HEALTH BASICS

Ciliary body

The ciliary body is an internal eye structure that controls focusing and makes eye fluid.

WHAT IT IS
A ring of eye tissue controlling focus and fluid production

WHERE IT COMES UP
Eye exams, glaucoma care, uveitis, trauma, and surgery

WHY IT MATTERS
Supports focusing and healthy pressure inside the eye

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
An optometrist or ophthalmologist

HOW IT IS CHECKED
Eye examination, pressure measurement, and specialized imaging

Overview

The ciliary body is a ring of tissue inside your eye. It sits behind the iris, which is the coloured part of the eye, and joins the iris to the choroid, a layer containing many blood vessels.

The ciliary body is not a disease or diagnosis. It is a normal part of eye anatomy.

It has two main jobs. It helps your eye focus at different distances, and it makes aqueous humour. Aqueous humour is the clear fluid that fills the front part of the eye. This fluid nourishes nearby tissues and helps the eye keep its shape and internal pressure.

Most of the ciliary body is hidden behind the iris, so you cannot see it by looking in a mirror. An eye care professional may assess it when checking eye pressure, inflammation, an injury, or an unusual finding inside the eye.

How it works

The ciliary body contains the ciliary muscle and many small folds called ciliary processes.

The ciliary muscle changes the shape of the natural lens inside your eye. Fine fibres called zonules connect the ciliary body to the lens. Together, these structures allow a process called

accommodation, which means adjusting focus.

When you look at something nearby, the ciliary muscle contracts. This reduces tension on the zonules, allowing the flexible lens to become rounder. A rounder lens bends light more strongly for close vision.

When you look into the distance, the muscle relaxes. The zonules become tighter and pull the lens into a flatter shape.

With age, the lens becomes less flexible. This causes presbyopia, the common age-related difficulty with focusing up close. Presbyopia mainly reflects changes in the lens rather than the ciliary body becoming diseased.

The ciliary processes make aqueous humour. This fluid flows from behind the iris, through the pupil, and into the front chamber of the eye. It then leaves through drainage pathways near the edge of the iris and cornea.

Eye pressure reflects the balance between fluid production and drainage. The ciliary body produces the fluid, but the drainage system usually has the greater role in common forms of raised eye pressure.

The ciliary body has a folded front section called the pars plicata and a flatter back section called the pars plana. Eye surgeons may use the pars plana as an entry point for operations involving the gel-filled back of the eye.

Why it matters for your health

Clear focusing depends partly on the coordinated work of the ciliary muscle, zonules, and lens. Problems affecting any one of these structures can change how the eye focuses.

Aqueous humour supports the cornea and lens, which do not have their own blood vessels. The fluid supplies nutrients and carries away waste. Its movement also contributes to pressure inside the eye.

This is why the ciliary body may be discussed during glaucoma care. Glaucoma is a group of conditions involving damage to the optic nerve. Some glaucoma medicines and procedures lower eye pressure by reducing aqueous humour production. Others improve fluid drainage.

The ciliary body is also part of the uvea, the eye's middle layer. The uvea includes the iris, ciliary body, and choroid. Inflammation involving these tissues is called uveitis. When inflammation affects the iris and ciliary body together, it may be called iridocyclitis or anterior uveitis.

Its location also matters during eye injury and surgery. Because the ciliary body is mostly hidden, specialized examination or imaging may be needed when a problem is suspected.

What can go wrong

Conditions and situations involving the ciliary body include:

These conditions cannot be identified from symptoms alone. Similar eye symptoms can have many causes.

A term involving the ciliary body on a stable test report can usually be discussed at the follow-up recommended by the eye care service. Ask what was seen, whether it affects pressure or vision, and whether imaging or monitoring is planned.

Seek urgent eye care for a new painful red eye, marked light sensitivity, or a noticeable change in vision. Get emergency help for sudden vision loss, severe eye pain, a penetrating eye injury, or eye pain with nausea and vomiting. After a chemical splash, begin rinsing the eye immediately and seek emergency advice.

- Uveitis: Inflammation can affect the ciliary body and nearby iris. Possible signs include eye pain, redness, light sensitivity, blurred vision, and new floating spots.
- Glaucoma and abnormal eye pressure: Aqueous humour production is one part of the pressure balance. Raised pressure can contribute to optic nerve damage, while very low pressure can also interfere with eye function.
- Cyclodialysis cleft: An injury or operation can separate part of the ciliary body from its normal attachment. This creates an abnormal drainage route and may cause low eye pressure.
- Zonule damage: Injury, surgery, or certain eye disorders can weaken the fibres connecting the ciliary body to the lens. The lens may then become unstable or move out of position.
- Cysts or tumours: Growths can develop in or near the ciliary body. Some are harmless, while others require treatment. Because this area is hidden, they may be found during a detailed eye examination or imaging.
- Surgical complications: Operations involving the front or back of the eye may affect nearby ciliary tissue, inflammation, fluid production, or pressure.

What you can do

There is nothing you need to do to keep a normal ciliary body "strong." Eye exercises and focusing drills do not prevent age-related stiffening of the lens.

If the ciliary body is mentioned in an examination or imaging report, useful questions include:

Keep copies of eye reports if you are being monitored over time. A record of pressure

readings, imaging results, injuries, operations, and current eye drops can help different clinicians understand what has changed.

Use prescribed eye drops exactly as directed. Do not stop glaucoma or anti-inflammatory drops because the eye feels better unless the prescribing service tells you to. Some eye drops must be reduced gradually, while others need consistent use to control pressure.

Protective eyewear can reduce the risk of eye injury during work, sport, or home projects. If an injury occurs, tell the eye care service when it happened and whether you noticed pain, blurred vision, flashes, floaters, or a change in the pupil.

- What exactly was found, and in which eye?
- Is my eye pressure normal for me?
- Does this affect the lens, drainage system, or other eye structures?
- Do I need imaging, treatment, or a repeat examination?
- Which changes in pain or vision should prompt earlier care?

Common questions

Can I feel my ciliary body working?

Usually not. Focusing happens automatically. Eye strain during close work does not by itself show that the ciliary body is damaged.

Is the ciliary body the same as the iris?

No. They are connected parts of the uvea, but they have different roles. The iris controls how much light enters through the pupil. The ciliary body adjusts focus and produces aqueous humour.

Is it the same as the tear gland?

No. Tears coat the outside surface of the eye and come mainly from the lacrimal glands. Aqueous humour is made inside the eye by the ciliary body.

Can a routine eye examination see it?

Most of it is hidden behind the iris. An eye care professional can assess related features, including eye pressure and the drainage angle. Gonioscopy uses a special contact lens to examine that angle. Ultrasound biomicroscopy or anterior-segment optical coherence tomography may provide detailed images when needed.

Does a ciliary body finding mean cancer?

No. The phrase may refer to normal anatomy, inflammation, an injury, a cyst, or another

change. Tumours are only one possible explanation. The report and examination findings determine whether further testing is needed.

Does removing the natural lens stop the ciliary muscle from working?

The muscle remains present after cataract surgery, but a standard artificial lens usually does not change shape like a young natural lens. Reading glasses may still be needed, depending on the type of lens implant and your visual needs.

Sources

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