CONDITION

Dermal melanocytosis

Dermal melanocytosis is a usually harmless blue-gray birthmark caused by pigment cells deep in the skin.

WHAT IT IS
Flat blue-gray pigmentation from pigment cells deep in skin

BODY SYSTEM
Skin

MAIN SYMPTOMS
Blue-gray patch, flat surface, irregular edges, no pain

WHAT CAUSES IT
Pigment cells remaining deep during skin development

HOW IT IS DIAGNOSED
Skin examination; dermoscopy or biopsy if uncertain

MAIN TREATMENT
Observation or pigment-targeting laser treatment

CAN IT BE CURED?
Sometimes - laser treatment may lighten persistent patches

IS IT AN EMERGENCY?
No - sudden skin changes need assessment

LONG-TERM OUTLOOK
Usually harmless and often fades during childhood

Overview

Dermal melanocytosis is a group of skin markings caused by melanocytes, the cells that make melanin, sitting deeper in the skin than usual. Because of this depth, the pigment looks blue, blue-gray, or slate-colored rather than brown.

The most common form is congenital dermal melanocytosis , meaning it is present at birth. It usually appears over the lower back or buttocks and was formerly called a Mongolian spot. That older term is now often avoided because it is outdated and misleading.

These markings are birthmarks, not bruises. They are usually flat, painless, and harmless. Many become lighter during childhood, although some remain into adulthood.

Other forms affect different areas:

Nevus of Ota and blue nevi are more likely than common lower-back birthmarks to persist. Some need follow-up because of their location or appearance.

Dermal melanocytosis is not contagious or caused by poor skin care, injury, or anything done during pregnancy.

- Nevus of Ota affects the face, often around one eye, and may also pigment the eye
- Nevus of Ito usually affects the shoulder, upper chest, or upper arm
- Blue nevus is usually a smaller, defined blue or blue-black spot

Symptoms

The main feature is a patch of blue-gray, slate-gray, or sometimes blue-green skin. It may be present at birth or noticed soon afterward.

Congenital dermal melanocytosis commonly appears on the:

The patch may be small or broad, with irregular or indistinct edges. The skin surface feels normal and is not usually raised, scaly, warm, or tender.

A typical patch does not itch, hurt, bleed, or swell. Unlike a bruise, it does not change from day to day. Bruises often pass through several colors as they heal, while dermal melanocytosis generally keeps a similar color and location before slowly fading over months or years.

Nevus of Ota may cause blue-gray or brown pigmentation on the forehead, temple, eyelids, cheek, or side of the nose. The white of the eye or tissues around and inside the eye may also be pigmented. It usually affects one side of the face.

A blue nevus is often a single round or oval spot. It may be slightly raised and have clearer borders than a broad congenital patch.

- Lower back
- Buttocks
- Hips
- Less often, shoulders, arms, or legs

Causes and risk factors

Dermal melanocytosis develops before birth. During fetal development, melanocytes move toward the upper layers of the skin. In dermal melanocytosis, some remain in the dermis , the deeper supporting skin layer.

Light scatters as it passes through the skin above these cells, making the melanin look blue or gray. The skin does not contain blue pigment, and the color does not indicate reduced blood flow.

The usual congenital form is not generally considered an inherited disorder. It can occur in anyone, although its frequency differs among ancestral backgrounds and skin tones. These differences do not alter its usually harmless nature.

Large, widespread, unusually dark, or persistent patches have occasionally been reported alongside rare inherited metabolic conditions. Most children with dermal melanocytosis do not have such a disorder. Further assessment may be appropriate when extensive markings occur with developmental, neurological, skeletal, or other health concerns.

Diagnosis

A healthcare professional can usually identify congenital dermal melanocytosis by examining its color, shape, location, surface, and history. A patch unchanged since birth is easier to distinguish from a recent bruise.

Recording its size and location in a child's medical notes can be helpful. A dated photograph may also provide a reference, particularly because blue-gray birthmarks can later be mistaken for bruising.

Further testing is not usually needed for a typical lower-back or buttock patch. If the appearance is unusual, a dermatologist may use dermoscopy , which examines structures beneath the skin surface with magnification and special light.

A skin biopsy is only sometimes needed. It may be considered when a spot is new, changing, raised, or difficult to distinguish from a mole or another pigmented growth.

Pigmentation involving the face, eyelids, or eye may require an eye examination. An eye specialist may check eye pressure and inspect pigmented tissues inside the eye.

Treatment and management

Typical congenital dermal melanocytosis does not need treatment. Creams, bleaching products, massage, and dietary changes will not remove it. Sun protection will not make it disappear, although protecting skin from excessive ultraviolet exposure remains important.

Observation is often best in childhood because many common patches fade naturally. Photographs taken under similar lighting can help show gradual changes.

Persistent markings may cause cosmetic or emotional concerns, especially on the face or another visible area. Pigment-targeting laser treatment can sometimes lighten them by breaking up pigment in the deeper skin.

Several sessions may be needed, and complete removal cannot be guaranteed. Possible effects include discomfort, temporary redness, swelling, scarring, or skin that becomes lighter or darker than the surrounding area. Pigment changes can be more noticeable in darker skin tones.

Treatment should be planned by a clinician experienced in pigmented skin conditions. The diagnosis must be confirmed first because not every blue or dark lesion is suitable for laser treatment.

Nevus of Ota involving the eye requires ongoing eye care rather than laser treatment alone. Laser treatment may improve skin pigmentation but does not treat pigment inside the eye.

Complications

Common congenital dermal melanocytosis usually causes no physical complications. The main practical issue is confusion with a bruise. Clear documentation can prevent unnecessary concern while allowing new injuries or skin changes to be assessed normally.

A visible patch may affect confidence or attract unwanted questions. Cosmetic camouflage or specialist laser advice may help if its appearance is distressing.

Nevus of Ota has different considerations. Eye pigmentation can be associated with raised pressure inside the eye, known as glaucoma. There is also a small risk of melanoma in pigmented eye or skin tissues. Regular examinations may therefore be advised even when the pigmentation is stable.

Most blue nevi remain harmless. However, a blue or blue-black spot that is new, growing, changing shape, bleeding, or otherwise unusual should be assessed rather than assumed to be dermal melanocytosis.

Rarely, extensive congenital dermal melanocytosis can be a clue to another condition when accompanied by loss of developmental skills, unusual stiffness or weakness, an enlarged abdomen, or changes in facial or skeletal development. The birthmark itself does not cause these problems.

Prevention

Dermal melanocytosis cannot usually be prevented. It forms before birth and is not linked to an action, food, medicine, or routine exposure during pregnancy.

No proven skin-care method prevents a congenital patch or makes it fade faster.

Monitoring can help manage risks linked to specific forms. For example, recommended eye examinations can detect pressure changes or suspicious pigmentation associated with nevus of Ota. Monitoring does not prevent the birthmark but may identify a complication early.

Living with it and what to expect

A common lower-back or buttock patch often becomes lighter during early childhood. Fading is gradual. Some remain visible into the school years or adulthood, especially if they are extensive, dark, or outside the usual lower-back area.

The patch should grow in proportion with the surrounding skin. It should not behave like an active rash or repeatedly become painful and inflamed.

Routine follow-up may not be needed after a typical patch has been examined and documented. Mention it during regular health visits if its appearance changes or it has not previously been recorded.

Nevus of Ota, nevus of Ito, and blue nevi are more likely to persist. People with eye involvement may need long-term eye examinations, with timing determined by an eye specialist.

Most people with uncomplicated dermal melanocytosis can participate in school, work, sport, and other activities without restrictions. The marking does not weaken the skin or spread through contact.

When to get medical help

Arrange a routine appointment if a blue-gray patch has not been assessed before, especially if its cause is uncertain. Assessment is also appropriate when a mark:

A stable birthmark does not usually need urgent care.

Seek urgent medical assessment for sudden eye pain, a red eye with blurred vision, halos around lights, severe headache with eye symptoms, or a sudden change in vision. These are not expected from ordinary congenital dermal melanocytosis and may signal an eye problem requiring prompt care.

Seek emergency help for a serious eye injury or sudden loss of vision.

New unexplained bruising, particularly with bleeding elsewhere, severe illness, or concern about an injury, should be assessed rather than assumed to be a birthmark.

- Appears for the first time later in life
- Grows quickly or changes shape or color
- Becomes raised, painful, itchy, crusted, or prone to bleeding
- Is widespread or occurs with developmental or other health concerns
- Affects the face, eyelid, or eye
- Is causing significant distress

Common questions

Is dermal melanocytosis the same as a bruise?

No. A bruise results from bleeding under the skin and usually changes color and fades over days or weeks. Dermal melanocytosis is pigment within deeper skin and is generally stable before fading slowly. A new blue-gray area should still be assessed if its cause is uncertain.

Will the birthmark go away?

Many congenital patches on the lower back or buttocks become much lighter during childhood, but some do not disappear completely. Facial forms, shoulder-area markings, and blue nevi are more likely to remain.

Can dermal melanocytosis turn into cancer?

Typical congenital dermal melanocytosis is benign, meaning noncancerous. Nevus of Ota and some unusual blue nevi have different risks and may require monitoring. Any pigmented spot that changes noticeably should be examined.

Can creams remove it?

Ordinary moisturizers and non-prescription lightening creams do not remove pigment deep in the skin. Some may cause irritation or damage. Pigment-targeting lasers are the main cosmetic procedure for persistent markings, but their risks and likely results require individual assessment.

Why does it look blue if the pigment is brown?

Melanin is brown, but it lies deep beneath the skin surface. Light scattering through the skin makes the pigment appear blue or gray.

Should my baby have tests for another condition?

A healthy baby with a typical patch usually does not need tests. A clinician may consider further assessment when markings are very extensive or occur with developmental, neurological, skeletal, or other unusual findings.

Sources

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