



# Neurology

Neurology is often feared by the student (and doctor) but it need not be! Developing a methodical approach to the examination of the 'neurological patient' will ensure that you cover all areas and will be able to demonstrate it in a competent, fluid and professional manner.

## Examination

### Abbreviated Mental Score

Also allows you to informally assess speech and cognition.  
Ten questions, score out of 10

1. Name
2. Age
3. Address
4. Where are you now?
5. Name of the monarch
6. Name of the prime minister
7. Date of second world war
8. Remember the following address and repeat it to me at end: 23 Granary Place, Kendal
9. What time is it now?
10. Count backwards from 20 to 10

## Motor function (corticospinal or pyramidal tracts)

Pathology may be in the brain, the spinal cord, the peripheral nerves or at the neuromuscular junction

The location of the lesion gives different clinical signs:

### ■ Upper motor neuron dysfunction

- ↑ tone
- ↑ reflexes
- Pyramidal pattern of weakness (weak arm extensors, weak leg flexors)
- Clonus at the ankle

### ■ Lower motor neuron dysfunction

- ↓ tone
- Absent reflexes
- Wasting
- Fasciculations

### ■ Dysfunction at the neuromuscular junction

- Weakness
- ↓ tone

### ■ Functional weakness - erratic and variable signs and symptoms; malingers

## Motor testing

### Inspection

- Involuntary movements e.g. tremor, fasciculation
- Muscle asymmetry
- Atrophy

### Tone

- Ask the patient to relax
- Move limb passively through its full range of motion, at varying speeds
- Tone may be normal, increased (rigid/spastic) or decreased (flaccid)
- Hypertonia is seen with upper motor neurone lesions, and may be
  - Pyramidal - 'clasp-knife' rigidity
  - Extra-pyramidal - 'lead pipe' rigidity
- A tremor superimposed on an extra-pyramidal lesion may cause 'cogwheel rigidity'
  - Seen in Parkinsonism