

Diabetes and Keeping Your Vision

This article is to help Mayne Islanders understand the importance of routine monitoring of your eyes while living with diabetes and the risks high blood sugar can have on your vision.

Diabetes Mellitus

Almost 30% of Canadians live with diabetes or prediabetes. There are two main types of diabetes. Type I diabetes mellitus, which often begins before the age of 20, is related to an autoimmune condition that destroys the cells in the pancreas responsible for making insulin. Insulin is the hormone responsible for helping cells take in sugar. Type II diabetes mellitus, which often develops later in life, is related to cells becoming less sensitive to insulin. In both types, the complications related to high blood sugars are the same. 25.1% of Canadians with diabetes live with diabetic eye complications, called diabetic retinopathy, and this is the number one cause of blindness in Canadians of working age.

Diabetic Retinopathy

Diabetic retinopathy is one of the main complications that can occur with high blood sugars. The back wall of the eye is lined by a 10-layer structure called the retina. The retina is where we have nerve cells that communicate outside information with our brain to create images and allow us to visually perceive our environment. The macula, the focus point of the retina at the back of the eye, is what gives us a sharp and detailed vision, while the rest of the retina gives us our peripheral vision (2). Diabetic retinopathy involves either leaky blood vessels that lead to swelling at retina (called non-proliferative diabetic retinopathy) or the formation of new abnormal blood vessels in the retina (called proliferative diabetic retinopathy) (3). The swelling and the new abnormal blood vessels that may bleed can cause distortions on the retina or retinal detachments that will severely decrease vision. This is due to long term high blood sugars. High blood sugar can damage the walls of small blood vessels. This either causes vessels to leak, resulting in swelling, or blockages, which then lead to the formation of new abnormal blood vessels (3).

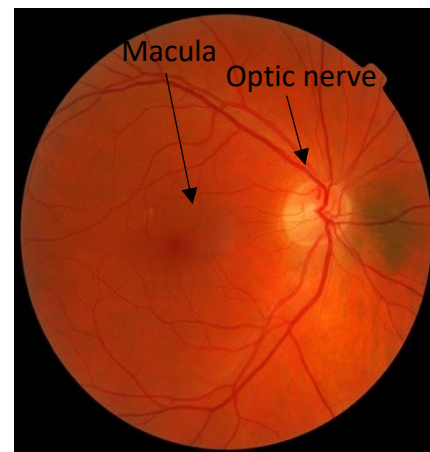
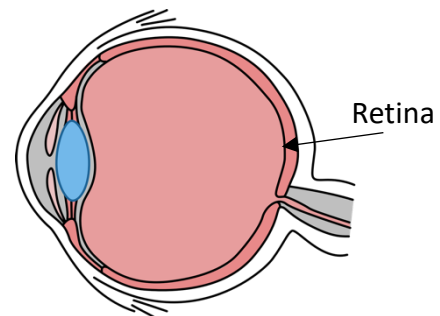


Image of the retina

What you can do to prevent this complication and prevent further damage

- Get a yearly dilated eye exam by an optometrist or ophthalmologist
- Control blood sugars by diet, regular exercise, and medications if needed
- Control blood pressure

- Control cholesterol and lipid levels with diet, exercise, and medications if needed

Treating Diabetic Retinopathy

When there is swelling or new vessel formation in the retina, ophthalmologists can use laser treatments or injections of medications directly into the eye to help decrease the swelling and improve vision (4). Both the injections and the laser treatments will help decrease the swelling in the retina and prevent new abnormal blood vessels to form. It is important to get treated early to prevent worse complications like retinal detachments, which can fully lead to blindness or complete blind spots (4).

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References

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