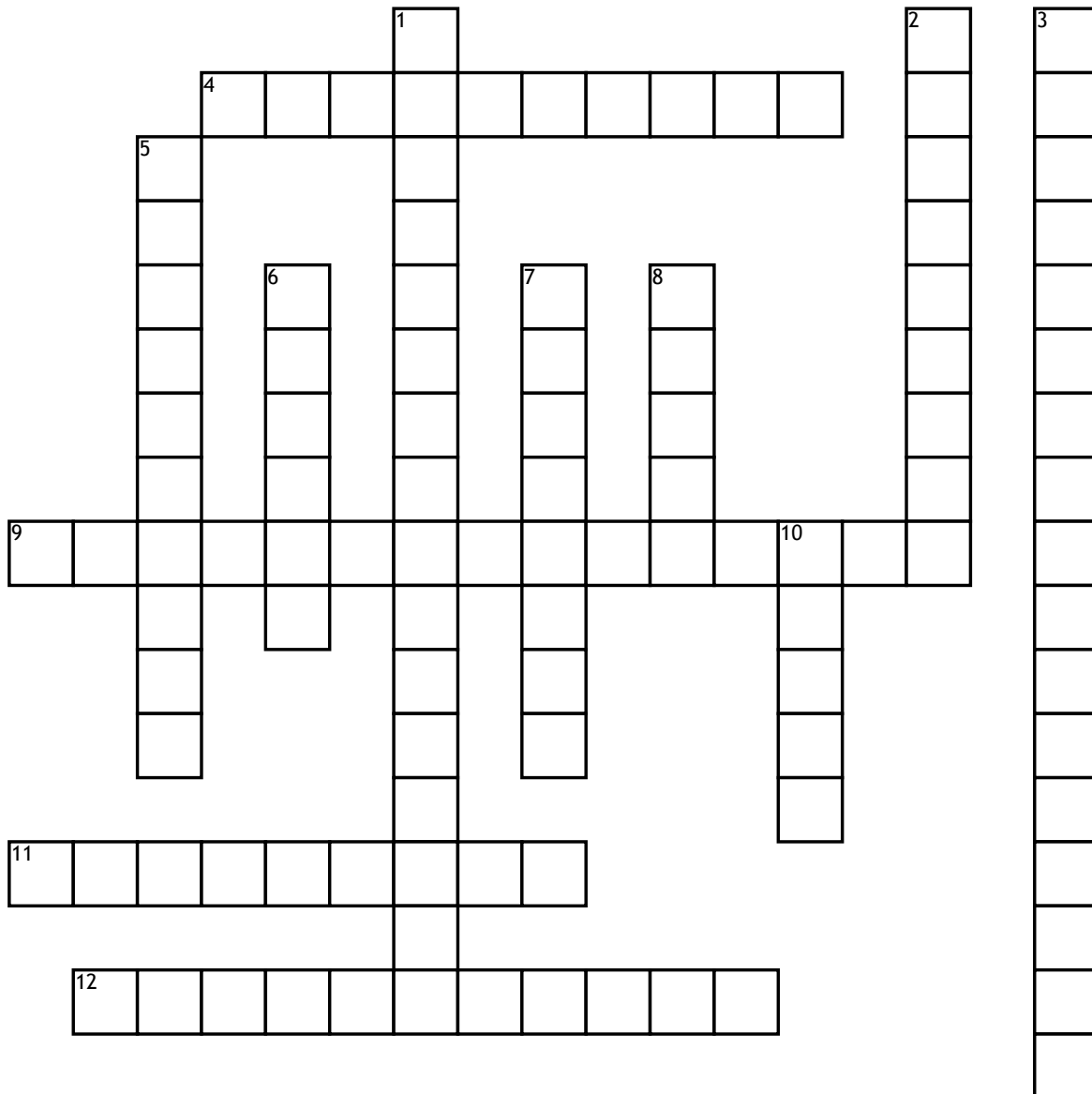


Cranial Nerves



Across

4. Responsible for the nerve supply to muscles around the eye, including the upper eyelid muscle, which raises the eyelid; the extraocular muscle, which moves the eye inward; and the pupillary muscle, which constricts the pupil. Paralysis of the nerve results in a drooping eyelid (ptosis), deviation of the eyeball outward (double vision), and a dilated (wide-open) pupil. This is the third cranial nerve.

9. Emerges from the skull and receives an additional (accessory) root from the upper part of the spinal cord. It supplies the sternocleidomastoid and trapezius muscles. This is the eleventh cranial nerve.

11. Controls the superior oblique muscle of the eye, one of the muscles that move the eye (extraocular muscles). Paralysis of the nerve results in rotation of the eyeball upward and outward (and, therefore, in double vision). It is the only cranial nerve that arises from the back of the brain stem. It follows the longest course within the skull of any of the cranial nerves. This is the fourth cranial nerve.

12. Supplies the muscles of the tongue. This is the twelfth cranial nerve.

Down

1. Supplies the tongue, throat, and one of the salivary glands (the parotid gland). Problems with the nerve result in difficulties with tasting and swallowing. This is the ninth cranial nerve.

2. The nerve that carries impulses for the sense of smell from the nose to the brain. This is the first cranial nerve.

3. A nerve that is responsible for the sense of hearing and that is also pertinent to the senses of balance and body position. Problems with the nerve may result in deafness, tinnitus (ringing or noise in the ears), dizziness, vertigo, and vomiting. This is the eighth cranial nerve.

5. The chief nerve of sensation for the face, which is also the motor nerve that controls the muscles used for chewing. Problems with the sensory part of the nerve result in pain or loss of sensation in the face. Problems with the motor root of the nerve result in deviation of the jaw toward the affected side and trouble chewing. This is the fifth cranial nerve.

6. A mixed nerve that has fibers both going out and coming in (both efferent and afferent fibers). It supplies the muscles of facial expression. Paralysis of the nerve causes a characteristic picture with drooping of one side of the face, inability to wrinkle the forehead, inability to whistle, inability to close the eye and deviation of the mouth toward the other side of the face. Bell's palsy is associated with this nerve. This is the seventh cranial nerve.

7. Emerges from the skull to operate the lateral rectus muscle. This muscle draws the eye toward the side of the head. Paralysis of the nerve causes inward turning of the eye. This is the sixth cranial nerve.

8. A nerve that supplies nerve fibers to the pharynx (throat), larynx (voice box), trachea (windpipe), lungs, heart, esophagus, and intestinal tract, as far as the transverse portion of the colon. The nerve also brings sensory information back to the brain from the ear, tongue, pharynx, and larynx. The nerve is the tenth cranial nerve. It originates in the medulla oblongata, a part of the brain stem, and extends all the way down from the brain stem to the colon. Complete interruption of the nerve causes a characteristic syndrome in which the soft palate droops on the side where damage occurred, and the gag reflex is also lost on that side. The voice is hoarse and nasal, and the vocal cord on the affected side is immobile. The result is difficulty swallowing (dysphagia) and speaking (dysphonia). The nerve has several important branches, including the recurrent laryngeal nerve. This is the tenth cranial nerve.

10. The nerve carries the impulses formed by the retina, the nerve layer that lines the back of the eye and senses light and creates impulses. These impulses are dispatched through the nerve to the brain, which interprets them as images. This is the second cranial nerve.