



## **Electroretinography (ERG) Coding and Reimbursement Guide**

### ***Physician Office***

**Provided courtesy of LKC Technologies, Inc.**  
*Updated March 2024*

REIMBURSEMENT CODES AND BILLING PRACTICES CHANGE OVER TIME.  
ALL INFORMATION IS SUBJECT TO THE DESCRIPTIONS AND DISCLAIMERS CONTAINED  
IN THIS GUIDE.

## Disclaimer

*Procedure coding should be based upon medical necessity and procedures and supplies provided to the patient. Coding and reimbursement information is provided for educational purposes and does not assure coverage of the specific item or service in a given case. LKC Technologies and The Pinnacle Health Group make no guarantee of coverage or reimbursement of fees. Contact your local Medicare Administrative Contractor (MAC) or CMS for specific information as payment rates listed are subject to change and will vary by payer and region. To the extent that you submit cost information to Medicare, Medicaid or any other reimbursement program to support claims for services or items, you are obligated to accurately report the actual price paid for such items, including any subsequent adjustments. CPT five-digit numeric codes, descriptions, and numeric modifiers only are Copyright AMA. All rights reserved.*

## ERG Coding Overview

Electroretinography is used to evaluate the function of the retina and optic nerve, including photoreceptors and ganglion cells. Effective January 1, 2019, CPT code 92275 (electroretinography (ERG) with interpretation and report) was deleted and replaced with three new CPT codes that are distinguished by the different areas of the retina targeted:

- 92273 ffERG (full field ERG) – Flicker ERG for global cone function and Flash Plus Photopic Negative Response (PhNR) for neural and non-neuronal cell function
- 92274 mfERG (multifocal ERG) for localized retinal dysfunction (i.e photoreceptors in multiple locations in the retina including the macula)
- 0509T PERG (pattern ERG) for retinal ganglion cell function

The difference between ffERG and mfERG is that ffERG records a summary response from the entire retina; mfERG uses multiple sequences to stimulate many retinal areas and records retinal responses from different regions simultaneously. Pattern electroretinography (PERG) exposes the retina to a specific pattern of stimuli in order to assess function of the retina and macula. Pattern ERG may be used as an adjunct to conventional full-field (ffERG) or multifocal ERG (mfERG) or used alone. PERG is a specialized version of ERG which can be elicited from the retina by alternating checkerboard stimuli presented to the central retina.

Most Medicare Administrative Contractors (MACs) continue to cover 92273 and 92274 while coverage for 0509T is limited (please see page 10 for additional information).

## Physician Reimbursement

CPT	Descriptor	MPFS Physician Payment
92273	ERG with interpretation and report; full field (ie, ffERG, flash ERG, Ganzfeld ERG)	\$126
92274	ERG with interpretation and report; multifocal (mfERG)	\$89
0509T	ERG with interpretation and report, pattern (PERG)	Contractor Priced

## Diagnosis Coding

There are 710 ICD-10-CM codes associated with the CPT codes used to report ERG. The following list provides some of the more common ICD-10-CM diagnosis codes that may be used for the protocols associated with RETeval and is not intended to be an all-inclusive list.

## Diabetic Retinopathy Assessment

ICD-10-CM	Descriptor
E08.311 - E08.319	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema - Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy without macular edema
E08.3211 - E08.3213	Diabetes mellitus due to underlying condition with mild non-proliferative diabetic retinopathy with macular edema, right eye - Diabetes mellitus due to underlying condition with mild non-proliferative diabetic retinopathy with macular edema, bilateral
E08.3291 - E08.3293	Diabetes mellitus due to underlying condition with mild non-proliferative diabetic retinopathy without macular edema, right eye - Diabetes mellitus due to underlying condition with mild non-proliferative diabetic retinopathy without macular edema, bilateral
E09.3211 - E09.3213	Drug or chemical induced diabetes mellitus with mild non-proliferative diabetic retinopathy with macular edema, right eye - Drug or chemical induced diabetes mellitus with mild non-proliferative diabetic retinopathy with macular edema, bilateral
E10.311 - E10.319	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema - Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema
E11.311 - E11.319	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema - Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema
E11.3211 - E11.3213	Type 2 diabetes mellitus with mild non-proliferative diabetic retinopathy with macular edema, right eye - Type 2 diabetes mellitus with mild non-proliferative diabetic retinopathy with macular edema, bilateral
E13.311 - E13.319	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema - Other specified diabetes mellitus with unspecified diabetic retinopathy without macular edema
H33.331 - H33.333	Multiple defects of retina without detachment, right eye - Multiple defects of retina without detachment, bilateral
H34.821 - H34.823	Venous engorgement
H35.011 - H35.013	Changes in retinal vascular appearance, right eye - Changes in retinal vascular appearance, bilateral
H35.021 - H35.023	Exudative retinopathy, right eye - Exudative retinopathy, bilateral
H35.041 - H35.043	Retinal micro-aneurysms, unspecified, right eye - Retinal micro-aneurysms, unspecified, bilateral
H35.051 - H35.053	Retinal neovascularization, unspecified, right eye - Retinal neovascularization, unspecified, bilateral
H35.061 - H35.063	Retinal vasculitis, right eye - Retinal vasculitis, bilateral
H35.40	Unspecified peripheral retinal degeneration

## PhNR 3.4 Hz Long / Short

ICD-10-CM	Descriptor
H46.01 - H46.03	Optic papillitis, right eye - Optic papillitis, bilateral
H46.11 - H46.13	Retrobulbar neuritis, right eye - Retrobulbar neuritis, bilateral
H47.011 - H47.013	Ischemic optic neuropathy, right eye - Ischemic optic neuropathy, bilateral
H47.091 - H47.093	Other disorders of optic nerve, not elsewhere classified, right eye - Other disorders of optic nerve, not elsewhere classified, bilateral
H47.10 - H47.13	Unspecified papilledema - Papilledema associated with retinal disorder
H47.141 - H47.143	Foster-Kennedy syndrome, right eye - Foster-Kennedy syndrome, bilateral
H47.20	Unspecified optic atrophy
H47.211 - H47.213	Primary optic atrophy, right eye - Primary optic atrophy, bilateral
H47.22	Hereditary optic atrophy
H47.231 - H47.233	Glaucomatous optic atrophy, right eye - Glaucomatous optic atrophy, bilateral
H47.291 - H47.293	Other optic atrophy, right eye - Other optic atrophy, bilateral
H47.331 - H47.333	Pseudopapilledema of optic disc, right eye - Pseudopapilledema of optic disc, bilateral
H47.391 - H47.393	Other disorders of optic disc, right eye - Other disorders of optic disc, bilateral
H46.2	Nutritional optic neuropathy
H46.3	Toxic optic neuropathy
H46.8	Other optic neuritis
H46.9	Unspecified optic neuritis

## Flicker 16 Td-s (32 Td-s for Patients with Cataracts)

ICD-10-CM	Descriptor
H30.001 - H30.003	Unspecified focal chorioretinal inflammation, right eye - Unspecified focal chorioretinal inflammation, bilateral
H31.011 - H31.013	Macula scars of posterior pole (post-inflammatory) (post-traumatic), right eye - Macula scars of posterior pole (post-inflammatory) (post-traumatic), bilateral
H33.011 - H33.013	Retinal detachment with single break, right eye - Retinal detachment with single break, bilateral
H33.021 - H33.023	Retinal detachment with multiple breaks, right eye - Retinal detachment with multiple breaks, bilateral
H34.11 - H34.13	Central retinal artery occlusion, right eye - Central retinal artery occlusion, bilateral
H34.211 - H34.213	Partial retinal artery occlusion, right eye - Partial retinal artery occlusion, bilateral
H34.231 - H34.233	Retinal artery branch occlusion, right eye - Retinal artery branch occlusion, bilateral
H34.8130 - H34.8132	Central retinal vein occlusion, bilateral, with macular edema - Central retinal vein occlusion, bilateral, stable
H34.9	Unspecified retinal vascular occlusion

ICD-10-CM	Descriptor
H35.00	Unspecified background retinopathy
H35.021 - H35.023	Exudative retinopathy, right eye - Exudative retinopathy, bilateral
H35.031 - H35.033	Hypertensive retinopathy, right eye - Hypertensive retinopathy, bilateral
H35.101 - H35.103	Retinopathy of prematurity, unspecified, right eye - Retinopathy of prematurity, unspecified, bilateral
H35.21 - H35.23	Other non-diabetic proliferative retinopathy, right eye - Other non-diabetic proliferative retinopathy, bilateral
H35.30	Unspecified macular degeneration
H35.3110 - H35.3134	Nonexudative age-related macular degeneration, right eye, stage unspecified - Nonexudative age-related macular degeneration, bilateral, advanced atrophic with sub-foveal involvement
H35.341 - H35.343	Macular cyst, hole, or pseudohole, right eye - Macular cyst, hole, or pseudohole, bilateral
H35.361 - H35.363	Drusen (degenerative) of macula, right eye - Drusen (degenerative) of macula, bilateral
H35.381 - H35.383	Toxic maculopathy, right eye - Toxic maculopathy, bilateral
H35.441 - H35.443	Age-related reticular degeneration of retina, right eye - Age-related reticular degeneration of retina, bilateral
H35.451 - H35.453	Secondary pigmentary degeneration, right eye - Secondary pigmentary degeneration, bilateral
H35.461 - H35.463	Secondary vitreoretinal degeneration, right eye - Secondary vitreoretinal degeneration, bilateral
H35.61 - H35.63	Retinal hemorrhage, right eye - Retinal hemorrhage, bilateral
H35.70	Unspecified separation of retinal layers
H35.81	Retinal edema
H35.82	Retinal ischemia
H35.89	Other specified retinal disorders
H35.50	Unspecified hereditary retinal dystrophy
H35.51	Vitreoretinal dystrophy
H35.52	Pigmentary retinal dystrophy
H35.21-H35.23	Other non-diabetic proliferative retinopathy, right eye - Other non-diabetic proliferative retinopathy, bilateral
H53.60	Unspecified night blindness
H53.8	Other visual disturbances
H53.9	Unspecified visual disturbance

## 2024 Medicare Reimbursement for ERG with Interpretation and Report (CPT 92273)

MAC	Locality	State	Locality Name	Payment
10112	AL	00	ALABAMA	\$111.55
02102	AK	01	ALASKA*	\$145.15
03102	AZ	00	ARIZONA	\$122.70
07102	AR	13	ARKANSAS	\$110.05
01112	CA	54	BAKERSFIELD	\$135.35
01112	CA	55	CHICO	\$135.18
01182	CA	71	EL CENTRO	\$135.19
01112	CA	56	FRESNO	\$135.18
01112	CA	57	HANFORD-CORCORAN	\$135.18
01182	CA	18	LOS ANGELES-LONG BEACH-ANAHEIM (LOS ANGELES/ORANGE CNTY)	\$146.24
01112	CA	58	MADERA	\$135.18
01112	CA	59	MERCED	\$135.18
01112	CA	60	MODESTO	\$135.18
01112	CA	51	NAPA	\$158.26
01182	CA	17	OXNARD-THOUSAND OAKS-VENTURA	\$144.72
01112	CA	61	REDDING	\$135.18
01112	CA	62	RIVERSIDE-SAN BERNARDINO-ONTARIO	\$135.51
01112	CA	63	SACRAMENTO-ROSEVILLE-FOLSOM	\$142.06
01112	CA	64	SALINAS	\$143.00
01182	CA	72	SAN DIEGO-CHULA VISTA-CARLSBAD	\$145.50
01112	CA	05	SAN FRANCISCO-OAKLAND-BERKELEY (SAN FRANCISCO/SAN MATEO/ALAMEDA/CONTRA COSTA CNTY)	\$169.97
01112	CA	52	SAN FRANCISCO-OAKLAND-BERKELEY (MARIN CNTY)	\$170.00
01112	CA	65	SAN JOSE-SUNNYVALE-SANTA CLARA (SAN BENITO CNTY)	\$171.99
01182	CA	73	SAN LUIS OBISPO-PASO ROBLES	\$139.15
01112	CA	09	SAN JOSE-SUNNYVALE-SANTA CLARA (SANTA CLARA CNTY)	\$171.85
01112	CA	66	SANTA CRUZ-WATSONVILLE	\$147.07
01182	CA	74	SANTA MARIA-SANTA BARBARA	\$143.72
01112	CA	67	SANTA ROSA-PETALUMA	\$149.64
01112	CA	68	STOCKTON	\$135.18
01112	CA	53	VALLEJO	\$158.21
01112	CA	69	VISALIA	\$135.18
01112	CA	70	YUBA CITY	\$135.18
01112	CA	75	REST OF CALIFORNIA	\$135.18
04112	CO	01	COLORADO	\$131.24
13102	CT	00	CONNECTICUT	\$135.81
12202	DC	01	DC + MD/VA SUBURBS	\$146.86
12102	DE	01	DELAWARE	\$125.17
09102	FL	03	FORT LAUDERDALE	\$125.91
09102	FL	04	MIAMI	\$129.71
09102	FL	99	REST OF FLORIDA	\$119.47
10212	GA	01	ATLANTA	\$125.58
10212	GA	99	REST OF GEORGIA	\$113.30

MAC	Locality	State	Locality Name	Payment
01212	HI	01	HAWAII, GUAM	\$140.47
02202	ID	00	IDAHO	\$114.93
06102	IL	16	CHICAGO	\$129.35
06102	IL	12	EAST ST. LOUIS	\$117.80
06102	IL	15	SUBURBAN CHICAGO	\$131.43
06102	IL	99	REST OF ILLINOIS	\$116.60
08102	IN	00	INDIANA	\$116.75
05102	IA	00	IOWA	\$115.69
05202	KS	00	KANSAS	\$114.99
15102	KY	00	KENTUCKY	\$112.32
07202	LA	01	NEW ORLEANS	\$118.83
07202	LA	99	REST OF LOUISIANA	\$112.91
14112	ME	03	SOUTHERN MAINE	\$126.22
14112	ME	99	REST OF MAINE	\$115.77
12302	MD	01	BALTIMORE/SURR. CNTYS	\$134.54
12302	MD	99	REST OF MARYLAND	\$127.71
14212	MA	01	METROPOLITAN BOSTON	\$146.75
14212	MA	99	REST OF MASSACHUSETTS	\$132.23
08202	MI	01	DETROIT	\$125.19
08202	MI	99	REST OF MICHIGAN	\$116.36
06202	MN	00	MINNESOTA	\$127.58
07302	MS	00	MISSISSIPPI	\$109.37
05302	MO	02	METROPOLITAN KANSAS CITY	\$120.13
05302	MO	01	METROPOLITAN ST. LOUIS	\$120.52
05302	MO	99	REST OF MISSOURI	\$110.43
03202	MT	01	MONTANA**	\$124.95
05402	NE	00	NEBRASKA	\$116.01
01312	NV	00	NEVADA**	\$125.40
14312	NH	40	NEW HAMPSHIRE	\$129.03
12402	NJ	01	NORTHERN NJ	\$144.85
12402	NJ	99	REST OF NEW JERSEY	\$137.66
04212	NM	05	NEW MEXICO	\$116.05
13202	NY	01	MANHATTAN	\$144.88
13202	NY	02	NYC SUBURBS/LONG ISLAND	\$148.60
13202	NY	03	POUGHKEEPSIE/N NYC SUBURBS	\$137.95
13292	NY	04	QUEENS	\$147.64
13282	NY	99	REST OF NEW YORK	\$120.16
11502	NC	00	NORTH CAROLINA	\$117.56
03302	ND	01	NORTH DAKOTA**	\$124.86
15202	OH	00	OHIO	\$116.40
04312	OK	00	OKLAHOMA	\$113.73
02302	OR	01	PORTLAND	\$136.31
02302	OR	99	REST OF OREGON	\$123.54
12502	PA	01	METROPOLITAN PHILADELPHIA	\$131.95
12502	PA	99	REST OF PENNSYLVANIA	\$118.04
09202	PR	20	PUERTO RICO	\$126.48
14412	RI	01	RHODE ISLAND	\$130.22
11202	SC	01	SOUTH CAROLINA	\$116.14
03402	SD	02	SOUTH DAKOTA**	\$124.61
10312	TN	35	TENNESSEE	\$113.95



MAC	Locality	State	Locality Name	Payment
04412	TX	31	AUSTIN	\$130.38
04412	TX	20	BEAUMONT	\$115.55
04412	TX	09	BRAZORIA	\$126.55
04412	TX	11	DALLAS	\$126.67
04412	TX	28	FORT WORTH	\$125.78
04412	TX	15	GALVESTON	\$126.00
04412	TX	18	HOUSTON	\$126.86
04412	TX	99	REST OF TEXAS	\$119.84
03502	UT	09	UTAH	\$118.06
14512	VT	50	VERMONT	\$124.01
11302	VA	00	VIRGINIA	\$124.00
09202	VI	50	VIRGIN ISLANDS	\$126.48
02402	WA	02	SEATTLE (KING CNTY)	\$149.08
02402	WA	99	REST OF WASHINGTON	\$129.87
11402	WV	16	WEST VIRGINIA	\$111.21
06302	WI	00	WISCONSIN	\$120.43
03602	WY	21	WYOMING**	\$124.97

MAC Assignments as of November 22, 2023

\*Work GPCI reflects a 1.5 floor in Alaska established by the MIPPA.

\*\*PE GPCI reflects a 1.0 floor for frontier states established by the ACA.

Search the current [CMS Physician Fee Schedule](#).

## Medicare Coverage ERG

MAC	LCD*†	Coding & Billing Article†	92273	92274	0509T
CGS	<a href="#">L38992</a> <a href="#">Electroretinography</a>	<a href="#">A58706</a> <a href="#">Billing and Coding:</a> <a href="#">Electroretinography</a>	Covered	Covered	Covered
FCSO	<a href="#">L37398</a> <a href="#">Electroretinography</a>	<a href="#">A57677</a> <a href="#">Electroretinography</a>	Covered	Covered	Covered
NGS	<a href="#">L36831</a> <a href="#">Visual</a> <a href="#">Electrophysiology</a> <a href="#">Testing</a>	<a href="#">A57060</a> <a href="#">Visual Electrophysiology</a> <a href="#">Testing</a>	Covered	Covered	Covered
Noridian	No LCD	No Article	Silent	Silent	Silent
Novitas	<a href="#">L37371</a> <a href="#">Electroretinography</a>	<a href="#">A56672</a> <a href="#">Electroretinography</a>	Covered	Covered	Covered
Palmetto	No LCD	No Article	Silent	Silent	Silent
WPS	<a href="#">L37015</a> <a href="#">Visual</a> <a href="#">Electrophysiology</a> <a href="#">Testing</a>	<a href="#">A57599</a> <a href="#">Visual Electrophysiology</a> <a href="#">Testing</a>	Covered	Covered	Covered

\*If there is no LCD, no written policy exists regarding ERG and coverage is considered to be "silent." Coverage will be determined on a case-by-case basis and based on medical necessity.

†Please click on the link to view the coverage details and a comprehensive list of ICD-10-CM codes that are covered.

## References

1. CY 2024 Payment Policies under the Physician Fee Schedule and Other Changes to Part B Payment Policies; (CMS-1784-F); Addendum B. All MPFS Fee Schedules calculated using CF of \$33.2875 effective March 9, 2024.
2. ICD-10-CM 2024, ©2023Optum360, LLC. All rights reserved.
3. 2024 CPT Professional, ©2023 American Medical Association.
4. Decision Health, Select Coder

## Frequently Asked Questions

### Can 92273 (ffERG) be billed the same day as optical coherence tomography (OCT)?

OCT can be reported with either of the following CPT codes:

- [92133](#): Scanning computerized ophthalmic diagnostic imaging, posterior segment, with interpretation and report, unilateral or bilateral; optic nerve; or
- [92134](#): Scanning computerized ophthalmic diagnostic imaging, posterior segment, with interpretation and report, unilateral or bilateral; retina.

There are no CCI edits preventing 92273 from being reported on the same date of service as 92133 or 92134.

### **Can 92273 (ffERG) be billed the same day as a visual field test?**

Visual field tests may be reported with one of three CPT codes:

- 92081: Visual field examination, unilateral or bilateral, with interpretation and report; limited examination (e.g., tangent screen, or single stimulus level automated test);
- 92082: Visual field examination, unilateral or bilateral, with interpretation and report; intermediate examination (e.g., at least 2 isopters on Goldmann, or automated suprathreshold); or
- 92083: Visual field examination, unilateral or bilateral, with interpretation and report; extended examination (e.g., Goldmann visual fields with at least 3 isopters plotted and static determination within the central 30°, or quantitative, automated threshold perimetry, Octopus program G-1, 32 or 42, Humphrey VF analyzer full threshold programs 30-2, 24-2, or 30/60-2).

There are no CCI edits preventing 92273 from being reported on the same date of service as 92081, 92082, or 92083.

### **Can 92273 (ffERG) be billed the same day as fundus photography?**

Fundus photography can be reported with the following CPT code:

- 92250: Fundus photography with interpretation and report.

There are no CCI edits preventing 92273 from being reported on the same date of service as 92250.

### **Is CPT 92273 covered for suspected glaucoma?**

The ICD-10-CM diagnoses code for suspected glaucoma is H40.0 – Glaucoma Suspect. Coverage for CPT 92273 for glaucoma suspect will vary by payer:

- Medicare MACs CGS, FCSO, NGS, Novitas, and WPS do not provide coverage for 92273 for suspected glaucoma.
- Noridian and Palmetto have not published an LCD for ERG; coverage will be determined upon review of the claim.
- Coverage with private payers will vary and we recommend you check a given payer's specific coverage policy for ERG to determine what diagnoses are covered for this procedure.

Medicare does provide coverage for glaucomatous optic atrophy (H47.23X).

### **Is CPT 92273 covered in patients who are diagnosed with glaucoma?**

ICD-10-CM diagnoses codes for a patient diagnosis with glaucoma are H40.1-H40. Coverage of CPT 92273 for patients diagnosed with glaucoma will vary by payer. Medicare MACs CGS, FCSO, NGS, Novitas, and WPS do not provide coverage for 92273, for patients with a diagnosis of glaucoma. Noridian and Palmetto have not published an LCD for ERG; coverage will be determined upon review of the claim. Coverage with private payers will vary and we recommend you check a given payer's specific coverage policy for ERG to determine what diagnoses are covered for this procedure.

### **Can 92273 be reported for a patient not yet diagnosed with diabetes mellitus?**

Coverage of CPT 92273 for patients not yet diagnosed with diabetes mellitus will vary from payer to payer. For example, some local MACs and commercial payers will only allow CPT 92273 to be reported for patients with diabetes mellitus and some form of diabetic retinopathy. It should also be noted that some payers may cover patients that present with unspecified visual disturbances (H53.9) or unspecified visual loss (H54.7). Please be sure to check your local payer coverage policies to determine specific coverage criteria.

### **Can 92273 be reported for a patient diagnosed with diabetes mellitus but not diabetic retinopathy?**

Coverage of CPT 92273 for patients diagnosed with diabetes mellitus but not yet diagnosed with diabetic retinopathy will vary from payer to payer. For example, some local MACs and commercial payers will only allow CPT 92273 to be reported for patients with diabetes mellitus as well as some form of diabetic retinopathy (e.g. mild, moderate, or severe non-proliferative diabetic retinopathy). It should also be noted that some payers may cover patients that present with unspecified visual disturbances (H53.9) or unspecified visual loss (H54.7). Please be sure to check your local payer coverage policies to determine specific coverage criteria.