

## Pubic and body lice

### What are lice?

Lice are blood-sucking insects and specific parasites of human beings. Lice are 1-3 mm long and have three pairs of legs that end in powerful claws.

- **Pubic lice** are slightly smaller than head lice and **body lice**.
- The female lives for 1-3 months but dies when separated from the host. The female louse lays up to 300 eggs, called nits, during her lifetime.
- The nits are less than 1 mm in diameter and, when viable, are opalescent. The nits hatch 6-10 days after they have been laid, giving rise to nymphs that become adults in 10 days.

Three species of lice have adapted to live on humans:

- Head louse (*Pediculus humanus capitis*) - see separate [Head Lice](#) article.
- Crab (or pubic) louse (*Phthirus pubis*).
- Body louse (*Pediculus humanus*).

### Pubic lice<sup>[1]</sup>

The pubic louse (*Phthirus pubis*) is 'crab'-shaped, grey-brown in colour, and about 2 mm in length. The female lays eggs (smaller than a pinhead) on the hair shaft, near to the body. The eggs hatch after about 6-10 days. The empty nit eggshells are tightly attached to the hair. The female louse lives for 1-3 months. Eradication of pubic lice from the body is unlikely unless treated.

### How common are pubic lice? (Epidemiology)

- Pubic lice infestation is found worldwide. The incidence of pubic lice infestation has been estimated at 1.3–4.6% with an average of 2% worldwide.
- Pubic lice are transmitted by close body contact, which can be from sexual contact or from close family contact (eg, from an infested beard or chest).
- Pubic lice in children may be an indication of sexual abuse but most children with pubic lice infestation have probably acquired this innocently.

### Signs of pubic lice (presentation)

- The incubation period is usually between five days and several weeks.<sup>[2]</sup>
- The diagnosis is based on finding adult lice or eggs. Pubic lice live on coarse hair, especially in the pubic and perianal areas but also on the eyelashes, abdomen, back, axillae and the head. Therefore, all hairy parts of the body should be examined. A fine-toothed comb may be useful for detection.
- Dermatoscopy has also proved a useful diagnostic technique in cases of doubt.<sup>[3]</sup>
- Itchy red papules are the most common presentation. Itching takes 1–3 weeks to develop after the first infestation but may occur immediately following re-infestation. Itching tends to be worse at night.
- Blue macules may be visible at feeding sites.<sup>[2]</sup>
- Minute dark-brown specks of louse excreta are sometimes seen on the skin and underwear.

### Differential diagnosis

- **Nits:** seborrhoeic scales, small crusts of scratched dermatitis, hair muffs (secretions from the hair follicle that are wrapped round the hair shaft). These can all be brushed off but nits are firmly attached to the hair.

- Body (clothing) lice (*Pediculus humanus*), which are slightly larger than pubic lice and found only on clothes; [head lice](#) (*Pediculus humanus capitis* - slightly larger than pubic lice and found only on the scalp).
- Itchy red papules: [scabies](#).

## Management of pubic lice

- Consider whether the pubic lice infestation has been acquired via sexual or non-sexual contact.
- If acquired via sexual contact, refer to a genitourinary medicine (GUM) clinic for treatment, screening for other sexually transmitted infections and contact tracing.<sup>[2]</sup>
- Treat the individual with a topical insecticide: two applications of malathion 0.5% aqueous lotion or permethrin 5% dermal cream, seven days apart. All surfaces of the body should be treated, including the scalp, neck and face (paying particular attention to the eyebrows and other facial hair).<sup>[4]</sup>
- Advise the individual to avoid close body contact until they and any current sexual partner have been treated.
- Any close contacts over the previous three months should be examined for pubic lice.
- For people with infestation of the eyelashes, treat the eyelashes with an inert occlusive ophthalmic ointment (eg, simple eye ointment BP) or a topical insecticide (a cream rinse or shampoo should be used). An inert occlusive ophthalmic ointment should be used for people under the age of 18 years and for those who are pregnant or breast-feeding.<sup>[5]</sup>
- If pubic lice infestation is unresponsive to initial insecticide treatment, repeat the previous treatment with the correct technique (rather than switching to a different treatment).
- If insecticide resistance is suspected, switch to the alternative insecticide (malathion or permethrin).
- When re-infestation occurs, repeat the previous treatment; assess all close contacts for pubic lice and treat all positive cases simultaneously.

## Complications of pubic lice

- Excoriation and skin infection due to scratching.
- [Blepharitis](#), [conjunctivitis](#), or corneal epithelial keratitis when the eyelashes are affected.

## Prevention of pubic lice

Shaving the infested areas does not provide protection from re-infestation because pubic lice need only a minimal length of hair on which to lay eggs. One study suggests the recent trend towards removal of pubic hair has reduced the incidence of pubic lice in the general population.<sup>[6]</sup>

## Body lice<sup>[7]</sup>

### How common are body lice? (Epidemiology)

- Pediculosis is usually caused by contact with an infested person.
- The body louse (*Pediculus humanus*) is most often seen in cold climates, in poor sanitation and with overcrowding.<sup>[8]</sup>
- Body lice also occur mainly when clothes are not changed or washed regularly. Therefore, homeless populations are predominantly affected.<sup>[9]</sup>
- Pediculosis and scabies may co-exist in the same individual.

### Signs of body lice (presentation)

- Patients usually present after discovering lice or nits.
- Many lice infestations are asymptomatic.
- Pruritus is accompanied by excoriations that can become infected secondarily and papules linked to bite reactions.
- Diagnosis is based on seeing eggs (nits), nymphs or mature lice. Observing lice is difficult. Nymphs and mature lice, despite being unable to hop or jump, can move rapidly through dry hair. The use of a magnifying glass assists with diagnosis.
- Mature lice are 3-4 mm long. Nits are much smaller (about 1 mm). The pubic louse is about the same length as the head or body louse but has a wider body.

- Body lice can be found in any area of the body, although they tend to avoid the scalp, except at the margins. Nits are laid in the host's clothing and are not usually found on the hair as with head lice and pubic lice. Body lice and eggs are found in clothing seams.<sup>[10]</sup>

### **Differential diagnosis**

- Unlike dandruff and hair root sheath casts, nits are stuck to the hair and are difficult to remove.
- **Nits** are fluorescent under a Wood's light.

### **Management of body lice**

The mainstay of treatment for body lice involves laundering clothing and bedding in hot water and bathing regularly. Drug treatment (eg, malathion or permethrin) is required in large-scale infestations.<sup>[11]</sup>

- Bed linens and clothes must be systematically decontaminated.
- Hygiene and washing clothes, bedding and towels are most important and are usually sufficient but application of permethrin or malathion may be required.
- Outbreaks require delousing of people with 1% permethrin dusting powder, basic sanitation and hygiene, changes of clean clothing, and sometimes shaving.
- Antibiotics are needed to treat louse-borne infectious diseases.
- Treating clothing with permethrin may prevent infestation.

### **Complications of body lice**

The body louse acts as a vector for bartonellosis, epidemic typhus and relapsing fever.<sup>[12]</sup>

### **Prognosis**

- Treatments are very effective in killing nymphs and mature lice but less effective in killing eggs.
- Appropriate therapy produces a cure in more than 90% of cases.

### **Prevention of body lice**

- To prevent re-infestation, treat contacts of the patient at the same time as the patient.
- Washing combs and brushes reduces re-infestation.

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## Further reading

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<b>Last updated by:</b> Dr Colin Tidy, MRCP 21/07/2023	
<b>Peer reviewed by:</b> Dr Doug McKechnie, MRCP 21/07/2023	<b>Next review date:</b> 19/07/2028

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