



# Macular Degeneration

## Loss of central vision

### What is macular degeneration?

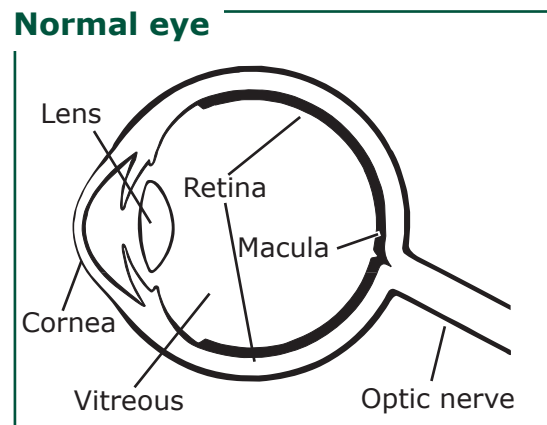
Macular degeneration is the most common cause of severe vision loss in Canada, especially among the elderly. It causes 1 in 3 cases of reported vision loss. The most common form of the disease occurs in people over age 55 and is called "age-related macular degeneration."

At the back of the eye there is a thin layer of light-sensitive tissue called the **retina**. The eye focuses light onto a small spot about the size of a pea called the macula. The macula processes the details in the central part of our vision, and is responsible for us being able to see the finest details, colours and to function in daylight.

If the macula is diseased for any reason, the retina becomes like a camera with a spot on the film in the centre of the picture. This results in blurry central vision and loss of details.

There are two types of macular degeneration. In the "dry" type, the central part of the retina becomes distorted, or pigmented or thinned. Symptoms of central visual loss develop slowly and almost unnoticeably.

In the more severe “wet” type, abnormal blood vessels develop and leak fluid and blood under the macula and into the retina. When the blood and fluid dry, a scar is left in the macula, which creates a black spot in your field of vision. Symptoms of the wet type can develop quickly and cause severe loss of vision.



## What causes macular degeneration?

We do not know all of the causes of macular degeneration. Age-related macular degeneration seems to be a “sped-up” and severe form of aging of the retina and the tissues around it. Although the wet type is usually associated with aging, it may be linked to other conditions, such as infections, high blood pressure, hardening of the arteries, and diabetes. Children and teenagers may inherit macular degeneration from their parents. Extreme nearsightedness is also a factor. Toxic light damage (like a solar or eclipse burn) or a traumatic eye injury that detaches the retina from the back of the eye may also damage the macula.

## How is macular degeneration diagnosed?

Although macular degeneration may develop slowly or quickly, it usually occurs gradually over a few years. Side (peripheral) vision will most likely stay normal, but you will find it hard to see at a distance or up close. Faces may begin to blur, and colours may be hard to distinguish. You may see distortions or wavy lines.

If you have new-onset blurred or distorted central vision, see a medical doctor or your eye doctor right away. He or she will refer you to an **ophthalmologist**. Everyone over age 45 should have regular eye exams by a qualified eye care professional.

## How is macular degeneration treated?

It may be possible to significantly delay visual loss with moderately advanced dry age-related macular degeneration by taking a combination of vitamin C, vitamin E, beta-carotene and zinc. Several supplement brands containing the correct dosages are available and can be purchased without prescription. Your ophthalmologist can tell you whether this treatment is right for you.

Sometimes ophthalmologists can use thermal lasers to seal damaged blood vessels in early wet macular degeneration. You may need a test called an intravenous "fluorescein angiogram" to see whether laser treatment can help. This diagnostic test involves injecting fluorescent dye into a vein and then taking photos of the dye as it circulates through the tiny blood vessels of interest in the eye. This test is usually done in a hospital or clinic on a strictly outpatient basis. The results of the test help your ophthalmologist to decide what type of therapy is best suited for your specific type of wet macular degeneration.

A newer and often more effective form of therapy than thermal laser is photodynamic therapy (PDT). This method involves injecting a special dye just before the damaged and diseased macula is treated. An infrared laser light is then shone on the macula. The reaction between the light and the dye seals the abnormal blood vessels. This process dries up the leaky blood vessels and results in better visual outcomes. Newer drugs that shrink abnormal new blood vessels are also being developed, and offer hope for a treatment of this common disabling condition.

While people with macular degeneration almost never go completely blind, visual loss from the disease is rarely reversed. However, you can usually continue most of your activities of daily living by using your side (peripheral) vision and by learning to look around the central blurry patch in your vision. Vision rehabilitation is also available to help you make the most of your remaining vision. Vision rehabilitation clinics are available across the country in eye care centres and through the CNIB.

## Glossary

**Ophthalmologist:** A medically trained eye doctor and surgeon.

**Retina:** Thin, light-sensitive tissue that covers the back of the eye and works like film in a camera to register the images we see.