

Clinical Practice Guideline: Diabetic Eye Examination

Reference Number: OC.UM.CPG.0022

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[Coding Implications](#)

[Revision Log](#)

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Description

Diabetic retinopathy is a complication of chronic diabetes mellitus and is a major cause of blindness in the United States. The primary purpose of evaluating diabetic patients for the presence and degree of retinopathy is to prevent, slow, or reverse the effects of the diabetes on the patient’s vision and quality of life. This document describes clinical practice guidelines for diabetic eye examinations.

Policy/Criteria

I. Diabetic eye evaluations are recommended for the following indications:

A. Examination frequency based upon diabetic status:

1. Patients with Type I diabetes should have a diabetic eye examination no longer than five years after diagnosis, and should be evaluated at least yearly thereafter. Abnormal findings will dictate more frequent follow-up examinations.
2. Patients with Type II diabetes should have a diabetic eye examination at the time of diagnosis, and should be evaluated at least yearly thereafter. Abnormal findings will dictate more frequent follow-up examinations.
3. Patients with gestational diabetes should have a diabetic eye examination soon after conception or early in the first trimester. Follow up should occur within 1-3 months for patients with severe non-proliferative diabetic retinopathy (NPDR) or 3-12 months in the absence of retinopathy or with mild to moderate NPDR.

B. Management recommendations based upon retinal pathology:

Severity of Retinopathy	Presence of Macular Edema	Follow-Up (months)	Panretinal Photocoagulation (scatter) Laser	Focal and/or Grid Laser	Intravitreal Anti-VEGF Therapy
Normal or minimal NPDR	No	12	No	No	No
Mild NPDR	No	12	No	No	No
	ME	4-6	No	No	No
	CSME	1	No	Sometimes	Sometimes
Moderate NPDR	No	6-12	No	No	No
	ME	3-6	No	No	No
	CSME	1	No	Sometimes	Sometimes
Severe NPDR	No	4	Sometimes	No	Sometimes
	ME	2-4	Sometimes	No	Sometimes
	CSME	1	Sometimes	Sometimes	Sometimes
Non-High-Risk PDR	No	4	Sometimes	No	Sometimes
	ME	2-4	Sometimes	No	Sometimes
	CSME	1	Sometimes	Sometimes	Sometimes
High-Risk PDR	No	4	Recommended	No	Alternative
	ME	4	Recommended	Sometimes	Usually

Severity of Retinopathy	Presence of Macular Edema	Follow-Up (months)	Panretinal Photocoagulation (scatter) Laser	Focal and/or Grid Laser	Intravitreal Anti-VEGF Therapy
	CSME	1	Recommended	Sometimes	Usually

Background

The nonproliferative stages of diabetic retinopathy are characterized by retinal vascular related abnormalities, such as microaneurysms, intraretinal hemorrhages, venous dilation, and cotton-wool spots. Increased retinal vascular permeability that occurs at these or later stages of retinopathy may result in retinal thickening (edema) and lipid deposits (hard exudates). Clinically significant macular edema (CSME) is a term commonly used to describe retinal thickening and/or adjacent hard exudates that either involve the center of the macula or threaten to involve it. Patients with CSME should be considered for prompt treatment, particularly when the center of the macula is already involved or if retinal thickening and/or hard exudates are very close to the center.

As diabetic retinopathy progresses, there is a gradual closure of retinal vessels that results in impaired perfusion and retinal ischemia. Signs of increasing ischemia include venous abnormalities (e.g., dilation, beading and loops), IRMA, and more severe and extensive vascular leakage characterized by increasing retinal hemorrhages and exudation. When these signs progress beyond certain defined thresholds, severe NPDR is diagnosed.

The more advanced stage, PDR, is characterized by the onset of neovascularization at the inner surface of the retina induced by more global retinal ischemia. New vessels on or near the optic disc (NVD) and new vessels elsewhere in the retina (NVE) are prone to bleed, resulting in vitreous hemorrhage. These new vessels may undergo fibrosis and contraction; this and other fibrous proliferation may result in epiretinal membrane formation, vitreoretinal traction bands, retinal tears, and traction or rhegmatogenous retinal detachments. When new vessels are accompanied by vitreous hemorrhage, or when new vessels at the optic disc occupy greater than or equal to about one-quarter to one-third disc area, even in the absence of vitreous hemorrhage, PDR is considered high-risk. Neovascular glaucoma can result from new vessels growing on the iris (NVI) and anterior chamber angle structures. Patients with neovascular glaucoma or high-risk PDR should receive prompt panretinal photocoagulation, and their treating ophthalmologist should also consider initiating anti-vascular endothelial growth factor (VEGF).

The comprehensive dilated eye examination for a patient with diabetes mellitus should include all of the following features:

A. History

1. Demographic data
2. Other pertinent health care providers utilized by the patient
3. Chief complaint and history or the reason for the exam at this time
4. Present status of patient’s vision
5. Past history of ocular disease

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6. Past history of allergies or adverse reactions to medications, current medications use, medical history including hospitalizations
 7. Family history of ocular and systemic diseases
 8. Date diabetes was first diagnosed and degree of control of blood glucose
 9. Methods by which the patient currently monitors control of serum glucose and administers medications for diabetes
- B. Examination**
1. Visual acuity with present correction (the power of the present correction recorded) at distance and, where appropriate, at near
 2. Measurement of best-corrected visual acuity (with refraction where indicated). An unstable diabetic should have the final refraction dispensed when the primary care physician certifies the diabetes is stable. It is appropriate to have the patient return under these circumstances for refractions.
 3. Ocular alignment and motility
 4. Pupil reactivity and function
 5. Intra ocular pressure
 6. Visual fields (confrontation)
 7. Dilation of pupil (special attention should be paid to pupillary dilation and examination of the retinal periphery)
 8. Evaluation of the anatomic status of the eye (all three parts)
 9. Lids, lashes, lacrimal apparatus, orbit, and other facial features that may be pertinent
 10. Anterior segment: eye film, conjunctiva, sclera, cornea, anterior chamber, iris, lens, and posterior chamber
 11. Posterior segment: vitreous, retina (including posterior pole and periphery), uvea, vessels, and optic nerve

Reviews, Revisions, and Approvals	Date	Approval Date
Annual Review	12/2019	12/2019
Converted to new template; Renamed to CPG.VP.22 Clinical Practice Guidelines for Examination of Diabetic Patients; Changed medical necessity statement to reflect that the document suggests practice recommendations.	05/2020	06/2020
Annual Review; Updated references	12/2020	12/2020
Annual Review	12/2021	12/2021

References

1. American Academy of Ophthalmology (AAO) Retina/Vitreous Panel, Preferred Practice Pattern® Guidelines, Diabetic Retinopathy PPP 2019, San Francisco, CA, American Academy of Ophthalmology, 2019, <https://www.aao.org/preferred-practice-pattern/diabetic-retinopathy-ppp>
2. American Optometric Association (AOA) Evidence-Based Optometry Guidelines Development Group, Eye Care of the Patient with Diabetes Mellitus, Second Edition, St. Louis, MO, American Optometric Association, 2019, <https://www.aoa.org/optometrists/tools-and-resources/clinical-care-publications/clinical-practice-guidelines>

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Envolve Vision, Inc., or any of such health plan’s affiliates, as applicable.

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Note: For Medicaid members, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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