

Diabetic Retinopathy (DR): A Quick Guide

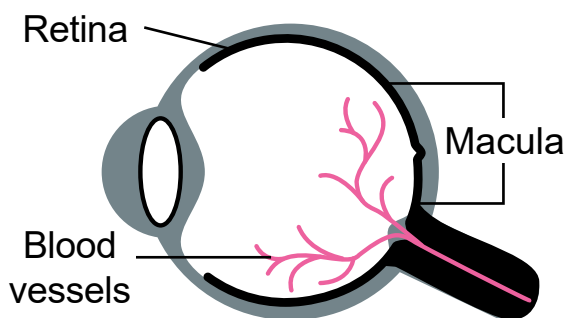
Diabetic retinopathy (DR) is an eye disease of the retina, the layer at the back of your eye that is vital to maintaining vision. It happens when significant changes in blood sugar levels damage blood vessels in the retina.¹ Of the more than 5.7 million Canadians living with diabetes, approximately 1 million are also affected by DR.²

What are the types of DR?

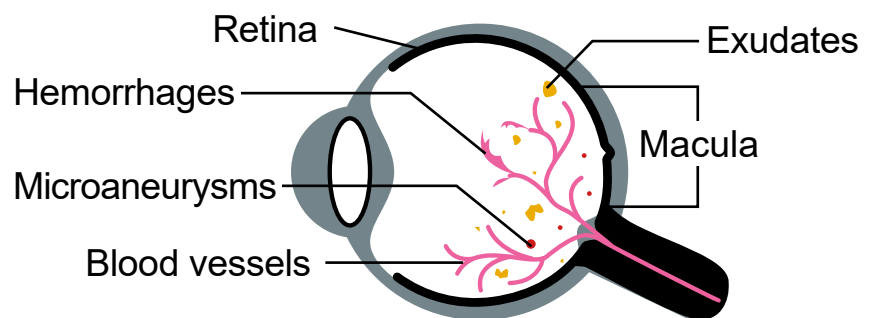
Non-proliferative diabetic retinopathy (NPDR):

- **Early** stage of the condition
- Often there are no symptoms²
- At this stage you should visit your eye doctor yearly so that they can check for things that are abnormal in your eye, like:
 - exudates (fluid from a wound)
 - hemorrhages (bleeding)
 - microaneurysms (tiny pouches of blood) leaking fluid^{2,3}

Healthy retina



NPDR

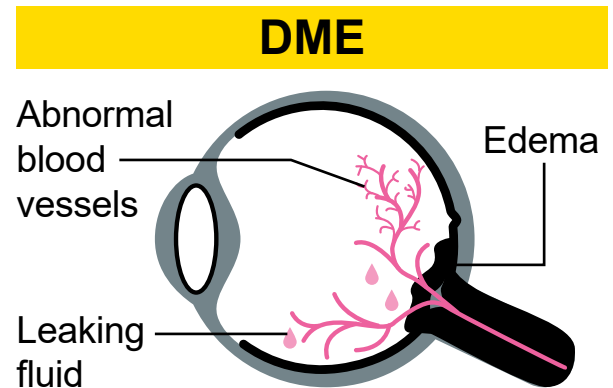


Proliferative diabetic retinopathy (PDR):

- **Advanced** form of DR
- New abnormal blood vessels start to proliferate (grow) to make up for the poor circulation in your retina caused by diabetes^{1,2}
- The new blood vessels are fragile and can cause vitreous hemorrhage (bleeding in the eye) or retinal detachment (the retina is pulled away from its normal position)^{1,2}
- Symptoms may include large floaters (black or red in colour) or sudden vision loss^{1,2}

What is diabetic macular edema (DME)?

- It can occur with NPDR or PDR
- Abnormal blood vessels develop along the macula (the centre of the retina that allows you to see things right in front of you, like faces or text)⁴
- The vessels leak fluid into the retina, which can cause edema (swelling) in the macula, affecting your central vision²
- A symptom of DME may be distorted vision (straight lines appear wavy)²



How are DR & DME treated?



In its early stage (NPDR), **proper diabetes control** can slow the development and progression of the disease.⁵

If the condition progresses (e.g., PDR or DME), you may receive:



Eye injections: an injection of medication to target the proteins in the eye that are causing the abnormal blood vessels to form⁵



Laser treatment: different types of office-based laser treatments can help reduce vision loss⁵

All treatment options can cause serious side effects and may not be suitable for everyone. Your eye doctor is the best source for advice on your treatment options.

I have been diagnosed with DR; what can I do now?

By taking care of your diabetes, you can take care of your vision. While the results may not be immediate, over time it is possible to undo some of the damage caused by DR.² Be sure to:

- Check your blood sugar often, and maintain your recommended target.
- Follow your diabetes management plan and take any medications as prescribed.
- Work alongside your healthcare team to develop and follow healthy eating and exercise plans. Ask your doctor to see if a nutritionist or dietitian may be able to help you.
- Keep your blood pressure and cholesterol under control. Talk to your doctor about how often these should be monitored.
- If you smoke, stop. Ask your doctor for help to quit, if you need it.
- Follow the guidance from your eye doctor on how often you need to have eye exams or treatments.¹



What other support can I get?

If you receive a diagnosis that could lead to vision loss, this can bring up emotional and practical challenges. Lean on your loved ones for support, and consider connecting with others facing a similar path.

Emotional support

- Express how you are feeling to friends and family, and don't be afraid to ask for help with everyday tasks.
- Seek advice from a therapist or counsellor (your family doctor may be able to suggest one).⁶

Lifestyle adaptations

- Using screen-magnification technology on websites or low-vision aids (e.g., magnifying glasses or descriptive audio television programs) may be helpful.⁶

Helpful resources for more information on DR



- Online vision tests
- Educational articles and videos



www.seethepossibilities.ca



- Tips for managing your diabetes



www.diabetes.ca



- Dedicated phone and email



1-888-626-2995



healthinfo@fightingblindness.ca

- Educational articles, videos, and webinars



www.fightingblindness.ca

1. "Diabetic Retinopathy: Symptoms & Causes", Mayo Clinic, last modified February 21, 2023, <https://www.mayoclinic.org/diseases-conditions/diabetic-retinopathy/symptoms-causes/syc-20371611>
2. "Diabetic Retinopathy", Fighting Blindness Canada, last modified October 27, 2020, <https://www.fightingblindness.ca/eyehealth/eye-diseases/diabetic-retinopathy/#resources-drm>
3. Davoudi S., *et al.* Optical coherence tomography characteristics of macular edema and hard exudates and their association with lipid serum levels in type 2 diabetes. *Retina*. 2016;36(9):1622-1629. doi:10.1097/IAE.0000000000001022
4. "Macula", American Academy of Ophthalmology, accessed June 30, 2023, <https://www.aao.org/eye-health/anatomy/macula-6>
5. Altomare F., *et al.* 2018 Clinical Practice Guidelines: Retinopathy. *Can J Diabetes*. 2018;42:S210-S216
6. "Strategies for Coping with Vision Loss", Braille Institute, last modified November 3, 2019, <https://brailleinstitute.org/blog/sight-loss-blog/strategies-for-coping-with-vision-loss#:~:text=Consider%20counseling%20%E2%80%93%20Vision%20loss%20can,based%20on%20your%20individual%20requirements>

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