

Balanitis & balano-posthitis

What is balanitis?

Balanitis is inflammation of the glans penis (head) of the male penis, due to any cause. In uncircumcised males (the foreskin or “prepuce” is still present), inflammation of both the glans and the foreskin together is called **balano-posthitis**.

What causes balanitis?

Balanitis and balano-posthitis may be caused by many different skin conditions including:

- non-infectious skin conditions, such as dermatitis and eczema or psoriasis
- occasional infections of the skin if uncircumcised, such as candidiasis or “thrush”
- non-infectious inflammatory conditions found on the penis including lichen sclerosus, lichen planus and Zoon’s plasma cell balanitis
- occasionally tablets taken by mouth
- a few pre-cancerous skin conditions including in situ squamous cell carcinoma or penile intra-epithelial neoplasia (“PIN”)

Sexually transmissible diseases (STDs) are only rarely a cause of balanitis or balano-posthitis, a fact that often causes anxiety and confusion.

What does balanitis look like?

Inflammation of the glans penis or foreskin may cause redness, itching, discomfort, flaking of skin, swelling or soreness.

Balano-posthitis (in uncircumcised males) may cause difficulty in retracting the foreskin, resulting in discomfort and difficulty with erections and sexual activity.

Balanitis and balano-posthitis may be a relatively minor problem or may become a major issue, greatly affecting enjoyment of life. A man or boy troubled with balanitis or balano-posthitis may be fearful of an infection (either a sexually acquired infection or non-sexually acquired) or fearful of cancer. Advice offered by family or friends or inexperienced health professionals may aggravate these fears.

What other problems can occur with balanitis?

Inflammation of the glans penis (balanitis) mostly occurs in uncircumcised males and is therefore usually balano-posthitis, rather than balanitis alone. Balano-posthitis is usually caused by retained urine, soap, smegma (a white, cheesy natural secretion from the foreskin) or simply as a result of the moist environment under the foreskin. Obesity, diabetes or a long-term indwelling urinary catheter make balanitis more likely. Balano-posthitis is also referred to as **non-specific balanitis of the uncircumcised**.

Balanitis or balano-posthitis due to dermatitis (or eczema) may follow earlier childhood atopic dermatitis (atopic eczema) or be part of later-onset widespread atopic dermatitis (which is genetically determined). Genital dermatitis may be aggravated by the use of irritants including use of soap, increase in body temperature, sweating or friction. In uncircumcised males dermatitis of the glans penis and foreskin may become infected with candida or bacteria.

Balanitis or balano-posthitis due to psoriasis may be associated with scaly, red, itchy patches of psoriasis on the scalp, elbows and knees or around the anus. Occasionally psoriasis may damage joints resulting in painful arthritis.

Lichen sclerosus causes whitening or redness of the glans penis. Some boys and men with lichen sclerosus have difficulty retracting the foreskin easily while others progress to severe tightening of the foreskin. Inability to retract the foreskin is known as **phimosis**. Urological surgeons often refer to this lichen sclerosus with phimosis as **balanitis xerotica obliterans**. Lichen sclerosus with inability to retract the foreskin (phimosis) may rarely lead to cancer of the penis later in life.

Lichen planus may be associated with itchy skin spots on other parts of the body or painful ulceration of the mouth.

Zoon's plasma cell balanitis occurs in uncircumcised men, causing itch and soreness of the red glans penis and foreskin.

Early in situ squamous cell carcinoma or **penile intra-epithelial neoplasia** ("PIN") may progress to invasive cancer of the glans penis. Fortunately invasive cancer of the penis is a rare disease. **Cancer of the penis** usually appears as either a persisting ulcer or a hard lump on the glans penis.

How is balanitis diagnosed?

A doctor who is knowledgeable and skilled in recognising disorders of the penis is the most helpful person to make a diagnosis of balanitis or balano-posthitis. The doctor can also explain the cause of these conditions. Dermatologists are the most qualified and trained doctors in recognising diseases of the male genitalia as most genital disease is disease of genital skin.

Your family doctor (GP) may refer you to a specialist dermatologist. Sexual health physicians and urologists may also be consulted.

A skin swab may be necessary if candida or bacterial infection is suspected.

Blood tests may be helpful to exclude an associated sexually transmissible disease (STD) but blood tests cannot diagnose balanitis or balano-posthitis. Having blood tests to exclude an STD is often very reassuring if this is a concern.

Skin biopsy of the glans penis or foreskin is necessary if cancer or a pre-cancerous disease is suspected. While skin biopsy sounds frightening, an experienced dermatologist can easily take a genital skin biopsy with minimal pain and distress.

Skin patch testing is occasionally necessary if an allergic substance is suspected.

How is balanitis treated?

The first step in treating non-specific balanitis is to clean and dry the glans penis after washing or going to the toilet. Applying soft white paraffin ointment (Vaseline® ointment) under the foreskin helps to heal genital skin.

Try to avoid contact with irritants of the genital skin. Replacing soap with a non-soap wash is important, combined with regular use of a moisturising ointment after showering or bathing (such as Vaseline® ointment). The same moisturising ointment can be used as a lubricant for sexual activity.

Stop any unnecessary over-the-counter creams or potions, particularly if they contain perfume or fragrance. This includes using “baby wipes”. Avoid any proven allergic substance.

Use a mild topical cortisone ointment (such as 1% hydrocortisone ointment) when the glans or foreskin appears red or irritated. Stop the topical cortisone ointment once the glans or foreskin appears normal again. Mild cortisone creams and ointments are extremely safe when used under the supervision of an experienced doctor. Many “natural” products are no safer than “not natural” products and may also cause irritation or allergies.

Infection with candida usually responds quickly to an antifungal cream, particularly if combined with a mild cortisone cream or ointment.

More difficult or serious causes of balanitis or balano-posthitis need specific treatment under the guidance of an expert doctor. Pre-cancerous genital skin disease needs specialist care to prevent and detect early cancer of the penis.

What is the likely outcome of balanitis?

- Balanitis or balano-posthitis due to dermatitis (eczema) or psoriasis usually improves quickly but may need repeated treatment for any flare-up.
- Infection with candida resolves quickly after treatment but may recur in uncircumcised males.
- ***Lichen sclerosus*** is a chronic condition requiring long-term treatment and follow-up by an experienced doctor to detect complications such as phimosis or early cancer.
- ***Zoon’s plasma cell balanitis*** requires intermittent treatment. Zoon’s balanitis resolves if circumcision is performed but circumcision is not always desired or necessary. Intermittent treatment with a mild cortisone cream and an antibacterial cream usually settles any flare of this chronic disorder.
- ***Lichen planus*** may recur after treatment with a strong cortisone cream or other medications and needs long-term follow-up.
- Modern treatment of pre-malignant disease (in situ squamous cell carcinoma or penile intra-epithelial neoplasia) and cancer of the penis needs specialist care. Early treatment may lead to a normal life expectancy. More advanced cancer carries a greater risk but the outcome for each man is very variable.
- **Vaccination** of young men with the **human papilloma virus (HPV) vaccine** (eg Gardasil) before sexual activity, together with careful management of any pre-cancerous genital disease are important in preventing development of penile cancer.