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VIDEO GUIDE · UNIT 1 · TOPIC 1.4

The Hemispheres

Watch the lesson

Name _____ Class _____ Date _____

NOTES: FILL IN THE BLANKS WHILE YOU WATCH

Split-brain research

1. Each _____ has its own frontal, parietal, temporal, and occipital lobes.
2. Normally the hemispheres communicate through a thick band of nerve fibers, the _____.
3. _____ had the corpus callosum cut to keep severe epileptic seizures from spreading between hemispheres.
4. Each _____ is processed by the opposite hemisphere: the right _____ by the left hemisphere, and vice versa.
5. In most people, the major language areas are in the _____, so a split-brain patient can't name an object flashed to the _____ visual field.
6. _____: each hemisphere receives sensation from and controls the opposite side of the body, so the patient can still pick out that object with the left hand.

Language areas

7. _____, in the left frontal lobe, is important for producing speech; damage causes broken speech.
8. _____, in the left temporal lobe, is important for understanding language; damage causes fluent but meaningless "word salad."
9. Damage to these areas can cause _____, an impairment in producing or understanding language.

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CHECK YOUR UNDERSTANDING

1. A patient has severe epilepsy that medication can't control, so surgeons cut his corpus callosum. What is the goal of this surgery?

(A) To remove the language areas that trigger seizures

(B) To keep seizures from spreading from one hemisphere to the other

(C) To make each hemisphere control both sides of the body

(D) To let the right visual field reach the right hemisphere

2. A split-brain patient feels a hidden object with his right hand without seeing it. Can he say what it is?

(A) Yes, because touch from the right hand goes to the left hemisphere, where language areas usually are

(B) No, because the right hand is controlled by the right hemisphere

(C) No, because without a corpus callosum, touch can't be perceived

(D) Only if the object is also flashed in his left visual field

3. A stroke patient has trouble producing and understanding language. Which term describes this, and which hemisphere was most likely damaged?

(A) Aphasia; right

(B) Contralateral organization; left

(C) Split-brain syndrome; right

(D) Aphasia; left

NOTES

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