESTS

- None

MAKING THE DIAGNOSIS

- Finding live adult lice, nymphs or nits on the head, body, or pubic area.

MANAGEMENT AND INTERVENTIONS

Goals of Treatment

- Eradicate infestation
- Prevent recurrences
- Prevent spread to close contacts

Appropriate Consultation

- Consult a physician/RN(NP) if there is treatment failure with non-pharmacological interventions and topical treatments.

Non-Pharmacological Interventions

- Remove lice and nits with tweezers or nit comb.
- Examine all family members and close personal contacts, treat if infested.
- Anyone who shares a bed requires assessment and treatment to prevent re-infestation.
- In young children or others in whom avoidance of topical pediculicides is preferred, mechanical removal of lice by wet combing is an alternative therapy. Comb wet hair with a fine-toothed comb with an added lubricant such as hair conditioner, vinegar, or olive oil. Combing is done until no lice are found. Repeat wet combing every 3 to 4 days, for several weeks, until no lice are found. The procedure may take 15-30 minutes or longer with thick, long hair.

Treatment of lice and nits found on eyebrows or eyelashes:

- If there are only a few live lice and nits present, it may be possible to remove these with fingernails or a nit comb.
- If additional treatment is needed for lice or nits on the eyelashes, carefully apply ophthalmic-grade petrolatum ointment (Sterilube, Duolube). Pull down the lower lid and apply to the eyelid margins 2-4 times a day for 10 days to be effective. Regular petrolatum (Vaseline) should not be used because it can irritate the eyes.

Pharmacological Interventions

Use one of the following three options:

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1. Permethrin 1% or 5% concentration (Nix Cream Kwellada-P Creme Rinse)
 - Do not use in children < 2 months of age.
 - This is the drug of choice for most clients.
 - It is contraindicated in clients with chrysanthemum allergy.
 - Permethrin resistance may result in treatment failure.
 - Treatment may temporarily exacerbate the pruritus erythema and scalp edema of lice infestation. Burning/stinging, tingling, numbness, or scalp discomfort is usually transient and mild.

Directions

Head Lice:

- Wash hair with conditioner-free shampoo, rinse with water, and towel dry. Apply Permethrin 1% to saturate the hair and scalp (½–1 bottle for adults and children with long hair); leave on for 10 minutes then rinse.
- Repeat treatment in 7-10 days.
- Do not use permethrins to treat lice of the eyelashes or eyebrows.

Pubic Lice:

- Thoroughly saturate the pubic hair with Permethrin 5%; leave on for 10 minutes then rinse.
- May repeat after 7-10 days if live lice are observed.

2. Pyrethrins/piperonyl butoxide (R&C Shampoo)

Head Lice/Pubic Lice:

- Shampoo: apply to thoroughly saturate dry hair and massage into scalp/skin; leave on for 10 minutes. Add a little water; work the shampoo into the hair and skin to form lather. Rinse thoroughly. Repeat treatment in 7-10 days.
- Adverse effects include contact dermatitis and eye irritation.
- Contraindications include clients allergic to ragweed, chrysanthemum, or other pyrethrin products.
- Do not use pyrethrin products to treat lice of the eyelashes or eyebrows.

3. Isopropyl myristate 50%/cyclomethicone 50% (Resultz)

Head Lice:

- Apply to dry hair and scalp (30–60 mL for short hair, 60–90 mL for shoulder-length hair, 90–120 mL for long hair).

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- Allow product to remain on hair and scalp for 10 minutes. Rinse off with warm water.
- Repeat in 7-10 days.
- May cause local irritation. If contact with eyes, immediately flush well with water.
- Not recommended for children < 2 years of age.
- Resistance to product is unlikely as it has a physical mode of action.

Body Lice:

- Pediculicides are unnecessary. Simple hygienic measures, including bathing and laundering of infested clothing and linens in hot water, are effective management. Alternative strategies for items that cannot be washed are dry cleaning or storing them in a sealed plastic bag for 2 weeks.
- If lice are adherent to body hairs, then pediculicides may be helpful. Use one of the options above.

Pregnancy

- Permethrin 1% or 5% concentration (Nix Cream, Kwellada-P Creme Rinse) is the treatment of choice in pregnancy. Second choice of treatment is Pyrethrins/piperonyl butoxide (R&C Shampoo, R&C II Spray).

Client and Caregiver Education

- Counsel client/caregiver about the appropriate use of medications (importance of compliance, side effects, etc.).
- Suggest that the client/caregiver informs others (e.g., schools, day cares, etc.) so that they can take appropriate action.
- Educate client/caregiver to encourage any close contacts to attend clinic for assessment and treatment.
- Do not use a combination shampoo and conditioner, or conditioner before using lice medicine. Do not rewash the hair for 1–2 days after the lice medicine is removed.
- Recommend avoidance of sharing of combs, brushes, hats, etc.

Cleaning:

- Recommend cleaning all personal items (e.g., combs, brushes, barrettes). Repeat this daily until the lice are gone.

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- Wash in hot water for 15 minutes or run through a dryer on the hottest setting.
- Clean all items that have been in prolonged or intimate contact with the client's head or body (bedding, hats, etc.) at the time of first treatment.
- For items that cannot be washed or put in a dryer, place them in a sealed plastic bag for 2 weeks or for 48 hours at -10°C.
- Suggest that mattresses, carpets, furniture (which can harbor lice) be vacuumed thoroughly. Intensive vacuuming of other furniture or floors is unlikely to be helpful.
- R&C II Aerosol Spray can be used to clean items
 - Aerosol: saturate area (5–10 squirts); wash off after 30 minutes.
- Use of household pesticide sprays should be avoided.

Monitoring and Follow-Up

- Follow-up if treatment fails.
- For pubic lice:
 - If after 10 days live lice are still present, repeat treatment.
 - Clients with pubic lice should be evaluated for sexually transmitted infections (STIs).
 - All sex partners from within the previous month should be informed that they are at risk for infestation and should be treated.
 - Clients should avoid sexual contact with their sex partner(s) until both they and their partners have been successfully treated and reevaluated to rule out persistent infestation.

Referral

- Usually not necessary unless there is persistent treatment failure.

DOCUMENTATION

- As per employer policy

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