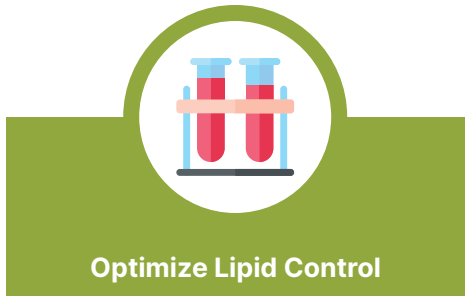
American Diabetes Association

Section 12:

Retinopathy, Neuropathy, and Foot Care

Optimizing the management of glycemia, blood pressure, and lipids can reduce or slow the progression of microvascular complications of diabetes.



Diabetic Retinopathy (DR)

Screening

Recommended DR screenings can allow for timely treatment to prevent or reverse vision loss.

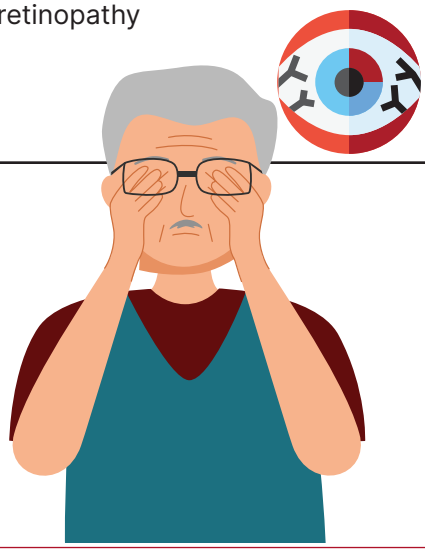
How?	When?	Follow-Up Eye Exam Schedule
Dilated comprehensive eye exam Retinal photography*	For people with type 1 diabetes: within 5 years after the onset of diabetes For people with type 2 diabetes: at the time of diabetes diagnosis	• At least annually for people with any level of retinopathy • Every 1–2 years for those with no retinopathy for one or more annual exams and well-managed glycemia • More frequently for those with progressing or sight-threatening retinopathy

*Retinal photography with remote reading or use of an authorized artificial intelligence tool can expand access to screening where qualified eye care professionals are not available. When abnormalities are detected, in-person exams will be needed.

Treatment

Promptly refer to an ophthalmologist who is knowledgeable and experienced in managing DR any individuals with:

- Any level of diabetic macular edema
- Moderate or worse nonproliferative DR (a precursor of proliferative DR)
- Any proliferative DR



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Neuropathy

Screening

All people with diabetes should be assessed for diabetic peripheral neuropathy (DPN):

- Starting at the diagnosis of type 2 diabetes
- 5 years after the diagnosis of type 1 diabetes
- At least annually thereafter

Symptoms and signs of autonomic neuropathy should be assessed:

- Starting at the diagnosis of type 2 diabetes
- 5 years after the diagnosis of type 1 diabetes
- At least annually thereafter
- With evidence of other microvascular complications, particularly kidney disease and DPN

Treatment

- Various drugs may reduce pain from DPN, and both drug and non-drug strategies may ease symptoms of DPN and autonomic neuropathy.
- The safest and most evidence-based pharmacologic options for DPN include gabapentinoids, serotonin-norepinephrine reuptake inhibitors, tricyclic antidepressants, and sodium channel blockers.
- Refer to a neurologist or pain specialist when pain control is not achieved within the scope of practice of the treating clinician.

Foot Care

Initial treatment recommendations should include:

- Daily foot inspection
- Use of moisturizers for dry, scaly skin and avoidance of self-care of ingrown nails and calluses
- Well-fitted athletic or walking shoes with customized pressure-relieving orthoses for people with increased plantar pressures (e.g., with plantar calluses).

Risk Stratification and Screening Frequency

Category	Ulcer Risk	Characteristics	Examination Frequency
0	Very low	No LOPS and no PAD	Annually
1	Low	LOPS or PAD	Every 6–12 months
2	Moderate	LOPS + PAD, or LOPS/PAD + foot deformity	Every 3–6 months
3	High	LOPS or PAD and one or more of the following: • History of foot ulcer • Amputation (minor or major) • End-stage renal disease	Every 1–3 months

Adapted with permission from Schaper NC, van Netten JJ, Apelqvist J, Bus SA, Hinchliffe RJ; IWGDF Editorial Board. Practical guidelines on the prevention and management of diabetic foot disease (IWGDF 2019 update). Diabetes Metab Res Rev 2020;36(Suppl. 1):e3266. LOPS, loss of protective sensation. PAD, peripheral artery disease. Examination frequency suggestions are based on expert opinion and person-centered requirements.