

# Nervous System Anatomy Worksheet

## A Reading questions

- 1 What do the abbreviations CNS and PNS stand for? What are the main divisions of PNS?
- 2 What are dendrites? What are axons?
- 3 What are the four major sections of the brain?
- 4 What is the position and function of the spinal cord?
- 5 What is the surface protection of the brain called?
- 6 What is the name for the liquid circulation around the spinal cord and the brain and what is its function?
- 7 What is a reflex?

## B Complete each sentence with a word made from the word in brackets:

- 1 The brain is \_\_\_\_\_ in the cranium and the spinal cord is protected by the vertebrae. (CLOSE)
- 2 The meninges are three layers of \_\_\_\_\_ membranes surrounding the brain and spinal cord. (PROTECT)
- 3 The \_\_\_\_\_ layer of the meninges is the pia mater, tightly bound to the surface of the brain. (INNER)
- 4 If a person is \_\_\_\_\_, he or she is unconscious and unable to wake up. (COMA)
- 5 Multiple sclerosis is a degenerative \_\_\_\_\_ disease of the CNS attacking the myelin sheath. (INFLAMMATION)

## C Choose the correct option.

- 1 Dentists \_\_\_\_\_ the tissue around the tooth before they drill. A die B dead C deaden D deafen
- 2 The nervous system is \_\_\_\_\_ into two major areas: CNS and PNS. A divorced B broken C separated D divided
- 3 An injury to the brainstem can result \_\_\_\_\_ death. A at B for C in D into
- 4 The brain \_\_\_\_\_ of the cerebrum, diencephalon, brainstem and cerebellum. A comprises B contains C consists D compasses

## D Complete each gap with ONE word.

\_\_\_\_\_ (1) neurons cannot replicate (mitotically divide), in many cases they may be able to regenerate (repair themselves) after having been traumatized. In the cases \_\_\_\_\_ (2) a peripheral nerve, healing and regeneration are likely to occur if the two ends are aligned in case proximity. The distal portion of the axon \_\_\_\_\_ (3) was severed from the cell body degenerates and is phagocytosed by Schwann cells and by macrophages that migrate \_\_\_\_\_ (4) the trauma zone. Once the debris has been disposed \_\_\_\_\_ (5), the surviving Schwann cells proliferate to form a regeneration tube. The part of the axon that is \_\_\_\_\_ (6) to the cell body begins to grow and exhibit amoeboid movement. The Schwann cells of the regeneration tube are \_\_\_\_\_ (7) to secrete chemicals that attract the growing axon tip, and the tube itself helps to guide the regenerating axon to its proper destination. Even a major nerve fibre that has been severed \_\_\_\_\_ (8) be surgically reconnected and the function of the nerve largely reestablished if the surgery is performed before tissue death has occurred.

## E Grammar Point

### First and Second Conditional

1 Work in pairs. Read the two sentences, spoken by a doctor. Answer the questions that follow.

- His blood pressure would be lower if he didn't smoke.
- If we break up the clot now, that'll prevent further damage to the brain.

- Which sentence talks about something which is possible in the future?
- Which sentence imagines something different from the real situation now?

2 Complete the sentences with verbs in correct form.

- If Mr. Jones \_\_\_\_\_ (not stop/drink), he \_\_\_\_\_ (really affect) his health.
- I \_\_\_\_\_ (not give) Mrs Rook morphine if she \_\_\_\_\_ (not want) it.
- She \_\_\_\_\_ (probably die) if we \_\_\_\_\_ (not operate) soon.
- If he \_\_\_\_\_ (not be) in hospital, he \_\_\_\_\_ (be looked after) at home.
- They \_\_\_\_\_ (not recover) if they \_\_\_\_\_ (not take) their medicine.
- If George \_\_\_\_\_ (be not) in hospital, he \_\_\_\_\_ (be) on holiday.

3 Complete the dialogue by putting the verbs in brackets in the correct tense.

Nurse 1 How's Mr Rigg?

Nurse 2 If his operation goes <sup>1</sup> (go) well tomorrow, he 'll make <sup>2</sup> (make) a full and speedy recovery.

Nurse 1 It's a straightforward procedure, isn't it?

Nurse 2 Yes, he's having a haematoma evacuated from his skull. He \_\_\_\_\_ <sup>3</sup> (be) home by the weekend, unless something unexpected \_\_\_\_\_ <sup>4</sup> (happen).

Nurse 1 We spend too much time treating cyclists. There \_\_\_\_\_ <sup>5</sup> (not be) so many accidents if they \_\_\_\_\_ <sup>6</sup> (have) more cycle paths.

Nurse 2 And if cycle helmets \_\_\_\_\_ <sup>7</sup> (be) compulsory, there \_\_\_\_\_ <sup>8</sup> (be) fewer brain injuries.

Nurse 1 Yes. This patient was lucky. At least he \_\_\_\_\_ <sup>9</sup> (wear) a helmet when he next \_\_\_\_\_ <sup>10</sup> (ride) his bike.

4 Complete these sentences in a way that is true for you.

- If I had more time, I ...  
I'll be very happy if ...  
If my current plan is successful, ...  
If I could work anywhere in the world, ...

5 Match the sentences and complete appropriate form of the verbs.

- The patient \_\_\_\_\_ (go) into shock
- The operation \_\_\_\_\_ (be) simpler
- If we \_\_\_\_\_ (have) another theatre,
- If you \_\_\_\_\_ (change) your dressings every day at home,
- Antibiotics \_\_\_\_\_ (be) more effective
- If the surgeon \_\_\_\_\_ (decide) to operate tomorrow,
  - he \_\_\_\_\_ (talk) you through the procedure.
  - if the patient \_\_\_\_\_ (be) so overweight.
  - if we \_\_\_\_\_ (stop) the bleeding quickly!
  - if we \_\_\_\_\_ (use) them less.
  - we \_\_\_\_\_ (be able) to handle a lot more patients.
  - you \_\_\_\_\_ (get) an infection.