SYMPTOM

Blue discoloration of the skin

Blue discoloration is a blue, grey, or purple change in the skin, lips, or tongue.

WHAT IT FEELS LIKE
Skin looks blue, grey, or purple, often without pain

WHERE IT IS FELT
Lips, tongue, face, fingers, toes, or one skin area

MOST COMMON CAUSES
Bruising, cold exposure, reduced circulation in fingers or toes

WHEN IT IS URGENT
Blue lips or tongue with breathlessness, confusion, or fainting

USUALLY LASTS
Minutes after cold exposure; longer with bruising or ongoing illness

SEE A DOCTOR IF
Discolouration persists, recurs, spreads, or has no clear cause

Overview

Blue discoloration of the skin can have many causes. A small blue or purple area is often a bruise. Fingers and toes may turn blue when cold because less blood reaches the skin.

A blue or grey colour involving the lips, tongue, or a large area of skin can sometimes mean that the blood is not carrying enough oxygen. This is called cyanosis . It can also happen when blood is not moving normally through part of the body.

The colour may be subtle, particularly on brown or black skin. It may be easier to see on the lips, tongue, gums, palms, soles, or beneath the nails. Lighting, cosmetics, tattoos, dyes, and skin pigmentation can affect how the colour looks.

Blue discoloration is a symptom, not a diagnosis. Its meaning depends on where it appears, how quickly it started, and whether you have breathing, circulation, or other symptoms.

What it may feel or look like

The skin may look blue, blue-grey, purple, or unusually pale-grey. The affected area may not feel different.

Cold-related colour changes usually affect the fingers, toes, hands, or feet. The skin may feel cold or numb. Some people notice fingers or toes changing from white to blue and then red as blood flow returns.

A bruise is usually limited to an injured area. It may be tender or swollen and often changes from blue or purple to green, yellow, or brown as it heals.

Reduced blood flow to one limb may cause blue or mottled skin with pain, coldness, numbness, or weakness. When oxygen levels are low, blue colour may appear around the lips or on the tongue and may occur with breathlessness, tiredness, confusion, or dizziness.

Common causes

Common causes include bruising and exposure to cold. Cold makes small blood vessels narrow, reducing warm blood flow near the skin. Raynaud phenomenon can cause repeated colour changes in the fingers or toes, often after cold exposure or emotional stress.

Less common causes include ongoing circulation problems and conditions affecting the lungs, heart, or blood. Some medicines, chemicals, metals, or pigments can also produce a blue-grey colour without reducing oxygen levels. This is sometimes called pseudocyanosis , meaning skin that looks blue for a reason other than low blood oxygen.

Urgent causes include a sudden airway, breathing, heart, or circulation problem. A sudden loss of blood supply to an arm or leg can also turn it blue or mottled. These causes usually produce other symptoms, such as breathing difficulty, chest discomfort, severe limb pain, weakness, or confusion.

Appearance alone cannot show which cause is responsible.

When to seek medical care

Call emergency services if blue or grey lips, tongue, face, or widespread skin discoloration appears suddenly, especially with:

Do not wait for the colour to improve or rely only on a home oxygen reading when these symptoms are present.

Seek same-day medical advice if new blue lips or tongue persist, even if you otherwise feel well. You should also seek prompt advice if blue fingers or toes do not improve after gentle warming, or if they are painful, swollen, or becoming darker.

Book a routine appointment if the discoloration repeatedly returns, is gradually spreading,

appears during ordinary activity, or has no clear cause. A persistent blue-grey colour that began after starting a medicine or using a supplement should also be reviewed. Do not stop prescribed medicine without advice unless emergency services tell you to do so.

- Difficulty breathing, choking, or inability to speak normally
- Chest pain, severe weakness, confusion, unusual drowsiness, or fainting
- A suddenly blue, cold, very painful, numb, or weak arm or leg
- A suspected medicine, drug, or chemical exposure with breathing or mental changes

How the cause is found

A clinician will ask when the colour began, whether it is constant, and which areas are affected. They may ask about cold exposure, injury, breathing symptoms, pain, medicines, smoking or vaping, and possible chemical exposure.

The examination may include checking your breathing, heart rate, temperature, and circulation in the affected area. An oxygen sensor placed on a finger may estimate the oxygen level in your blood.

Home and clinical oxygen sensors can sometimes give inaccurate readings. Cold hands, movement, nail products, poor circulation, device quality, and skin pigmentation can affect results. Your symptoms and examination still matter.

Depending on the findings, tests may include blood tests, a blood-gas test that directly measures oxygen, a heart tracing, or imaging of the chest or blood vessels.

Treatment and self-care

Treatment depends on the cause. Low oxygen or an urgent circulation problem needs immediate medical treatment. Repeated cold-related episodes may require assessment for Raynaud phenomenon or another circulation condition.

If only your fingers or toes have changed colour after being cold, move to a warm, dry place. Remove wet clothing and warm the area gradually. Avoid very hot water, direct heat, or vigorous rubbing because numb skin can be injured without you noticing.

A straightforward bruise usually fades without specific treatment. Protect the area from further injury. Arrange an assessment if bruises are unusually large, frequent, unexplained, or accompanied by other bleeding.

Do not use supplemental oxygen or change medicines based only on skin colour unless this has been prescribed or advised by a qualified professional.

What to expect

Cold-related colour usually improves as the skin warms and normal blood flow returns. Repeated episodes may continue unless the trigger or underlying cause is addressed.

Most uncomplicated bruises change colour and fade over one to two weeks, although larger bruises may take longer. Discoloration caused by medicines, pigments, circulation problems, or heart and lung conditions may persist until the cause is treated and can sometimes last longer.

Arrange follow-up if the colour is not improving as expected or new symptoms appear.

Common questions

Is every blue mark cyanosis?

No. Bruises, veins, tattoos, dyes, medicines, and skin pigments can all look blue. Cyanosis usually involves a broader area or places such as the lips, tongue, nail beds, hands, or feet.

Can cold weather make healthy skin look blue?

Yes. Cold temporarily narrows blood vessels near the skin, especially in the fingers and toes. The colour should improve with gentle warming. Persistent, painful, or one-sided discoloration needs medical review.

Does a normal pulse oximeter reading rule out a problem?

No. Pulse oximeters have limitations, and a reading must be considered alongside your symptoms. Seek emergency care for blue lips or tongue with breathing difficulty, confusion, chest pain, or fainting, regardless of the reading.

Sources

- NHS. Blue or grey skin or lips (cyanosis)
- MedlinePlus Medical Encyclopedia. Skin discoloration - bluish
- National Center for Biotechnology Information. Central and Peripheral Cyanosis, StatPearls

- U.S. Food and Drug Administration. Pulse Oximeter Accuracy and Limitations: FDA Safety Communication
- DermNet. Acrocyanosis