CONDITION

# Hemangioma

A hemangioma is a noncancerous growth made from extra blood vessels, usually appearing on or under a baby's skin.

**WHAT IT IS**
Benign growth made from extra blood vessels

**BODY SYSTEM**
Skin and blood vessels

**MAIN SYMPTOMS**
Red patch, raised lump, bluish swelling, skin breakdown

**WHAT CAUSES IT**
Abnormal blood-vessel growth; exact trigger unknown

**HOW IT IS DIAGNOSED**
Skin examination; ultrasound or MRI when needed

**MAIN TREATMENT**
Monitoring, beta-blocker medicines, or procedures

**CAN IT BE CURED?**
Sometimes - many fade; treatment controls others

**IS IT AN EMERGENCY?**
Sometimes - breathing difficulty or uncontrolled bleeding

**LONG-TERM OUTLOOK**
Most shrink, sometimes leaving lasting skin changes

## Overview

A hemangioma is a benign, or noncancerous, growth made up of blood vessels. The term can describe several types of vascular growth, but it most often refers to an infantile hemangioma . This type develops during infancy and usually affects the skin.

An infantile hemangioma may be barely visible at birth or appear during the first few weeks of life. It often grows quickly for several months before stabilising. It then usually begins a slow shrinking process called involution , which can continue for years.

Some hemangiomas are fully formed at birth. These are called congenital hemangiomas . They behave differently: some shrink rapidly, some shrink partly, and others do not shrink.

Most hemangiomas are harmless and need only monitoring. Location and growth pattern

matter, however. A hemangioma near an eye, nose, mouth, airway, or genital area may affect sight, breathing, feeding, hearing, or skin care. A large or rapidly growing lesion may also leave loose skin, scarring, or changes in skin texture.

Hemangiomas can also develop inside the body, particularly in the liver. These may be found by chance during imaging performed for another reason.

## Symptoms

A superficial infantile hemangioma often starts as a flat red area. As it grows, it may become bright red, raised, and rubbery. It is sometimes called a "strawberry mark."

A deeper hemangioma sits under the skin. It may look like a soft, skin-coloured or bluish lump. Some hemangiomas have both superficial and deep parts.

Possible features include:

Minor surface bleeding often stops with steady pressure. Bleeding that is heavy or does not stop needs urgent medical assessment.

Symptoms from an internal hemangioma depend on its size and location. Most small liver hemangiomas cause no symptoms. Larger lesions may sometimes cause abdominal discomfort or fullness. Multiple or very large liver hemangiomas in an infant can rarely place extra strain on the heart.

- A red patch or raised red lump
- A soft blue or purple swelling under the skin
- Noticeable growth during early infancy
- Warmth over the area
- Bleeding after rubbing or injury
- Painful skin breakdown, called ulceration

## Causes and risk factors

A hemangioma forms when blood-vessel cells grow more than expected. The exact trigger is not fully understood. It is not caused by anything a parent did during pregnancy, and an infantile hemangioma is not contagious.

Infantile hemangiomas are seen more often in babies who were born prematurely or had a low birth weight. They are also more frequent in girls and in babies from multiple pregnancies, such

as twins. These factors are associations, not direct causes.

Most infantile hemangiomas are not inherited. Rare inherited conditions can cause other kinds of blood-vessel abnormalities, but these are different from a typical isolated infantile hemangioma.

## Diagnosis

A clinician can often identify a skin hemangioma by examining its colour, texture, location, and growth pattern. Photographs taken over time can help show whether it is growing, stable, or shrinking.

Imaging is not needed for every hemangioma. An ultrasound may be used when the diagnosis is uncertain, when the growth is deep, or when several skin hemangiomas raise concern about lesions inside the body.

Magnetic resonance imaging, or MRI, can show the full depth of a large lesion and its relationship to nearby structures. It may be recommended for certain hemangiomas on the face, scalp, neck, lower back, or pelvis because some growth patterns can occur with abnormalities elsewhere in the body.

A biopsy, in which a small tissue sample is removed, is rarely needed. It may be considered if the appearance or growth does not fit the usual pattern.

Hemangiomas that threaten vision, breathing, feeding, hearing, or normal development benefit from prompt specialist assessment. Early evaluation matters because infantile hemangiomas can grow quickly during the first months of life.

## Treatment and management

Many small, uncomplicated hemangiomas do not require active treatment. They can be monitored during routine appointments. Follow-up may include measurements and photographs to track changes.

Treatment may be recommended when a hemangioma:

An oral beta-blocker medicine, most commonly propranolol, is the main systemic treatment for problematic infantile hemangiomas. Beta-blockers like metoprolol or propranolol affect signals that control blood vessels and can soften the lesion, reduce its colour, and slow its growth.

Propranolol can lower heart rate, blood pressure, and blood sugar. It can also worsen wheezing in some children. A child needs an appropriate medical assessment and ongoing monitoring.

Families should follow the prescribing team's instructions about feeding, illness, missed doses, and follow-up rather than changing or stopping treatment on their own.

A topical beta-blocker, such as timolol, may be considered for selected small, thin, superficial hemangiomas. Because medicine placed on the skin can still be absorbed into the body, it should be used only as directed.

Other treatments are used less often. Laser treatment may help selected superficial changes or blood vessels that remain after the hemangioma shrinks. Surgery may be considered for a congenital hemangioma that does not shrink, a lesion causing a specific problem, or loose skin and scarring left later in childhood.

Ulcerated hemangiomas may need wound care, pain control, and treatment for infection if one develops.

- Affects vision, breathing, feeding, hearing, or movement
- Develops painful ulceration
- Grows rapidly in a high-risk location
- Places stress on the heart or another organ
- Is likely to cause substantial scarring or disfigurement

## Complications

Ulceration is a significant complication. The surface breaks down into an open sore, which can be painful, bleed, become infected, and leave a scar. It is more likely in areas exposed to moisture, friction, or pressure.

A hemangioma around the eye can press on the eyelid or change how the eye focuses. Without timely treatment, this can interfere with normal visual development.

Growths around the nose, lips, mouth, or airway can affect breathing or feeding. Those around the ear may interfere with hearing. Lesions in skin folds or the genital area can make hygiene difficult and are more prone to irritation.

Large hemangiomas involving a broad area of the face or scalp can occasionally occur with PHACE syndrome , a group of abnormalities involving structures such as the brain, arteries, heart, and eyes. Certain large lower-back or pelvic hemangiomas can also be associated with underlying structural differences.

After shrinking, a hemangioma may leave loose skin, fatty tissue, visible small blood vessels, lighter colouring, or a change in texture. This does not happen to everyone.

## Prevention

Infantile and congenital hemangiomas cannot currently be prevented. They do not result from a known action, food, medicine, or routine activity during pregnancy.

Complications may sometimes be reduced through early recognition and monitoring. A rapidly growing hemangioma or one near an eye, mouth, nose, airway, or another sensitive area should be assessed promptly.

## Living with it and what to expect

Infantile hemangiomas usually grow most quickly during early infancy. Growth then slows, and the lesion often starts to soften and fade. Deep hemangiomas may grow for longer and can take more time to become obvious.

Shrinking happens gradually over several years, not over days or weeks. Colour often fades before the extra bulk disappears. Some lesions become barely noticeable, while others leave visible skin or contour changes.

A hemangioma that is being monitored may need more frequent checks during its early growth phase. Follow-up can usually become less frequent once growth has stopped and the lesion is clearly shrinking. A clinician may also review pain, skin breakdown, function, and treatment effects.

Most children with uncomplicated hemangiomas take part in normal daily activities. Protecting an exposed lesion from repeated rubbing may reduce irritation. If the skin opens, follow the wound-care plan provided by the child's healthcare team.

Visible hemangiomas can attract comments or questions. Simple explanations, such as "It is a harmless growth of blood vessels," may help family members, childcare staff, and teachers respond supportively.

## When to get medical help

Arrange a prompt medical assessment if a hemangioma:

Seek emergency care for difficulty breathing, blue or grey colouring, severe weakness, reduced responsiveness, or bleeding that does not stop after firm, continuous pressure.

For a child taking propranolol or another beta-blocker, follow the treatment team's illness and feeding instructions. Urgent assessment may be needed for unusual sleepiness, shaking,

sweating, breathing difficulty, or poor responsiveness because these can be signs of low blood sugar or another medicine-related problem.

Small changes in colour or slow growth without pain or functional problems can usually be discussed at a routine follow-up appointment.

- Is growing quickly, especially in a young infant
- Is close to an eye, eyelid, nose, mouth, ear, or genital area
- Interferes with feeding, hearing, movement, or opening an eye
- Becomes painful, crusted, or develops an open sore
- Shows spreading redness, swelling, pus, or other signs of infection
- Appears as five or more separate skin hemangiomas in an infant
- Is large and covers a broad area of the face, scalp, lower back, or pelvis

## Common questions

Is a hemangioma cancer?

No. A hemangioma is a benign blood-vessel growth and does not behave like cancer. A rapidly changing or unusual lump still needs assessment because other conditions can sometimes look similar.

Will a hemangioma go away on its own?

Many infantile hemangiomas shrink naturally over several years. A congenital hemangioma may shrink rapidly, shrink partly, or remain. Even after shrinking, loose skin, visible vessels, or a change in texture may remain.

Should I massage or press a hemangioma?

Massage does not make a hemangioma disappear and may irritate the surface. Avoid squeezing, puncturing, or trying to drain it. If it bleeds, apply firm, continuous pressure with clean gauze or cloth.

When does a hemangioma need treatment?

Treatment is usually considered when the lesion threatens sight, breathing, feeding, hearing, or another body function; develops ulceration; strains an organ; or is likely to leave substantial permanent changes. Size alone does not determine treatment.

Can a hemangioma come back after treatment?

Some regrowth can occur after medicine is stopped, particularly if treatment ends while the

hemangioma is still in its growth phase. The treating team may restart treatment or continue monitoring, depending on the location and effect of the regrowth.

Are liver hemangiomas the same as skin hemangiomas?

Both are benign blood-vessel growths, but their behaviour and management can differ. A small liver hemangioma found incidentally often needs no treatment. Infants with multiple or large liver lesions may need specialist monitoring because of possible effects on circulation or thyroid function.

## Sources


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