

Warts

What are warts?

Warts are verrucous, can occur in any place on the body, and are most common in school-aged children. Children who are immunosuppressed and children with eczema can have a higher risk of developing warts.

What causes warts?

Warts are caused by human papilloma virus (HPV) by direct skin-to-skin contact or autoinoculation. The virus infects the superficial layers of the epidermis, resulting in proliferation of keratinocytes and causing wart formation.



What are the clinical features and diagnosis?

Diagnosis is typically made clinically. Cutaneous warts all have a hard surface and may have a tiny black dot in the center.

There are multiple types of warts, which are described below.

- **Common wart:** Papules with a rough surface which can be variable in size (1 mm to >1 cm). They are most common on the backs of fingers and toes and on the knees. If they are around the nails, they can distort nail growth.
- **Plantar wart:** May be tender, inward-growing lesions on soles, with clusters of less painful warts.
- **Plane wart:** Lesion with a flat surface that usually occurs on the face, hands, and shins. Often occur in groupings and in linear distribution due to autoinoculation with scratching or shaving.
- **Filiform wart:** Formed on a long stalk and often occur on the face.

- **Mucosal wart:** Can affect the lips and inside the cheeks. Anogenital warts can also occur as a sexually transmitted disease (STD). Mucosal wart can cause intraepithelial and invasive neoplastic lesions.

How are warts treated?

Warts do not need to be treated if they are not causing any discomfort or embarrassment. In some cases, they may regress spontaneously. If treatment is desired, topical treatment or cryotherapy is effective on most warts.

Topical treatment with daily salicylic acid is described below. If discomfort or soreness occurs, stop treatment until discomfort has improved and begin again. This technique can take up to 12 weeks or longer, so patience is key.

- Soften the wart by soaking it in warm, soapy water
- Rub the surface with an emery board or pumice stone
- Apply salicylic acid paint or gel to the lesion (avoiding normal skin) according to instructions and allow it to dry
- Cover with a Band-Aid or duct tape

Cryotherapy occurs at 1- to 3-week intervals. This can be uncomfortable and may result in blistering. Use caution around the eyes, proximal nail fold (can cause permanent nail dystrophy) and in patients with darker skin types (can cause permanent depigmentation). Aerosol sprays are available over-the-counter, or liquid nitrogen can be used at a doctor's office. Liquid nitrogen may leave a scar.

It is impractical and of unproven benefit to require covering warts to prevent spread to others.

May consider the use of imiquimod or cimetidine for patients with warts resistant to first-line treatments discussed above.

When to refer to a dermatologist?

Refer to a dermatologist for large or resistant warts that may need further intervention. Also refer for suspicious-looking lesions if there is a concern for malignancy (such as squamous cell carcinoma). Mucosal lesions have a higher risk of malignancy and can be evaluated by a dermatologist or gynecologist depending on the location.

Information for families

You can provide our Seattle Children's hand-outs about warts (file name [PE577](#)). Link here: <https://www.seattlechildrens.org/globalassets/documents/for-patients-and-families/pfe/pe577.pdf>