

<i>Neurology Curriculum 2010 (with 2013 amendments) item</i>	<i>Review Article</i>	<i>Case Report</i>	<i>Title</i>
<b>1. General and Professional Content</b>			
<b>1.1 History Taking</b>			
Understand the differences between open and closed questioning.	<a href="#">Allen 2013</a>		How I start a new patient consultation
Communicate this verbally or in writing and in summary form. Be aware of the possible influence of, and sensitively include questions about, socio-economic status, household poverty, employment status and social capital in taking a medical history.			
Appropriate use of an interpreter for patients & families when English is not their first language. Be aware of one's own behaviour and how it might impact on patients' health issues.			
<b>1.2 Neurological Examination</b>			
A thorough working knowledge of neuroanatomy.			
Able to undertake an appropriate, focussed and comprehensive examination of mental and physical state and communicate this verbally or in writing and in summary form.	<a href="#">Stone 2001</a>		Hoover's Sign
	<a href="#">Rossor 2001</a>		Snouting, Pouting and Rooting
	<a href="#">Van Gijn 2002</a>		The Babinski Sign
	<a href="#">Sandercock 2002</a>		The Carotid Bruit
	<a href="#">Pinto 2003</a>		A Short History of the Reflex Hammer
	<a href="#">Harvey 2004</a>		Harvey's 1 and 2
	<a href="#">Hilton-Jones 2004</a>		Beevor's Sign
	<a href="#">Josephs 2004</a>		The Alien Limb
	<a href="#">Lueck 2005</a>		Nystagmus
	<a href="#">Turner 2006</a>		Visually-evoked rooting, a fascinating primitive reflex
	<a href="#">Kennard 2007</a>		Examine eye movements
	<a href="#">Anderson 2010</a>		The forearm and finger rolling tests
	<a href="#">Apok 2011</a>		Dermatomes and dogma
	<a href="#">Gates 2011</a>		Work out where the problem is in the brainstem using 'the rule of 4'
	<a href="#">Warburton 2011</a>		Dermatological clues to neurological diagnoses

[Stark 2013](#)

[van Ballegoij 2015](#)

[Evans 2016](#)

[Kiernan 2016](#)

[Schott 2016](#)

[Turner 2016](#)

[Ellul 2017](#)

[Fuller 2017](#)

Clinical testing of visual fields using a laser pointer and a wall

The menace reflex

Putting pontine anatomy into clinical practice: the 16 syndrome

The Babinski sign

The palmomental reflex: stop scratching around!

Romberg's test no longer stands up

Aterixis

End the cult of cotton wool

Use of chaperone where appropriate, respect for patient's personal dignity.

Adopt assessments and interventions that are inclusive, respectful of diversity and patient-centred.

### 1.3 Communication Skills

Use of a Dictaphone, discharge summaries, legibility of case notes.

Ability to negotiate with patients, relatives and fellow healthcare professionals.

Consideration and time shown to those with visual and auditory impairments.

Communicate effectively with patients from diverse backgrounds and those with special communication needs, such as the need for interpreters, etc.

Able to communicate effectively with the patient, their family and carers and other staff in relation to the individual needs of the patient and with appropriate regard for confidentiality. Individual cultural, religious & educational parameters must be taken into consideration. [Fuller 2003](#)

Metaphors and Analogies In Neurology: From Kerplunk to Dripping Taps

Able to give a prognosis, to explain the patient's condition, to break bad news, to obtain full and informed consent for investigations and treatment. [Coebergh 2014](#)

'Undiagnosing' neurological disease: how to do it, and when not to

Able to inform concerning patient support groups and relevant charities.

Able to summarise clinical case in a coherent manner to clinical colleagues.

[Davenport 2011](#)

Write a clinical letter

### 1.4 Differential Diagnosis, Investigation and Initial Management

Understanding of the roles and usefulness of investigations including neuroimaging and neurophysiology.

Able to formulate an appropriately ordered differential diagnosis based on an appreciation of the patient, their past history and current problems and their likely causes. [Ward 2008](#)

Consideration given for different racial, social & ethnic groups.

Adopt assessments and interventions that are inclusive, respectful of diversity and patient-centred. [Johnston 2004](#)

[Seal 2014](#)

Able to plan and order appropriate observations, liaise with members of the MDT, determine and prescribe immediate treatment, seek appropriate opinions and interventions and with others, develop an overall plan for the individual patient. [Dani 2013](#)

Demonstrate leadership skills including mentorship of junior medical colleagues.

### 1.5 Personal qualities

Identify own strengths, limitations and the impact of their behaviour and is able to change their behaviour in light of feedback and reflection

Demonstrates different methods of obtaining feedback.

Awareness of the trainee's own values and principles and how these may differ from those of other individuals and groups.

The importance of best practice transparency and consistency.

Maintain and routinely practice critical self awareness, including being able to discuss strengths and weaknesses with supervisor and recognising external influences and changing behaviour accordingly.

Use assessment, appraisal, complaints and other feedback to discuss and develop an understanding of own development needs.

Identify own strengths and weaknesses.

Organise and manage workload effectively and flexibly.

Recognising and showing respect for diversity and differences in others.

Better questions, less uneasy answers

Neurological Disease at 30 000 Feet –What is an Acceptable Risk for your Pilot?

Using an Option Grid in shared decision making

Rare neurological diseases: a practical approach to management

Shows commitment to continuing professional development which involves seeking training and self development opportunities, learning from colleagues and accepting criticism.

### 1.6 Working with others

Adopt a team approach, acknowledging and appreciating efforts, contributions and compromises. Continue to recognise the common purpose of the team and respect their decisions

Knowledge of the roles and importance of different members of the MDT.

Enable individuals, groups and agencies to implement plans and make decisions.

Assessment and appraisal of more junior clinical colleagues or students.

Build and maintain relationships by listening, supporting others, gaining trust and showing understanding.

Shown willingness to act as a leader, mentor, educator and role model. [Morrish 2009](#)

[Allen 2012](#)

[Wiles 2013](#)

[Russell 2013](#)

Showing recognition of a team approach, respecting colleagues, including non-medical professionals.

[Mumford 2013](#)

[Perry 2013](#)

[Norris 2015](#)

It's all in the history (a continuing story)

Teaching clinical neurology

Introducing neurological examination for medical undergraduates—how I do it

The 'Attack of the Demyelinator'

When worlds collide: the uncomfortable romance between law and neurology

When worlds collide: comments from a barrister

Should medicolegal medicine be part of the medical school curriculum?

Respect diversity of status and values in patients and colleagues.

### 1.7 Managing Services

Support team members to develop their roles and responsibilities and continue to review performance of the team members to ensure that planned service outcomes are met

[Mumford 2010](#)

The dark side: a year as clinical director (or 'medical management without coronary spasm...')

Demonstrate knowledge of relevant legislation and HR policies.

Show knowledge of the duties, rights and responsibilities of an employer and co-worker.

Demonstrates knowledge of individual performance review.  
Understand the roles, competences and capabilities of other professionals and support workers.  
Understand the role of audit (improving patient care and services, risk management etc).  
Understand the steps involved in completing the audit cycle.  
Continue to contribute towards staff development and training, including mentoring, supervision and appraisal.  
Able to write a job description, including person specification and short listing criteria.  
Contribute to the development of an organisational response to emerging health policy.  
Commitment to good communication whilst also inspiring confidence and trust.  
Manage resources: know what resources are available and use influence to ensure that resources are used efficiently and safely.

[Greene 2009](#)

Reflections on management

Manage people: providing direction, reviewing performance and motivating others.  
Manage performance: hold oneself and others accountable for service outcomes.

## 1.8 Improving Services

Ensure patient safety at all times, continue to encourage innovation and facilitate transformation

[Larner 2011](#)

Teleneurology: an overview of current status

Demonstrate knowledge of risk management issues and risk management tools.

[Stone 2008](#)

Morbidity and mortality meetings for neurologists

Demonstrates understanding of how healthcare governance influences patient care.

Demonstrates knowledge of a variety of methodologies for developing creative solutions to improving services.

[Flower 2015](#)

How to write a neurology newsletter

[Brizzi 2015](#)

The value of a weekly newsletter in neurology

[Wardle 2016](#)

How to set up a clinical database

Recall principles of risk assessment and management.  
Identify risk management guidance e.g. safe prescribing, sharps disposal, needlestick injury.  
Reports clinical incidents.

Be able to assess and manage risk to patients.

Monitors the quality of equipment and safety of the environment relevant to the specialty.

Ensure the correct and safe use of medical equipment, ensuring faulty equipment is reported appropriately.

Questions existing practice in order to improve the services.

Seeks advice and or assistance whenever concerned about patient safety.

Supports colleagues to voice new ideas and is open minded to new thoughts.

### **1.9 Setting Direction**

Is able to identify the contexts for change and is able to make decisions

The ability to discuss the local, national and UK health priorities and how they impact on the delivery of health care relevant to the specialty.

Is able to run committee meetings and work collegiately and collaboratively with a wide range of people outside the immediate clinical setting.

Willingness to articulate strategic ideas and use effective influencing skills.

Willingness to participate in decision making processes beyond the immediate clinical care setting.

Apply knowledge and evidence: gathering information to produce an evidence-based challenge to systems and processes in order to identify opportunities for service improvements.

Make decisions: integrating values with evidence to inform decisions.

### **1.10 Clinical Pharmacology of Neurological Disorders**

Principles of neuro-pharmacokinetics and pharmacodynamics.

Understand principles of treatment especially vascular disease, migraine, epilepsy, pain, psychiatric disorders, movement disorders, multiple sclerosis, autoimmune disorders, infections, dementia, motor neuron disease.

Understand limitations: compliance, adverse effects, interactions, cost implications.

Able to plan and administer pharmacological treatments safely and effectively.	<a href="#">Pritchard 2001</a>	Intravenous Immunoglobulin – How to use it
Able to refer to local and national guidelines (NICE) and sources of evidence and information about treatments.	<a href="#">Chadwick 2009</a>	NICE and neurology
Understand information needs of patients and others.	<a href="#">Manford 2014</a>	Using Option Grids: a referee's commentary
Utilise reporting mechanisms for adverse events, both within an organisation and to national bodies.		
<b>1.11 Presentation Skills, Audit and Quality Improvement</b>		
An understanding of the importance and processes of audit.	<a href="#">Carroll 2015</a>	Auditing adult first seizure assessments
Understands the differences between audit and quality improvement		
Understands steps involved in completing a quality improvement project (which may include audit)		
Ability to give a range of oral presentations with the use of appropriate audio-visual aids including <i>Powerpoint</i> presentations. Presentations may involve clinical cases, audits or research papers.	<a href="#">Fathers 2014</a>	How to give a talk
Ability to instigate and collate an audit project.	<a href="#">Husain 2015</a>	How to write a successful grant or fellowship application
Describes measurement for improvement	<a href="#">Weir 2004</a>	Measuring and Improving the Quality of Care
Recognises and commits to the culture of continuous improvement in clinical practice to promote safe and high quality care		
Recognise how health systems can discriminate against patients from diverse backgrounds, and how to work to minimise this discrimination. For example, in respect of age, gender, race, culture, disability, spirituality, religion and sexuality		
<b>1.12 Special Interest Groups: Women &amp; Pregnancy</b>		
Understand the effects of menarche, menstrual cycle and menopause on common neurological disorders.	<a href="#">Zanette 2014</a>	Periodic thigh pain from radicular endometriosis
Knowledge of methods of contraception, failure rate and interaction with drugs (especially antiepileptic drugs); teratogenic risks of commonly prescribed drugs and genetic risks of neurological diseases; presymptomatic/prenatal diagnosis of neurological conditions; psychosexual dysfunction		

Understand the effect of pregnancy on existing neurological disorders and neurological disorders as complications of pregnancy.

[Lim 2014](#)

Postpartum headache: diagnostic considerations

Knowledge of the neonatal complications in offspring of affected women with neurological conditions; effects of drugs on pregnancy (foetus and mother) and pregnancy on drugs.

[O'Neal 2016](#)

[Pearce 2014](#)

Stroke in pregnancy: a case-oriented review

Can I treat this pregnant patient with botulinum toxin?

Ability to evaluate, diagnose and manage women with neurological disease.

[Jackson 2006](#)

Epilepsy in women: a practical guide to management

Adherence to national guidelines (e.g. NICE guidelines for epilepsy, British National Formulary etc.

### 1.13 Special Interest Groups: Teenagers

Knowledge of neurological disorders presenting in adolescence.

[Giles 2004](#)

Adolescent Neurology

Knowledge of childhood neurological disorders presenting in early adulthood.

Understand the special needs of teenagers, particular issues of confidentiality, and transition disorders.

### 1.14 Special Interest Groups: Elderly

Understand the normal clinical and radiological findings in the elderly; special presentations of neurological disease, diagnosis, investigation and management of dementia; effects of drugs in the elderly; hospital based & community services; communication with relatives and care agencies; role of COTE.

[Voermans 2007](#)

Why old people fall (and how to stop them)

Understand the specific issues of the Mental Capacity Act in relation to this patient group.

### 1.15 Special Interest Groups: Learning Disabilities

Understanding of the common causes of learning disabilities and the different presentation of symptoms in this group.

Recognise the stigmatising effects of some illnesses and work to help in overcoming stigma.

Understand the needs of patients with special educational needs with neurological disorders. Understand the specific issues of the Mental Capacity Act in relation to this patient group.

[Bradley 2012](#)

How to get the most from a consultation with a person who has a learning disability

### 1.16 Special Interest Groups: Terminally Ill



Understand end of life issues in neurological disorders and the role of palliative care services and specialist nurses; ethical and legal aspects of terminal care.

[Langley 2003](#)

How Changing the Law can Improve Human Rights at the End of Life

[Kerrigan 2010](#)

Advance planning in end-of-life care: legal and ethical considerations for neurologists

Neurology Curriculum 2010 (with 2013 amendments) item	Review Article	Case Report	Title
<b>2. Major Topics within Neurology Curriculum</b>			
<b>2.1 Head Injury</b>			
Knowledge of symptoms and signs of head injury and its complications; indications for investigations; indications for medical interventions, ITU referral, urgent and delayed neurosurgery.	<a href="#">Anderson 2006</a>		Concussion and mild head injury
	<a href="#">van Dijk 2011</a> <a href="#">Sharp 2015</a> <a href="#">Kolias 2013</a>		The bare essentials: Head injury Concussion is confusing us all Traumatic brain injury in adults
Ability to evaluate and manage people with acute head injury: perform immediate resuscitative measures; formulate a strategy for immediate and short term management; primary and secondary effects of head injury.		<a href="#">Smith 2012</a>	Seizures after head injury
Ability to evaluate and manage post traumatic change in consciousness, behaviour and cognition, and other post-traumatic symptoms (including epilepsy).			
<b>2.2 Headache</b>			
Knowledge of the clinical features, differential diagnosis and specific pharmacological and general treatment of the causes of headache and facial pain.	<a href="#">Matharu 2001</a>		Cluster Headache
	<a href="#">Goadsby 2002</a>		Low CSF Volume (Pressure) Headache
	<a href="#">Gladstone 2004</a>		Acute Migraine: Which Triptan?
	<a href="#">Davenport 2005</a>		Sudden onset headache
	<a href="#">Evers 2005</a>		Hypnic Headache
	<a href="#">Frese 2005</a>		Primary headache syndromes associated with sexual activity
	<a href="#">Dodick 2007</a>		Migraine prevention
	<a href="#">Weatherall 2007</a>		Chronic daily headache
	<a href="#">Davenport 2008</a>		THE BARE ESSENTIALS: Headache
	<a href="#">Larner 2009</a>	<a href="#">Mistry 2009</a>	

[Angus-Leppan 2013](#)

Migraine: mimics, borderlands and chameleons

[Nicholl 2014](#)

Subarachnoid haemorrhage: the canary in the mine, or the elephant in the room?

[Sinclair 2015](#)

Headache management: pharmacological approaches

[Alim-Marvasti 2016](#)

Trigeminal autonomic cephalgia caused by recurrent posterior scleritis

[Miller 2016](#)

Neurostimulation in the treatment of primary headaches

[Nesbitt 2016](#)

Migraine with brainstem aura presenting as recurrent hypersomnia (Kleine-Levin syndrome)

[Simpson 2016](#)

Weightlifter's headache

An understanding of the role of relevant investigations: brain scanning, urgent blood tests, lumbar puncture.

### 2.3 Disorders of Consciousness

Knowledge of anatomy and physiology of consciousness, and the pathophysiology of disorders of consciousness; definitions, causes, pathophysiology, clinical features and prognosis of permanent vegetative state, locked in state and brainstem death.

[Zeman 2002](#)

The Persistent Vegetative State: Conscious of Nothing?

[Wijdicks 2010](#)

[Howard 2011](#)

[Wijdicks 2012](#)

[Howe 2006](#)

The Bare Essentials: Coma

Hypoxic-ischaemic brain injury

Four eponyms in coma

An understanding of the legal issues relating to disorders of consciousness.

The persistent vegetative state, treatment withdrawal, and the Hillsborough disaster:

Airedale NHS Trust v Bland

[Wade 2014](#)

Patients with prolonged disorders of consciousness: more than a clinical challenge

Use of tests for brainstem death.

[Cameron 2016](#)

Confirmation of brainstem death

Development of interpersonal skills for relating to management of the family of people with disorders of consciousness.

### 2.4 Disorders of Sleep

Knowledge of narcolepsy, daytime hypersomnolence, parasomnias, obstructive sleep apnoea, effects of neurological conditions on sleep; indications, scope and limitations of the sleep laboratory; principles of physical and pharmacological treatment.

[Douglas 2003](#)

The Obstructive Sleep Apnoea/Hypopnoea Syndrome

[Berkovic 2002](#)

Sleep Neurology - A Wakeup Call for Neurologists

[Reading 2007](#)

Parasomnias: the spectrum of things that go bump in the night

[Lisk 2009](#)

Kleine–Levin syndrome

[Reading 2010](#)

The bare essentials: Sleep disorders in neurology

[Walker 2010](#)

The dark night

[Leschziner 2014](#)

Narcolepsy: a clinical review

[Derry 2014](#)

Sleeping in fits and starts: a practical guide to distinguishing nocturnal epilepsy from sleep disorders

[Cheng 2017](#)

Sleep apnoea and the neurologist

An understanding of the effects of sleep on the EEG.

Knowledge of driving regulations and the consequences and complications of sleep disorders.

## 2.5 Disorders of Higher Function & Behaviour

An understanding of memory, language, visuospatial function & behaviour; definition and epidemiology of dementia; pathology and clinical features of individual dementias; investigations, treatments, genetic aspects, risks and costs of investigations; role of neuropsychological evaluation

[Neary 2002](#)

Sorting out the Dementias

Ability to evaluate and manage people with disordered higher function & behaviour.

[Waldemar 2002](#)

Reversible Dementias – do they Exist?

[Neary 2003](#)

[de Leeuw 2003](#)

[Pujol 2003](#)

[Merrison 2003](#)

Sorting Out Subacute Encephalopathy

Vascular Dementia

Psychogenic Amnesia

Cognitive Decline, Behavioural Disturbance and Motor Dysfunction in a Young Adult

Cognitive Decline in a Young Adult with Pre-Existent Developmental Delay – What the Adult Neurologist Needs to Know

	<a href="#">Yapici 2004</a>	Not Just a Child With Simple Learning Disability: Beware the Opercular Syndrome
<a href="#">Knibb 2005</a>		Semantic Dementia: Losing the Meaning of Everything
	<a href="#">Gawler 2006</a>	A “glioma” that was cured
<a href="#">Schott 2006</a>		Limbic encephalitis: a clinician’s guide
<a href="#">Corey-Bloom 2006</a>		Managing patients with Alzheimer’s disease
<a href="#">McKeith 2007</a>		Dementia with Lewy bodies and Parkinson’s disease with dementia: where two worlds collide
<a href="#">Kester 2009</a>		Dementia: THE BARE ESSENTIALS
	<a href="#">Rodrigues 2010</a>	The groom who could not say “I do”
<a href="#">Carson 2010</a>		Managing acute behavioural disturbance in a neurology ward
<a href="#">Mitchell 2010</a>		Do CSF biomarkers help clinicians predict the progression of mild cognitive impairment to dementia?
<a href="#">Murray 2011</a>		Creutzfeldt–Jacob disease mimics, or how to sort out the subacute encephalopathy patient
<a href="#">Ahmad 2011</a>		Seronegative limbic encephalitis: case report, literature review and proposed treatment algorithm
	<a href="#">Dean 2012</a>	End of the bed (end of the video) diagnosis
<a href="#">Lee 2012</a>		Autoantibody testing in encephalopathies
<a href="#">Budson 2012</a>		New diagnostic criteria for Alzheimer's disease and mild cognitive impairment for the practical neurologist
<a href="#">Schott 2012</a>		Alzheimer's disease: mimics and chameleons
<a href="#">Irani 2013</a>		Organic neuropsychiatry: a treatable cause of suicidal behaviour
<a href="#">Mortimer 2013</a>		Neuroimaging in dementia: a practical guide
<a href="#">Wilkinson 2013</a>		Neuroimaging in transient global amnesia

	<a href="#">Larner 2014</a>	Neurological signs of possible diagnostic value in the cognitive disorders clinic
	<a href="#">Pennington 2015</a>	Functional cognitive disorder: what is it and what to do about it?
	<a href="#">Beh 2015</a>	Hiding in plain sight: a closer look at posterior cortical atrophy
	<a href="#">Slattery 2015</a>	Phenotypical variation in Alzheimer's disease: insights from posterior cortical atrophy
	<a href="#">Cope 2015</a>	The functional anatomy of central auditory processing
	<a href="#">Cassidy 2016</a>	The clinical assessment of apraxia
	<a href="#">Li 2015</a>	Spatial neglect
	<a href="#">Scott 2016</a>	Clinicopathological case: rapid cognitive decline in an older man
	<a href="#">Devenney 2017</a>	The Mini-Mental State Examination: pitfalls and limitations

Evaluation of competency (e.g. Mental Capacity Act, enduring power of attorney).

## 2.6 Epilepsy and Loss of Consciousness

Knowledge of the differential diagnosis of paroxysmal and transient events	<a href="#">Smith 2008</a>	THE BARE ESSENTIALS: Epilepsy
	<a href="#">Smith 2012</a>	Epilepsy: mimics, borderland and chameleons
	<a href="#">Powell 2012</a>	Acute symptomatic seizures
	<a href="#">Chowdhury 2015</a>	Focal inhibitory seizures: a cause of recurrent transient weakness
Scope and limitations of investigations	<a href="#">Rees 2005</a>	What to do With the Patient Who Has Had a Fit and the Scan Shows a 'Glioma'?
	<a href="#">Benbadis 2007</a>	Misdiagnosis of epilepsy due to errors in EEG interpretation
	<a href="#">Leach 2008</a>	Overuse of the EEG
	<a href="#">Marsh 2008</a>	The humble electrocardiogram
	<a href="#">Jones 2015</a>	Autonomic function testing: an important diagnostic test for patients with syncope
Use of anti-epileptic drugs	<a href="#">Leach 2001</a>	New Antiepileptic Drugs Revolution or Marketing Spin?

	<a href="#">Jackson 2005</a>	Choice of Antiepileptic Drug, Which One to Try First and What to Do if it Fails ...
	<a href="#">Schoeler 2016</a>	Ketogenic dietary therapies in adults with epilepsy: a practical guide
	<a href="#">Sisodiya 2017</a>	Temporary replacements for oral epilepsy treatments
	<a href="#">Bank 2017</a>	What to do when patients with epilepsy cannot take their usual oral medications
Treatment of refractory seizures; serial seizures and status epilepticus	<a href="#">Kelso 2005</a>	Status epilepticus
		<a href="#">Cosgrove 2013</a>
		Hemiatrophy and seizures: a case of adult-onset Rasmussen encephalitis
		<a href="#">Murray 2006</a>
		A young man with bilateral epilepsy intractable and partialis continua
	<a href="#">Jones 2014</a>	A protocol for the in-hospital emergency drug management of convulsive status epilepticus in adults
		<a href="#">Flower 2015</a>
		Status epilepticus caused by an unusual encephalopathy
Role of epilepsy surgery	<a href="#">Butler 2004</a>	Epilepsy Surgery
Awareness of issues related to women and pregnancy, driving, vocation and sudden death; psychological and social consequences of epilepsy especially teenagers.	<a href="#">Craig 2009</a>	Treating women with juvenile myoclonic epilepsy
	<a href="#">Thomas 2009</a>	“Can I drive, doctor?” LEAN thinking may help us answer the question
	<a href="#">Zeman 2009</a>	When a patient with epilepsy complains about poor memory
	<a href="#">Leach 2012</a>	SUDEP discussions with patients and families
	<a href="#">Leach 2015</a>	Death in pregnancy: a call for neurological action
	<a href="#">Mc lean 2017</a>	Sudden unexpected death in epilepsy: measures to reduce risk
Knowledge and management of other causes of loss of consciousness including syncope, drop attacks and vaso-vagal episodes.		<a href="#">Chadwick 2010</a>
		Life and death diagnosis

	<a href="#">Smith 2011</a>	Transient loss of consciousness ('blackouts') in adults and young people (NICE)
	<a href="#">Davis 2015</a>	<a href="#">Fox 2015</a>
		An unusual cause of seizures
		Curious turns in the night-time
		<a href="#">Jones 2016</a>
Knowledge, recognition and management of non-epileptic seizures.	<a href="#">Plug 2009</a>	Clinical challenges in the diagnosis and management of postural tachycardia syndrome
	<a href="#">Warren-Gash 2003</a>	Making the diagnosis in patients with blackouts: it's all in the history
Ability to evaluate and manage people with epilepsy.	<a href="#">McGonigal 2004</a>	Déjà vu
	<a href="#">Fuller 2005</a>	Frontal Lobe Epilepsy: Seizure Semiology and Presurgical Evaluation
	<a href="#">Butler 2006</a>	Silent Witnesses in the Diagnosis of Epilepsy
	<a href="#">Rogers 2008</a>	Transient epileptic amnesia
		"This house believes that only general practitioners with a specialist interest in epilepsy should be treating the condition"
	<a href="#">Leach 2009</a>	When the antiepileptic drugs are not working
	<a href="#">Miller 2010</a>	Reading epilepsy
	<a href="#">Nicolson 2010</a>	When the first antiepileptic drug fails in a patient with juvenile myoclonic epilepsy
	<a href="#">Catarino 2010</a>	A fitful night's sleep
	<a href="#">Brennan 2013</a>	Bilateral neck of femur fractures secondary to seizure
		<a href="#">Herskovitz 2013</a>
	<a href="#">Likeman 2013</a>	Periventricular heterotopias with incomplete agenesis of corpus callosum and prolonged focal seizures
	<a href="#">Malek 2015</a>	Imaging in epilepsy
	<a href="#">Dixit 2016</a>	The progressive myoclonic epilepsies
		When the face says it all: dysmorphology in identifying syndromic causes of epilepsy
	<a href="#">Galtrey 2016</a>	Stress and epilepsy: fact or fiction, and what can we do about it?
	<a href="#">Smith 2016</a>	Telephone review for people with epilepsy

Recognise that people can be denied employment opportunities unnecessarily through myths, stigma, dogma and insufficient advocacy and support; be aware of the role of doctors and other services in combating this inequality.

## 2.7 Cerebrovascular Disease

Knowledge of the cerebral circulation and its determinants; pathophysiology of cerebral infarction, cerebral haemorrhage, subarachnoid haemorrhage, cerebral venous thrombosis and vascular dementia.

Knowledge of the epidemiology, risk factors and their management;

[Prevett 2013](#)

[Fernandes 2013](#)

[Fearnley 2002](#)

[Arnold 2005](#)

[O'Sullivan 2008](#)

[Cordonnier 2010](#)

[O'Sullivan 2011](#)

[Datta 2015](#)

[Greaves 2002](#)

[Mas 2003](#)

[Razvi 2004](#)

[Braksick 2017](#)

[Bamford 2003](#)

[Hinze 2015](#)

[Salman 2007](#)

[Nieuwkamp 2010](#)

[Jung 2010](#)

[Stokes 2011](#)

Steak and Stupor: seizures and E. coli O157 infection

Epilepsy in sub-Saharan Africa

Strokes: mimics and chameleons

Superficial Siderosis of the Central Nervous System

Carotid and Vertebral Artery Dissection

Leukoaraiosis

Brain microbleeds

South Wales Joint Neuroscience Meeting, Bridgend, 29 April 2010: a 66-year-old man who suddenly couldn't drive

Severe MRI-visible perivascular spaces due to cerebral amyloid angiopathy

Thrombophilia

Bubbles, Bubbles Everywhere!

Patent Foramen Ovale and Stroke

Cerebral Autosomal Dominant Arteriopathy With Subcortical Infarcts and Leukoencephalopathy (CADASIL)

Longitudinally extensive spinal cord infarction in CADASIL

Stroke due to a cardiac myxoma

Multiple intracerebral haematomas during normal intensity anticoagulation

Cerebral air embolism caused by a bronchogenic cyst

Gesundheit! Sneezing, paraesthesiae and ataxia in a 35-year-old man



features of stroke /TIA, ICH and venous thrombosis;

[Ferro 2003](#)

[Cordonnier 2008](#)

[Hankey 2008](#)

[Emsley 2012](#)

[Coates 2015](#)

[Nadarajan 2014](#)

[Powell 2014](#)

[Samarasekera 2012](#)

[Norby 2016](#)

[Witherick 2016](#)

[Hankey 2001](#)

[Abdulkarim 2011](#)

[Booij 2012](#)

[Liolios 2013](#)

[Labiano-Fontcuberta 2013](#)

[Cruz 2014](#)

[Vale 2014](#)

Shot in the foot

Laying on the cause of stroke?

Extracorporeal membrane oxygenation-related brain haemorrhages

Rubeosis Iridis

Cerebral Venous and Dural Sinus Thrombosis

Stroke: THE BARE ESSENTIALS

When the patient fails to respond to treatment:

TIA's that go on, and on

Multiple retinal emboli in a case of acute stroke

When stopping the antiplatelet drugs stopped the 'TIA's'

Cerebral amyloid angiopathy: amyloid spells and cortical superficial siderosis

Stroke mimicking conversion disorder: two young women who put our feet back on the ground

Lessons from everyday practice: septic cavernous sinus thrombosis due to sphenoid sinusitis in a young patient following a road traffic accident

Paraplegia after epidural anaesthesia

Transient ischaemic attacks: mimics and chameleons

Unilateral lingual paralysis after isolated unilateral infarction in the primary motor cortex

A tonsillomedullary stroke causing supranuclear lingual paresis

A chamber of secrets The neurology of the thalamus: lessons from acute stroke

	<a href="#">Wilson 2014</a>	Spontaneous limb movements and posturing secondary to acute basilar artery occlusion: a potentially devastating seizure mimic
	<a href="#">Littleton 2015</a>	Recurrent amaurosis fugax and hemichorea: limb-shaking TIA
	<a href="#">López-Blanco 2015</a>	Sudden asymmetric bilateral ptosis as stroke onset
	<a href="#">McKenna 2016</a>	Intracranial bleeding from collaterals following carotid artery occlusion
	<a href="#">Yap 2016</a>	Auditory hallucination in basilar occlusion: I heard it was the basilar
	<a href="#">Kane 2016</a>	Ischaemic stroke in a 21-year-old with hereditary haemorrhagic telangiectasia
	<a href="#">Lim 2016</a>	Stroke-like migraine attack after cranial radiation therapy: the SMART syndrome
	<a href="#">Punter 2016</a>	Transient focal leukoencephalopathy with cerebral oedema as a presentation of cerebral amyloid angiopathy
	<a href="#">Rutter-Locher 2016</a>	Sneddon's syndrome: it is all in the ectoderm
	<a href="#">Jiad 2017</a>	When the heart rules the head: ischaemic stroke and intracerebral haemorrhage complicating infective endocarditis
	<a href="#">Neo 2017</a>	Collet-Sicard syndrome: a rare but important presentation of internal jugular vein thrombosis
investigation and management of acute stroke (including thrombolysis) and TIA as medical emergencies	<a href="#">Kay 2001</a>	Anticoagulation for Acute Ischaemic Stroke?
	<a href="#">Hand 2001</a>	CT for Acute Ischaemic Stroke
	<a href="#">Gubitz 2002</a>	The NINDS trial of Thrombolysis in Acute Ischaemic Stroke
	<a href="#">Sprigg 2005</a>	Management of Blood Pressure in Acute Stroke
	<a href="#">Norrving 2008</a>	Lacunar infarcts: no black holes in the brain are benign
	<a href="#">Cohen 2011</a>	Stroke thrombolysis in Mombasa—an outreach service

	<a href="#">Anderson 2015</a>	Venous thromboembolic event prevention in acute stroke: update on evidence and recommendations
	<a href="#">Hofmeijer 2015</a>	Antithrombotic treatment and intracerebral haemorrhage: between Scylla and Charybdis
The role of secondary prevention and surgical interventions	<a href="#">Sudlow 2002</a>	Antiplatelet Drugs in the Secondary Prevention of Stroke
	<a href="#">armitage 2003</a>	Cholesterol Lowering for the Prevention of Stroke
	<a href="#">Rothwell 2005</a>	With What to Treat Which Patient with Recently Symptomatic Carotid Stenosis
	<a href="#">Warlow 2005</a>	Carotid endarterectomy for asymptomatic carotid stenosis - firming up on the uncertainty
	<a href="#">Brown 2008</a>	Should carotid stenting replace carotid endarterectomy in routine clinical practice?
	<a href="#">Sudlow 2008</a>	Preventing further vascular events after a stroke or transient ischaemic attack: an update on medical management
	<a href="#">Rafiq 2014</a>	Cerebral hyperperfusion syndrome
	<a href="#">Werring 2015</a>	Emergency stenting for acute symptomatic carotid stenosis: dissecting the evidence
	<a href="#">Korya 2015</a>	Carotid artery dissection treated with stenting after anticoagulation failure
An understanding of the role and limitation of imaging (e.g. CTA, DWI); role of evaluation scales.	<a href="#">Renowden 2013</a>	Normal vascular imaging
	<a href="#">Renowden 2014</a>	Imaging in stroke and vascular disease—part 1: ischaemic stroke
	<a href="#">Renowden 2014</a>	Review: Imaging of the cerebello-pontine angle
	<a href="#">Kenmuir 2014</a>	Hyperdense middle cerebral artery sign
Cerebral aneurysm and AVM; interventional, surgical and radiotherapy treatment.	<a href="#">White 2004</a>	Cerebral Malaria
	<a href="#">Sellar 2005</a>	The Management of Ruptured Cerebral Aneurysms: Life After ISAT

	<a href="#">Al-Shahi 2005</a>	The Prognosis and Treatment of Arteriovenous Malformations of the Brain
	<a href="#">Wilson 2008</a>	Intracranial dural arterio-venous fistula
	<a href="#">Rinkel 2009</a>	Prevention and treatment of medical and neurological complications in patients with aneurysmal subarachnoid haemorrhage
	<a href="#">Lim 2014</a>	When a bruise is not just a bruise
	<a href="#">Maekawa 2014</a>	Takotsubo cardiomyopathy following subarachnoid haemorrhage
	<a href="#">Khan 2015</a>	Large basilar tip aneurysm causing anterior internuclear ophthalmoplegia
Multidisciplinary stroke care, organisation of stroke units, nutrition after stroke, rehabilitation techniques, community stroke care.	<a href="#">Benlidayi 2014</a>	Hemiplegic shoulder pain: a common clinical consequence of stroke
Ability to evaluate and manage people with stroke disease	<a href="#">Hughes 2013</a>	Chameleons, confusion, and the Clinical Historian
	<a href="#">Bousser 2003</a>	In a Worsening Situation, Treatment can do More Good than Harm
Ability to assess suitability and safely administer intravenous thrombolysis for patients with acute ischaemic stroke		
<b>2.8 Tumours of the NS, Neurological Complications of Systemic Cancer, Complications of Treatment of Cancer</b>		
Neuropathological classification of brain tumours	<a href="#">Bradley 2013</a>	Brain tumour mimics and chameleons
	<a href="#">Donaghy 2002</a>	Shrinking Cerebral Lymphomas with Steroids can Cause Diagnostic Confusion
	<a href="#">Abbasi 2014</a>	A mystery solved
	<a href="#">Hardy 2015</a>	A longitudinally extensive myelopathy in a patient with AIDS
	<a href="#">Bittar 2015</a>	Corticosteroid sensitivity in gliomatosis cerebri delays diagnosis
Clinical features of the common tumours of the nervous system including malignant meningitis.	<a href="#">Davenport 2001</a>	Missed Convexity Meningioma
	<a href="#">Heckmann 2006</a>	An "isodense" (on CT) meningioma
	<a href="#">Witherick 2016</a>	Shrinking meningioma
	<a href="#">Connor 2007</a>	Vanishing diplopia: a problem case
	<a href="#">Ahmed 2013</a>	Rapidly progressive dementia and ataxia in an elderly man

Clinical features and immunology of paraneoplastic syndromes

<a href="#">Rees 2010</a>	<a href="#">Schulz 2009</a>	A difficult case solved at autopsy: memory loss, behavioural change and seizures
	<a href="#">Miller 2011</a>	The bare essentials: Neuro-oncology
	<a href="#">Iqbal 2012</a>	Recurrent subarachnoid haemorrhage
<a href="#">Kerrigan 2012</a>		Multiple cranial neuropathies: one diagnostic difficulty
	<a href="#">Osborne 2014</a>	Low-grade brain tumours and seizures
	<a href="#">Kaski 2014</a>	Rapid-onset flaccid paraplegia caused by multiple myeloma dumbbell tumour
		Epley and beyond: an update on treating positional vertigo
	<a href="#">Louapre 2015</a>	Primary diffuse leptomeningeal gliomatosis diagnosed on CSF cytology: perseverance pays off
<a href="#">Grant 2002</a>		What the General Neurologist needs to know about the Paraneoplastic Syndromes
	<a href="#">Schulz 2007</a>	Anti-Hu syndrome: a rare presentation and a very difficult decision
	<a href="#">Hirst 2007</a>	Clear cell carcinoma of the kidney in a young man with neurological complications
<a href="#">Gozzard 2010</a>		Which antibody and which cancer in which paraneoplastic syndromes?
<a href="#">Sahu 2011</a>		The opsoclonus–myoclonus syndrome
<a href="#">Nitkunan 2013</a>		Midbrain encephalitis associated with neoplasia
	<a href="#">Archer 2014</a>	Mesothelioma and anti-Ma paraneoplastic syndrome; heterogeneity in immunogenic tumours increases
	<a href="#">Garcia-Reitboeck 2014</a>	Upbeat nystagmus in anti-Ma2 encephalitis
	<a href="#">Waddell 2014</a>	Progressive cognitive decline and neuropathy in a sailor
	<a href="#">Cope 2016</a>	Anti-collapsin response mediator protein 5 encephalitis masquerading as a low-grade brain tumour
	<a href="#">Cruz 2016</a>	Alternating faciobrachial dystonic seizures in LGI1-antibody limbic encephalitis

Benefits and risks of therapies including surgery and radiotherapy

[Wickremaratchi 2004](#)

Three Strokes and a Heart Attack in a Fit and Relatively Young Woman

Neurological complications of chemotherapy and radiotherapy.

Understanding the role of the neuro-oncology MDT.

Ability to evaluate and manage people with primary tumours of the NS or effects of systemic tumours or their treatment.

[Milburn-McNulty 2012](#)

How to do it: How to get the most out of cerebrospinal fluid cytology

[Parker 2014](#)

A misleading case of CSF cytology: a cautionary tale

## 2.9 Infections of Nervous System

Principles of neurological infectious disease; clinical features of these diseases and their causes (including meningitis, encephalitis, TB, HIV, neurosyphilis).

[Warrell 2001](#)

Rabies Encephalitis and its Prophylaxis

[Thwaites 2002](#)

[Shah 2004](#)

... At Least in Scotland  
The Diagnosis and Management of Tuberculous Meningitis

[Thwaites 2002](#)

[Hayat 2015](#)

Multifocal tuberculous osteomyelitis  
Tetanus

[Bill 2003](#)

[Doshi 2014](#)

Just a graze? Cephalic tetanus presenting as a stroke mimic

[Howard 2003](#)

[Connor 2007](#)

Schistosomiasis and the Nervous System  
Late Post-Polio Functional Deterioration

[Carr 2003](#)

[Proudfoot 2013](#)

Immune or not immune: two cases of acute flaccid motor paralysis

[Day 2004](#)

[Mignarri 2014](#)

Neurosyphilis  
Old adversaries, modern mistakes: neurosyphilis

[Gunatilake 2004](#)

[Wijdicks 2004](#)

Temporal lobe abnormalities in neurosyphilis

[Czyz 2013](#)

Cryptococcal Meningitis  
Excruciating Headache but Nothing Obvious, Look at the Skin!

[Huda 2013](#)

Isolated, complete paralytic mydriasis secondary to herpes zoster ophthalmicus

Leprosy

An unusual cause of mononeuritis multiplex

[White 2004](#)

How to Manage the Patient With a Family History of Aneurysmal Subarachnoid Haemorrhage

[Wokke 2004](#)

Neuroborreliosis

[Williams 2008](#)

An exotic cause for confusion in the garden

[Murphy 2012](#)

A case of acute neurogenic weakness mimicking the axonal variant of the Guillain-Barré syndrome

[Li 2015](#)

Lyme disease presenting as multiple ischaemic strokes

[Sieradzan 2005](#)

Wound Botulism

[Joseph 2005](#)

The Bath Advanced Neurology Course 2003: Progressive Neurological Decline in Pregnancy

[Kennedy 2005](#)

Sleeping sickness – human African trypanosomiasis

[Kennedy 2010](#)

Neurological influences from Africa

[Torok 2005](#)

Human immunodeficiency virus associated central nervous system infections

[Webb 2012](#)

Hypereosinophilia and acute bilateral facial palsy: an unusual presentation of a common disease

[Nightingale 2013](#)

Test them all; an easily diagnosed and readily treatable cause of dementia with life-threatening consequences if missed

[Cooper 2009](#)

Assess and interpret the visual fields at the bedside

[Singhal 2006](#)

Non-compressive myelopathy with one error of omission and two of commission

[Vilensky 2006](#)

Encephalitis lethargica: could this disease be recognised if the epidemic recurred?

[Garcia 2006](#)

Neurocysticercosis: some of the essentials

[Dhesi 2015](#)

[Knight 2009](#)

Traveller's headache

[Solomon 2007](#)

Imaging in neurocysticercosis

Viral encephalitis: a clinician's guide

[Moragas-Garrido 2013](#)

Seizure, dysphasia, blindness and amnesia; what's the connection?

[Davies 2012](#)

[Schmutzhard 2007](#)

Encephalitis: help from guidelines  
Eosinophilic myelitis, a souvenir from South East Asia  
Chronic and recurrent meningitis  
IgG4-related disease: a rare but treatable cause of refractory intracranial hypertension

[Ginsberg 2008](#)

[Williams 2016](#)

[Rice 2016](#)

[Panegyres 2008](#)

[Prasad 2008](#)

Intracranial spread of IgG4-related disease via skull base foramina  
Diagnosis and management of Whipple's disease of the brain  
Fatal subacute necrotising brainstem encephalitis in a young man due to a rare parasitic (Balamuthia) infection  
Community-acquired bacterial meningitis in adults

[Schut 2008](#)

[Narayan 2009](#)

[Hayton 2012](#)

[McCarthy 2012](#)

Isolated cerebral aspergilloma in a young immunocompetent patient  
Successful outcome of Epstein–Barr virus encephalitis managed with bilateral craniectomy, corticosteroids and aciclovir  
Acute cerebellar ataxia due to Epstein–Barr virus

[Abbs 2012](#)

[Karunaratne 2016](#)

[Weeratunga 2014](#)

Listeria rhomboencephalitis  
The right diagnosis but the wrong pathway?  
Listeria meningitis mimicking stroke  
Spontaneously resolving cerebellar syndrome as a sequelae of dengue viral infection: a case series from Sri Lanka

[Merwick 2015](#)

Intradural extramedullary spinal candida infection

[Osborne 2016](#)

[Llewelyn 2016](#)

Toscana virus encephalitis following a holiday in Sicily

[Milburn 2016](#)

Meningitis: from Kernig and Brudzinski to the 21st century  
Progressive weakness and intermittent low-grade fever in a Libyan man



Diagnostic techniques and their appropriate use; anti-microbial therapies and their use; the importance of liaison with infectious disease physicians, microbiologists, public health and occupational health medicine in relation to neurological infections.

Knowledge of prion disorders and its wider implications, such as infection control risk.

Based on an understanding of risk, be able to apply epidemiological principles and public health approaches so as to reduce and prevent disease and improve the health of populations.

## 2.10 CSF Disorders

CSF composition and dynamics; anatomy and radiology of the ventricular system;

genesis of hydrocephalus;

biochemistry and immunology of CSF; blood brain barrier;

indications, techniques, and contraindications of CSF examination.

[Nihat 2016](#)  
[Zarkali 2017](#)

[Lowman 2001](#)

[Will 2010](#)  
[Collie 2002](#)  
[Pal 2011](#)

[Hornabrook 2006](#)

[Beernink 2016](#)

[Malm 2006](#)  
[Conn 2007](#)

[Benz 2009](#)

[van Gijn 2005](#)

[Thawani 2014](#)  
[Fink 2015](#)

Rheumatoid meningitis  
CD8+ encephalitis: a severe but treatable HIV-related acute encephalopathy

Variant Creutzfeldt-Jakob Disease

Variant CJD: where has it gone, or has it?  
Creutzfeldt-Jakob Disease  
31st Advanced Clinical Neurology Course, Edinburgh 2009: progressive cognitive impairment, behavioural change and upper motor neuron signs in a 57-year-old woman  
Early descriptions of kuru: instinct, insects and intellect  
Capnocytophaga canimorsus meningitis diagnosed by 16S rRNA PCR

Idiopathic normal pressure hydrocephalus  
Normal pressure hydrocephalus: new complications and concepts  
Colloid cyst of the third ventricle  
Colloid cyst  
When a clear crystal makes a case crystal clear

Investigate the CSF in a patient with sudden headache and a normal CT brain scan

Methods of intracranial pressure monitoring; treatments of raised intracranial pressure, management of shunts.  
Able to evaluate and manage people with disorders of CSF including diagnostic and therapeutic lumbar punctures.

[Jellinek 2002](#)

[Lueck 2002](#)

[Mollan 2014](#)

[Rice 2013](#)

[Davis 2016](#)

[Tyagi 2016](#)

[Williams 2017](#)

[Suetterlin 2014](#)

[Newman 2011](#)

[Mattsson 2013](#)

[Webb 2015](#)

[Lagrand 2015](#)

[Stephen 2016](#)

Myodil arachnoiditis: Iatrogenic and forensic illness  
Idiopathic Intracranial Hypertension  
When is 'idiopathic intracranial hypertension' no longer idiopathic?  
A practical approach to, diagnosis, assessment and management of idiopathic intracranial hypertension  
Thinking outside of the box  
Coagulation of cerebrospinal fluid—the Nonne–Froin sign  
Spontaneous intracranial hypotension and venous sinus thrombosis  
Superficial siderosis following spontaneous intracranial hypotension  
Sagging brain causing postural loss of consciousness: a case of severe spontaneous intracranial hypotension  
Complicated spontaneous intracranial hypotension treated with intrathecal saline infusion  
Atraumatic needles for lumbar puncture: why haven't neurologists changed?  
Management of spontaneous intracranial hypotension  
How to do it: bedside ultrasound to assist lumbar puncture

## 2.11 Demyelination & Vasculitis

Biology of demyelination & vasculitis; clinical features of multiple sclerosis,

[Rucker 2004](#)

[Hutchinson 2009](#)

[Coles 2009](#)

[Lin 2012](#)

Visual and Eye Movement Problems in Multiple Sclerosis  
Predicting and preventing the future: actively managing multiple sclerosis  
Multiple sclerosis: THE BARE ESSENTIALS  
The genetics of multiple sclerosis

related demyelinating disorders

	<a href="#">Jenkins 2014</a>	Multiple sclerosis presenting as a relapsing amnesic syndrome
	<a href="#">Al-Shahi 2002</a>	A Young Man with a Fatal Encephalopathy
	<a href="#">Williams 2003</a>	Confusion and Ataxia in a Middle Age Woman: A Case with Four Diagnoses Discussed at the Edinburgh Advanced Clinical Neurology Course in 2001
	<a href="#">Fialho 2002</a>	A Blinding Headache Falling on Deaf Ears (Susac's Syndrome)
	<a href="#">Ramadan 2012</a>	Susac's syndrome
	<a href="#">Dayal 2015</a>	Looking out for the blind spot
<a href="#">Akman-Demir 2002</a>		Neuro-Behçet's Disease: a Practical Approach to Diagnosis and Treatment
<a href="#">Baker 2011</a>		Pathergy test
	<a href="#">Jenkins 2005</a>	A Dysphasic Diabetic with Confusion and Fever
	<a href="#">Joseph 2007</a>	Sarcoidosis of the nervous system
	<a href="#">Sabah 2011</a>	Cavernous sinus syndrome with pachymeningitis
	<a href="#">Shenoy 2015</a>	Corticosteroid-resistant bulbar neurosarcoidosis responsive to intravenous immunoglobulin
<a href="#">Jacob 2006</a>		Neuromyelitis optica
	<a href="#">Chhetri 2012</a>	The unfolding tale of an unusual brain stem syndrome
<a href="#">Hewett 2008</a>		A devilishly interesting case
	<a href="#">Brownlee 2014</a>	An elderly woman with leg weakness
<a href="#">Matthews 2009</a>		The borderland of neuromyelitis optica
	<a href="#">Zhao 2015</a>	An unusual case of 'itchy paralysis': neuromyelitis optica presenting with severe neuropathic itch
<a href="#">Palace 2012</a>		A practical guide to the treatment of neuromyelitis optica
	<a href="#">Hamid 2015</a>	Tonic spasms and short myelitis in an elderly woman—unique onset of neuromyelitis optica

vasculitic and arteritic disorders.

[Biotti 2011](#)

[Wong 2013](#)

[Bargiela 2014](#)

[Broadfoot 2015](#)

[Milic 2017](#)

[Joshi 2017](#)

[Joseph 2002](#)

[Bhattacharyya 2016](#)

[Coles 2004](#)

[Joseph 2010](#)

[Irani 2006](#)

[Bock 2005](#)

[Thomas 2006](#)

[Brownlee 2013](#)

[Mitchell 2014](#)

[Saadi 2016](#)

[Hilton-Jones 2007](#)

[Ducros 2009](#)

[Shah 2011](#)

[Miteff 2006](#)

CLIPPERS: Chronic Lymphocytic Inflammation with Pontine Perivascular Enhancement Responsive to Steroids

'Blindness cured!': long-standing visual loss responding to corticosteroids

An under-recognised cause of spastic paraparesis in middle-aged women

Paraneoplastic tumefactive demyelination with underlying combined germ cell cancer

Acute demyelination following radiotherapy for glioma: a cautionary tale

Neuromyelitis optica presenting as acute bilateral ptosis

Cerebral Vasculitis: A Practical Approach

Primary angiitis of the central nervous system: avoiding misdiagnosis and missed diagnosis of a rare disease

Looks Like Multiple Sclerosis, but the Ana is Positive: Does My Patient Have Lupus? Neurolupus

Relapsing "encephalo" polychondritis

Vertebral artery halo sign in giant cell arteritis

Visual loss when treating giant cell arteritis

A pain in the neck

Giant cell arteritis presenting with bilateral orbital inflammatory disease and enhancing superficial temporal arteries

Tongue infarction due to giant cell arteritis

A young man with rapidly progressive multifocal disease affecting the white matter

An evolving case of headaches and strokes

Reversible cerebral vasoconstriction syndrome

Idiopathic reversible segmental cerebral vasoconstriction

Management of specific impairments and disabilities arising in MS; role of disease modifying drugs, symptomatic treatments and therapies.

[Berkowitz 2014](#)

[Connick 2011](#)

[Fox 2002](#)

[Warlow 2003](#)

[Duddy 2016](#)

[Coles 2005](#)

[Gold 2006](#)

[Rice 2014](#)

[Scolding 2015](#)

[Dobson 2013](#)

[Wiles 2015](#)

[Maxwell 2012](#)

[Iqbal 2013](#)

[Paling 2010](#)

[Sloan 2009](#)

Reversible cerebral vasoconstriction syndrome: a rare cause of postpartum headache

Neuro-Sweet's disease  
Wegener's granulomatosis presenting with multiple cranial nerve palsies and pachymeningitis

The neurology of Sjögren's syndrome and the rheumatology of peripheral neuropathy and myelitis

A treatable cause for a painful movement disorder  
Stem cells as a resource for regenerative neurology

Cannabis for Multiple Sclerosis  
Not Such a Bright Idea: The UK Risk-Sharing Scheme for Beta Interferon and Glatiramer Acetate in Multiple Sclerosis  
The UK Risk-Sharing Scheme for interferon-beta and glatiramer acetate in multiple sclerosis. Outcome of the year-6 analysis  
Can the course of multiple sclerosis be modified?

Multiple sclerosis therapy: new agents carry new risks

Disease modification in multiple sclerosis: an update

Association of British Neurologists: revised (2015) guidelines for prescribing disease-modifying treatments in multiple sclerosis

Greater trochanteric pain syndrome, another cause of hip or thigh pain in multiple sclerosis

Bone health in chronic neurological diseases: a focus on multiple sclerosis and parkinsonian syndromes

Use of disability rating scales.

Ability to evaluate & manage people with demyelinating & vasculitic disorders.

[Fragoso 2014](#)

Recommendations on diagnosis and treatment of depression in patients with multiple sclerosis

[Giovannoni 2016](#)

Switching patients at high risk of PML from natalizumab to another disease-modifying therapy

[Fuller 2001](#)

WHAT SHOULD I TELL A PATIENT AFTER AN ISOLATED EPISODE OF DEMYELINATION?

[Chataway 2010](#)

When confronted by a patient with the radiologically isolated syndrome

[Ciccarelli 2002](#)

Magnetic Resonance Imaging in Multiple Sclerosis

[Mumford 2002](#)

Can Trauma Provoke Multiple Sclerosis?

[Renowden 2014](#)

Review: Imaging in multiple sclerosis and related disorders

[Tallantyre 2016](#)

How to run a multiple sclerosis relapse clinic

Matthews 2016

A practical review of the neuropathology and neuroimaging of multiple sclerosis

## 2.12 The Neurological Complications of Immunosuppression

Principles of immune responses in relation to the NS; immunological basis underlying auto-immune neurological disease; clinical features of these diseases; diagnostic techniques and their appropriate use.

[Kelly 2014](#)

PCP prophylaxis with use of corticosteroids by neurologists

Immunosuppressive and immunomodulatory therapies; their actions, side effects and indications.

[Compston 2004](#)

Management of Glucocorticoid-Induced Osteoporosis – for Neurologists

Ability to evaluate and manage people with immunological disorders caused by disease or treatment.

[Martino 2007](#)

Are antibasal ganglia antibodies important, and clinically useful?

[Hadavi 2011](#)

Stiff person syndrome

[Lockman 2007](#)

Stiff-person syndrome

[Selvarajah 2012](#)

Histiocytosis for the neurologist: a case of Erdheim–Chester disease

[Stern 2014](#)

Glycine receptor antibody mediated Progressive Encephalomyelitis with Rigidity and Myoclonus (PERM): a rare but treatable neurological syndrome

[Jabbari 2015](#)

Longitudinally extensive transverse myelitis: a rare association with common variable immunodeficiency

### 2.13 Parkinsonism & Movement Disorders

Clinical features and differential diagnosis of parkinsonism, chorea/athetosis, dystonia, tics and tremor;

[Ali 2015](#)

Parkinson's disease: chameleons and mimics

[Hyman 2004](#)

Botulinum Toxin for Focal Dystonia

[Lin 2006](#)

Focal hand dystonia

[Zeman 2004](#)

Neuroacanthocytosis

[Sokolov 2012](#)

Chorea-acanthocytosis

[Lindahl 2005](#)

Startles, jumps, falls and fits

[Taylor 2006](#)

Is it Parkinson's disease, and if not, what is it?

[Hawkes 2006](#)

Predicting Parkinson's disease: worthwhile but are we there yet?

[Nahab 2007](#)

Essential tremor, deceptively simple ...

[Warren 2007](#)

Progressive supranuclear palsy

[Wild 2007](#)

The differential diagnosis of chorea

[Jellinek 2008](#)

Not Parkinson's disease: neurologists' mistakes with a diversion into adult hydrocephalus

[van Rootselaar 2009](#)

The paroxysmal dyskinesias

[Malek 2015](#)

Diagnosing dopamine-responsive dystonias

[Gallagher 2010](#)

Two in the hand, an essential lesson in tremor management

[Fuller 2010](#)

The Bare Essentials: Hyperkinetic movement disorders: shakes, jumps and jolts

[Lees 2010](#)

The bare essentials: Parkinson's disease

[Rickards 2010](#)

Tourette's syndrome and other tic disorders

[Saifee 2011](#)

Tardive movement disorders: a practical approach

[Jones 2011](#)

Orthostatic tremor

[Keogh 2011](#)

An unusual gait following the discovery of a new disease

[Aerts 2012](#)

Improving the diagnostic accuracy in parkinsonism: a three-pronged approach

role of investigations in diagnosis (including DAT scans).

Role of neurosurgical interventions.

Ability to evaluate and manage people with Parkinsonism and Movement Disorders; Treatment (and complications of treatment) of movement disorders

[Lozsadi 2012](#)

[Roper 2013](#)

[Patel 2015](#)

[Healy 2008](#)

[Levi 2015](#)

[Thevathasan 2010](#)

[Hanagasi 2002](#)

[Todorova 2014](#)

[Lees 2002](#)

[Lennox 2002](#)

[Chaudhuri 2003](#)

[Davie 2005](#)

[Kesler 2006](#)

[Playfer 2007](#)

[O'Sullivan 2007](#)

[Brady 2015](#)

[Poewe 2008](#)

[Vlaar 2011](#)

[Morrish 2012](#)

[Worth 2015](#)

[Burn 2013](#)

Myoclonus: a pragmatic approach

How to use the entrainment test in the diagnosis of functional tremor

Hemichorea–hemiballism: a case report

Test for LRRK2 mutations in patients with Parkinson's disease

Bilateral Parkinsonism: when to image?

Deep brain stimulation for movement disorders

Management of the Neuropsychiatric and Cognitive Symptoms in Parkinson's Disease

Non-motor Parkinson's: integral to motor Parkinson's, yet often neglected

Apomorphine for Parkinson's Disease

Fluctuations in Parkinson's Disease

The restless legs syndrome: Time to recognize a very common movement disorder

First-line Treatment in Parkinson's Disease

Visual disturbances in Parkinson's disease

Ageing and Parkinson's disease

Punding in Parkinson's disease

Impulse control disorder manifesting as hidden sexual self-injury

When a Parkinson's disease patient starts to hallucinate

The treatment of early Parkinson's disease: levodopa rehabilitated

Prescribing in Parkinson's disease: a story of hope and adverse events

Results of the early stage PD MED study: revelation or recapitulation?

Mild cognitive impairment in Parkinson's disease: millstone or milestone?



[Worth 2013](#)

When the going gets tough: how to select patients with Parkinson's disease for advanced therapies

[Dobson 2013](#)

Bone health in chronic neurological diseases: a focus on multiple sclerosis and parkinsonian syndromes

[Okuma 2014](#)

Practical approach to freezing of gait in Parkinson's disease

[Gregory 2015](#)

Parkinson's disease and the skin

[Wu 2015](#)

Management of orthostatic hypotension in patients with Parkinson's disease

[Alty 2016](#)

What to do when people with Parkinson's disease cannot take their usual oral medications

[Marion 2016](#)

British Neurotoxin Network recommendations for managing cervical dystonia in patients with a poor response to botulinum toxin

Ability to liaise with other members of MDT (e.g. PD specialist nurse).

[Post 2011](#)

Multidisciplinary care for Parkinson's disease: not if, but how!

## 2.14 Motor Neuron Disease

Clinical features and differential diagnosis of motor neuron syndromes; disease modifying and symptomatic treatments (e.g. NIV).

[Talbot 2009](#)

Motor neuron disease: THE BARE ESSENTIALS

[Turner 2013](#)

Mimics and chameleons in motor neurone disease

[Turner 2003](#)

Riluzole and Motor Neurone Disease

[Talbot 2004](#)

Monmelic Amyotrophy Hirayama's Disease

[Baek 2007](#)

ALS: pitfalls in the diagnosis

[Rafiq 2012](#)

Respiratory management of motor neurone disease: a review of current practice and new developments

[Turner 2012](#)

Motor neurone disease is a clinical diagnosis

[Fernandes 2015](#)

Progressive hemiparesis in a 75-year-old man

[Stavroulakis 2016](#)

Enteral feeding in neurological disorders

Special issues of breaking bad news and prognosis; palliative care aspects; knowledge of advanced directives and living wills.

[Oliver 2002](#)

Palliative Care for Motor Neurone Disease

## 2.15 Toxic & Metabolic States

Biochemistry and neuropathology of exposure to alcohol and other recreational drugs, heavy metals, pesticides and therapeutic agents; clinical features of alcohol, cocaine, opiate, amphetamine neurotoxicity; of heavy metal, CO, NO and organophosphate poisoning; of chemotherapeutic agents; Psychiatric morbidity associated with substance abuse.

[Norrving 2003](#)

An Enigmatic Encephalopathy

[Achaibar 2007](#)

[Bhatia 2008](#)

Ciguatera poisoning

Putaminal necrosis due to methanol toxicity

[Singh 2013](#)

Methanol toxicity presenting as haemorrhagic putaminal necrosis and optic atrophy

[Roth 2011](#)

The posterior reversible encephalopathy syndrome: what's certain, what's new?

[Welch 2011](#)

[Rinaldi 2011](#)

A dizzy and disorientated DJ

[Derry 2012](#)

Neurological complications of alcohol and misuse of drugs

Encephalopathy in a 45-year-old woman: presented at the Advanced Clinical Neurology Course, Edinburgh 2010

[Blackburn 2013](#)

[Chancellor 2013](#)

Trigeminal neuralgia: no laughing matter

A bitter-sweet tale from the land of milk and honey

[Cosgrove 2013](#)

Migration of intraocular silicone oil into the brain

[Iniesta 2013](#)

Methyl iodide rhombencephalopathy: clinico-radiological features of a preventable, potentially fatal industrial accident

[Bhat 2014](#)

Corpus callosum fibre disruption in Marchiafava–Bignami disease

[Gooneratne 2014](#)

Toxic encephalopathy due to colchicine—Gloriosa superba poisoning

Neurological presentations of renal & hepatic failure, nutritional deficiencies and porphyria.

	<a href="#">Kinzel 2015</a>	Toxic cerebellar syndrome due to methotrexate
	<a href="#">Ward 2015</a>	Acute cerebellar syndrome associated with metronidazole
	<a href="#">Thompson 2015</a>	Whippits, nitrous oxide and the dangers of legal highs
	<a href="#">Benzimra 2015</a>	Sight-threatening pseudotumour cerebri associated with excess vitamin A supplementation
<a href="#">Nehlig 2016</a>		Effects of coffee/caffeine on brain health and disease: What should I tell my patients?
<a href="#">Samuels 2003</a>	<a href="#">Bourke 2016</a>	A taxing case The Neurology of Anaemia
<a href="#">Peters 2006</a>		Porphyria for the neurologist: the bare essentials
	<a href="#">Swash 2007</a> <a href="#">Turner 2009</a> <a href="#">Pal 2009</a>	And Lord Brain said ... Functional vitamin B12 deficiency Progressive unsteadiness in a 68-year-old man with longstanding abdominal pain and altered bowel habit
	<a href="#">Murphy 2009</a>	Dry beriberi mimicking the Guillain–Barré syndrome
<a href="#">Miller 2010</a>		Essential thrombocythaemia and its neurological complications
	<a href="#">Mullin 2012</a>	Cerebral vasospasm and anterior circulation stroke secondary to an exacerbation of hereditary corproporphyria
	<a href="#">Balestrini 2016</a>	Safe use of perampanel in a carrier of variegate porphyria
	<a href="#">Dobson 2016</a>	The difficulties with vitamin B12
<a href="#">Lachmann 2016</a>		Homocysteine and methylmalonate: when should I measure them and what do they mean?

Role and value of blood and urine toxicology, imaging and neurophysiology; assessment of other organ damage

[Mistry 2009](#)

[Bashford 2017](#)

Remarkable motor recovery after riboflavin therapy in adult-onset Brown—Vialeto—Van Laere syndrome

Clinical features and management of hyper/hypo-thermia, sodium, potassium, calcium and acid base disorders.

[Clarke 2006](#)

[Carvalho 2009](#)

When to consider thyroid dysfunction in the neurology clinic

An error of self-diagnosis—but what was the real diagnosis?

Neurology at high altitude

Ability to evaluate and manage people with metabolic/toxic states.

[Evans 2011](#)

[Biotti 2009](#)

A trident in the brain, central pontine myelinolysis

[Donnelly 2016](#)

Central pontine myelinolysis secondary to hyperglycaemia

Neurogastroenterology: an A to Z

[Parkinson 2014](#)

When the penny drops

[Litwin 2015](#)

Sunflower cataract: do not forget Wilson's disease

[Blair 2015](#)

Urea cycle disorders: a life-threatening yet treatable cause of metabolic encephalopathy in adults

[Tohge 2016](#)

A case of cystinuria presenting with cerebellar ataxia and dementia

## 2.16 Disorders of the Visual System

Applied anatomy and physiology of the visual and oculomotor systems; clinical evaluation of the eye and adnexae, vision (acuity, fields and higher function); clinical features and conditions which may affect these systems.

[Molyneux 2010](#)

Migraine, an open and shut case?

[Williams 2005](#)

The Tilted Disc Syndrome

[Parry-Jones 2008](#)

Leber's hereditary optic neuropathy associated with multiple sclerosis: Harding's syndrome

[Cooper 2009](#)

The neurology of HTLV-1 infection

[Arbabi 2010](#)

Drusen and the misleading optic disc

[Lueck 2010](#)

Loss of vision

[Dobson 2011](#)

Melanoma associated retinopathy and how to understand the electroretinogram

Driving regulations.  
 Ability to evaluate and manage people with disorders of the visual system including visual failure, oculomotor disorders & pituitary disease.

[Hickman 2011](#)

[McGowan 2011](#)

The bare essentials: Neuro-ophthalmology  
 The Pulfrich phenomenon; clumsiness and collisions which can be ameliorated  
 The pharmacological treatment of acquired nystagmus

[Mehta 2012](#)

[Cooper 2012](#)

Higher visual function: hats, wives and disconnections

[Cooper 2016](#)

Here, there and everywhere: higher visual function and the dorsal visual stream

[Milazzo 2013](#)

Diffuse multiple sclerosis and chronic central serous chorioretinopathy: pitfall not to ignore

[Ali 2015](#)

Parkinson's disease: chameleons and mimics

[Attawan 2015](#)

The natural history of idiopathic neuroretinitis

[Prasad 2015](#)

Ectopia lentis in Marfan's syndrome causing positional visual symptoms

[Osman 2016](#)

'The worm that got away': parainfectious atypical optic neuritis associated with schistosomiasis infection

[Weerasinghe 2016](#)

Mimics and chameleons of optic neuritis

[McIlwaine 2003](#)

Transient or Intermittent Visual Loss

[Benninger 2014](#)

Surprising cause of transient monocular vision loss

[McDonald 2005](#)

Visual Loss in a Young Man

[Xue 2013](#)

Retinal imaging: what the neurologist needs to know

[Bennetto 2014](#)

Eye drop neurology

[Wong 2015](#)

Moisture and mydriasis

[Mackay 2016](#)

How to interpret visual fields

Non-mydratic fundus photography: a practical review for the neurologist

Anatomy of the skull base, particularly the orbit, cavernous sinus, pituitary fossa, foramen magnum and jugular foramen; pathological processes involving cranial nerves and their central connections; clinical features & clinical assessment of cranial nerve function.

[Stone 2002](#)

Pseudo-Ptosis

[Hawkes 2005](#)

[Lance 2005](#)

[Stone 2006](#)

[Pearce 2007](#)

[Neagu 2016](#)

[Steele 2007](#)

[Sheerin 2008](#)

[Stevens 2010](#)

Why Bother Testing the Sense of Smell?

Harlequin Syndrome

Parry-Romberg syndrome

Some syndromes of James Ramsay Hunt

Ramsay Hunt syndrome

Not a microvascular sixth nerve palsy

Atrophy of the superior oblique muscle

The imploding antrum syndrome: an unusual cause of double vision

Accessory nerve palsies

Ptosis

Trigeminal trophic syndrome

Aberrant regeneration of the third nerve (oculomotor synkinesis)

Delayed toxic–hypoxic encephalopathy

Asystole and facial pain

Rules of tongue: look, listen, feel

Neurological red flag: the numb chin

Recognising facial onset sensory motor neuronopathy syndrome: insight from six new cases

[Ahmad 2011](#)

[Wills 2010](#)

[Collyer 2012](#)

[Gold 2012](#)

[Blackburn 2013](#)

[Huda 2013](#)

[Hughes 2014](#)

[Kheder 2014](#)

[Broad 2015](#)

[Fuller 2016](#)

Bell's palsy syndrome: mimics and chameleons

The Guillain–Mollaret triangle in action

Management of cranial nerve disorders including multidisciplinary approaches to visual, hearing & balance, speech & swallowing disorders.

[Murdoch 2016](#)

## 2.18 Disorders of Spine, Spinal Cord, Roots and Spinal Injury

Anatomy of the spine, spinal cord, roots; clinical features of spinal cord, root and cauda equina syndromes; indications for urgent investigation; potential and limitations of spinal CT, MRI, myelography and spinal angiography.

[Lamin 2003](#)

Vascular Anatomy of the Spinal Cord and Cord Ischaemia

Emergency management of spinal cord or root compression, of spinal injury; management of neck and low back pain and sciatica.

[Renowden 2012](#)  
[Ropper 2015](#)

Ability to evaluate and manage people with disorders of the spine, spinal cord and roots, and the acute & chronic consequences of acute spinal cord injury including effects of paralysis, autonomic dysfunction and sensory loss.

[Knight 2001](#)

[Bennett 2016](#)

[Ginsberg 2011](#)

[Wong 2008](#)

[Ginsberg 2017](#)

[Myles 2003](#)  
[van Gijn 2006](#)

[Stacpoole 2007](#)

[Bush 2014](#)

[Buch 2015](#)

[Colchester 2015](#)

[Lo 2014](#)

[Carroll 2015](#)

[Cosgrove 2015](#)

[Williamson 2017](#)

Normal anatomy of the spinal cord  
Acute management of traumatic cervical spinal cord injury

Notalgia Paraesthetica

Don't Worry – it's only a Birthmark  
An elderly man with slowly ascending numbness of the legs, followed by incontinence and paraplegia

Neoplastic cauda equina syndrome: a neuroimaging-based review

Spinal claudication due to myxopapillary ependymoma

The bare essentials: Disorders of the spinal cord and roots

Papilloedema secondary to a spinal paraganglioma

Spinal cord tumour misdiagnosed as seropositive neuromyelitis optica spectrum disorder

Cauda equina syndrome due to intravascular lymphoma: diagnosis by nasal biopsy

Myelopathy but normal MRI: where next?

Horse's tail in bamboo spine: the 'cauda equina syndrome in ankylosing spondylitis'

Transdural spinal cord herniation with extradural cerebrospinal fluid collection

Holocord syrinx associated with haemangioblastoma

Myelopathy: chameleons and mimics

Spinal cord infarction after cocaine use

clinical features & investigation of genetic and acquired axonal and demyelinating neuropathies, traumatic & entrapment neuropathies, plexopathies and mononeuritis multiplex;  
Anatomy and pathology of peripheral nerves;

[Overell 2011](#)

[Marsh 2013](#)

[Hughes 2008](#)

[Hughes 2002](#)

[Overell 2006](#)

[Neligan 2014](#)

[Willison 2002](#)

[Donaghy 2003](#)

[Khadilkar 2015](#)

[Ginsberg 2005](#)

[Hui 2005](#)

[Dineen 2014](#)

[Connor 2002](#)

[Lewis 2016](#)

[Warlow 2002](#)

[Shah 2012](#)

[Mohee 2013](#)

[Andrews 2003](#)

[Kowalewska-Zietek 2011](#)

[Gibani 2014](#)

Peripheral neuropathy: pattern recognition for the pragmatist

How to recognise and treat peripheral nervous system vasculitis

Peripheral nerve diseases: THE BARE ESSENTIALS

Not the Guillain–Barré Syndrome

A wolf in sheep's clothing

Where is the Lateral Cutaneous Nerve of the Forearm Anyway?

Chronic Inflammatory Demyelinating Polyradiculoneuropathy

Cranial nerve, spinal root and plexus hypertrophy in chronic inflammatory demyelinating polyneuropathy

Chronic inflammatory demyelinating polyradiculoneuropathy: classification and treatment options

CIDP: mimics and chameleons

An unusual cause of raised CSF protein

Multifocal Motor Neuropathy

Enlarged Peripheral Nerves

A practical approach to enlargement of nerves, plexuses and roots

King's College London Neuromuscular Disease Symposium, November 2002 - An Unusual Cause of Speech and Swallowing Difficulty

An unusual cause of carpal tunnel syndrome

Hard to swallow: atypical transthyretin amyloid neuropathy mistaken for CIDP

Fabry Disease

Carpal Tunnel Syndrome

What role for ultrasound in diagnosing carpal tunnel syndrome?



	<a href="#">Lindley 2006</a>	Happy with HNPP?
	<a href="#">Geranmayeh 2012</a>	Recurrent sensory and motor neuropathy
	<a href="#">Caswell 2006</a>	POEMS syndrome
<a href="#">Stewart 2006</a>		Ulnar neuropathies: where, why, and what to do?
<a href="#">van Alfen 2006</a>		The trouble with neuralgic amyotrophy
<a href="#">Little 2007</a>		Diabetic neuropathies
	<a href="#">Hwang 2016</a>	'Insulin neuritis' to 'treatment-induced neuropathy of diabetes': new name, same mystery
<a href="#">Reilly 2007</a>		Sorting out the inherited neuropathies
<a href="#">Rossor 2012</a>		Knee bobbing in Charcot–Marie–Tooth disease
<a href="#">Rossor 2015</a>		A practical approach to the genetic neuropathies
<a href="#">Ingram 2016</a>		Distal hereditary motor neuropathy with vocal cord paresis: from difficulty in choral singing to a molecular genetic diagnosis
<a href="#">Stewart 2008</a>		Foot drop: where, why and what to do?
<a href="#">Mathew 2010</a>		Arsenical peripheral neuropathy
<a href="#">Sheikh 2010</a>		The dorsal root ganglion under attack: the acquired sensory ganglionopathies
	<a href="#">Aurangzeb 2014</a>	Mitochondrial encephalomyopathy with lactic acidosis and stroke-like episodes (MELAS) in the older adult
<a href="#">Themistocleous 2014</a>		The clinical approach to small fibre neuropathy and painful channelopathy
<a href="#">Chhetri 2014</a>		Clinical assessment of the sensory ataxias; diagnostic algorithm with illustrative cases
	<a href="#">Lo 2016</a>	Rueing the Roux-en-Y
	<a href="#">Bäumer 2016</a>	CIDP presenting as recurrent severe back pain without weakness or sensory loss
	<a href="#">Moudrous 2016</a>	First digit macrodactyly and carpal tunnel syndrome caused by giant median nerve with macrodystrophia lipomatosa
2016	<a href="#">Pritchard 2006</a>	Author's response
management of GBS and other severe paralyzing neuropathies;	<a href="#">Chai 2012</a>	Acute flaccid paralysis with chronic cough

	<a href="#">Winer 2009</a>		When the Guillain-Barré patient fails to respond to treatment
		<a href="#">Carswell 2015</a>	Progressive bilateral facial weakness
	<a href="#">Wakerley 2015</a>		Stumbling towards a diagnosis
	<a href="#">Uncini 2015</a>		99 years of Guillain-Barré syndrome: pathophysiological insights from neurophysiology
	<a href="#">Wakerley 2015</a>		Mimics and chameleons in Guillain-Barré and Miller Fisher syndromes
		<a href="#">Bulder 2011</a>	The man in black with headache, photophobia and fixed pupils
		<a href="#">Gilpin 2014</a>	Headache, diplopia and labile blood pressure during haemodialysis
general management of acute neuromuscular paralysis.	<a href="#">Hutchinson 2008</a>		Neuromuscular disease and respiratory failure
Ability to evaluate and manage people with disorders of peripheral nerves (including plexus lesions).	<a href="#">Ginsberg 2003</a>		Nerve Biopsy
	<a href="#">Lauria 2005</a>		Skin Biopsy in the Diagnosis of Peripheral Neuropathies

## 2.20 Disorders of Autonomic Nervous System

Anatomy and physiology of ANS; clinical features of ANS disorders alone and as part of other condition e.g. multi-system atrophy; investigations including autonomic function tests.

Pharmacological and physical managements of urinary retention, erectile disorder, constipation, postural hypotension, autonomic dysreflexia.

Ability to evaluate and manage people with disorders of the autonomic nervous system.

## 2.21 Disorders of Muscle

Clinical features and investigation of genetic and acquired disorders of the neuromuscular junction and voluntary muscle including periodic disorders and disorders of energy metabolism (e.g. mitochondrial disorders).

[Merrison 2009](#)

Muscle disease: THE BARE ESSENTIALS

[Jacob 2009](#)

THE BARE ESSENTIALS: Myasthenia gravis and other neuromuscular junction disorders

[Walters 2014](#)

Muscle diseases: mimics and chameleons

[Hilton-Jones 2001](#)

McArdle's Disease

[Chevrel 2002](#)

[Shah 2015](#)

[Hilton-Jones 2002](#)

[Farrugia 2005](#)

[Hilton-Jones 2005](#)

[Burke 2009](#)

[Hilton-Jones 2007](#)

[Reddy 2007](#)

[Finlayson 2013](#)

[Sussman 2015](#)

[Hilton-Jones 2002](#)

[Maddison 2002](#)

[Orrell 2004](#)

[Mul 2016](#)

[Mastaglia 2006](#)

[Lagarde 2012](#)

[Petty 2007](#)

[Mastaglia 2008](#)

[Bushby 2009](#)

[Shaboodien 2015](#)

[Rajakulendran 2010](#)

[Wilmin 2012](#)

[Siow 2016](#)

Myositis Diagnosis and Management  
Giant cell myositis responsive to combined corticosteroids and immunoglobulin  
Diagnose Myasthenia Gravis  
Myasthenia gravis with MuSK antibodies  
The Management of Myasthenia Gravis  
A treatable muscle disease  
When the patient fails to respond to treatment: myasthenia gravis  
“Ice-on-eyes”, a simple test for myasthenia gravis presenting with ocular symptoms  
Congenital myasthenic syndromes: an update

Myasthenia gravis: Association of British Neurologists’ management guidelines  
Inclusion Body Myositis  
Neuromyotonia  
Facioscapulohumeral Dystrophy  
What's in a name? The clinical features of facioscapulohumeral muscular dystrophy  
Drug induced myopathies  
Sudden proximal paraparesis secondary to statin myositis  
Lambert–Eaton myasthenic syndrome  
When the treatment does not work: polymyositis

Diagnosis and management of the limb girdle muscular dystrophies  
Limb-girdle weakness in a marfanoid man: distinguishing calpainopathy from Becker's muscular dystrophy  
Muscle weakness, palpitations and a small chin: the Andersen–Tawil syndrome  
Torsade de pointes in Kearns–Sayre syndrome

A rare cause of weakness

Management including cardio-respiratory and anaesthetic considerations.

Ability to evaluate and manage people with disorders of muscle.

[Hall 2001](#)

Muscle Biopsy

[Leung 2006](#)

The dropped head

[Renard 2015](#)

Cortical abnormalities on MRI: what a neurologist should know

[Sussman 2016](#)

Thymectomy: the more you know, the more you know you don't know

[Cauchi 2016](#)

A practical approach to the patient presenting with dropped head

[Walters 2016](#)

Contractures and muscle disease

## 2.22 Pain

Theories of pain generation; pain patterns in neurological and systemic diseases; effective use of pharmacological agents and other measures for pain relief including nerve blocks, TNS, acupuncture and neurosurgical interventions.

[Murray 2008](#)

The farmer, his neuropathic pain and the cow fence

Role of Pain Clinic; psychological and social effects of chronic pain, understanding of MDT approach.

[Magrinelli 2013](#)

Neuropathic pain: diagnosis and treatment

Ability to evaluate and manage people with neurological disorders causing pain and common non neurological causes of pain including musculoskeletal disease.

[Schott 2007](#)

Complex? Regional? Pain? Syndrome?

Neurology Curriculum 2010 (with 2013 amendments) item	Review Article	Case Report	Title
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## 3. Allied Topics within Neurology Curriculum

### 3.1 Clinical Neurophysiology

EEG - normal range of EEG findings; common epileptiform abnormalities; capabilities and limitations in neurological disorders; role of monitoring techniques (telemetry, ambulatory); evaluation of sleep disorders; neurological emergencies.

[Chancellor 2009](#)

Electroencephalography: maturing gracefully

[Whittaker 2015](#)

Video telemetry: current concepts and recent advances

[May 2013](#)

SIRPIDS: An unusual EEG pattern in a critically ill patient

[Abbas 2016](#)

Extreme delta brushes and BIRDS in the EEG of anti-NMDA-receptor encephalitis

[Proudfoot 2014](#)

Magnetoencephalography

EMG/NCS/repetitive stimulation – principles of techniques; abnormalities in common nerve entrapments, peripheral neuropathies; motor neuron disease; disorders of neuromuscular junction; muscle disease.

[Ertas 2003](#)

Single Fibre Electromyography

[Whittaker 2011](#)

Testing the neuromuscular junction: what neurophysiology can offer the neurologist  
The fundamentals of electromyography  
SNAPs, CMAPs and F-waves: nerve conduction studies for the uninitiated  
The action potential

[Whittaker 2012](#)

[Whittaker 2012](#)

Evoked potentials - common abnormalities in neurological diseases, particularly demyelination; role of intraoperative EP.

[Barnett 2007](#)

[Kane 2015](#)

Somatosensory evoked potentials aid prediction after hypoxic–ischaemic brain injury

Understand role and practice of neurophysiological investigations in disorders of the nervous system; ability to interpret a neurophysiology report.

### 3.2 Neuroendocrinology

Clinical features and investigations in endocrine disorders; emergency management of disorders; relationships with neurological disorders.

Steroid therapy and its complications.

[Simpson 2008](#)

An evolving headache

Understand the principles of the NS in endocrine function and neurological features of endocrine disorder particularly pituitary disease.

### 3.3 Neurogenetics

Basic genetic principles including inheritance patterns and common diagnostic methods; roles of a detailed family history and of DNA based diagnostic tests.

[Morrison 2002](#)

Polymerase Chain Reaction

[Reilly 2016](#)

Untreatable genetic disorders: to test or not to test

[Chinnery 2003](#)

[Aurangzeb 2014](#)

The Mitochondrion and its Disorders  
An elusive cause for a progressive neuropathy

[Chinnery 2006](#)

Could it be mitochondrial? When and how to investigate

Genetic contribution to multifactorial neurological disease (e.g. stroke, multiple sclerosis, subarachnoid haemorrhage, epilepsy).

Clinical features of common genetic conditions (hereditary ataxias, Huntington's disease, hereditary neuropathies, muscle diseases, and neurocutaneous syndromes).

[Martikainen 2015](#)

[Razvi 2005](#)

[Keogh 2013](#)

[Jung 2009](#)

[Simpson 2004](#)

[Craufurd 2015](#)

[Worth 2004](#)

[van Gaalen 2012](#)

[Walker 2006](#)

[Stevens 2011](#)

[Sidhu 2013](#)

[Davenport 2006](#)

[Ferner 2010](#)

[Rafiq 2011](#)

[Nicholls 2015](#)

[Athappily 2013](#)

[Kheder 2013](#)

[Lote 2013](#)

[Nowak 2014](#)

Mitochondrial disease: mimics and chameleons

Draw a Pedigree During the Neurological Consultation

Exome sequencing: how to understand it

Acute hemiparesis in Sturge-Weber syndrome

The Management of Huntington's Disease

Diagnostic genetic testing for Huntington's disease

Sorting out Ataxia in Adults

Spinocerebellar ataxia type 7 (SCA7)

A practical approach to late-onset cerebellar ataxia: putting the disorder with lack of order into order

Ataxia in a young patient

A progressive multifocal conundrum

Shaky older men (and now women)

The neurofibromatoses

A neurological rarity not to be missed: cerebrotendinous xanthomatosis

Diagnosis of spinal xanthomatosis by next-generation sequencing: identifying a rare, treatable mimic of hereditary spastic paraparesis

TS or not TS?

Niemann-Pick type C: a potentially treatable disorder?

48, XXYY syndrome associated tremor

Kjellin syndrome: hereditary spastic paraplegia with pathognomonic macular appearance

<a href="#">Wynford-Thomas 2014</a>	Rarities in neurology: blue rubber bleb naevus syndrome
<a href="#">Ahmad 2015</a>	Adult-onset Alexander's disease mimicking degenerative disease
<a href="#">Thouin 2016</a>	Glut1 deficiency syndrome: Absence epilepsy and La Soupe du Jour
<a href="#">Ibitoye 2016</a>	Ovarioleukodystrophy due to EIF2B5 mutations
<a href="#">Kirresh 2016</a>	Trapped without a diagnosis: Tumour necrosis factor receptor-associated periodic syndrome (TRAPS)
<a href="#">Rodrigues 2016</a>	Psychogenic non-epileptic seizures in early Huntington's disease
<a href="#">Breen 2017</a>	A hill walker with long chains

An understanding of the role of bioinformatic databases of human disease.

Understand the principles of genetics as applied to neurological disorder; ability to interpret a genetics report.

Ability to counsel and consent patients and families prior to undergoing genetic testing.

### 3.4 Neurointensive Care

Clinical features, causes, investigation and management of coma (including epilepsy and raised ICP), failure to regain consciousness and paralysis; diagnosis of and ability to define the vegetative state; management of status epilepticus; the principles of CVR support; indications for artificial nutrition.

[Wijdicks 2002](#)

Short of Breath, Short of Air, Short of Mechanics

[Howard 2008](#)

[Ropper 2014](#)

Weakness on the intensive care unit  
Management of raised intracranial pressure and hyperosmolar therapy

ICU neurological complications of major surgery, sepsis, drugs & medical disorders.

Clinical, legal and ethical issues in brain death, coma and vegetative state.

### 3.5 Neuro-otology

Applied anatomy and physiology of hearing and balance; history and examination techniques including vestibular manoeuvres; conditions affecting the vestibulocochlear system.

[Whiteley 2004](#)

An Elderly Man with Cranial Nerve Palsies, Otagia and Otorrhoea

[Mattle 2005](#)

Benign Paroxysmal Positional Vertigo is Sometimes Not so Benign

A practical approach to acute vertigo

Ménière's disease

Chronic dizziness: a practical approach

Ability to evaluate the deaf and / or dizzy person and interpret reports including audiograms.

Ability to perform diagnostic and therapeutic vestibular manoeuvres.

[Seemungal 2008](#)

[Hamid 2009](#)

[Bronstein 2010](#)

[Brandt 2001](#)

Exercise Away Vertigo

[Kaski 2014](#)

Progressive bilateral ptosis in a patient with midbrain metastasis and chronic inflammatory demyelinating polyradiculoneuropathy

### 3.6 Neuropaediatrics

Understanding of neurological disorders in intrauterine life and childhood; key stages of development and range of normality; knowledge of developmental disorders (including effects of intrauterine and perinatal factors ), metabolic conditions, cerebral palsy, learning disability and autism.

[Mikati 2003](#)

Febrile Seizures in Children

[Kassem-Moussa 2005](#)

Management of acute stroke in the paediatric age group

[Wimalasundera 2016](#)

Cerebral palsy

Knowledge of paediatric conditions that can present in adulthood.

Ability to evaluate and manage neurological disorders in teenagers in liaison with paediatric neurologists.

Ability to examine teenage children.

### 3.7 Neuropathology



Understand the pathological basis of neurological disorders; anatomy of brain sections, brain preparation, histological, histochemical, immunocytochemical biochemical, immunological & microbiological and E.M. techniques; understand and interpret reports; role of and consent process for coroner.

Ability to appropriately request pathological investigations and interpret pathology reports.

Understand the importance of clinico-pathological conferences.

### 3.8 Neuropsychiatry

Understanding of common psychiatric disorders (including learning disability),

[Sharpe 2003](#)

[Zeman 2014](#)

[David 2003](#)

[Howard 2004](#)

neurological features which may have psychiatric causes (including medically unexplained symptoms, conversion disorder, somatisation);

[Stone 2006](#)

[Stone 2009](#)

[Stone 2016](#)

[Edwards 2016](#)

[Carson 2016](#)

[Lee 2016](#)

the mental health act and when it can be used.

[Wade 2015](#)

[Ashby 2015](#)

Brain histology

What do Neurologists Need to Know About Psychiatry?

Neurology is psychiatry—and vice versa  
Asperger's and Related Disorders

Do Investigations Reassure Patients with No Organic Pathology?

Dissociation: what is it and why is it important?

Functional symptoms in neurology: THE BARE ESSENTIALS

Functional neurological disorders: the neurological assessment as treatment

Functional neurological symptoms: welcome to the new normal

Explaining functional disorders in the neurology clinic: a photo story

Explaining functional disorders in the neurology clinic: a photo story

Functional foreign accent syndrome

Restricting freedom of people with limited awareness of maintaining their well-being: a legal quagmire

Brain injury and deprivation of liberty on neurosciences wards: 'a gilded cage is still a cage'

Ability to evaluate and interpret psychiatric symptoms in and as presentations of neurological disorders, psychiatric consequences of neurological disease and neurological features in people with psychiatric disorders.

[House 2003](#)

Defining, Recognizing and Managing Depression in Neurological Practice

[Sharpe 2006](#)

[Stone 2011](#)

The symptom of generalised fatigue  
We must tell our patients what is wrong with them even if we don't know why they have symptoms

[Stanton 2016](#)

Apathy: a practical guide for neurologists

### 3.9 Neuropsychology

Understanding of neuroanatomical and neurophysiological basis of memory, attention, language and perception

[Budson 2007](#)

Memory dysfunction in neurological practice

Understand the value and limitations of neuropsychological interventions (CBT)

[Detert 2015](#)

Mindfulness for neurologists

Understand MMSE and basic neuropsychological tests employed by Clinical Psychologists, e.g. NART, WAIS.

Ability to utilise basic clinical tests of cognitive function, to understand the need to refer to and the role of the Clinical Neuropsychologist, and to interpret reports.

[Griffiths 2003](#)

Use a Diagnostic Neuropsychology Service Properly

### 3.10 Neuroradiology

Request, interpret and utilise neuro-radiological investigations appropriately;

[Thammaroj 2005](#)

The Hippocampus: Modern Imaging of its Anatomy and Pathology

[Schott 2007](#)

[Shenoy 2009](#)

[Lines 2013](#)

A neurological MRI menagerie

Fahr's disease

Looking beyond the obvious: cerebral calcification

[Renowden 2012](#)

Normal anatomy of the brain on CT and MRI with a few normal variants

[Renowden 2012](#)

Normal anatomy of the base of the skull, orbit, pituitary and cranial nerves

[Renowden 2014](#)

Imaging in stroke and vascular disease—part 2: intracranial haemorrhage and related pathologies

[Renowden 2015](#)

[Bahl 2013](#)

[Renard 2015](#)

The parasellar region and central skull base  
Focal cortical dysplasia mimicking neoplasia  
Serum CK as a guide to the diagnosis of muscle disease

explain the nature, risks and benefits of neuro- radiological investigations to patients.  
understand the role, risks and limitations of common techniques.

[Velasquez 2015](#)  
[Kaplan 2016](#)

[Boca 2016](#)

[Salman 2010](#)

[Farrall 2006](#)

Kernohan's notch  
Reversible splenial lesion syndrome  
Basal ganglia necrosis: a 'best-fit' approach  
Brain MRI roulette

Magnetic resonance imaging

### 3.11 Neurorehabilitation

Understand the difference between pathology, impairment, activity & participation; understand the potential and limitations of neurorehabilitation; understand the social perspective, relevant social work legislation and availability of care in the community.

[Walton 2003](#)

Management of Patients With Spasticity - A Practical Approach

Ability to evaluate the requirement for rehabilitation in people with neurological disorders (including stroke, head injury, spinal injury and MS) in the context of a multidisciplinary team and make appropriate referrals.

Ability to perform and utilise a functional assessment.

Contribute to and, if appropriate, lead an MDT meeting being aware of the different roles, skills, approach and agenda of rehabilitation teams.

[Kheder 2012](#)

Spasticity: pathophysiology, evaluation and management

### 3.12 Neurosurgery

Understand the role of neurosurgery in the management of head injury, raised intracranial pressure, intracranial haemorrhage and ischaemic stroke, aneurysm, vascular malformation and tumours, spinal cord and root disorder and peripheral nerve lesions.

Understand the purpose, limitations, process and complications of biopsy procedures (brain, muscle, nerve).

Understanding of the principles of general and specific risks and complications of neurosurgical interventions.

[de Gusmão 2015](#)

[Annan 2014](#)

[Nagendran 2016](#)

Cerebrospinal fluid shunt-induced chorea: case report and review of the literature on shunt-related movement disorders  
Deterioration following craniectomy  
The zebra sign: an unknown known

Ability to evaluate the requirement for neurosurgical interventions in people with neurological disorders and to liaise effectively with the neurosurgeon.

[Haines 2003](#)

Which Operation for Trigeminal Neuralgia

[Spinner 2006](#)

CA Breaking down the silos: the team approach to evaluating the patient referred for neurological surgery

[Wakerley 2013](#)

Progressive dysphagia without dysarthria

[McArdle 2016](#)

Ruptured intracranial dermoid cyst

### 3.13 Neurourology

Understand normal control of micturition and sexual function; differential diagnosis of causes of disordered micturition and erectile dysfunction; understand hypo- and hyper-sexuality; understand

[Smith 2013](#)

Urinary retention for the neurologist

treatment strategies for disorders of micturition and sexual function.

[Panicker 2010](#)

The bare essentials: Uro-Neurology

Ability to evaluate, manage and or refer people with disordered micturition and sexual function due to neurological disorder.

[Dasgupta 2001](#)

Urodynamics