

N-30 Visual Field Exams

Your Comprehensive Guide

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Even patients who notice changes in their vision might not realize they have blind spots in their nasal peripheral area. Vision loss here could be an early sign of glaucoma, retinal disease, or optic neuropathy. These conditions often go undiagnosed until significant damage has occurred, but can be identified sooner with the right targets. The N-30 test can help uncover these hidden conditions. It focuses specifically on the central vision, as well as nasal targets, and detects defects that might be (literally) overlooked.

Carrot makes it simple to shift the target focus for a fast, efficient, and more comfortable patient experience, providing accurate test results that can be uploaded to your EHR. Our first-of-its-kind headset technology eliminates the need for bulky perimetry machines, reduces test time, and helps you deliver more accessible exams for all your patients.

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The N-30 visual field test uses frequency doubling technology to examine 19 points within the central 30-degree vision radius. This radius includes 17 points in the central region, plus two additional nasal targets above and below the horizontal meridian. These two extra nasal points distinguish the N-30 from other central visual field exams.

In order to test nasal peripheral vision, the fixation point is shifted by 10 degrees after all other points have been tested. This assessment is especially important for early glaucoma screenings and for revealing neurological conditions.

The N-30 is quick to perform, so it's a popular choice for busy practices. To make the test even faster and more accurate, Carrot's patient-friendly headset and [advanced algorithms](#) can cut down exam time by up to 50%. This way, you can support more patients daily without sacrificing testing accuracy.

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Academic references and clinical validation



This study evaluated the effectiveness of the N-30 test in detecting glaucomatous visual field loss and highlighted its diagnostic accuracy.



Research comparing the N-30 and C-20 indicated that they both have similar sensitivity and specificity in detecting glaucoma; however, the N-30 offers a broader central field assessment.

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Early signs of glaucoma, retinal disease, or optic neuropathy can hide in the nasal field, but the N-30 allows you to uncover these conditions earlier and intervene more effectively. This test excels at providing fast routine screenings with high sensitivity to these specific visual field changes. Compared to other exams, the N-30 may be less affected by refractive error, so it's reliable and practical. But because the N-30 focuses primarily on the central 30 degrees, it's not ideal for full-scope testing or identifying other kinds of peripheral visual field loss.

Pros and Cons of the N-30 Visual Field Test

We know the N-30 exam is efficient, useful, and widely used, but there are pros and cons to incorporating this test into your routine.

PROS	CONS
The N-30 test effectively detects glaucomatous damage, especially among patients with normal visual acuity and no obvious structural changes.	Patients may become fatigued or irritated by the frequency-doubling technology's flickering stimuli.
The N-30 is ideal for initial screenings and identifying early signs of visual field loss.	The N-30 doesn't assess the full peripheral visual field, so it doesn't provide as much insight as other tests like the 24-2.
It only takes seconds to perform this test using Carrot. This speedy exam fits into most practices' schedules, and because it doesn't take long, this test may have better patient compliance.	This test is better for initial screenings than for progression monitoring.

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Glaucoma	In glaucoma, nasal step defects often appear first. The N-30 is best known for detecting these early signs. This testing protocol can help improve early intervention and slow glaucoma progression.
Retinal Vein Occlusion	Branch retinal vein occlusion (BRVO) and central retinal vein occlusion (CRVO) can cause localized or widespread visual field defects. The N-30 can detect relevant abnormalities in screenings and follow-up exams.
Optic Neuritis	The test can reveal central visual field defects associated with optic nerve inflammation, supporting early diagnosis and management.
Macular Degeneration	Age-related macular degeneration usually presents with blind spots in the central vision. The N-30 examines more than the nasal periphery, so this may be a good all-purpose exam to screen a wide range of patients.
Ocular Hypertension	Patients with high intraocular pressure may be at risk for developing glaucoma, so the N-30 can be used to screen for defects.
Optic Neuropathies	The altitudinal visual field losses characteristic of anterior ischemic optic neuropathy (AION) can't hide from the N-30.
Other Conditions	The N-30 can also be used to monitor or diagnose: <ul style="list-style-type: none"> • Diabetic retinopathy • Retinitis pigmentosa • Pituitary adenomas • Toxic optic neuropathies

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Billing and Coding for the N-30 Visual Field Test

When performing the N-30 visual field exam, you may use CPT code 92082, which supports intermediate visual field examination.

The [Medicare Physician Fee Schedule \(MPFS\)](#) allows reimbursement between \$19 and \$60, depending on your location, setting, modifiers, and other factors.

When is the N-30 visual field test required?

The N-30 test is particularly useful for patients at risk of glaucoma, those with ocular hypertension, or individuals experiencing unexplained visual disturbances. Since it focuses on the central 30 degrees of vision, it is ideal for detecting early glaucoma, [optic nerve dysfunction](#), and certain neurological conditions that affect central vision. The N-30 may be performed annually or semi-annually to track changes, but as conditions progress, you may switch to more sensitive tests.

Is the N-30 required for driver's licenses?

No, the N-30 test is not typically required for driver's license vision screening. Most driving eligibility assessments focus on peripheral vision and overall visual acuity. If a patient with specific medical conditions requires additional testing for driver's licensing, you may need to administer broader exams like the Full Field 120 or Esterman.

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The N-30 test is fast, reliable, and relevant. It's perfect for routine screenings – especially among patients at risk of glaucoma or optic neuropathies – and by moving the fixation point, the N-30 test can assess parts of the visual field that are often overlooked.

Traditionally, conducting the N-30 on bulky perimetry equipment takes longer and is uncomfortable for patients. Carrot is a patient-friendly experience that provides real-time data analysis for improved testing accuracy and immediate insights. Available with the [Carrot Basic or Pro subscription](#), the N-30 has rightfully earned its place as one of optometrists' and ophthalmologists' favorite go-to screenings.

Ready to get started?

Schedule a demo or begin your 30-day free trial of Carrot to offer an exceptional eye exam experience in your practice.

[Book a demo](#)[Start your 30-day trial](#)

Questions? Contact sales@carrot.io talk to a Carrot expert today.