HEALTH BASICS

Uvea

The uvea is the pigmented middle layer of the eye, made up of the iris, ciliary body, and choroid.

WHAT IT IS
The eye's pigmented middle layer

WHERE IT COMES UP
Eye examinations, uveitis, injuries, congenital differences, and eye tumors

WHY IT MATTERS
Supports vision, focusing, pupil control, and eye fluid production

WHAT IT IS NOT
Normal eye anatomy, not a disease or diagnosis

WHO TO ASK
An optometrist or ophthalmologist

HOW IT IS CHECKED
Slit-lamp and dilated eye examinations

Overview

The uvea, also called the uveal tract , is a normal part of your eye. It is not a disease or diagnosis.

The uvea is the eye's middle layer. It lies inside the tough white outer coat, called the sclera, and is closely connected with the retina, the light-sensitive tissue at the back of the eye.

It has three parts:

These structures help control how much light enters your eye, adjust focus, make fluid inside the eye, and support the retina.

You may hear the word uvea during an eye examination or in the name of a condition such as uveitis, uveal melanoma, or uveal coloboma. These are conditions involving the uvea; they are not other names for the uvea itself.

- Iris: the colored part at the front of your eye
- Ciliary body: a ring of muscle and tissue behind the iris
- Choroid: a layer rich in blood vessels behind the retina

How it works

The iris controls the size of the pupil. The pupil is the dark opening in the center of the iris, not a separate piece of tissue. Small muscles in the iris make the pupil narrower in bright light and wider in dim light. This helps regulate the amount of light reaching the retina.

The ciliary body performs two main jobs. Its ciliary muscle changes tension on tiny fibers connected to the lens. This allows the lens to change shape when you shift focus between distant and nearby objects.

The ciliary body also makes aqueous humor , the clear fluid in the front of the eye. This fluid nourishes nearby tissues and helps maintain the eye's shape and internal pressure. It normally passes through the pupil and drains through tissue near the angle between the iris and cornea.

The choroid lies between the sclera and retina in the back of the eye. Its many blood vessels supply oxygen and nutrients to the outer retina, including the light-sensing cells known as photoreceptors.

Pigment within the uvea helps absorb stray light. This limits internal light scattering and helps the retina form a clearer image.

The three parts have different jobs, but inflammation or injury in one part can sometimes affect nearby eye structures.

Why it matters for your health

The uvea supports several processes needed for sight. It helps the eye respond to changing light, focus at different distances, maintain fluid balance, and nourish the retina.

Its blood supply and pigment-producing cells also explain why certain inflammatory, inherited, and cancerous conditions can involve this layer.

When an eye professional describes a finding as anterior , intermediate , or posterior , those terms help identify where it is located. For example, anterior uveitis mainly affects the iris or nearby ciliary body, while posterior uveitis affects tissues toward the back of the eye.

Knowing the exact part involved can help you understand which examinations, scans, or follow-up visits are needed. It may also clarify why treatment aimed at one eye structure can require monitoring of eye pressure, the lens, or the retina.

What can go wrong

Several conditions and injuries can involve the uvea.

Uveitis means inflammation inside the eye. It may affect the iris, ciliary body, choroid, or several areas at once. Causes can include infection, an immune system condition, an eye injury, or certain medicines. Sometimes no cause is found. Eye pain, redness, light sensitivity, blurred vision, or new floaters can occur, although the pattern depends on the area affected.

Uveal melanoma is a cancer that begins in pigment-producing cells of the uvea, most often in the choroid. It is different from melanoma of the skin. Some tumors are found during a routine dilated eye examination, while others affect vision. A suspected tumor needs assessment by an ophthalmologist, often one specializing in eye tumors.

Uveal coloboma is a difference present from birth in which part of the iris, ciliary body, or choroid did not form completely before birth. An iris coloboma may give the pupil a keyhole-like shape. The effect on vision depends mainly on which tissues are involved.

Choroidal detachment happens when fluid or blood collects between the choroid and sclera. It may occur after eye surgery, injury, inflammation, or a marked drop in eye pressure. An ophthalmologist can determine whether observation or treatment is needed.

A blunt or penetrating injury can tear the iris, inflame the uvea, or cause bleeding inside the eye. These problems cannot be judged safely by appearance alone.

Seek prompt, same-day eye assessment for new eye pain, marked redness, light sensitivity, blurred vision, new floaters, or flashes of light. A shadow or curtain across your vision also needs urgent assessment because it can indicate a retinal problem.

Sudden major vision loss, a penetrating eye injury, or a chemical splash is an emergency. After a chemical splash, begin rinsing the eye immediately with clean water while arranging emergency care.

What you can do

There is no home test for the uvea, and most people do not need a separate uvea screening test. An optometrist or ophthalmologist can examine it as part of an eye examination.

The iris and front of the ciliary body can be viewed with a slit lamp , a microscope that shines a narrow beam of light into the eye. Dilating drops widen the pupil so the clinician can examine the choroid, retina, and other structures at the back of the eye.

Other tests may be used for a particular finding. These can include eye-pressure measurement, retinal imaging, optical coherence tomography, ultrasound, or photographs taken after dye is injected into a vein. Not everyone needs these tests.

If you are told that a finding involves the uvea, useful questions include:

Keep a record of the diagnosis, which eye is affected, test results, medicines, and previous eye surgery or injuries. Tell the eye professional about immune system conditions, infections, and all medicines you use because these details may help explain inflammation.

If you have been prescribed eye drops or other treatment for a uveal condition, use them as directed. Do not stop steroid eye drops suddenly or restart old drops without advice, because treatment and monitoring depend on the specific condition.

- Which part of the uvea is involved?
- Is the finding inflammation, an injury, a congenital difference, or a tumor?
- Does it affect the retina, lens, or eye pressure?
- Which changes should lead to urgent assessment?
- What follow-up examination or imaging is planned?

Common questions

Is the uvea the same as the iris?

No. The iris is the visible front part of the uvea. The uvea also includes the ciliary body and choroid.

Is the pupil part of the uvea?

The pupil is an opening in the iris rather than a separate tissue. Iris muscles change its size.

Is uvea another word for uveitis?

No. The uvea is normal anatomy. Uveitis is inflammation involving part or all of the uvea.

Can the whole uvea be seen during a regular eye examination?

Different parts require different methods. A slit lamp shows structures toward the front. Dilating the pupil allows a better view of the choroid and retina at the back.

Does eye color change how the uvea works?

Eye color mainly reflects the amount and distribution of pigment in the iris. Normal differences in eye color do not by themselves mean that the uvea is unhealthy.

Can you feel the uvea working?

No. Normal pupil adjustment, focusing, and fluid production usually happen without any sensation.

Sources

- American Academy of Ophthalmology - Eye Anatomy: Parts of the Eye and How We See
- National Eye Institute - How the Eyes Work
- National Eye Institute - Uveitis
- National Eye Institute - Coloboma
- National Cancer Institute - Intraocular Melanoma Treatment: Patient Version
- MedlinePlus, U.S. National Library of Medicine - Eye Injuries