

CORONAVIRUS



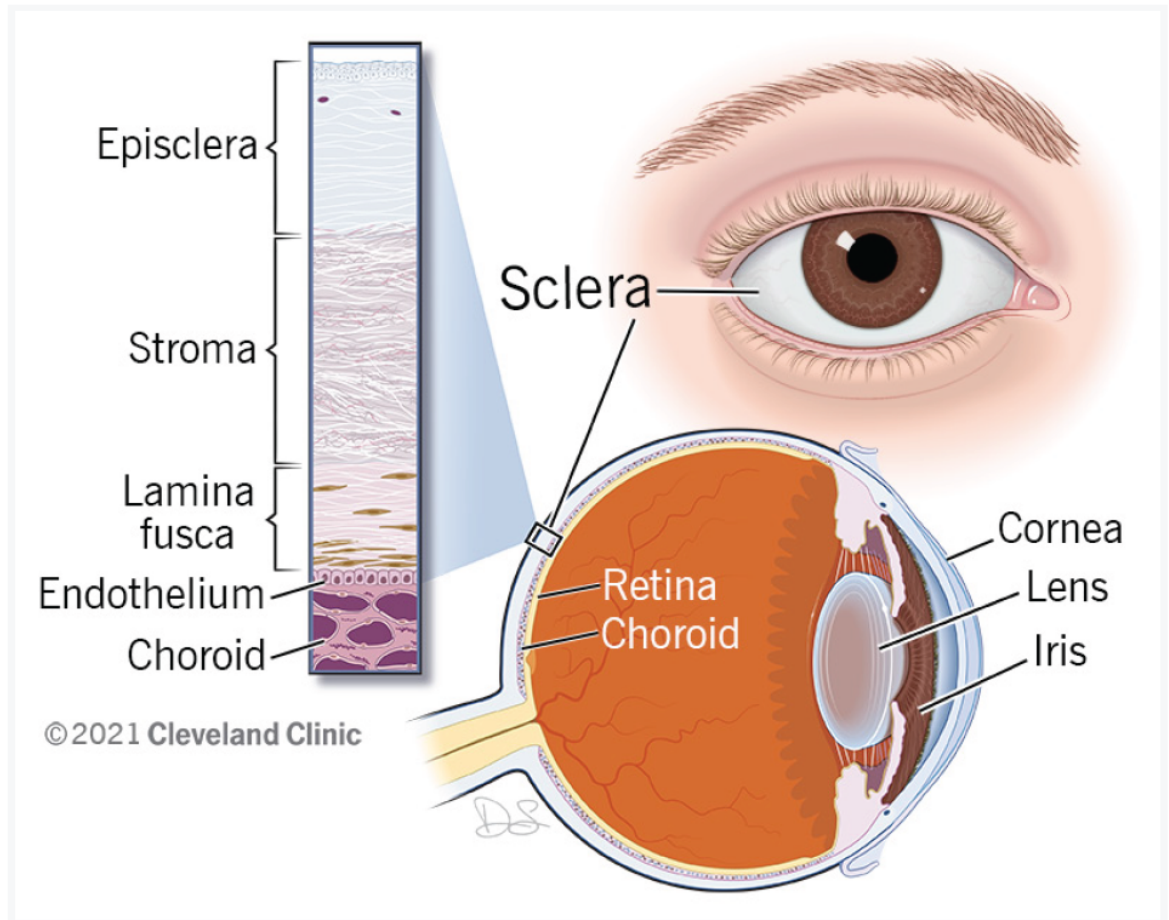
Sclera

The sclera, or white of the eye, is strong tissue that wraps around the eyeball. It helps maintain your eyeball's shape and protects it from injury. Several things can make the entire sclera change color or cause spots of color. Many scleral conditions resolve on their own in a few weeks, but some require medical attention.

[Function](#) [Anatomy](#) [Conditions and Disorders](#) [Care](#) [Frequently Asked Questions](#)

OVERVIEW

Ad



The sclera wraps around the eyeball.

What is the sclera?

The sclera, or white of the eye, is a protective covering that wraps over most of the eyeball. It extends from the cornea in the front to the optic nerve in the back.

This strong layer of tissue, which is no more than a millimeter thick, gives your eyeball its white color. It also protects and supports your eye. The plural for sclera is sclerae.

Ad

ADVERTISEMENT

Cleveland Clinic is a non-profit academic medical center. Advertising on our site helps support our mission. We do not endorse non-Cleveland Clinic products or services. [Policy](#)

FUNCTION

What does the sclera do?

The sclera functions as the supporting wall of the eyeball. It helps maintain your eyeball's shape, and protects it from injury.

The sclera is covered by conjunctiva, which are clear mucus membranes that lubricate (moisturize) your eye. Muscles attached to the sclera help move your eyeball up and down and side to side.

ANATOMY

What is the anatomy of the sclera?

The sclera is made of tough collagen fibers, which crisscross in random directions. That random pattern gives your eyeball its white color and gives the sclera strength. This contrasts with the collagen fibers in your cornea, which are very organized and allow the cornea to be clear.

The sclera has four layers, from the outside to the inside:

- **En sclera** clear thin tissue resting on top of the whites of your eyeballs

Ad

- **Stroma**, made up of fibroblasts and collagen fibers, blending into the episclera.
- **Lamina fusca**, a transitional layer between the sclera and the choroid and ciliary body outer layers.
- **Endothelium**, the basal, or innermost layer of the sclera.

ADVERTISEMENT

CONDITIONS AND DISORDERS

Why isn't the sclera of my eye white?

Several things can cause the entire sclera to change color or spots of color to appear:

- **Blue sclera:** If the sclera is thinner than normal, blood vessels may show through, giving your eyeballs a blue or gray hue. This may occur in people with certain health conditions. Examples include [osteogenesis imperfecta](#) (a genetic bone disease) and [Marfan syndrome](#) (a disorder in connective tissue throughout the body). Other examples include iron deficiency and [anemia](#).
- **Icteric sclera and jaundice:** If the entire sclerae turn yellow, that could mean you have [jaundice](#). Jaundice indicates liver disease, which means the liver isn't filtering blood properly.
- **Injury:** If your eyeball is injured, it may have a bright red spot. This indicates a broken blood vessel that has leaked some blood. These red spots are usually harmless and go away in a few days or weeks.

Ad

- **Irritation:** If your eyes are “bloodshot,” you can see redness throughout the sclerae. Eyes may be irritated due to smoke, allergies, exhaustion or infection.
- **Medication:** Some medications can tint the sclerae blue or gray (for example, an antibiotic called minocycline).
- **Melanosis:** Your sclera may contain a flat, brown spot, almost like a freckle. This is more common in Black people. The spots are caused by high levels of pigment called melanin, and they’re harmless.
- **Pinguecula:** A small patch of yellow may bulge out from your sclera after damage from the sun, wind or dust. The patch may become inflamed and turn pink or red.
- **Pterygium:** If a pinguecula goes untreated, it can get larger, expand into the cornea and block vision.
- **Primary acquired melanosis (PAM):** If you have a flat brown spot on the eye that changes over time, this may indicate PAM. This condition can become cancerous, so report any new or changing spots on the sclera.

What other conditions and disorders affect the sclera?

Other problems with the sclera include:

- **Ectasia:** When your eyeball experiences trauma (injury) or inflammation, the sclera may thin or bulge. This may heal on its own, or you may need special contact lenses.
- **Episcleritis:** This is inflammation (swelling) of the episclera. Your eyes may be swollen, tender and red. The condition may be associated with an inflammatory condition, such as [rheumatoid arthritis](#). Episcleritis usually goes away on its own in a few weeks, but it can come back.
- **Scleral coloboma:** Sometimes, a piece of tissue is missing in the sclera from birth. It can cause a notch or a bulge in your eyeball. Treatment varies

Ad

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.