

What Are Drusen?

Drusen are yellow deposits under the retina, the light-sensitive tissue at the back of the eye. Drusen are made up of lipids, a fatty protein. While drusen likely do not cause [age-related macular degeneration \(AMD\)](#), their presence increases a person's risk of developing AMD.

There are different kinds of drusen. "Hard" drusen are small, distinct and far away from one another. This type of drusen may not cause vision problems for a long time, if at all.

"Soft" drusen are large and cluster closer together. Their edges are not as clearly defined as hard drusen. This soft type of drusen increases the risk for AMD.

Drusen of the optic nerve

Drusen can also occur in the optic nerve. These drusen are made up of protein and calcium salts and generally appear in both eyes. Unlike the drusen associated with AMD, optic nerve drusen (also known as optic disc drusen) are not related to aging and often appear in children. Optic nerve drusen usually do not affect vision, but some patients with these drusen may lose peripheral (side) vision.

Drusen Causes

Drusen occur naturally with age. They are believed to be the result of the eye's failure to eliminate waste products produced in the cells of the eye.

The exact relationship between degenerative macular disease and drusen is not clear. Scientists are uncertain whether drusen cause [AMD](#) or whether AMD and drusen are caused by the same process but are otherwise unrelated. However, the presence of soft drusen is a sign of AMD

Drusen Symptoms

Most people with drusen do not have any symptoms. Often, a [routine eye exam](#) will incidentally reveal their presence. Hard drusen are not a symptom of eye disease. However, the presence of a large number of soft drusen is an early sign of [dry age-related macular degeneration \(AMD\)](#). The [symptoms of AMD](#) include hazy vision, difficulty seeing when going from bright light to low light, and a blank or blurry spot in your central vision.

Optic nerve drusen also often do not produce symptoms. However, some patients with optic nerve drusen experience vision problems, including loss of peripheral (side) vision and temporary flickering or graying out of their vision.

Who Is At Risk for Drusen?

Drusen are typically a result of aging and are commonly found in people age 60 and older. Caucasians are more likely to develop drusen, as well as [age-related macular degeneration \(AMD\)](#). Soft drusen are associated with AMD. [Risk factors for AMD](#) include a family history of the disease, smoking and abnormal cholesterol levels.

The risk of developing optic nerve drusen is also increased for people who are of Caucasian descent or who have a family history of the disease.

Drusen Diagnosis

Drusen are detected during a dilated eye exam. To check your eyes, your [ophthalmologist \(Eye M.D.\)](#) will dilate (widen) your pupils using [dilating eyedrops](#) and examine your eyes with an ophthalmoscope, a device that allows him or her to see the retina and other areas at the back of the eye. This examination will allow him or her to see if drusen are present.

If your Eye M.D. detects soft drusen, he or she may have you use an [Amsler grid](#) to check for [macular degeneration symptoms](#) such as wavy, blurry or dark areas in your vision. If your Eye M.D. suspects you have optic nerve drusen, he or she may order additional imaging tests to confirm the diagnosis.

Drusen Treatment

Hard drusen do not need to be treated. If your [ophthalmologist \(Eye M.D.\)](#) detects hard drusen during a [routine eye exam](#), he or she may want to monitor them regularly to make sure they do not develop into soft drusen.

Because soft drusen are a sign of [age-related macular degeneration \(AMD\)](#), your Eye M.D. will follow the [AMD treatment](#) appropriate for you. Trying to eliminate the drusen will not improve your AMD.

If you have optic nerve drusen without symptoms, you should be monitored regularly. There is no treatment for optic nerve drusen. In rare cases where [choroidal neovascular membranes](#) develop, laser treatment may be appropriate.