CONDITION

Warts

Warts are harmless skin growths caused by infection with certain human papillomaviruses.

WHAT IT IS
Noncancerous viral skin growths

BODY SYSTEM
Skin

MAIN SYMPTOMS
Rough growths, black dots, tenderness, thickened skin

WHAT CAUSES IT
Human papillomavirus infection

HOW IT IS DIAGNOSED
Skin examination, occasionally biopsy

MAIN TREATMENT
Topical treatments, freezing, or watchful waiting

CAN IT BE CURED?
Sometimes - many disappear without treatment

IS IT AN EMERGENCY?
No, unless bleeding cannot be controlled

LONG-TERM OUTLOOK
Usually harmless but may recur or spread

Overview

Warts are small, noncancerous skin growths caused by human papillomavirus, usually shortened to HPV. More than one type of HPV can cause warts. The types that cause common skin warts are different from the types most strongly linked with cancer.

Warts can appear at any age, but they are especially common in children and teenagers. They may occur anywhere on the skin. Their appearance and symptoms depend partly on where they grow.

Common warts often develop on the hands, fingers, knees, or elbows. Plantar warts grow on the soles of the feet. A plantar wart may be called a verruca. Pressure from walking can push it inward beneath a layer of hard skin, making it painful.

Warts are contagious, but they do not always spread after contact. They may pass to another

part of your body, or to another person, through direct skin contact or shared objects. HPV enters more easily through skin that is cut, scratched, wet, or softened.

Most warts are harmless. Some disappear without treatment as the immune system learns to control the virus. Others last for months or years, and new warts can appear while older ones are clearing. Treatment may help, but no method works every time.

Genital warts are also caused by HPV, but they need a separate medical assessment. This article mainly covers warts on ordinary skin, including plantar warts.

Symptoms

A wart may be a single growth or part of a cluster. Its surface can be smooth, flat, rough, or shaped like thin projections.

Common features include:

Common warts are often round and skin-coloured, grey, tan, or brown. They frequently appear around the fingers and nails. Picking or biting the skin in these areas may help the virus spread.

Flat warts are smaller and smoother than common warts. They may occur in larger numbers, often on the face, hands, or legs.

Filiform warts form narrow, finger-like projections. They are often found around the face or neck.

Plantar warts develop on weight-bearing areas of the foot. Normal skin lines may curve around the wart rather than continuing across it. This can help distinguish a wart from a corn or callus, although the difference is not always obvious.

Warts are not usually very painful. Pain is more likely when a wart is under pressure, sits near a nail, cracks, or is repeatedly rubbed.

- A firm, raised growth with a rough surface
- Tiny black or dark-red dots caused by clotted blood vessels
- Thickened skin over a plantar wart
- Pain or tenderness when standing or walking
- Several small growths grouped together

Causes and risk factors

Warts are caused by HPV infecting the outer layer of the skin. The virus encourages skin cells

to grow more quickly, producing a thickened area.

The virus can spread through direct contact with a wart. It may also spread through items or surfaces that have recently touched infected skin, such as nail tools, towels, or floors in shared changing areas. It is difficult to know exactly where or when an infection happened because a wart may take months to become visible.

Scratching, shaving, biting, or picking a wart can move the virus to nearby skin. Moist or damaged skin gives HPV an easier entry point.

Factors associated with a greater chance of developing or spreading warts include:

Having a wart does not mean that you have poor hygiene. Even careful washing cannot always prevent HPV infection.

- Childhood or adolescence
- Nail biting or picking the skin around nails
- Eczema or another condition that weakens the skin barrier
- A weakened immune system
- Walking barefoot in damp shared areas
- Sharing razors or nail-care tools

Diagnosis

A healthcare professional can usually diagnose a wart by examining the skin. They may look at its surface, location, and the way normal skin lines pass around it.

Sometimes the top layer is gently pared or scraped. Small dark dots or pinpoint bleeding underneath can support the diagnosis. This should be done by someone trained to assess and treat skin lesions, especially if you have diabetes, poor circulation, or reduced feeling in your feet.

A biopsy is rarely needed. During a biopsy, a small sample of tissue is removed and examined under a microscope. This may be recommended if a growth looks unusual, keeps bleeding, grows quickly, or has not responded as expected to treatment.

Several conditions can resemble warts, including corns, calluses, skin tags, and some skin cancers. Do not assume that every rough or raised growth is a wart.

Treatment and management

Treatment is not always necessary. Watching and waiting may be reasonable when a wart is painless, not spreading, and not causing distress. Many eventually clear, although it is not possible to predict when this will happen.

Treatment may be considered if a wart hurts, interferes with daily activities, spreads, or is upsetting to you. Warts can be stubborn, and more than one course or type of treatment may be needed.

Salicylic acid is a common nonprescription treatment for ordinary and plantar warts. It gradually removes infected layers of skin. Products come in different strengths and forms, so follow the package instructions. Protect the surrounding healthy skin and stop if there is marked pain, bleeding, or irritation.

Do not use wart-removal acids on your face, genitals, or broken skin unless a healthcare professional has advised it. Ask for medical guidance before self-treatment if you have diabetes, poor circulation, nerve damage, or a weakened immune system.

Cryotherapy freezes the wart, usually with liquid nitrogen. It can cause temporary pain, blistering, swelling, and changes in skin colour. Several treatment sessions may be needed. Freezing products sold for home use are not the same as liquid nitrogen used in a clinic.

For persistent warts, a dermatologist may consider other treatments. These can include stronger medicines applied to the skin, treatments that stimulate an immune response, scraping or burning the growth, laser treatment, or injections into the wart. Evidence for some treatments is limited, and procedures may leave a scar.

Cutting, burning, or digging out a wart yourself can cause infection, bleeding, and scarring without removing the virus.

Covering a plantar wart with a comfortable dressing may reduce rubbing. Footwear with cushioning or pressure-relieving pads can also make walking easier. Avoid placing a ring-shaped pad directly against the wart if it increases pressure or pain.

Complications

Most warts do not cause serious health problems. The more common difficulties are discomfort, spread, and frustration with repeated treatment.

Possible complications include:

Warts may be larger, more numerous, or harder to clear when the immune system is weakened. This can happen because of an illness or medicines that suppress immune activity.

A growth thought to be a wart can occasionally be another skin condition. A changing,

ulcerated, repeatedly bleeding, or unusual-looking growth needs medical assessment rather than continued home treatment.

- Pain from plantar warts or warts near nails
- Cracking or bleeding after rubbing or picking
- Spread to nearby skin
- Transmission to another person
- Skin irritation from wart treatments
- Scarring or lasting colour changes after procedures
- Bacterial infection of damaged skin

Prevention

There is no guaranteed way to prevent all warts. HPV is common, and a person can carry it without having a visible growth.

You can reduce spread by avoiding direct contact with warts, including your own. Wash your hands after touching or treating one. Do not pick, scratch, shave over, or bite a wart.

Keep personal items personal. Avoid sharing razors, towels, socks, shoes, nail clippers, or pumice stones that have touched a wart. Clean reusable nail tools and do not use the same file or pumice stone on healthy skin.

Covering a wart during contact sports or swimming may reduce direct contact and protect the skin from damage. Wearing sandals in shared showers and changing areas may also reduce exposure, although it cannot provide complete protection.

There is no routine vaccine specifically intended to prevent common hand or foot warts. HPV vaccines protect against important types of HPV associated with genital warts and several cancers, but they are not treatments for an existing wart.

Living with it and what to expect

A wart may stay the same size, slowly enlarge, multiply, or disappear. These changes often happen over months rather than days.

Many warts eventually clear as the immune system responds to HPV. Clearance can take longer in adults and in people with weakened immune systems. Even after successful treatment, a wart can return because virus may remain in nearby skin.

Treatment often requires patience. Salicylic acid treatments usually involve repeated applications, while freezing may require several appointments. A wart looking white, peeling, or blistered during treatment does not always mean it has fully cleared.

Warts do not usually affect general health. Most people continue school, work, exercise, swimming, and other activities. A painful plantar wart may temporarily limit walking or sport, but cushioning and suitable footwear may help.

Visible warts can cause embarrassment, especially when they are on the hands or face. Remember that they are a common viral skin condition and are not evidence of being unclean. If a wart is affecting your confidence or daily life, this is a reasonable reason to discuss treatment.

When to get medical help

Arrange a routine appointment if you are unsure whether a growth is a wart, especially if it is new or changing. You should also seek routine medical advice if it is painful, repeatedly bleeds, spreads widely, returns often, or does not improve after correctly used nonprescription treatment.

Get advice before treating a suspected wart yourself if it is on the face or genitals, or if you have diabetes, poor circulation, reduced sensation, or a weakened immune system. A clinician should assess genital growths because other conditions can look similar and treatment options differ.

Seek prompt medical care if the surrounding skin becomes increasingly red, hot, swollen, or painful, or if pus or fever develops. These can be signs of a bacterial infection.

Warts are not normally an emergency. Seek emergency care for bleeding that is heavy or does not stop with firm, continuous pressure, or for signs of a severe allergic reaction after using a treatment, such as trouble breathing or swelling of the face or throat.

Common questions

Are warts contagious?

Yes. HPV can spread through direct skin contact and through objects that have touched a wart. However, not everyone who is exposed develops one. Avoid picking the wart, wash your hands after treatment, and do not share personal skin-care tools.

Will a wart go away by itself?

It may. Many warts clear without treatment, but this can take months or years. Treatment is an option when a wart is painful, spreading, persistent, or bothersome.

What are the black dots inside a wart?

They are usually tiny blood vessels that have clotted. They are sometimes called "wart seeds," but they are not seeds and do not contain roots.

Can I cut a wart off?

Do not cut or dig out a wart yourself. This can cause bleeding, infection, and scarring. It may also spread HPV without removing all infected skin.

How can I tell a plantar wart from a corn?

A plantar wart may interrupt the skin's natural lines and contain small dark dots. A corn often has a hard central core, with skin lines continuing across it. Because they can look similar, ask a healthcare professional or podiatrist to assess a painful or uncertain growth.

Does having a wart mean I have a dangerous type of HPV?

Usually not. Common skin warts are generally caused by HPV types that are different from the types most strongly linked with cancer. A new genital growth or an unusual skin lesion still needs proper assessment.

Sources

- American Academy of Dermatology Association. Warts: Diagnosis and treatment
- Centers for Disease Control and Prevention. Sexually Transmitted Infections Treatment Guidelines: Anogenital Warts
- DermNet. Viral wart
- National Health Service. Warts and verrucas
- British Association of Dermatologists. Plantar warts patient information leaflet
- Kwok CS, Gibbs S, Bennett C, Holland R, Abbott R. Topical treatments for cutaneous warts. Cochrane Database of Systematic Reviews. 2012;2012(9):CD001781