Evidence Search results	
Search topic:	Electrodiagnostic of vision
Date requested:	6/1/26
Date completed:	10/3/26
Search completed by:	Jess Pawley
Number of results selected:	9
Time taken:	5 hours

Citing this evidence search

If you reference this search in any paper, publication or presentation, please let us know and use the following format:

Pawley, J. (2026). *Evidence summary: Electrodiagnostic of vision.* Taunton, UK: Somerset NHS Foundation Trust Knowledge & Library Service.

Summary of results

Summary generated in part using AI

There is not a huge amount of evidence available on this, which you may or may not have been expecting.

A job description from NHS Greater Glasgow may act as a potential starting point for you to make further contact and liaise with, as to how they have embedded this role into their team.

The Association of Neurophysiological Scientists and the British Society for Clinical Neurophysiology ran a joint audit of current UK practice for evoked potentials in 2019. **I could not find an updated version of this, but it does contain names and I have found an email address for one of the authors, if you wished to contact for further information: peter.walsh@nbt.nhs.uk (Peter Walsh, Clinical Neurophysiology Service Manager, North Bristol NHS Trust).**

Findings from the audit-

- A large amount of the work done is historic
- The tests are useful, but "imaging has largely surpassed their use"
- **The aim of the audit was an evaluation of then-current practice in the UK, and to set nationally agreed UK minimal standards**
- 36 out of 83 contacted centres responded, which is a 43% response rate
- **Focusing on pattern reversal (PRVEP), upper and lower limb somatosensory (UL and LLSSEP) and brainstem (SSP).**

- Organisations asked to reference the guidelines they use, **with ISCEV and ACNS being the most widely used**
- **Limited local or regional audits performed**

American in focus, this clinical guideline from Anthem Medical "addresses non-operative uses of evoked potential studies", providing definition around each of the tests and key factors for clinicians to look out for. **Includes a section on clinical coding, including differentiation where services are deemed medically necessary or non-medically necessary.**

Sheffield Teaching Hospitals include a link to their referral form which is downloadable and shows relevant criteria patients need to meet.

From the published papers (again, only a few of these which seemed relevant):

Bayer et al (2025): **A handheld RETeval ERG screening step could theoretically eliminate EDT waiting lists and significantly improve access, justifying further clinical research**
However, real-world evidence is missing: sensitivity/specificity in routine practice, test–retest variability, usability by non-experts, referral pattern changes, and especially the clinical consequences of false negatives and false positives require prospective studies.

Sustar Habjan et al (2025) is an update of the 2016 ISCEV standards:
Main updates vs 2016 standard

- **Optional simultaneous PERG + pattern-reversal VEP is now included as an ISCEV-standard option**
- **Component nomenclature and analysis updated: origin and clinical use of waveform components are described; N135 renamed N145; clear guidance on amplitude and peak-time measurements**
- **Flash VEP rate changed to 1–2 Hz to speed acquisition**
- **More detailed, harmonized descriptions of multi-channel and paediatric VEP methods to encourage convergence of widely used non-standard approaches**

Calcagni et al (2024):
Electrodiagnostic testing, performed to ISCEV standards, is portrayed as indispensable in neuro-ophthalmology for localising pathology, refining differential diagnoses, phenotyping complex genetic and acquired disorders, and providing objective outcome measures for emerging therapies.

Possibly tangential? Neveu et al (2025): **The paper concludes that visual EDTs are strong candidates for objective efficacy and safety endpoints in trials of novel pharmacologic therapies for acquired retinal disorders, especially for early-phase and mechanism-driven studies where conventional psychophysical or imaging outcomes are too slow or insensitive.**

I hope this is helpful. Please contact the Library if you would like any further information or would like to revise your search: library@somersetft.nhs.uk.

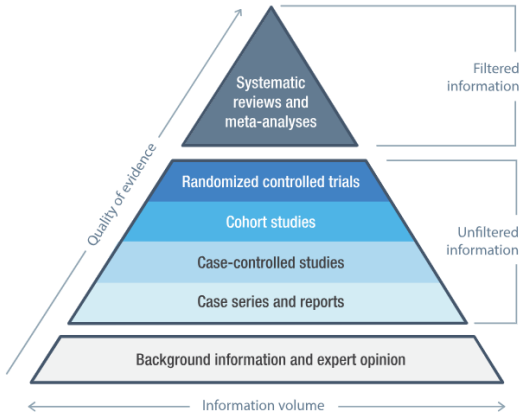
We would like to capture information about the impact this evidence search has had on your practice or decision—making. We can use this to promote this service to others within the Trust and it also ensures this service continues to develop and meet the needs of everyone who uses it. Please take a few moments to complete our short impact survey.

Search results

Full-text access:

Abstracts are provided where available. To check if the full-text of an article is available, click on the links provided and log in with your NHS OpenAthens username and password, if prompted. You can register for an NHS OpenAthens username and password at: https://openathens.nice.org.uk. If there is no link, or the full-text is not available to you, please send the details of the article to library@somersetft.nhs.uk or and we will try and find it for you.

For your information, and to help you assess the quality of the research, here is a hierarchy of the quality of evidence that you may find useful:



Click to jump to section:

Case study examples

Job description – NHS Greater Glasgow

The ElectroDiagnostic Imaging Unit provides a highly specialised national imaging and interpretation service for referring consultant clinicians in ophthalmology/neurology. The Unit acts as a central referral service for over 1500 patients per year who will undergo a range of highly specialised diagnostic imaging investigations within the Unit. This service is unique in the UK providing clinical diagnostic interpretation and guidance using combined high resolution imaging of structure and function of the visual pathway.

The Unit has an international reputation on the application and development of imaging modalities in ophthalmology and in addition provides a central research resource for junior and senior clinicians in ophthalmology both within the Trust and supra-regionally. The Unit has close links with the Glasgow Centre for Ophthalmic Research and Medical Devices Unit. Senior staff within the Unit are expected to provide consultation in the development and direction of research within imaging in ophthalmology regionally, including the design and securing of research funding and clinical trials. Additionally, senior staff are responsible for providing external guidance in the development of grant applications, and the structuring of publications for peer review.

An evaluation of current UK practice for evoked potentials – Joint National Audit Project, Association of Neurophysiological Scientists and the British Society for Clinical Neurophysiology, 2019

CG-MED-50 Visual, Somatosensory and Motor Evoked Potentials – Anthem Medical, Clinical Guideline

Information for referrers (Electrodiagnostics) - Sheffield Teaching Hospital

Published papers

Normative Values for Contact Heat and Cold Evoked Potentials
Foolchand et al, European Journal of Pain, 2026

Bayer, S., Garillo, D., Penn, M., Chorozoglou, M., Brailsford, S., Keeling, E., Shawkat, F., Carter, P., Lee, H., & Self, J. E. (2025). Could a hand-held, visual electrophysiology device theoretically reduce diagnostic waiting times for complex eye conditions in the NHS? A Discrete Event Simulation (DES) modelling study. *BMC health services research*, *25*(1), 461.

Šuštar Habjan, M., Bach, M., van Genderen, M. M., Li, S., Mizota, A., Nilsson, J., ... & Robson, A. G. (2025). ISCEV standard for clinical visual evoked potentials (2025 update). *Documenta Ophthalmologica*, *151*(2), 97-112.

Calcagni, A., Neveu, M. M., Jurkute, N., & Robson, A. G. (2024). Electrodiagnostic tests of the visual pathway and applications in neuro-ophthalmology. *Eye*, *38*(12), 2392-2405.

Too much of a tangent?
Neveu, M. M., Chong, V., Empeslidis, T., Scholl, H. P., & Robson, A. G. (2025). Electrodiagnostic Tests as Potential Efficacy Endpoints in Clinical Trials of Novel Pharmacological Therapies for Acquired Retinal Disorders. *Ophthalmic Research*, *68*(1), 169-186.

OFFICE USE ONLY

Keywords/search strategy	Limits used
Electrodiagnostic service Electrodiagnostic testing Pathway Electrodiagnostic testing Electrodiagnostic screening pathway Ophthalmic electrodiagnostics Evoked potentials Clinical coding	

Databases/sources used		
☒Pubmed	☐HMIC	☐BMJ Best Practice
☐MEDLINE	☐Social Policy & Practice	☐UpToDate
☐Emcare	☐CINAHL	☒Trip Pro
☐Embase	☐PsycINFO	☐Cochrane Library
☐Knowledge & Library Hub	☒Google Advanced/Scholar	
Other (please list): KnowledgeShare, King's Fund, Nuffield Trust, Health Foundation, CoPilot Researcher (AI)		

inSPIRE repository	
inSPIRE	The Knowledge & Library Service have a growing archive of completed evidence summaries on inSPIRE – the organisation's knowledge, research and evidence repository. You can browse the evidence summaries here. The (anonymised) results of this search will only be shared in the repository if you have given your permission to do so (we ask this in the evidence search request form).
Has permission to share these results been given?	
☒Yes – share	☐No – do not share

Contact us	
SFT Knowledge & Library Services	Email: library@somersetft.nhs.uk Tel: 01823 342433 (MPH) Tel: 01935 384495/4697 (YDH) Web: https://somersetft-nhs.libguides.com/home
Improvement Team	Email: Jessica.Pawley@somersetft.nhs.uk Web: https://somersetcollaborationhub.org/
Primary Care/ICB	Email: Roxanne.hart3@nhs.net