



THE LITTLE GUIDE TO **HEALTHY EYES** **WITH DIABETES**

How You Can Have the Best Eye Health
While Living with Diabetes

Written by the Optometrists at
www.eyecarevision.com.au

Hello there!

Thanks for taking the time to read this short guide about diabetes.

Diabetes is a widespread disease that, if poorly managed, can attack different body systems including our delicate eyes! According to Diabetes Australia, hundreds of thousands of Australians with diabetes are at risk of developing diabetic eye disease and blindness.

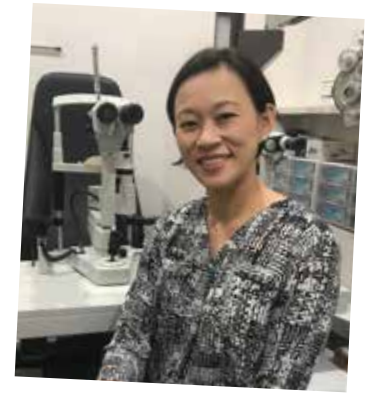
A first step to good eye health is being informed. As optometrists, we are committed to preventing blindness in patients, so we've put together some valuable information into this booklet which you can share with your family and friends.

This booklet provides information on

- diabetes as a disease
- how diabetes can affect the eye
- diabetic retinopathy and its symptoms
- people at risk
- keys for prevention
- what happens with diabetic retinopathy
- our role as optometrists in managing your eyes

We hope that you find this guidebook helpful. If you're looking for a local optometrist who will ensure that you have the best vision for life, come see us at one of our practices!

From your Eyecare Plus Optometrists



Dr Soojin Nam
Optometrist



Dr Ali Khalife
Optometrist



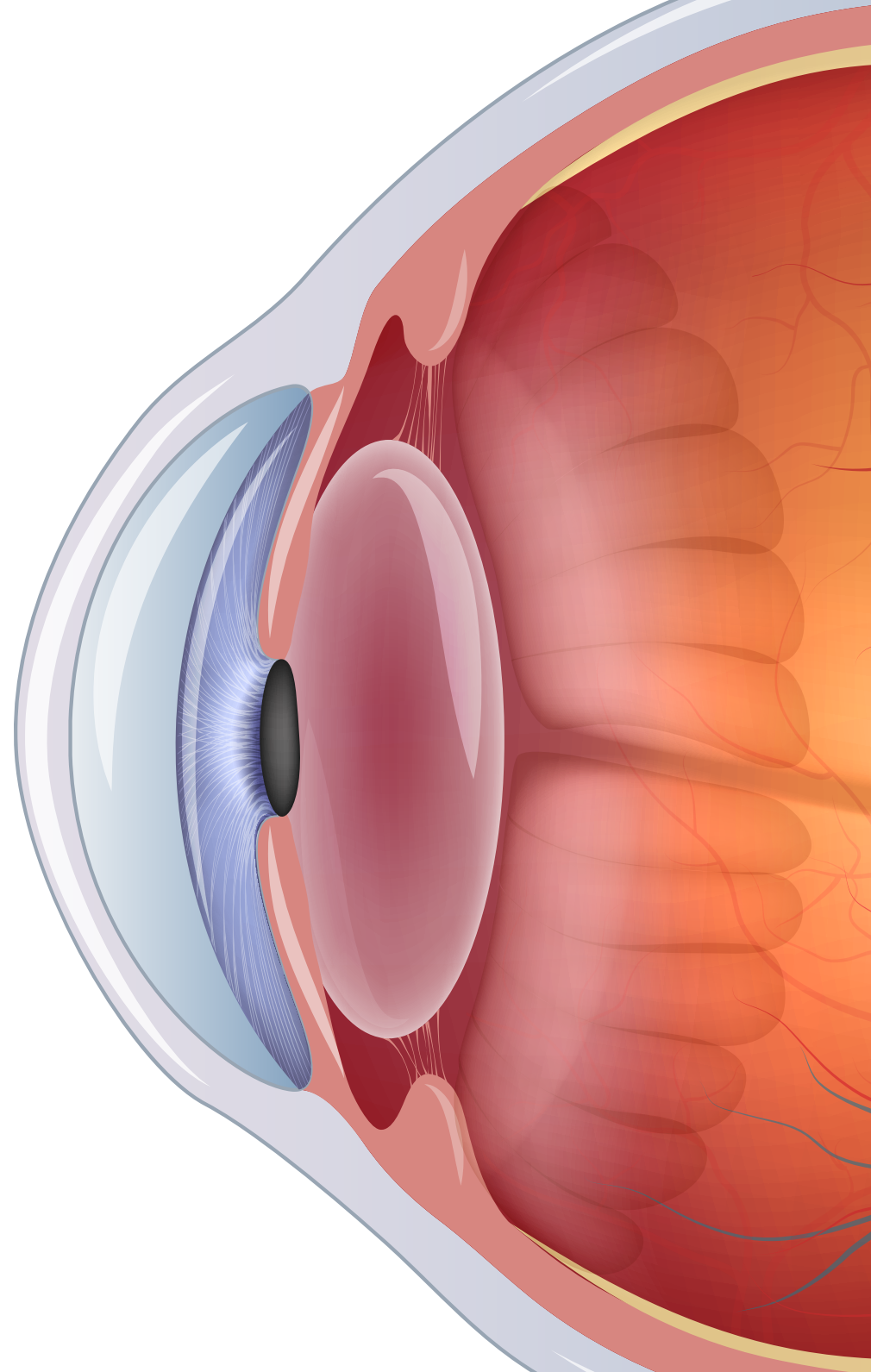
Dr Alexander Du
Optometrist

THE LITTLE GUIDE TO HEALTHY EYES WITH DIABETES

This booklet aims to provide basic information on diabetic retinopathy based on the latest research. It is not meant to replace advice given by your eyecare professional (optometrist or ophthalmologist). Should any of the information differ to what your eyecare professional has given you, please consult them before implementing any changes to your lifestyle.

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WHAT IS DIABETES?

Diabetes is a complicated disease that can lead to damage to the blood vessels in the body. It is serious and once diagnosed, it will remain with you for the rest of your life. As the whole body is full of blood vessels, diabetes will generally affect most of the body. Diabetes is a chronic condition that cannot be cured. However, it can be controlled quite well by correctly managing blood glucose levels, diet, body weight and physical activity. In some cases, diabetes may need you to check blood sugar levels or have multiple different healthcare professionals to provide appropriate care designed for your individual needs.

Three different types of diabetes

- *Type 1 diabetes* is an inherited autoimmune condition in which the body destroys the cells that produce insulin (Insulin is what breaks down glucose to reduce our sugar levels in the body).
- *Type 2 diabetes* occurs when the body becomes resistant to the normal effects of insulin and hence the sugar levels are unable to be controlled adequately by the amount of insulin being produced. This disease is controllable and even preventable with the appropriate lifestyle and dietary modifications.
- *Gestational diabetes* occurs in 5-10% of pregnancies in Australia. It generally disappears after the baby is born, but both parent and child have a risk of developing type 2 diabetes anywhere in life.

Please note: If you have any type of diabetes, you should see your optometrist for an eye exam. All three types of diabetes have a chance of causing diabetic retinopathy.



Diabetes and the Eye

Everyone who has diabetes is at risk of developing diabetic retinopathy, a disease which affects the blood vessels in the back of the eye. The management of diabetes can be difficult. However, living with diabetic retinopathy and its potential impact on vision is even more difficult.

Eye Testing

Just how important is an eye test in assessing the status of our blood vessels?

“The only place any medical profession can physically see your blood vessels is at the back of your eye,” states optometrist Dr Soojin Nam. “When we can physically examine the blood vessels, we can get an idea of just how well they are doing.”

- ✓ When you get your eyes tested, our optometrists will always ask about what medication you take. Please disclose the fact that you have diabetes and how long you’ve had it for.
- ✓ If you have diabetes, you need to see an eye specialist or optometrist at least every 2 years for a comprehensive dilated eye examination.
- ✓ People with diabetes and additional risk factors (see below) need to have their eyes tested every 12 months regardless of their vision.
- ✓ Anyone with existing diabetic retinopathy needs an eye test at least every 12 months.



Optometrist Dr Alexander Du states, “The longer you’ve had diabetes, the higher the chance of retinopathy and the more important it is to be tested, even if your past eye checks have always been clear.”

How does diabetes affect the eye?

- 👁️ **Temporary blurring of vision.** High levels of sugar in your blood can affect the shape of the lens in the eye. This will change the focus of your eye, and vision may be blurry as a result.
- 👁️ **Diabetic retinopathy.** This is the leading cause of blindness in the working age Australian.
- 👁️ **Cataracts.** Long term effects of the temporary blurred vision, as above, can cause permanent changes to the lens and cause it to be cloudy and, hence, become a cataract.
- 👁️ **Glaucoma.** Diabetes increases the risk of developing glaucoma, which causes progressive damage to the optic nerve.

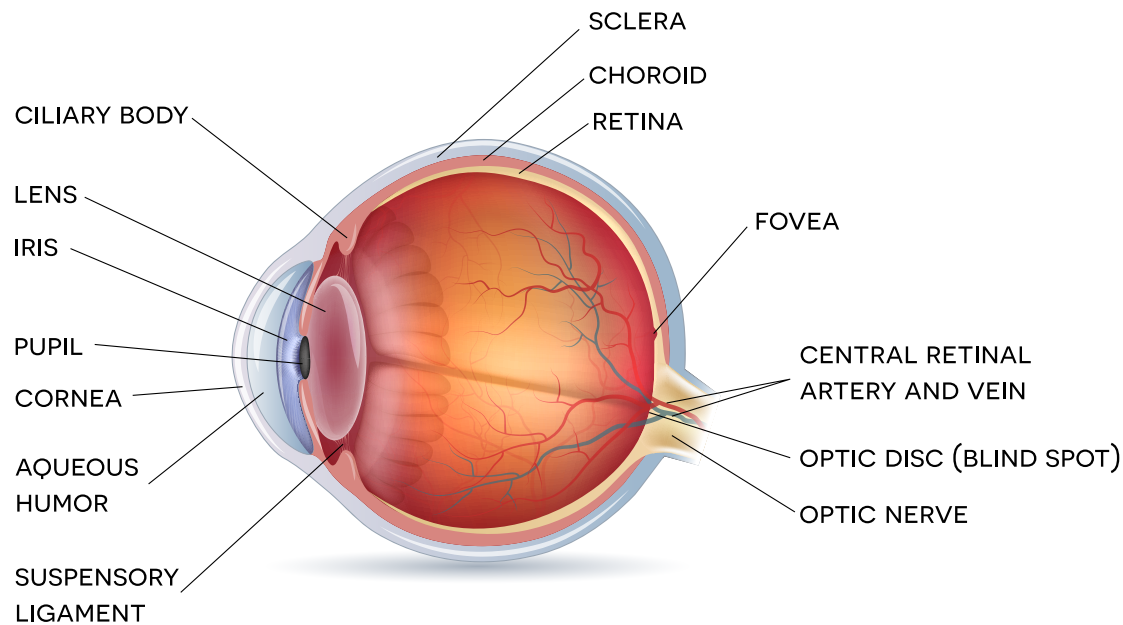


WHAT IS DIABETIC RETINOPATHY?

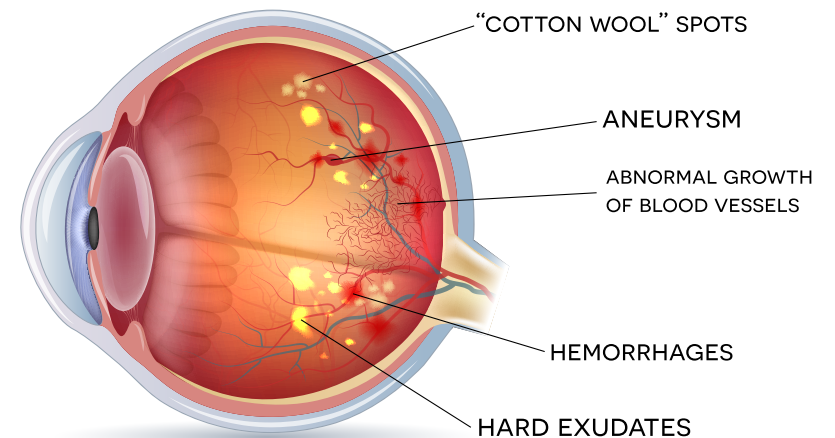
Diabetic retinopathy is an eye disease caused by complications due to diabetes. It occurs when the small blood vessels in the back of the eye start to leak fluid or even close off completely. In other cases, new unwanted blood vessels may grow on the retina.

There are multiple stages of diabetic retinopathy, from early fluid-leaking stages to more dangerous macular oedema, where fluid buildup in the retina can threaten quality of vision.

NORMAL EYE



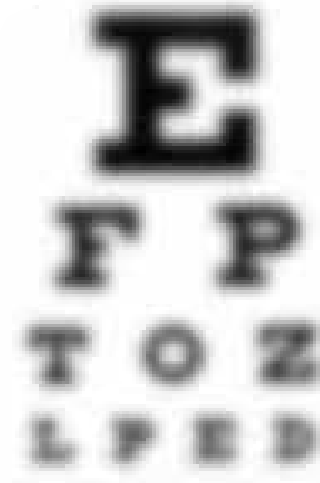
DIABETIC RETINOPATHY



WHAT ARE THE SYMPTOMS OF DIABETIC RETINOPATHY

Often, in its early stages, people do not notice changes in their vision. As the disease progresses, people may start to notice:

- ✓ patches of black or missing spots in their vision
- ✓ dark spots or holes in their vision
- ✓ blurred, distorted, dim or double vision
- ✓ difficulty seeing at night with increased glare and light sensitivity
- ✓ frequent changes in spectacle prescriptions
- ✓ bright halos around lights
- ✓ flashes or large floaters in vision



Healthy Retina



Retina with Diabetes

WHO IS AT RISK OF DEVELOPING DIABETIC RETINOPATHY?

Anyone who has diabetes is at risk of developing diabetic retinopathy. However, certain risk factors place you at greater risk of developing diabetic retinopathy. These include:

- ✓ increasing age
- ✓ type of diabetes
- ✓ elevated HbA1c levels
- ✓ duration of diabetes
- ✓ high blood pressure and/or high cholesterol levels
- ✓ existing renal disease
- ✓ smokers
- ✓ family history of diabetic retinopathy
- ✓ patients on insulin injections



PREVENTING DIABETIC RETINOPATHY

In the past, the chance of going blind within 5 years after being diagnosed with severe diabetic retinopathy was around 50%. These days with an early diagnosis and key management, there is a highly likely chance of saving sight.

Strict monitoring of blood glucose and HbA1c levels can reduce the risk of vision loss. Diet and exercise, along with following the procedures for prescribed medications, allow for the appropriate control of the sugar levels. Blood glucose levels can be monitored simply with a device that is available to purchase.

These lifestyle disciplines, along with yearly comprehensive dilated eye tests to detect for any changes in the retina, will help ensure that diabetes won't get the best of your eyes.



WHAT IS PERFORMED DURING AN OCULAR DIABETIC CHECK?

In addition to a standard testing such as acuity, ocular motility and refraction assessment, our optometrist will carry out the following tests:

Slit lamp examination

This determines whether or not there are cataracts or if there are any new blood vessels on the iris. Gonioscopy may be performed if there is suspicion of this happening.



Dr. Ali Khalife performing a slit lamp examination.

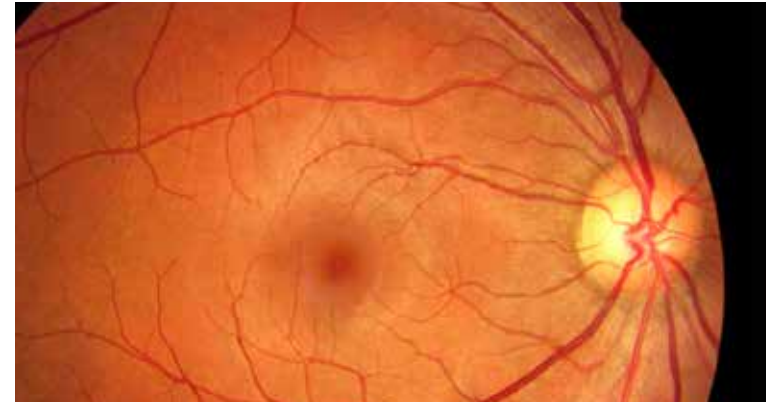
Dilated fundus examination

This is an essential test performed on all diabetic patients in order for the optometrist to better assess for any diabetic damage to the retina. See page 6 for further information.



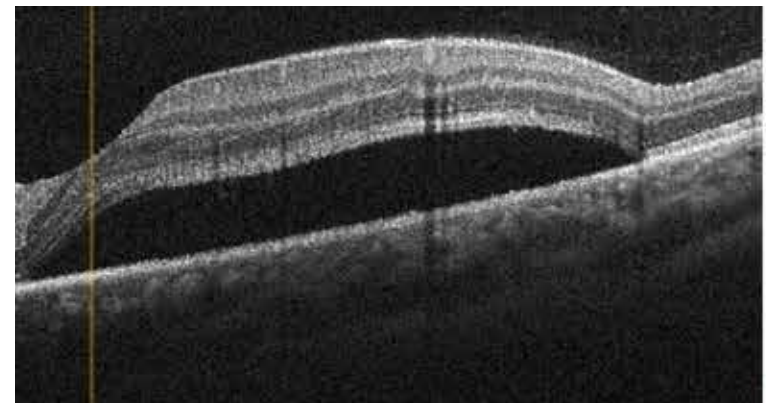
Digital Retinal Imaging

Retinal imaging is essential for patients with diabetes as it serves as a baseline for future comparison. Even if you do not have diabetic retinopathy, our optometrists will carry this out in order to better assess your eyes in the future. As imaging is not covered under the Medicare schedule, this will attract an out-of-pocket fee.



Optical Coherence Tomography (OCT)

Where indicated, our optometrists will perform or refer for an OCT to be carried out where there is suspicion of swelling of the macular or an unexplained drop in vision.



WHAT DO I NEED TO KNOW ABOUT A DILATED FUNDUS EXAMINATION?

The dilated fundus examination, also known as a dilated eye test, allows a more thorough eye examination of the internal health of the eye. Our optometrists will administer eye drops to dilate (increase) the size of your pupil temporarily.

This exam allows us to easily detect many sight-threatening eye diseases such as macular degeneration, diabetic retinopathy, glaucoma and retinal degenerative conditions.

Important: After dilating drops are put onto your eye for a diabetic check, you will not be able to drive for the next couple of hours as your vision will be blurry. It is therefore advisable to have someone drop you off and pick you up for the testing.

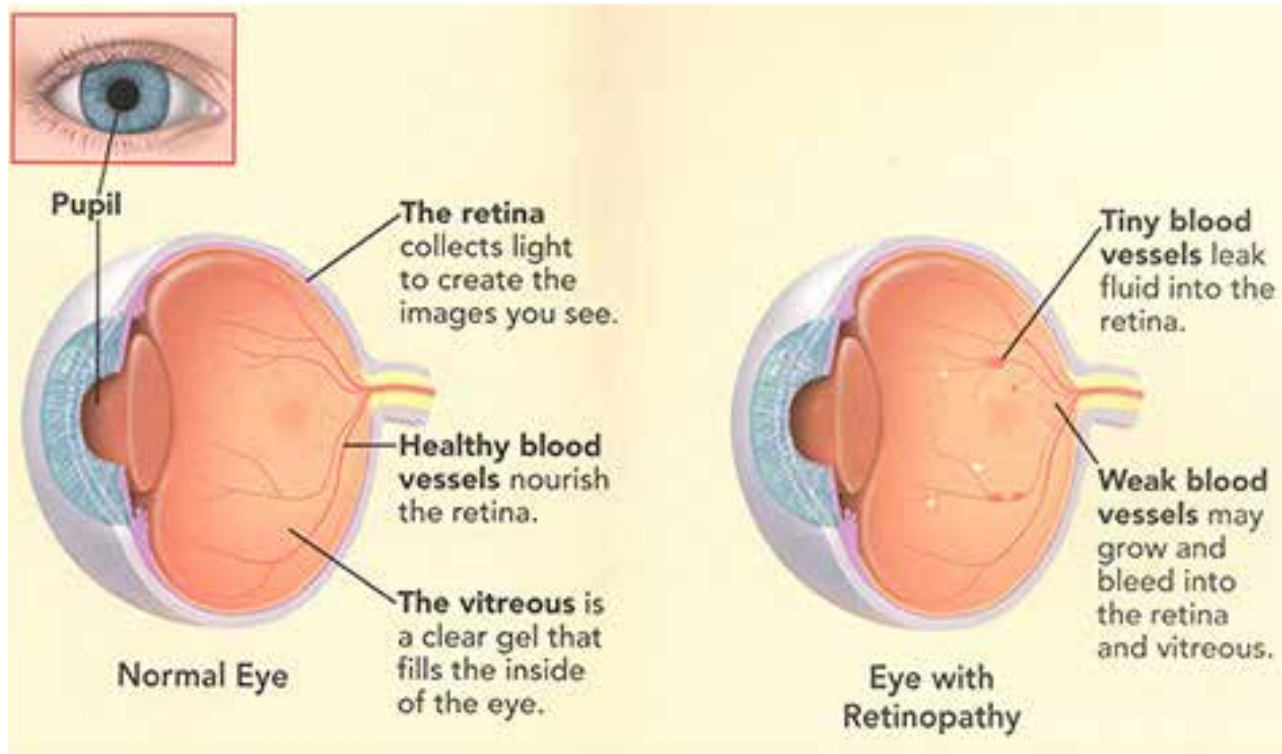
There is also a very small chance the dilating drops may cause acute angle closure. The incidence of this is rare, with an incidence rate of 1-6 per 20,000 people. Our optometrists will determine if you are at risk of this before putting the drops in.

It is very important to schedule regular dilated fundus examinations as recommended by our optometrists.



WHAT HAPPENS IF I HAVE DIABETIC RETINOPATHY?

Depending on what stage of diabetic retinopathy you have, it may require regular monitoring or, in more advanced cases, a prompt referral to an ophthalmologist.



Optometrist Dr Ali Khalife states, "If your optometrist provides you with a referral to an eye specialist because you have significant changes to your retina, please make sure you make this appointment and follow up as soon as possible!"

Should our optometrists believe that monitoring is required, the frequency of visits will be made appropriate to your level of diabetic retinopathy. This can range from three monthly reviews in more moderate cases, to two yearly reviews if no diabetic retinopathy is present in low-risk patients.

YOUR LOCAL OPTOMETRIST'S ROLE IN DIABETIC EYE DISEASE MANAGEMENT

Your optometrist is generally the first point of contact when you are found to have early signs of diabetic eye diseases, like retinopathy. As needed, your optometrist may recommend you to see your GP/Endocrinologist to better control your diabetes and may write a report outlining the results of the examination. Many people with well-controlled diabetes can be regularly assessed by their local optometrists. Make sure you prioritise your eyes and book in for your eye test!

When was your last **CheckUp Plus™**?



DIABETES?

Diabetic eye diseases have the potential to cause severe vision loss and blindness. Regular eye examinations are critical for early detection and treatment.

BOOK YOUR CHECKUP PLUS™ TODAY!