



What's new, and why, in Neurology 4?

All topics in Neurology 4 have been extensively reviewed and updated by the expert writing group, to provide concise evidence-based advice for the busy practitioner.


Therapeutic
Guidelines
evidence in context

Stroke and transient ischaemic attack

Primary prevention

Prevention is the best approach for reducing the burden of stroke, a leading cause of death and long-term adult disability in the Western world.

It is important to identify patients at risk of a first stroke and start preventive therapy. Discussion of risk factors such as atrial fibrillation, hypertension, smoking, diabetes and hypercholesterolaemia has been updated and moved into a separate chapter (pp.175–80). There is a new section on small vessel ischaemic change (p.180), a common finding in asymptomatic elderly people that requires detailed assessment of vascular risk factors, but not antiplatelet drugs or statins.

Identify patients at risk of a first stroke and start preventive therapy.

Management

This topic includes information on the assessment, initial management and secondary prevention of **acute ischaemic stroke** (p.182), **transient ischaemic attack (TIA)** (p.195), **intracerebral haemorrhage** (p.197) and **subarachnoid haemorrhage** (p.198).

The section on thrombolysis with alteplase for acute ischaemic stroke (p.183) includes a table of selection and exclusion criteria (p.186) from the National Stroke Foundation guidelines. The time window for initiation of alteplase treatment has been extended to 4.5 hours, in line with updated product information. Text on general measures in the immediate treatment of acute ischaemic stroke has been revised, including the need for referral to a speech pathologist for patients with difficulty swallowing (p.185). The role of early mobilisation, adequate hydration and antiplatelet therapy to help prevent deep vein thrombosis is also discussed (p.188).

A new section on TIA (p.195) highlights the need for urgent referral to hospital for rapid assessment and specific interventions to prevent further events.

Patients with TIA should be urgently referred to hospital

An expanded discussion of poststroke recovery (p.200) gives advice on driving assessment and mood disturbances after stroke.

Epilepsy and seizures

The classification of seizures and epileptic syndromes was recently revised by the International League Against Epilepsy (ILAE). The new classifications have been included alongside the older classifications, as the proposed changes are not yet widely adopted.

The management of epilepsy involves both drug treatment and lifestyle advice. The revised topic 'General measures in treating epilepsy' (p.43) includes brief advice on driving and risky activities for people with epilepsy.

A new topic 'General principles of antiepileptic drug therapy' (p.44) gives practical advice on how to start an antiepileptic drug, how to switch to another drug and how to withdraw therapy. It includes a new flowchart (p.45) to help guide the initial management of epilepsy. A new box (p.46) lists factors to consider when choosing an antiepileptic drug, emphasising the need to individualise the choice of drug.

For practical advice on starting, switching or stopping antiepileptic drugs, see p.44.

The latest changes in the management of epilepsy are included. Ethosuximide is now first-line therapy for **childhood and juvenile absence seizures** (p.48), as it has equal efficacy but better tolerability than sodium valproate.

Carbamazepine is the drug of choice for **partial (focal) seizures** (p.50), and clobazam, sodium valproate and newer antiepileptic drugs have been added to the tables of second-line treatment options for children (p.53) and adults (p.54).

Tonic-clonic seizures where generalised or partial (focal) onset is unclear (p.51) require treatment with broad-spectrum antiepileptic drugs (eg sodium valproate, levetiracetam, lamotrigine, topiramate or clobazam).

The recommendations for **West syndrome (infantile spasms)** (p.56) have been revised, in line with The International Collaborative Infantile Spasms study. Recommendations for **Lennox-Gastaut syndrome** (p.58) now include adult doses (as the diagnosis is not always made in childhood, and the newer drugs may not have been available at the time of initial diagnosis); lamotrigine monotherapy is not recommended as it is unlikely to be effective.

Antiepileptic drug therapy in women

The management of antiepileptic drug therapy in females of childbearing potential is complex and requires careful consideration. The possibility of pregnancy needs to be discussed before antiepileptic drugs are commenced.

A maximum daily dose of sodium valproate of 1000 mg is recommended for females of childbearing potential.

General principles of therapy in pregnancy are discussed (p.66). Recommendations for sodium valproate now include a lower maximum daily dose of 1000 mg for females of childbearing potential. At this dose the teratogenic risk is similar to that of other antiepileptic drugs.

A new section on contraception (p.65) includes a table of contraceptives that may be ineffective in women taking enzyme-inducing antiepileptic drugs and advice on suitable alternatives.

A new topic discussing the effects of antiepileptic drugs on bone health (p.15) is particularly relevant to women and other patients at risk of osteoporosis.

Monitoring antiepileptic drug therapy

This topic emphasises that clinical response to treatment is the mainstay of monitoring, in line with ILAE guidelines. Measurement of plasma antiepileptic drug concentrations is only recommended in a few specific cases (p.219). Routine haematological and biochemical monitoring is discouraged as there is no clear evidence of value in predicting adverse reactions in asymptomatic patients (p.221).

Clinical response to treatment is the mainstay of monitoring antiepileptic drug therapy.

Status epilepticus

Convulsive status epilepticus (p.62) is a medical emergency that requires investigation for the underlying cause, and specific treatment if possible. Immediate treatment involves simultaneous protection of the airway, maintenance of oxygenation and termination of seizure activity with a benzodiazepine. Rectal diazepam is no longer recommended because intranasal or buccal administration is preferred.

Phenytoin has the most evidence for efficacy and is the first-line antiepileptic drug for status epilepticus. Phenobarbitone has been added as a second-line option (as this also has evidence for efficacy). Lacosamide and levetiracetam are possible alternatives, although there is little well-controlled evidence for their efficacy.

Phenytoin is the first-line antiepileptic drug for status epilepticus.

Migraine

The newer triptans are included for the treatment of acute migraine (p.81) and the risk of serotonin toxicity with triptans is discussed (p.82). For prophylaxis of migraine attacks (p.84), amitriptyline, pizotifen or propranolol are first-line options, and sodium valproate, topiramate or verapamil are now second-line, based on their adverse effect profiles; aspirin is no longer recommended.

A link to a downloadable headache diary is included (p.84). Advice on migraine in women includes updated discussion of the risk of stroke in women taking oral contraceptives or hormone replacement therapy (p.87).

Neuropathic pain

Neuropathic pain is common, but is often underdiagnosed and undertreated. A new algorithm (p.164) outlines a process to help determine the likelihood of neuropathic pain.

Information on treatment with analgesic adjuvants (p.166) has been expanded, with updated information on their efficacy (based on a 2010 meta-analysis) and a new recommendation for duloxetine. Nonsteroidal anti-inflammatory drugs are no longer recommended because they have not shown efficacy for neuropathic pain.

The rationale for drug choice in neuropathic pain is given on p.165

Advice on the management of postherpetic neuralgia (p.171) has been revised to give greater guidance on treatment choice.

Parkinson's disease

This topic reflects the latest changes in diagnosis and management. A new box (p.103) lists 'red flag' features of Parkinson's disease that should prompt a review of the diagnosis.

The newer non-ergot-derived dopamine agonists (pramipexole, ropinirole, rotigotine) and their usual dose range and adverse effects are included in Table 9 (p.106). Ergot-derived dopamine agonists (bromocriptine, cabergoline, pergolide) are no longer recommended due to the risks of adverse effects with long-term use.

The nonmotor complications of Parkinson's disease are now recognised as a major cause of disability. New sections on orthostatic hypotension, bladder dysfunction (p.111) and psychosis (p.112) outline the management of these complications.

Ergot-derived dopamine agonists are no longer recommended for Parkinson's disease.

Vertigo

Central causes of vertigo (apart from migraine) are uncommon, but the presence of 'central' features should raise the possibility of potentially serious conditions. A new table (p.204) lists clinical features differentiating central and peripheral causes of vertigo.

Central features (see Table 17, p.204) might indicate a potentially serious cause of vertigo.

The treatment of vestibular neuritis with prednis(ol)one (p.204) has been revised, using a weight-based 5-day regimen followed by tapering over 15 days.

Advice on motion-induced vertigo has been expanded, with more information on the diagnostic Hallpike manoeuvre (p.208). A new summary table (p.207) of physical treatments for motion-induced vertigo helps to explain their place in therapy, and the patient instructions for Cawthorne-Cooksey (p.210) and Brandt-Daroff exercises (p.214) are now clearer and easier to follow.

Facial nerve (Bell's) palsy

The majority of patients with facial nerve (Bell's) palsy (p.155) return to normal with no residual weakness, but some weakness may persist if nerve involvement is severe. Prednis(ol)one is now recommended treatment, in line with a 2010 Cochrane review that showed corticosteroids increase the frequency of complete recovery from Bell's palsy.

Multiple sclerosis

This topic reflects the latest advances in the diagnosis of multiple sclerosis, including new information on clinically isolated syndrome (the first episode of symptoms suggestive of multiple sclerosis) and an explanation of the use of imaging in diagnosis (p.123).

There is a trend towards earlier therapy with immunomodulators because current therapy cannot reverse neurological deficits once they occur. A new algorithm for management of different types of multiple sclerosis (p.130) outlines treatment options.

Early use of immunomodulators is generally recommended in multiple sclerosis.

The management of bladder symptoms in patients with multiple sclerosis (p.138) now includes recommendations for the newer anticholinergic drugs darifenacin, solifenacin and tolterodine.

A new section discusses multiple sclerosis in children (p.142). This is relatively rare, but has been increasingly recognised since the advent of magnetic resonance imaging.

Feedback

Users of these guidelines are encouraged to comment on their content and accessibility (p.259).

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