CONDITION

Diabetic eye disease

Diabetic eye disease is a group of eye conditions caused or worsened by diabetes.

WHAT IT IS
Diabetes-related damage affecting the eyes and vision

BODY SYSTEM
Eyes and vision

MAIN SYMPTOMS
Blurred vision, floaters, dark areas, vision loss

WHAT CAUSES IT
Blood vessel damage from prolonged high blood sugar

HOW IT IS DIAGNOSED
Dilated eye examination and retinal imaging

MAIN TREATMENT
Diabetes management, eye injections, laser treatment, or surgery

CAN IT BE CURED?
No - damage can be treated and progression slowed

IS IT AN EMERGENCY?
Sometimes - sudden vision loss or a dark curtain

LONG-TERM OUTLOOK
Regular monitoring and treatment can protect vision

Overview

Diabetic eye disease is a general term for eye conditions caused or made more likely by diabetes. It can affect people with type 1, type 2, or other forms of diabetes.

The main condition is diabetic retinopathy . It develops when high blood sugar damages small blood vessels in the retina, the light-sensitive layer at the back of the eye.

Damaged vessels may leak fluid or blood or close and reduce the retina's blood supply. In advanced retinopathy, fragile new vessels may grow, bleed, or form scar tissue.

Diabetes also increases the risk of:

Diabetic eye changes often cause no symptoms at first. Regular screening matters because treatment is usually more effective before major vision loss develops.

- Diabetic macular edema , or swelling in the central retina
- Cataracts , which cloud the eye's natural lens
- Glaucoma , which damages the nerve connecting the eye to the brain

Symptoms

Early diabetic retinopathy usually does not affect how you see. Significant retinal changes can be present while vision still seems normal.

Symptoms may include:

Blood sugar changes can temporarily affect the eye's lens and alter focus, so blurred vision does not always mean retinopathy is worsening. Cataracts, dry eyes, and other conditions can also cause blurring.

A sudden increase in floaters, flashing lights, a dark curtain across your sight, or sudden vision loss needs urgent assessment. These symptoms can result from bleeding, scar tissue, a retinal tear, or retinal detachment.

- Blurred or changing vision
- Difficulty reading or seeing fine detail
- Faded colors
- Dark, empty, or distorted areas in your sight
- Moving spots or threads called floaters
- Poorer vision in dim light
- Partial or complete vision loss

Causes and risk factors

Diabetic eye disease is mainly linked to long-term exposure to high blood sugar, which can damage small blood vessels throughout the body.

Risk generally increases the longer you have diabetes. Other factors associated with development or faster progression include:

Pregnancy can make retinopathy progress more quickly. This differs from gestational diabetes, which begins during pregnancy and does not usually require the same retinal monitoring unless diabetes continues afterward.

Risk factors cannot predict exactly what will happen to an individual. Retinopathy can develop even in someone with few risk factors.

- Blood sugar that remains above your agreed target
- High blood pressure
- High cholesterol or other abnormal blood fats
- Kidney disease related to diabetes
- Smoking
- Pregnancy in someone who already has diabetes
- Existing diabetic retinopathy

Diagnosis

Diabetic eye disease is diagnosed through an eye examination, not from symptoms alone.

During a dilated eye examination , drops widen your pupils so an eye professional can examine the retina. The drops may temporarily blur your vision and make you sensitive to light.

Digital retinal photographs can show leaking vessels, small bleeds, fatty deposits, and abnormal new blood vessels.

Other tests may include:

Non-proliferative diabetic retinopathy involves damaged or leaking vessels. Proliferative diabetic retinopathy is more advanced and involves abnormal new vessel growth.

Macular edema can develop at any stage. It affects the macula, the central area needed for reading, recognizing faces, and seeing detail.

- Optical coherence tomography , or OCT, which creates detailed retinal scans and measures swelling
- Fluorescein angiography , which uses dye injected into a vein to show leaking or blocked vessels
- Eye pressure measurement to check for glaucoma
- A visual acuity test using a letter chart

Treatment and management

Treatment depends on the affected part of the eye, the severity of the changes, and whether

sight is at risk.

Managing diabetes remains important at every stage. Keeping blood sugar, blood pressure, and cholesterol within targets agreed with your healthcare team can reduce progression, although it does not instantly reverse established damage.

Mild retinopathy may only require more frequent examinations or imaging. Monitoring allows treatment to begin when it is most likely to help.

Anti-VEGF injections are commonly used for diabetic macular edema and some proliferative retinopathy. These medicines reduce abnormal vessel growth, leakage, and swelling. Numbing drops are used first. Repeated appointments are often needed, although schedules vary.

Steroid medicines may sometimes be placed in or around the eye to reduce swelling. They can raise eye pressure or contribute to cataracts, so follow-up examinations are essential.

Laser treatment can seal leaking areas or treat retina that is not receiving enough blood. It may reduce the risk of severe vision loss but does not usually restore sight already lost. Some laser treatments can affect side or night vision.

A vitrectomy removes blood or scar tissue from inside the eye. It may be used for persistent bleeding, severe scarring, or retinal detachment.

Cataracts and glaucoma are treated separately. Treatment may include cataract surgery, eye drops, laser procedures, or glaucoma surgery.

Complications

Diabetic macular edema can damage central vision, making reading, driving, screen use, and recognizing faces difficult.

Fragile new vessels can bleed into the vitreous, the clear gel inside the eye. A small bleed may cause floaters; a larger one can suddenly block much of the vision.

Scar tissue may pull the retina away from the back of the eye. This tractional retinal detachment can cause serious sight loss and may require surgery.

Abnormal vessels can also block fluid drainage and cause neovascular glaucoma , a painful rise in eye pressure that threatens vision.

Vision loss may be gradual or sudden. Early treatment can limit further damage, but established retinal injury may not be fully reversible.

Prevention

Diabetic eye disease cannot always be prevented, but you can reduce the risk of severe changes by:

Do not stop attending screening because your vision seems normal. Screening detects changes before you notice them.

If you are planning a pregnancy and already have diabetes, discuss eye monitoring with your diabetes and pregnancy teams. You may need retinal assessment before or early in pregnancy and additional checks afterward.

Rapid improvement in long-standing high blood sugar can occasionally be followed by temporary worsening of retinopathy. Better glucose management remains beneficial overall, but your diabetes and eye teams may coordinate monitoring when major treatment changes are planned.

- Attending diabetic eye screening or dilated eye examinations
- Managing blood sugar within your agreed target
- Having blood pressure and cholesterol checked and treated
- Not smoking
- Reporting new visual symptoms rather than waiting for routine screening

Living with it and what to expect

Many people with early diabetic retinopathy continue to see normally for years. Some changes remain stable, while others progress and need treatment. Outlook depends on the retinopathy stage, macular swelling, diabetes duration, and other health conditions.

Follow-up may range from routine screening to frequent specialist appointments. A shorter interval often means the eye team wants to monitor a particular change closely, not that vision loss is certain.

Eye injections may be needed repeatedly over months or years. Keep appointments because swelling or abnormal vessel growth can return after improvement. Tell the clinic if travel, work, caring duties, anxiety, or cost makes attendance difficult; support or appointment adjustments may be available.

If your sight is reduced, low-vision services may provide magnifiers, stronger lighting, screen-reading software, high-contrast settings, and mobility support.

Ask whether reduced vision affects driving rules where you live. Registration or certification of visual impairment may provide access to workplace changes, benefits, transport support, or

rehabilitation.

Support from an eye clinic, diabetes team, counselor, or sight-loss organization may help if worry affects your mood, sleep, work, or diabetes care.

When to get medical help

Arrange a routine appointment for gradual, stable blurring, changing focus, difficulty reading, or poorer night vision.

Contact your eye clinic promptly if you have known diabetic retinopathy and notice any new vision change. Do not wait for your next screening appointment.

Seek urgent same-day eye care for:

Seek emergency care for sudden severe vision loss, especially if urgent eye services are unavailable. Severe eye pain with a red eye, headache, nausea, or rapidly worsening vision also needs emergency assessment.

- A sudden increase in floaters
- New flashes of light
- A dark shadow or curtain moving across your vision
- Sudden blurred, distorted, or reduced vision
- New loss of part of your visual field

Common questions

Can diabetic retinopathy go away?

Very early changes may improve with better diabetes and blood pressure management, but established retinal damage may not disappear. Treatment aims to reduce leakage, control abnormal vessels, and prevent further sight loss.

Can I have diabetic eye disease with good eyesight?

Yes. Early retinopathy often causes no symptoms, and a standard glasses test cannot rule it out. Retinal screening or a dilated examination is needed.

Will I go blind if I have diabetic retinopathy?

Most people do not lose all vision. Risk is higher with advanced retinopathy, macular edema, missed monitoring, or untreated complications. Regular assessment and timely treatment

substantially reduce the risk of severe sight loss.

Does better blood sugar reverse eye damage?

Better blood sugar management reduces future damage and may improve early changes, but it cannot reliably restore permanently injured retinal tissue. Vision may temporarily fluctuate when blood sugar changes.

Are eye injections painful?

Numbing drops are used first. You may feel pressure or brief discomfort rather than sharp pain. Mild irritation or a blood spot on the white of the eye can occur afterward. Increasing pain, worsening redness, or reduced vision after an injection needs urgent advice from the treating clinic.

Can I drive after a diabetic eye examination?

Dilating drops can blur vision and increase light sensitivity for several hours. Do not drive until your vision has returned to normal and you meet local driving requirements. Sunglasses may make the journey home more comfortable.

Sources

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