Keloids

Keloids are large, firm, raised scars that occur after skin injury.

In people prone to developing keloids, the healing process does not stop, and the body continues making too much scar tissue. Keloids grow beyond the borders of the injured skin and into nearby normal skin. Keloids are different from hypertrophic scars, which are also raised but remain within the limits of the damaged skin.

Characteristics and Affected Patients
Keloids often occur after damage to the skin (eg, surgeries, piercings, burns, acne, and vaccinations). Sometimes, they can occur without any known skin injury. Some patients have 1 keloid, while others may develop many keloids. The chest, shoulders, back, and ears are the most common sites. They occur most often in patients in their teens and 20s, although they can happen at any age. Black patients are more likely to develop keloids than other patients of color; they occur least commonly in White patients. They can sometimes occur within families.

Causes
The exact causes of keloids remain unknown. They likely develop from a combination of factors, including trauma, inflammation, and genetics. Research has shown that differences in DNA are associated with patients developing keloids. However, their role in the development of keloids is unclear. Studies have also shown that patients with keloids are more likely to have high blood pressure, but no clear association has been found.

Symptoms and Diagnosis
Keloids only grow in the skin and do not spread inside the body (ie, not cancerous). In addition to the unpleasant appearance of keloids, some patients may feel itch, pain, and/or soreness to touch. Keloids can become so irritated that they appear infected with drainage. The diagnosis of a keloid is usually made through a clinical examination. The physician may also perform a skin biopsy (during which a small portion of the skin is removed and examined under the microscope) to confirm the diagnosis.

Treatment
Patients with a history of keloids should avoid skin piercings, tattoos, and unnecessary surgeries, as these may cause new keloids. If a keloid is forming, early treatment is important, because bigger keloids are often more difficult to treat. Surgery can remove the keloid; however, a new keloid may develop in the same site (approximately 50% chance) unless additional treatments are done after surgery. Superficial radiation immediately after surgery may be an option. Steroid injections into the keloid, performed by a physician, can be done monthly to help shrink the keloid and decrease pain and itch. If there is no improvement with steroid injections, other types of treatment include injection of chemotherapy, extreme cold (cryotherapy), and certain lasers. Silicone sheets, applied over the scar, are not very effective in flattening already formed keloid scars. With any treatment type, multiple treatments are usually required to achieve the best outcome.

FOR MORE INFORMATION
Keloid and hypertrophic scars
https://dermnetnz.org/topics/keloids-and-hypertrophic-scar/
Keloid
https://www.skinsight.com/skin-conditions/adult/keloid
Keloids
https://skinforesociety.org/dermatology-education/1402-2/

The JAMA Dermatology Patient Page is a public service of JAMA Dermatology. The information and recommendations appearing on this page are appropriate in most instances, but they are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, JAMA Dermatology suggests that you consult your physician. This page may be photocopied noncommercially by physicians and other health care professionals to share with patients. To purchase bulk reprints, email reprints@jamanetwork.com.

Authors: Jared Jagdeo, MD, MS; Eva Kerby, MD; Donald Alexander Glass II, MD, PhD
Published Online: April 21, 2021. doi:10.1001/jamadermatol.2020.4705
Author Affiliations: Department of Dermatology, SUNY Downstate Medical Center, Brooklyn, New York (Jagdeo); Department of Dermatology, Weill Cornell Medicine, New York, New York (Kerby); Department of Dermatology, University of Texas Southwestern Medical Center, Dallas (Glass).
Conflict of Interest Disclosures: None reported.
Section Editor: Courtney Schadt, MD.