

Clinical Neurophysiology Fellowship FAQs

Subspecialty field:

Clinical Neurophysiology is an area of medicine in which selected neurological disorders involving electrophysiology of the central, peripheral, and autonomic nervous systems are assessed and monitored.

What accreditation is available for fellowships (ACGME, UCNS, other) in this subspecialty field?

Accreditation Council for Graduate Medical Education (ACGME) accredits most of the Clinical Neurophysiology programs. United Council for Neurologic Subspecialties (UCNS) accredits Autonomic Disorders programs

Is board certification available in this subspecialty? If so, through which agency (ABPN, UCNS, other)?

Yes. For those who train in an ACGME accredited program they can take the American Board of Psychiatry and Neurology (ABPN - <https://www.abpn.com/>) that is given every other year (odd years). United Council for Neurologic Subspecialties (UCNS - <https://www.ucns.org/>) has a certification examination for Autonomic Disorders. For those who do not train in an ACGME program or have interest in specific certifications American Board of Clinical Neurophysiology (ABCN - <https://abcn.org/>) has examinations in General Clinical Neurophysiology, Epilepsy Monitoring, Neurophysiologic Intraoperative Monitoring, and Critical Care EEG. The American Board of Electrodiagnostic Medicine (ABEM - <https://www.abemexam.org/>) provides certification in electrodiagnostic evaluation of neuromuscular and musculoskeletal systems.

Does completion of this fellowship typically expand the scope of the subspecialist's hospital credentials (added credentials for performing procedures, interpreting studies, etc)?

In most cases, under current guidelines, any board-certified neurologist without fellowship training can read EEGs or perform EMGs and other routine neurodiagnostic procedures in most hospitals. However, many hospitals and most academic centers seek candidates with additional training in specialized procedures. Additional training allows for exposure to procedures not covered during residency training such as evoked Potentials, video-EEG monitoring, intraoperative neuromonitoring, polysomnography, advanced electrodiagnostic skills (SFEMG), neuromuscular ultrasound, and muscle and nerve biopsy interpretation.

Is completion of a fellowship typically necessary in order to achieve a subspecialty-focused practice in an academic practice or a large neurology group practice?

Whereas non-fellowship trained neurologists with an interest in clinical neurophysiology may see similar patient populations and perform routine EMG/NCS or interpret EEGs, sizeable group practices customarily seek neurologists who are fellowship trained.

Academic centers typically hire CNP or epilepsy fellowship trained-neurologists not only for subspecialty practice but also to develop academic interests. Faculty interested in education need to be board-certified in their field of subspecialty. Although fellowship training is not necessary for billing, increased experience and degree of expertise expands the scope and understanding of the relevant clinical practice and can improve patient care.

What type of cases do you see?

Clinical Neurophysiology programs have a great deal of flexibility based on their faculty portfolio and the fellow's interests. Finding a program that can meet each individual's goals is the biggest challenge in choosing a training program.

All ACGME-accredited CNP fellowships have broad guiding principles for training, allowing each program to tailor to the needs of the trainee.

ACGME requires CNP fellows to demonstrate **proficiency** in the ability to accurately report results in at least **two** of the following:

1. Electroencephalography (EEG) and video EEG interpretation
2. Electromyography (EMG) and nerve conduction studies performance and interpretation;
3. Intra-operative monitoring studies interpretation
4. Interpretation of sleep studies

Some programs have "tracks" where a fellow can specialize (i.e. CNP-EEG or CNP-EMG track). All ACGME certified programs, including track-based fellowships require a minimum of 2 months equivalent time in a second area of focus.

All CNP fellows must demonstrate **competence** in the application of electrical, magnetic, and mechanical methods to evaluate a wide range of diseases salient to the fellow's two or more areas of clinical neurophysiology experience.

All ACGME CNP accredited programs must provide **education** in the broad area of clinical neurophysiology, which may include clinical or didactic experience in:

1. Electroencephalography (EEG)
2. Video EEG monitoring
3. Electromyography (EMG) and nerve conduction studies (NCS)
4. Single fiber EMG
5. Polysomnography (PSG) and assessment of disorders of sleep
6. Evoked potential (EP) studies
7. Intra-operative monitoring and analysis (Neurophysiologic Intraoperative Monitoring, NIOM)
8. Movement disorder assessment, to include dystonia
9. Testing of autonomic function

What is the typical minimum duration of a fellowship in this field? Can it be completed on a part-time basis? The educational program in Clinical Neurophysiology must be 12 months in length. It would be difficult to do this on a part time basis. Opportunities for additional years to be spent performing research are available at some centers. Some institutions combine two different fellowships such as Clinical Neurophysiology followed by a second year of Epilepsy fellowship. It should be noted that a trainee cannot do 2 years of an ACGME accredited CNP fellowship, even within a different track (i.e. a fellow could not do one year of EMG-focused CNP and then another year of EEG-focused CNP).

How are fellowship positions obtained- match or hospital based? How far in advance should inquiries be sent to the program to ensure a candidate’s consideration? Are there prerequisites beyond completion of a Neurology residency?

- For Clinical Neurophysiology programs that have an emphasis on EMG/NCS, American Association of Neuromuscular and Electrodiagnostic Medicine (AANEM) has a portal available to match with a participating program. The timeline for application is listed here:

Applicants submit applications through AANEM	Jan 1- Mar 1, 2023
Program directors have access to applicant information	Mar 1, 2023
Interviews begin	Mar 1, 2023
Rank lists due	May 25, 2023
Match Day	June 1, 2023, 11AM CST

- For prospective fellows who intend to begin training in July 2024, over half of all Clinical Neurophysiology fellowship programs (generally those that have an emphasis on EEG and Epilepsy) have joined with Epilepsy fellowship programs in the National Resident Matching Program (NRMP). The timeline for application is listed below:

Applicants submit applications through ERAS	June – Dec. 2022
Program directors have access to applicant information	Nov. 16, 2022
Interviews begin	Dec. 7, 2022
Rank lists due	May 3, 2023
Match Day	May 17, 2023

- For ACGME programs that are not participating in the AANEM or NRMP Match process or for programs that have unfilled positions following the AANEM or NRMP Match, applications are sent directly to program directors and program coordinators. Applications for these programs typically begin in the fall, approximately 18 months prior to the fellowship start date. The time course for accepting and declining fellowship positions may vary between programs. If a potential fellowship candidate decides to apply to a Clinical Neurophysiology program late in their training, applications may still be considered, because many programs will have positions that were not filled (either directly or through the AANEM or NRMP Match.)
- For all applicants, successful completion of an ACGME-accredited neurology residency are required before beginning an ACGME-accredited fellowship.

Do faculty from outside Neurology typically participate in training? From which other specialties?

Physical Medicine and Rehabilitation, Neuropathology, Bioengineering, Neurosurgery, Neuropsychology, Psychiatry

Please provide a brief overview of the rotations a typical fellowship involves. Are there rotations required by accrediting bodies?

Due to the broad nature of the fellowship and the ability to tailor a fellowship to the trainee's interests, no distinct rotations are required for accreditation. Sufficient time must be spent to develop proficiency in at least one of the four core subspecialties and competence in a second subspecialty. A typical arrangement is to have protected blocks of time for elective and vacation, with the remainder of time being spent in the performing and interpreting studies, outpatient clinics, and inpatient rotations.

In your opinion, what are important qualities to look for in selecting a fellowship program in this field?

Every field of medicine has practitioners with diverse perspectives on diagnostic and management strategies in the field. It is useful to be exposed to multiple viewpoints during your training. For residents who are interested in pursuing an academic career, opportunities for research and scholarship may also be an important aspect in choosing a program. Finally, patient volume and exposure to a wide range of pathology may influence a candidate's choice in a program, depending on the ultimate career goals. In all cases, experienced faculty committed to teaching is important and beneficial.

What are the most important words of advice you have for a neurology resident considering a fellowship in the subspecialty field?

Consider why you are choosing this fellowship. Is it because the field is intrinsically interesting to you? Because a mentor in this field has inspired you? Because you want to make a contribution to this field for personal reason? Clinical neurophysiology fellowships are designed to give neurologists an additional skill set, such as EMG/NCS, EEG or intraoperative monitoring. This can help neurologists to feel more comfortable utilizing these valuable diagnostic tools.

Is there a professional society specific to this subspecialty? Website:

American Clinical Neurophysiology Society (ACNS) www.acns.org

American Association of Neuromuscular and Electrodiagnostic Medicine (AANEM) www.aanem.org

International Federation of Clinical Neurophysiology (IFCN) [IFCN | International Federation of Clinical Neurophysiology](http://www.ifcn.org)

Recommended web based resources for further information and searching for fellowship positions:

www.acgme.org

http://www.acgme.org/acWebsite/downloads/RRC_progReq/183pr205.pdf

www.aanem.org

<https://www.acns.org/education/residents-and-fellows>

<https://www.aesnet.org/education/epilepsy-fellowship-match>

<https://www.nrmp.org/fellowship/epilepsy-and-clinical-neurophysiology/>

<https://services.aamc.org/eras/erasstats/par/index.cfm>