

Neurology Summary

The role of the GP in the care of people with neurological problems

As a GP, your role is to:

- Recognise that neurological conditions are common causes of serious disability and have a major, but often unrecognised, impact on health and social services
- Adopt approaches to assess and manage common but non-specific presentations such as headache, which can present diagnostic challenges and may have serious consequences if misdiagnosed. Managing the associated uncertainty should be carefully balanced with cost effective use of resources
- Understand that, increasingly, care for patients with long term neurological disease is coordinated in primary care with access to specialist clinical networks. GPs have to deal with disability, comorbidity (which includes depression), and inequalities in available resources
- Diagnose acute neurological emergencies, cognitive difficulties, and epilepsy, which will usually present in primary care.

Key Areas for Exam preparation

Common and important conditions

- Acute confusional states or coma with underlying causes such as metabolic, infective, or drug-induced
- Autonomic neuropathies such as diabetic, drug induced, metabolic, multi-system atrophy
- Causes and risk factors for recurrent falls
- Cerebellar disorders including tumours, demyelination such as multiple sclerosis and inherited such as Friedrich's ataxia
- Chronic fatigue syndrome
- Complex regional pain syndrome
- Cranial nerve disease e.g. Bell's palsy, trigeminal neuralgia, bulbar palsy
- Dementia e.g. Alzheimer's, vascular, Lewy body, Pick's disease, normal pressure hydrocephalus, other causes of memory loss and confusion
- Epilepsy including generalised and focal seizures, febrile convulsions and other causes of seizures (such as hypoglycaemia, alcohol and drugs)
- Falls, their causes and risk factors
- Head injuries with or without loss of consciousness, concussion and more serious cranial or intracranial injuries, and relevant long-term care with brain injuries including secondary epilepsy and behavioural problems
- Headaches including tension, migraine, cluster, raised intracranial pressure including idiopathic intracranial hypertension
- Infections such as meningitis, encephalitis, arachnoiditis
- Inherited neurological diseases e.g. Huntington's disease, Charcot-Marie-Tooth, myotonic dystrophy, neurofibromatosis
- Intracranial haemorrhage including subarachnoid, subdural and extradural and thrombosis such as sinus thromboses, congenital aneurysms
- Motor neurone disease including progressive bulbar palsy and muscular atrophy
- Movement disorders including tremor and gait problems including athetosis, chorea, tardive dyskinesia, dystonia, tics. Underlying causes such as Sydenham's chorea, Huntington's disease, drug-induced, parkinsonism
- Multiple sclerosis and other demyelinating disorders such as transverse myelitis
- Muscle disorders such as muscular dystrophy, myasthenia gravis and associated syndromes
- Parkinson's disease and parkinsonism secondary to other causes such as drugs
- Sensory and/or motor disturbances (peripheral nerve problems) including mono- and poly- neuropathies such as nerve compression and palsies, Guillain-Barré syndrome
- Speech disorders including stroke, cerebellar disease, cerebral palsy, motor neurone disease
- Spinal cord disorders such as root and cord compression, cauda equina syndrome, spinal stenosis, syringomyelia. Metastatic cord compression in at-risk patients

- Spinal injuries causing paralysis and relevant care of tetra- and paraplegic patients including bowel and bladder care, potential complications such as pressure sores, autonomic dysfunction, aids to daily living and mobility
- Stroke including transient ischaemic attacks, with underlying causes such as cardiac arrhythmias, arterial disease, thrombophilia
- Tumours of the brain and peripheral nervous system such as meningiomas, glioblastomas, astrocytomas, neurofibromatosis, secondary metastases.

Suggested resources:

General information

- British Medical Association and Royal Pharmaceutical Society of Great Britain. *The British National Formulary* London: BMJ Books, updated annually
- British Medical Association, Royal Pharmaceutical Society of Great Britain, Royal College of Paediatrics and Child Health. *The Neonatal and Paediatric Pharmacists Group BNF for Children* London: BMA, 2005 Murtagh J, Ridsdale L, Hart Y, *et al*. Neurological problems, Section 11. In: Jones R, Britten N, Culpepper L, Gass DA, Grol R, Mant D, *et al* (eds) *Oxford Textbook of Primary Medical Care, Vol 2: clinical management* Oxford: Oxford University Press, 2004, pp. 1043–80
- The Neurological Alliance. *Levelling Up: standards of care for people with a neurological condition* London: The Neurological Alliance, 2002
- The Neurological Alliance. *Getting the Best from Neurological Services* London: The Neurological Alliance, 2003
- Ridsdale L, Dowson A, Rogers G. Neurology. Chapter 12. In: Lakhani M and Charlton R (eds). *Royal College of General Practitioners Handbook: recent advances in primary care* London: RCGP, 2006
- Wolfe C and Rudd AG. Stroke and transient ischaemia. Chapter 1.7. In: Jones R, Britten N, Culpepper L, Gass DA, Grol R, Mant D, *et al* (eds) *Oxford Textbook of Primary Medical Care, Vol 2: clinical management* Oxford: Oxford University Press, 2004, pp. 640–4
- **Driver and Vehicle Licensing Agency (DVLA)** DVLA guidelines for doctors regarding driving licences for patients with neurological disorders. www.dft.gov.uk/dvla//medical.aspx
- **National clinical guidelines for stroke.** The guidelines are published by the Clinical Effectiveness and Evaluation Unit of the Royal College of Physicians (RCP), in collaboration with the Intercollegiate Stroke Working Party. They are available from the RCP website. www.rcplondon.ac.uk/resources/stroke-guidelines
- **National Institute for Health and Care Excellence (NICE)** For NICE clinical guidance (CG) on epilepsy, see CG137 – The epilepsies: the diagnosis and management of the epilepsies in adults and children in primary and secondary care. www.nice.org.uk/guidance/CG137
- **Patient resources** You will find a wealth of useful information about neurological problems (and many other chronic conditions) in resources specifically prepared to inform patients and carers, in sites such as NHS Shared Decision Making (<http://sdm.rightcare.nhs.uk>), NHS Choices (www.nhs.uk) and Patient (<http://patient.info/>).
- Epilepsy Society - www.epilepsysociety.org.uk
- Multiple Sclerosis Trust - www.mstrust.org.uk
- Motor Neurone Disease Association - www.mndassociation.org
- Parkinsons's UK - www.parkinsons.org.uk
- RCGP resources include an online course on multiple sclerosis www.elearning.rcgp.org.uk/ms
- The Rare Diseases programme of the RCGP includes resources on Motor Neurone Disease www.rcgp.org.uk/clinical-and-research/clinical-resources/rare-diseases.aspx

Acute confusional states or coma

- <https://www.nice.org.uk/guidance/CG103>

Autonomic neuropathies

- <https://cks.nice.org.uk/neuropathic-pain-drug-treatment>

Recurrent falls

- <https://www.nice.org.uk/guidance/cg161/chapter/1-recommendations>
- <https://www.evidence.nhs.uk/search?q=falls>

Cerebellar disorders

- <https://www.evidence.nhs.uk/search?pa=3&q=Cerebellar+ataxia>
- <https://www.evidence.nhs.uk/search?pa=2&q=Cerebellar+stroke>
- <https://cks.nice.org.uk/vertigo>
- <https://cks.nice.org.uk/vestibular-neuronitis>

Chronic fatigue syndrome

- <https://www.nice.org.uk/Guidance/CG53>
- <https://www.evidence.nhs.uk/search?q=nice+guidelines+for+fatigue>

Complex regional pain syndrome

- <https://www.evidence.nhs.uk/search?q=RSD+complex+regional+pain+syndrome>
- <https://www.rcplondon.ac.uk/guidelines-policy/complex-regional-pain-syndrome-adults>

Neuropathic Pain

- <https://cks.nice.org.uk/neuropathic-pain-drug-treatment>

Cranial nerve disease e.g. Bell's palsy, trigeminal neuralgia, bulbar palsy

- <https://www.evidence.nhs.uk/search?q=Cranial+nerves>
- <https://clinicalgate.com/cranial-nerve-disorders/>

Dementia

- <https://www.evidence.nhs.uk/search?q=dementia>
- <https://www.nice.org.uk/guidance/ng97>

Delirium

- <https://www.nice.org.uk/guidance/ng97>
- <https://pathways.nice.org.uk/pathways/delirium>

Epilepsy

- <https://www.evidence.nhs.uk/search?q=epilepsy>
- <https://www.nice.org.uk/guidance/cg137/chapter/1-guidance>

Head injuries with or without loss of consciousness,

- <https://www.evidence.nhs.uk/search?q=head-injury>
- <https://cks.nice.org.uk/head-injury#!scenario>
- <https://www.nice.org.uk/Guidance/CG176>

Headaches including tension, migraine, cluster, raised intracranial pressure including idiopathic intracranial hypertension, trigeminal Neuralgia

- <https://cks.nice.org.uk/trigeminal-neuralgia>
- <https://www.nice.org.uk/guidance/cg150/evidence>
- <https://www.evidence.nhs.uk/search?pa=2&ps=50&q=headaches>
- <https://cks.nice.org.uk/headache-cluster>

Infections such as meningitis, encephalitis, arachnoiditis

- <https://www.evidence.nhs.uk/search?q=meningitis>
- <http://www.evidence.nhs.uk/search?q=Encephalitis>
- <https://www.evidence.nhs.uk/search?q=Arachnoiditis>

Inherited neurological diseases (also see genomic summary) e.g. Huntington's disease, Charcot-Marie-Tooth, myotonic dystrophy, neurofibromatosis
Intracranial haemorrhage including subarachnoid, subdural and extradural and thrombosis such as sinus thromboses, congenital aneurysms

- <https://www.evidence.nhs.uk/search?pa=1&q=Charcot+marie+tooth+disease>

Motor neurone disease including progressive bulbar palsy and muscular atrophy

- <https://www.evidence.nhs.uk/search?q=motor+neurone+disease>
- <http://www.nice.org.uk/guidance/NG42>

Movement disorders including tremor and gait problems including athetosis, chorea, tardive dyskinesia, dystonia, tics. Underlying causes such as Sydenham's chorea, Huntington's disease, drug-induced, parkinsonism

- <https://www.evidence.nhs.uk/search?q=Movement+disorders>

Multiple sclerosis and other demyelinating disorders such as transverse myelitis

- <https://www.evidence.nhs.uk/search?q=multiple+sclerosis>
- <https://www.evidence.nhs.uk/search?q=demyelinating%20diseases>

Muscle disorders such as muscular dystrophy, myasthenia gravis and associated syndromes

- <https://www.evidence.nhs.uk/search?q=muscular+dystrophy>
- <https://prowebsearch.com/search/?q=myasthenia%20gravis%20NICE&chm=1p&chm2=C+hrome&chm3=GB>

Parkinson's disease and parkinsonism secondary to other causes such as drugs

- <https://www.nice.org.uk/guidance/ng71>
- <https://www.evidence.nhs.uk/search?q=parkinson%27s+disease>

Sensory and/or motor disturbances (peripheral nerve problems) including mono- and poly- neuropathies such as nerve compression and palsies, Guillain-Barré syndrome

- <https://www.evidence.nhs.uk/search?ps=30&q=peripheral+neuropathy+autonomic&s=Date>
- <https://www.evidence.nhs.uk/search?q=guillain+barre+syndrome>

Speech disorders including stroke, cerebellar disease, cerebral palsy, motor neurone disease

- <https://www.evidence.nhs.uk/search?q=Speech%20disorders>
- <https://www.nice.org.uk/guidance/ng127/chapter/Recommendations-for-adults-aged-over-16>
- <https://www.nice.org.uk/guidance/ng127/chapter/Recommendations-for-children-aged-under-16>
- <https://www.evidence.nhs.uk/search?q=Speech%20and%20Language%20therapy%20Clinical%20guidelines>

Spinal cord disorders such as root and cord compression, cauda equina syndrome, spinal stenosis, syringomyelia. Metastatic cord compression in at-risk patients

- <https://cks.nice.org.uk/neck-pain-cervical-radiculopathy#!topicsummary>
- <https://cks.nice.org.uk/sciatica-lumbar-radiculopathy>
- <https://www.evidence.nhs.uk/search?pa=6&q=Carpal+tunnel+syndrome>
- <https://www.evidence.nhs.uk/search?q=spinal+stenosis>
- <https://www.evidence.nhs.uk/search?q=spinal%20cord%20compression%20guidelines>

Spinal injuries causing paralysis and relevant care of tetra- and paraplegic patients including bowel and bladder care, potential complications such as pressure sores, autonomic dysfunction, aids to daily living and mobility

- <https://www.evidence.nhs.uk/search?q=spinal+cord+injury+guidelines>
- <https://www.evidence.nhs.uk/search?ps=100&q=Paraplegia&s=Date>
- <https://www.evidence.nhs.uk/search?q=Quadriplegia>

Stroke including transient ischaemic attacks, with underlying causes such as cardiac arrhythmias, arterial disease, thrombophilia

- <https://www.nice.org.uk/guidance/NG128>

Tumours of the brain and peripheral nervous system such as meningiomas, glioblastomas, astrocytomas, neurofibromatosis, secondary metastases.

- <https://www.nice.org.uk/guidance/ng99/evidence>
- <https://www.evidence.nhs.uk/search?q=Glioblastoma&ps=50>
- <https://www.evidence.nhs.uk/search?ps=30&q=Astrocytoma>
- <https://www.evidence.nhs.uk/search?q=Neurofibromatosis+1>
- <https://www.evidence.nhs.uk/search?pa=2&q=Neurofibromatosis+2>