



Pigment Dispersion Syndrome

What is pigment dispersion syndrome?

Pigment is the material that gives your **iris** its color. Pigment dispersion syndrome (PDS) happens when the pigment rubs off the back of your iris. This pigment then floats around to other parts of the eye. The tiny bits of pigment can clog your eye's **drainage angle**. This can cause eye pressure problems.

Your eye keeps a healthy pressure by making a fluid called **aqueous humor**. As new aqueous flows into your eye, the same amount flows out. If enough fluid doesn't leave the eye, pressure inside the eye (intraocular pressure, or IOP) builds up over time and can damage the **optic nerve**. This is called glaucoma. When PDS has progressed to this stage, it is called pigmentary glaucoma. Not everyone who has pigment dispersion syndrome will develop pigmentary glaucoma.

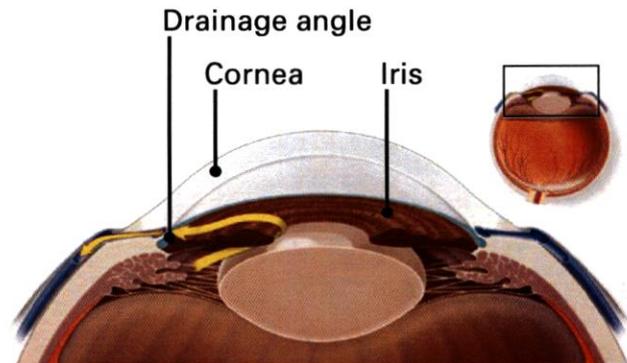
Eye Words to Know

Aqueous humor: Clear liquid inside the front part of our eyes. Aqueous is different than tears. It nourishes the eye and helps it hold its shape.

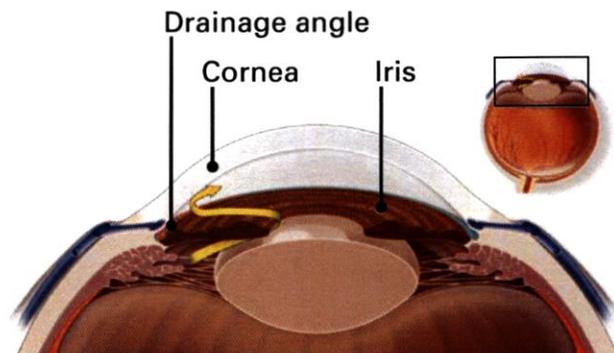
Optic nerve: A nerve at the back of your eye that connects to your brain. The optic nerve sends light signals to your brain so you can see.

Drainage angle: The area of the eye where the aqueous humor drains from the front of the eye.

Iris: The colored part of your eye. It controls the size of your pupil to let light into your eye.



In a healthy eye, fluid leaves the eye through the drainage angle, keeping pressure stable.



If the drainage angle is blocked, fluid cannot flow out of the eye, causing pressure to increase.

What are symptoms of pigment dispersion syndrome?

Many people with PDS do not have any symptoms. Some people may have blurring of vision or see halos after exercise.

Even if you have pigmentary glaucoma, you may not notice any symptoms. In time, as the optic nerve becomes more damaged, you may notice that blank spots begin to appear in your field of vision. You usually won't notice these blank spots in your day-to-day activities until the optic

nerve is significantly damaged and these spots become large. If all of the optic nerve fibers die, blindness results.

Who is at risk for pigment dispersion syndrome?

PDS may be inherited (passed from parent to child). It is more common among:

- people with myopia (nearsightedness)
- people in their 20s and 30s. Other types of glaucoma are usually diagnosed after the age of 40.
- men
- white people

How is pigment dispersion syndrome diagnosed?

Because there are often no symptoms, PDS is usually diagnosed during a regular eye exam. That is why it is so important to have an eye exam with your ophthalmologist.

During a thorough eye exam, your ophthalmologist will:

- check your eye pressure
- do other tests like a gonioscopy, if PDS is suspected. This lets your ophthalmologist look at the eye's drainage angle. He or she can see if something is blocking the fluid from leaving the eye.
- Your ophthalmologist will also check for glaucoma. They will examine your optic nerve for signs of damage, and check your side (peripheral) vision.

These tests are the same used for a glaucoma diagnosis and will determine if you have pigmentary glaucoma. Your ophthalmologist will be looking for tell-tale signs of pigment floating in the eye (including at the back of the cornea) or small sections of pigment missing from your iris.

How is pigment dispersion syndrome treated?

Treatment for pigment dispersion syndrome varies depending on how it is affecting your IOP.

For pigment dispersion syndrome with normal or only slightly elevated IOP, there is a low risk of damage to the optic nerve. No treatment is needed other than seeing your ophthalmologist one time each year. He or she will monitor your condition by checking your IOP and looking for any changes in your vision.

For pigment dispersion syndrome with elevated IOP, there is a greater risk of damage to the optic nerve. To lower IOP, you may be treated with medicated eye drops or laser therapy.

When IOP from PDS is so high that it damages the optic nerve, this is then called "pigmentary glaucoma." In this case, treatment is needed and it may be medicated eye drops, laser therapy, or surgery.

Summary

Pigment dispersion syndrome (PDS) happens when the pigment rubs off the back of your iris. This extra pigment floats around in other parts of the eye, besides the iris, where it is supposed to be. This can cause eye pressure problems and lead to pigmentary glaucoma.

If you have PDS, you should see your ophthalmologist regularly. He or she can make sure it isn't causing damage and progressing to pigmentary glaucoma. Some people with PDS need to be treated with eye drops, laser therapy or surgery

Get more information about eye health from EyeSmart—provided by the American Academy of Ophthalmology—at aao.org/eyesmart.

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