



Family Education Sheet



Hemangiomas

What is a hemangioma?

- Hemangiomas are the most common type of vascular birthmark.
- It is a benign (non-cancerous) tumor of the cells that normally line the blood vessels.
- Hemangiomas have a fairly predictable pattern of growth. Most appear during the first weeks of life and grow rapidly (called the proliferative phase) for 6 to 12 months. Then they begin a much slower process of shrinking or regressing (called the involuting phase). Finally, the tumor enters its final, shrunken state (called the involuted phase).
- Tumor regression is complete in 50% of children by age 5 and in 70% of children by age 7. By the time a child reaches 10 to 12 years of age, involution of the tumor is always complete. Some residual fatty tissue or thin skin may remain after involution.

How common are hemangiomas?

- Hemangiomas are the most common benign tumor in infants. Between 4% and 10% of infants have at least one hemangioma.
- Hemangiomas are three to five times more common in females than in males, and occur more frequently in Caucasian infants than in Asian infants.
- The incidence of hemangiomas may be as high as 25% in premature infants of a low birth weight (fewer than 1,000 grams).

What causes hemangiomas?

- The exact cause of hemangiomas is not known at this time, although research is under way.
- Hemangiomas are not usually hereditary, although 10% of infants have a family history of these vascular birthmarks.
- No known food, medication, or activity during pregnancy can cause a hemangioma.

What do hemangiomas look like?

- The appearance of a hemangioma depends on many factors, including whether it is superficial or deep; whether it is in the growing (proliferation), shrinking (involution), or shrunken (involved) phase; and whether it is congenital (present at birth).
- Initially, hemangiomas may look like a white spot with small blood vessels. As the tumor grows, it may be bright red and elevated and/or a soft blue mass. As the hemangioma regresses, it changes color to purple or gray. Hemangiomas may be a few millimeters to several centimeters in length. Approximately 60% of hemangiomas occur in the head and neck area.
- A tumor near the skin's surface is called a superficial hemangioma. It often looks like a raised bright red patch, sometimes with a textured surface (hence the once-commonly used term "strawberry hemangioma").

Hemangiomas

- Hemangiomas that grow in the lower layers of the skin or in the muscle, called deep hemangiomas, may appear bruise-like or bluish or may not be visible at all.
- Congenital hemangiomas look different than the more common type that grows after birth. They are enlarged at birth, blue and may have a pale halo.

What are the possible complications of hemangiomas?

- While complications are uncommon, they can occur in some children.
- Complications include:
 - ulcers (skin breakdown), which can bleed, become infected and can be painful;
 - obstruction of vital functions such as vision or breathing;
 - distortion of facial features;
 - and, very rarely, heart failure resulting from a hemangioma in an internal organ. Much less than 1% of hemangiomas cause life-threatening complications.
- About 5% of children with a hemangioma develop an ulcer, typically on the lip or the anal or genital region. An ulcer is usually effectively treated with topical antibiotics and frequent cleansing and dressings. Sometimes oral medications, an operation or laser therapy may be necessary. Bleeding, which is rare, can usually be controlled by applying pressure to the ulcer. An ulcer usually heals within a few weeks and does not recur; however, it may result in scarring.
- Hemangiomas that obstruct an airway or interfere with vision or eating require prompt treatment. These may require drug treatment to slow their growth and shrink the tumor.

How are hemangiomas treated?

- Most hemangiomas do not require any treatment (other than observation) because they go away on their own. In most children, they disappear completely, leaving normal or slightly blemished skin. In some children, loose skin, discoloration, or tiny, dilated blood vessels called telangiectasias may remain after the hemangioma has fully involuted. When this occurs, treatment (surgery and/or laser therapy) to improve the child's appearance may be advised, usually before the child starts school.
- There are some hemangiomas, however, that do require intervention because they might endanger the child's normal functions of life. These include hemangiomas that are obstructing essential functions such as breathing, eating, or vision, or that ulcerate, frequently bleed or become infected.
- The usual treatment options for hemangiomas include medications and/or surgery. Corticosteroid drugs given by injection directly into the tumor or taken orally are used to treat hemangiomas.
- For some hemangiomas, such as eyelid tumors that do not respond to medication or tumors that obstruct the airway, surgery may be advised. An operation to remove a disfiguring hemangioma that is not fully involuted may sometimes be recommended to spare a child emotional distress. The benefits of an early operation must be carefully weighed against the appearance of scarring, which occurs in all operations.
- Pulsed-dye laser lightens the surface color and is effective for removing telangiectasias that may remain after the hemangioma has involuted.

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