Case Histories in Human Physiology

Answer Key

Third Edition

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**Neurophysiology Case Histories**

*Case 1 Bell’s Palsy*

Answers:

1. The cranial nerve involved in this individual is the facial (VII) nerve.
2. This condition is known as Bell’s palsy.
3. This disorder results in blocked conduction of motor impulses along this cranial nerve, which innervates muscles of facial expression. (The conduction block may result from inflammation, hemorrhage, tumor, meningitis, or local traumatic injury around the nerve.) This motor impairment results in facial paralysis, inability to smile, and inability to close her left eye.
4. Her taste was distorted because there are also sensory fibers in this compressed cranial nerve originating from the taste buds on the anterior two-thirds of the tongue.
5. The major disorder of cranial nerve V (trigeminal) is trigeminal neuralgia (also known as tic douloureux), a painful disorder of one or more of the three major branches of the trigeminal nerve (ophthalmic, maxillary, mandibular). Trigeminal neuralgia is characterized by excruciating searing or burning pain that occurs in lightninglike jabs and lasts around one to two minutes in an area innervated by one or more branches of the trigeminal nerve.
6. Bell’s palsy is a disorder of the cranial nerve VII (facial) that produces unilateral facial weakness or paralysis.
7. Trigeminal (V): mixed nerve; the “great sensory nerve”; carries sensory information from the face from the three major branches (ophthalmic, maxillary, and mandibular). Motor fibers innervate the muscles of mastication.
8. Facial (VII): mixed nerve; the “great motor nerve”; motor fibers innervate the muscles of facial expression. Sensory fibers arise from taste buds on the anterior two-thirds of the tongue.