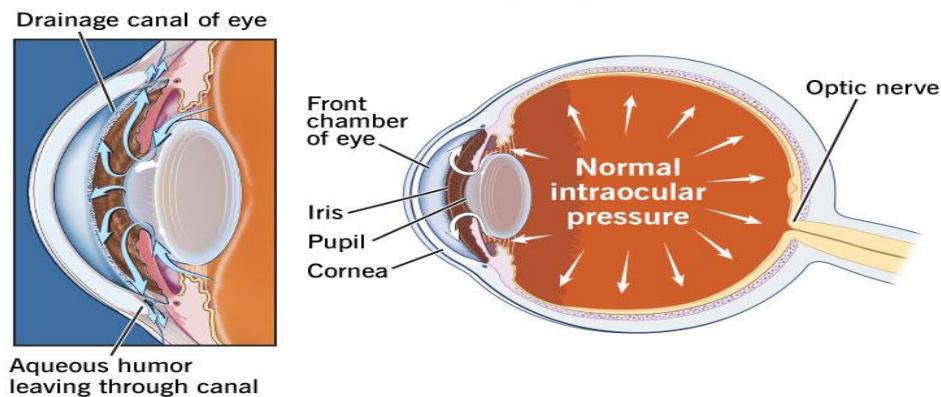


WHAT IS GLAUCOMA?

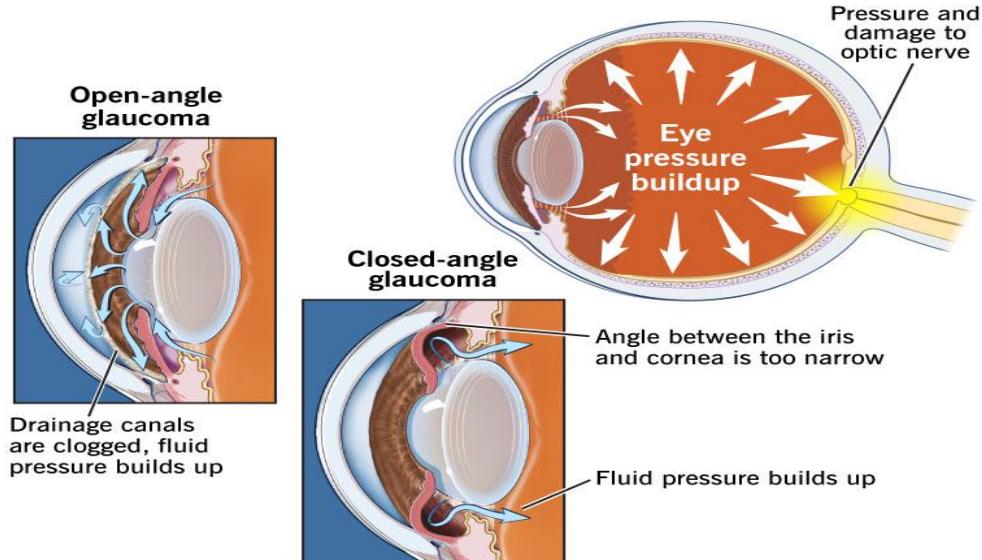
Glaucoma is an umbrella term for eye diseases that make pressure build up inside your eyeball, which can damage delicate, critical parts at the back of your eye. Most of these diseases are progressive, which means they gradually get worse. As they do, they can eventually cause permanent vision loss and blindness. In fact, glaucoma is the second-leading cause of blindness worldwide.

Learning that you have glaucoma or that you're at risk for it can be hard to process. For most people, vision is the sense they rely on most in their daily routine. It can feel scary to imagine trying to adapt to and live your life after you have severe vision loss. But most forms of glaucoma are treatable, especially when diagnosed early. And with care and careful management, it's possible to delay — or even prevent — permanent vision loss.

Healthy Eye



Glaucoma



SYMPTOMS AND CAUSES

Glaucoma happens when high pressure inside your eye damages your optic nerve and retina.

WHAT ARE THE SYMPTOMS OF GLAUCOMA?

In its early stages, glaucoma may not cause any symptoms. That's why up to half of the people in the United States with glaucoma may not know they have it. And symptoms may not appear until this condition causes irreversible damage.

Some of the more common glaucoma symptoms include:

- Eye pain or pressure
- Headaches
- Red or bloodshot eyes
- Double vision (diplopia)
- Blurred vision
- Gradually developing low vision
- Gradually developing blind spots (scotomas) or visual field defects like tunnel vision

Some types of glaucoma, particularly angle closure glaucoma, can cause sudden, severe symptoms that need immediate medical attention to prevent permanent vision loss. Emergency glaucoma symptoms include:

- Blood gathering in front of your iris (hyphema)
- Bulging or enlarged eyeballs (buphthalmos)
- Nausea and vomiting that happen with eye pain/pressure
- Rainbow-colored halos around lights
- Sudden appearance or increase in floaters (myodesopsias)
- Sudden vision loss of any kind
- Suddenly seeing flashing lights (photopsias) in your vision

WHAT CAUSES GLAUCOMA?

Glaucoma is caused by damage to your optic nerve. It can occur without any cause, but many factors can affect the condition. The most important of these risk factors is intraocular eye pressure. Your eyes produce a fluid called aqueous humor that nourishes them. This liquid flows through your pupil to the front of your eye. In a healthy eye, the fluid drains through mesh-like canals (trabecular meshwork), which is where your iris and cornea come together at an angle.

With glaucoma, the resistance increases in your drainage canals. The fluid has nowhere to go, so it builds up in your eye. This excess fluid puts pressure on your eye. Eventually, this elevated eye pressure can damage your optic nerve and lead to glaucoma.

What makes the fluid buildup can vary, depending on the specific overall type of glaucoma you have.

TYPES OF GLAUCOMA

There are many different types of glaucoma, but they mainly fall under a few specific categories:

- **Primary open-angle glaucoma.** "Open-angle" means that the drainage angle, where the inside of the sclera (the white of your eye) and the outer edge of your iris meet, is open wide. Aqueous humor flows into the drainage angle so it can drain out of the anterior chamber. This is the most common type of glaucoma.
- **Primary angle-closure glaucoma.** Aqueous humor fluid is supposed to flow from the posterior chamber behind your iris, through your pupil, and into the anterior chamber. But sometimes, the lens of your eye presses too far forward, blocking fluid from flowing through the pupil opening. The extra fluid in the posterior chamber forces the iris forward, narrowing or closing off the drainage angle.
- **Secondary glaucoma.** This is when another condition or event increases eye pressure, which leads to glaucoma. Conditions that can cause it include eye injuries, pigmentary dispersion syndrome, uveitis, certain medications (especially corticosteroids and cycloplegics), eye procedures and more.
- **Congenital glaucoma.** This means you have glaucoma because of changes or differences that happened during fetal development. These include aniridia, Axenfeld-Rieger syndrome, Marfan syndrome, congenital rubella syndrome and neurofibromatosis type

DIABETES

Diabetes is a chronic disease where the body has high blood sugar (glucose) because it doesn't produce enough insulin or can't use the insulin it makes effectively. Insulin, a hormone from the pancreas, is needed to move glucose from the blood into cells for energy. Without enough insulin, glucose builds up in the bloodstream, which can damage organs like the heart, eyes, kidneys, and nerves over time.

Key facts about diabetes

- **What it is:**

A condition of high blood glucose levels.

- **Why it happens:**

The pancreas doesn't produce enough insulin, or the body's cells don't respond properly to insulin.

- **What insulin does:**

It's a hormone that acts like a key, allowing glucose to enter cells for energy.

- **Consequences:**

When glucose can't enter cells, it stays in the blood, leading to potential damage to the body's organs over time.

- **Main types:**

- **Type 1:** An autoimmune condition where the body attacks and destroys insulin-producing cells.
- **Type 2:** The body either doesn't make enough insulin or doesn't use it effectively.
- **Gestational diabetes:** Occurs during pregnancy.

- **Classic symptoms:**

Excessive thirst, frequent urination, increased hunger, and blurred vision.

- **Management:**

Diabetes can be managed through a healthy diet, regular physical activity, and, in some cases, medication or insulin therapy, which helps reduce the risk of complications.

SYMPTOMS



Common diabetes symptoms include increased thirst and urination, unexplained weight loss, extreme hunger, fatigue, and blurry vision. Other signs can include slow-healing sores, frequent infections, and tingling or numbness in the hands and feet. In type 1 diabetes, symptoms can appear suddenly, while in type 2 diabetes, they may develop slowly and be less severe, sometimes going unnoticed for years.

Common symptoms

- **Increased thirst and urination:** Feeling very thirsty and needing to urinate more often than usual, especially at night.
- **Increased hunger:** Feeling very hungry, even after eating.
- **Unexplained weight loss:** Losing weight without trying to.
- **Fatigue:** Feeling unusually tired or weak.
- **Blurred vision:** Vision that becomes blurry.
- **Slow-healing sores:** Cuts and sores that take a long time to heal.
- **Frequent infections:** Getting more infections, such as skin, gum, or vaginal infections.
- **Tingling or numbness:** A "pins and needles" sensation, often in the hands or feet.
- **Mood changes:** Irritability or other mood changes.

DIABETIC RETINOPATHY

Diabetic retinopathy is an eye complication of diabetes caused by high blood sugar damaging the blood vessels in the retina, the light-sensitive tissue at the back of the eye. This damage can cause blood vessels to leak fluid or close off, and in advanced stages, new, abnormal blood vessels can grow, leading to vision loss and even blindness.

CAUSES AND RISK FACTORS

- **High blood sugar:**

Over time, high glucose levels damage the small blood vessels in the retina.

- **Duration of diabetes:**

The longer a person has diabetes, the higher the risk of developing retinopathy.

- **Poorly controlled blood sugar:**

High A1C levels increase the risk and severity of the condition.

- **Other factors:**

Smoking, high blood pressure, and high cholesterol can also increase the risk and severity of damage.

Stages and symptoms

- **Nonproliferative diabetic retinopathy (NPDR):**

The early stage where blood vessels weaken, bulge (microaneurysms), or leak fluid into the retina. Symptoms are often mild or absent, but may include blurry vision or floaters.

- **Proliferative diabetic retinopathy (PDR):**

The advanced stage where blood vessels close off, and the retina grows new, abnormal blood vessels. These fragile vessels can bleed into the vitreous (the gel that fills the eye), causing significant vision loss or blindness.

SYMPTOMS

Early to moderate symptoms

- **Blurred or fluctuating vision:** Your vision may become blurry, or the level of blurriness can change.
- **Floater:** You might see spots, dark strings, or "cobwebs" that drift through your field of vision.
- **Dark or empty areas in your vision:** You may experience blind spots in your vision.

Advanced symptoms

- **Poor night vision:** It can become harder to see in low light conditions.
- **Faded or washed-out colors:** Colors may appear less vibrant.
- **Sudden, severe, or painless vision loss:** This is a serious symptom that requires immediate attention.
- **Eye pain or pressure:** While less common, this can occur and should be evaluated by a specialist.

CARDIOVASCULAR

Cardiovascular refers to the heart ("cardio") and the blood vessels ("vascular") that make up the circulatory system. This system is responsible for pumping and circulating blood throughout the body to deliver oxygen and nutrients while removing waste products. Cardiovascular diseases are conditions that affect the heart and blood vessels, such as coronary artery disease, stroke, and peripheral artery disease.

The cardiovascular system

- **Heart:** A muscular pump that pumps blood.
- **Blood vessels:** A network of arteries, veins, and capillaries that transport blood throughout the body.
- **Function:** The system transports oxygen, nutrients, hormones, and other essential cells to the body's tissues and organs. It also removes waste products like carbon dioxide.

Cardiovascular disease

- **What it is:** A broad term for conditions affecting the heart and blood vessels.
- **Common types:**
 - Coronary Artery Disease (CAD): Narrowed arteries that supply blood to the heart.
 - Stroke: Occurs when blood supply to part of the brain is blocked or a blood vessel ruptures.

- Peripheral Artery Disease (PAD): Affects arteries in the limbs.
- Arrhythmias: Problems with the heart's electrical rhythm.
- **Risk factors:** High blood pressure, high cholesterol, tobacco use, diabetes, and unhealthy diet can increase the risk of developing cardiovascular diseases.

SYMPTOM

As the condition gets worse, symptoms may include:

- Dizziness, lightheadedness and fainting.
- Fatigue.
- Feeling short of breath during activity or at rest.
- Feeling short of breath at night when trying to sleep, or waking up short of breath.
- Rapid, pounding or fluttering heartbeats.
- Swollen legs, ankles or feet.