LEARNING OBJECTIVES

After completing this chapter, you will be able to:

• Define and spell the word parts used to create terms for the nervous system.
• Identify the major organs of the nervous system.
• Break down and define common medical terms used for symptoms, diseases, disorders, procedures, treatments, and devices associated with the nervous system and mental health.
• Build medical terms from the word parts associated with the nervous system and mental health.
• Pronounce and spell common medical terms associated with the nervous system and mental health.
CHAPTER 13
The Nervous System and Mental Health

Worksheet 1

Phonetic Spelling Challenge

Spell the medical term correctly in the space provided.

1. pall ee noo ROH path ee ____________________________
2. RAE beez ____________________________
3. ek oh en SEFF ah LOG rah fee ____________________________
4. NOO roh plass tee ____________________________
5. ceh REE bral anj ee OHG rah fee ____________________________
6. LUM bar PUNK shur ____________________________
7. noo ROT oh mee ____________________________
8. sye KYE ah trist ____________________________
9. en seff ah loh mah LAY she ah ____________________________
10. SKIZ oh FREHN ee ah ____________________________
11. MEHG ah lo MAE nee ah ____________________________
12. anne ehs THEE zee ah ____________________________
13. ray dih KOT oh mee ____________________________
14. ee LEK troh en SEFF ah LOG rah fee ____________________________
15. GANG lee on EK toh mee ____________________________
16. de MEN she ah ____________________________
17. sy KO siss ____________________________
18. qwad rih PLEE jee ah ____________________________
19. PIE roh MAE nee ah ____________________________
20. poh lee oh my eh LYE tiss ____________________________
Spelling Challenge

These terms are spelled incorrectly. Spell each term correctly in the space provided.

1. Gliomae ____________________________
2. Hydrocephaelus ____________________________
3. Incephalitis ____________________________
4. Oldheimerz ____________________________
5. Singcope ____________________________
6. Afasia ____________________________
7. Cephalalglia ____________________________
8. Parresthesia ____________________________
9. Anneurysm ____________________________
10. Menninjocele ____________________________
11. Polliomyelitis ____________________________
12. Anaesthesia ____________________________
13. Newrectomy ____________________________
14. Vagotomy ____________________________
15. Annalgesics ____________________________

Abbreviation Matchup

Select and match the correct abbreviation to the definition.

_____ 1. multiple sclerosis a. ADD
_____ 2. positron emission tomography b. CVA
c. DTR
d. MS
ey. ADHD
_____ 4. amyotrophic lateral sclerosis d. PD
_____ 5. Parkinson disease e. PET
_____ 6. electroencephalogram f. ALS
_____ 7. attention deficit disorder g. CP
_____ 8. deep tendon reflex h. EEG
_____ 9. attention deficit hyperactivity disorder i. CP
_____ 10. cerebrovascular accident j. EEG
True/False
Mark each statement as true (T) or false (F).

_____ 1. Cerebral palsy is a curable disease.

_____ 2. The cause of Alzheimer disease is not yet known.

_____ 3. *Cephalalgia* is the clinical term for a headache.

_____ 4. The brain and spinal cord form the peripheral nervous system.

_____ 5. Nerve cells in the brain cells are called neurons.

_____ 6. Stroke is the most common cause of death in the United States.

_____ 7. *Syncope* is often called “fainting.”

_____ 8. A *convulsion* can also be called a *seizure*.

_____ 9. The most common form of psychosis is psychosis.

_____ 10. Acrophobia is the abnormal fear of heights.

Fill in the Blank
Fill in the blank with the correct medical term from this chapter.

11. ____________________________ is an obsessive concern with fire.

12. The term ____________________________ literally means “pertaining to body and mind.”

13. The inability to speak is known as ____________________________.

14. A surgical incision into a nerve root is called ____________________________.

15. The most common form of pain management is the use of ____________________________.

16. Inflammation of a nerve is called ____________________________.

17. A form of paralysis includes ____________________________, in which one limb is paralyzed.

18. Inflammation of the spinal cord is called ____________________________.

19. A brain disorder characterized by recurrent seizures, including convulsions and temporary loss of consciousness, is the disease ____________________________.

20. A tumor originating from neurons is generally called a(n) ____________________________.
Short Answer
Write the definition for each of the following terms.

21. Autism _____________________________________________________________

22. Alzheimer disease __________________________________________________________

23. Cerebral atherosclerosis ___________________________________________________________

24. Mania _____________________________________________________________

25. Anxiety disorder _____________________________________________________________

Word Search
Fill in the blank with the correct medical term from this chapter, then find the words in the word
search puzzle that follows.

1. The disease ____________________________ literally means “disease of self.”

2. The Latin word that means not in the mind is ____________________________.

3. A(n) ____________________________ puncture is the withdrawal of CSF from the
subarachnoid space in the lumbar region of the spinal cord.

4. The branch of medicine that addresses disorders of the brain, resulting in mental and
emotional disturbances, is known as ____________________________.

5. ____________________________ is an acute, often fatal, infection of the central nervous
system that is caused by a virus transmitted to humans by the bite of an infected animal.

6. The term for an inflammation of the brain is ____________________________.

7. A condition that appears at birth or shortly afterward as a partial muscle paralysis is called
____________________________ palsy.

8. The suffix -algia means “condition of ____________________________.”

9. The disease called ____________________________ disease is abbreviated AD.

10. A(n) ____________________________ is a circulatory problem caused by the weakened wall
of a blood vessel, resulting in a protrusion through the wall that is in danger of bursting.

11. A(n) ____________________________ is a general term describing several levels of
abnormally decreased consciousness.

12. The ____________________________ are several layers of membranes surrounding the brain
and spinal cord, which include the pia mater, arachnoid, and dura mater.
13. A disease affecting any part of the nervous system, such as a cranial nerve, the brain, or the spinal cord is known as a(n) ______________________________.

14. The disease ______________________________ literally means “disease of self.”

15. The clinical word for a stroke is ______________________________ accident.
CHAPTER 13
The Nervous System and Mental Health

Worksheet 2

Dictation Report
Write each numbered term as you hear it, spelling each term correctly. This exercise will help you learn to hear, comprehend, visualize, and spell the new medical terms accurately.

The (1) ______________________ system connects our brain to all other parts of our body. It is made up of the (2) ______________________ and the (3) ______________________. A(n) (4) ______________________ is a physician who specializes in (5) ______________________, or the care of people with disorders of the nervous system.

Many things can go wrong with the brain, resulting in neurological problems. The brain has electrical components that can misfire, causing recurrent seizures, including convulsions and temporary loss of consciousness, known as (6) ______________________. The term epilepsy literally means “to be seized upon.” A(n) (7) ______________________ measures the electrical components of the brain. A tumor can grow from cells of the nervous system, called a(n) (8) ______________________. Infection can cause problems with the nervous system, creating diseases like (9) ______________________ and (10) ______________________. Nervous tissue can produce benign tumors, including (11) ______________________ and (12) ______________________. There also can be damage to the brain, as in a(n) (13) ______________________, or stroke. A blow to the head can result in a(n) (14) ______________________. Any of these conditions could result in (15) ______________________ or even death.

There are many procedures used to treat disorders of the nervous system. A procedure involving the use of a computer to interpret a series of images and construct from them a three-dimensional view of the brain is known as (16) ______________________. A diagnostic procedure that reveals blood flow to the brain by x-ray photography is known as (17) ______________________.
the frequently used diagnostic procedure (18)______________________________, powerful magnets are used to observe soft tissues in the body, including the brain. A(n) (19)____________________________ aspires (20)____________________________ from the subarachnoid space in the lumbar region of the spinal cord.

The nervous system and brain are closely related to the functioning of the mind. Common mental disorders include (21)____________________________, (22)____________________________, (23)____________________________, (24)____________________________, (25)____________________________, (26)____________________________, (27)____________________________, (28)____________________________, (29)____________________________, (30)____________________________, and (31)____________________________.
CHAPTER 13
The Nervous System and Mental Health

Worksheet 3

Word Surgery

Read the Medical Word. Break down the medical word into its word parts, and give the meaning of each word part. Then give the definition of the medical word.

1. Encephalomalacia
   Definition: __________________________________________________________
   Prefix and definition: ____________________________________________
   Combining form and definition: _________________________________
   Suffix and definition: __________________________________________

2. Schizophrenia
   Definition: _______________________________________________________
   Combining form and definition: _________________________________
   Suffix and definition: __________________________________________

3. Paresthesia
   Definition: _______________________________________________________
   Prefix and definition: __________________________________________
   Combining form and definition: _________________________________
   Suffix and definition: __________________________________________

4. Psychosis
   Definition: _______________________________________________________
   Combining form and definition: _________________________________
   Suffix and definition: __________________________________________

5. Analgesic
   Definition: _______________________________________________________
   Prefix and definition: __________________________________________
   Combining form and definition: _________________________________
   Suffix and definition: __________________________________________
6. **Diagnosis**
   - Definition: ______________________________
   - Prefix and definition: ____________________
   - Combining form and definition: ____________________
   - Suffix and definition: ____________________

7. **Neuroglioma**
   - Definition: ______________________________
   - Combining form and definition: ____________________
   - Suffix and definition: ____________________

8. **Hydrocephalus**
   - Definition: ______________________________
   - Prefix and definition: ____________________
   - Combining form and definition: ____________________
   - Suffix and definition: ____________________

9. **Quadriplegia**
   - Definition: ______________________________
   - Prefix and definition: ____________________
   - Combining form and definition: ____________________
   - Suffix and definition: ____________________

10. **Poliomyelitis**
    - Definition: ______________________________
    - Combining form and definition: ____________________
    - Suffix and definition: ____________________

11. **Epidural**
    - Definition: ______________________________
    - Prefix and definition: ____________________
    - Combining form and definition: ____________________
    - Suffix and definition: ____________________

12. **Meningocele**
    - Definition: ______________________________
    - Combining form and definition: ____________________
    - Suffix and definition: ____________________
13. Angiosclerosis
    Definition: ________________________________________________________________
    Combining form and definition: _____________________________________________
    Suffix and definition: _______________________________________________________

14. Polyneuralgia
    Definition: ________________________________________________________________
    Prefix and definition: _______________________________________________________ 
    Combining form and definition: _____________________________________________
    Suffix and definition: _______________________________________________________

15. Narcolepsy
    Definition: ________________________________________________________________
    Prefix and definition: _____________________________________________________
    Combining form and definition: _____________________________________________
    Suffix and definition: _______________________________________________________
Case Study

Fill in the blank with the correct medical term from this chapter.

George is a 73-year-old who is brought to the emergency room by ambulance after his daughter, Jane, noticed that he could not move the right side of his body and was unable to speak. George's medical history is remarkable for high blood pressure, high cholesterol, and cigarette smoking. In the emergency room the physician obtains all appropriate tests, including a CT scan of the head, which reveals a stroke on the left side of the brain.

A stroke, also called a cerebrovascular accident, or CVA, is frequently the result of hardening and narrowing of the arteries in the brain and the development of plaque in the arteries. If this plaque ruptures and moves through the blood vessel, it is referred to as an embolus. It can then lodge in a blood vessel and interrupt blood flow to important brain tissue.

What is the appropriate medical terminology for:

1. Paralysis of one side of the body ______________________
2. Inability to speak __________________________________
3. High blood pressure ________________________________
4. High cholesterol ___________________________________
5. Hardening of the arteries ____________________________
6. Narrowing of the arteries __________________________
7. Plaque within an artery _____________________________
Medical Report Analysis

Consider the following excerpt from a clinician’s notes following completion of a neurologic examination. For the highlighted terms or word parts, provide the meaning.

Patient is a 25-year-old female in for follow-up after treatment of generalized neuralgia (A) __________________________ after being involved in a motor vehicle accident two weeks ago. Despite anti-inflammatory and analgesic (B) __________________________ therapy, the patient continues to experience cephalalgia (C) __________________________ and paresthesia (D) __________________________ of the left side. CT scan showed intracranial (E) __________________________ bleeding with evidence of increasing pressure.
Which Term Does Not Belong?

Circle the term that is not related to the other terms. Then explain why the term does not belong with the others.

1. **Word roots**
   - a. crani
   - b. neur
   - c. phrenic
   - d. psych
   - e. vag

   Why does it not belong? __________________________________________________________

2. **Signs and symptoms**
   - a. aphasia
   - b. cephalalgia
   - c. hyperesthesia
   - d. neuroglia
   - e. syncope

   Why does it not belong? __________________________________________________________

3. **Disorders and conditions**
   - a. agnosia
   - b. cerebrum
   - c. encephalitis
   - d. epilepsy
   - e. meningocele

   Why does it not belong? __________________________________________________________

4. **Treatments and procedures**
   - a. craniotomy
   - b. echoencephalography
   - c. epidural
   - d. epilepsy
   - e. myelogram

   Why does it not belong? __________________________________________________________
5. Mental health disorders
   a. dyslexia
   b. paranoia
   c. phobia
   d. psychosis
   e. psychiatry

   Why does it not belong? ___________________________________________________________
Labeling

Label the diagram below.
### CHAPTER 13
The Nervous System and Mental Health

**Worksheet 8**

**Key Terms Double Check**

Remember that the chapter’s key terms appeared alphabetically throughout this chapter. This exercise helps you to check your knowledge and review for tests.

1. First, fill in the missing word in the definitions for the chapter’s key terms.
2. Then, check your answers using the answer key.
3. If you got the answer right, put a checkmark in the right column.
4. If your answer was incorrect, go back to the frame number provided and review the content.

Use the checklist to study the terms you don’t know until you’re confident you know them all.

<table>
<thead>
<tr>
<th>Key Term</th>
<th>Frame</th>
<th>Definition</th>
<th>Know It?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. agnosia</td>
<td>13.18</td>
<td>the loss of the ____________ to interpret sensory information</td>
<td></td>
</tr>
<tr>
<td>2. Alzheimer disease</td>
<td>13.19</td>
<td>a disease characterized by gradual deterioration in ____________ function</td>
<td></td>
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<tr>
<td>3. amyotrophic lateral sclerosis</td>
<td>13.20</td>
<td>a disease characterized by progressive atrophy of ____________</td>
<td></td>
</tr>
<tr>
<td>4. analgesic</td>
<td>13.50</td>
<td>a common form of ____________ management; includes aspirin, ibuprofen, and acetaminophen</td>
<td></td>
</tr>
<tr>
<td>5. anesthesia</td>
<td>13.51</td>
<td>a primary type of pain management that is used during ____________ procedures</td>
<td></td>
</tr>
<tr>
<td>6. anesthetist</td>
<td>13.51</td>
<td>a trained specialist who administers ____________ under the management of an anesthesiologist</td>
<td></td>
</tr>
<tr>
<td>7. antidepressants</td>
<td>13.77</td>
<td>a drug therapy that combats ____________</td>
<td></td>
</tr>
<tr>
<td>8. anxiety disorder</td>
<td>13.77</td>
<td>a mental disorder in which ____________ dominates a person’s behavior</td>
<td></td>
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<tr>
<td>9. aphasia</td>
<td>13.8</td>
<td>the inability to ____________</td>
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<tr>
<td>Key Term</td>
<td>Frame</td>
<td>Definition</td>
<td>Know It?</td>
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<tr>
<td>10. attention deficit disorder</td>
<td>13.78</td>
<td>a neurological disorder characterized by short _______________ span and poor concentration</td>
<td></td>
</tr>
<tr>
<td>11. autism</td>
<td>13.21</td>
<td>a(n) _______________ developmental disorder that varies in severity and is characterized by impaired development in social conduct and communication</td>
<td></td>
</tr>
<tr>
<td>12. Bell palsy</td>
<td>13.22</td>
<td>a condition characterized by _______________ of the face muscles on one side</td>
<td></td>
</tr>
<tr>
<td>13. bipolar disease</td>
<td>13.79</td>
<td>a mental disorder characterized by alternating periods of _______________ energy and mental confusion with low energy and mental depression</td>
<td></td>
</tr>
<tr>
<td>14. cephalalgia</td>
<td>13.9</td>
<td>the clinical term for a(n) _______________, or a generalized pain in the region of the head _______________ of the cerebellum</td>
<td></td>
</tr>
<tr>
<td>15. cerebellitis</td>
<td>13.23</td>
<td>_______________ of the cerebellum</td>
<td></td>
</tr>
<tr>
<td>16. cerebral aneurysm</td>
<td>13.24</td>
<td>a bulging in the _______________ of a blood vessel in the brain that is in danger of bursting</td>
<td></td>
</tr>
<tr>
<td>17. cerebral angiography</td>
<td>13.52</td>
<td>a diagnostic procedure that reveals blood flow to the _______________ by x-ray photography</td>
<td></td>
</tr>
<tr>
<td>18. cerebral atherosclerosis</td>
<td>13.25</td>
<td>the accumulation of fatty plaques that cause arteries that supply the brain to gradually _______________</td>
<td></td>
</tr>
<tr>
<td>19. cerebral embolism</td>
<td>13.26</td>
<td>a moving _______________ in an artery of the brain</td>
<td></td>
</tr>
<tr>
<td>20. cerebral hemorrhage</td>
<td>13.26</td>
<td>_______________ from cerebral blood vessels</td>
<td></td>
</tr>
<tr>
<td>21. cerebral palsy</td>
<td>13.27</td>
<td>a condition that appears at birth or shortly afterward as a partial muscle _______________ that is caused by a brain lesion present at birth or a defect arising during development</td>
<td></td>
</tr>
<tr>
<td>22. cerebrovascular accident</td>
<td>13.28</td>
<td>the irreversible death of brain cells caused by reduced or cut off _______________ supply to the brain</td>
<td></td>
</tr>
<tr>
<td>23. coma</td>
<td>13.29</td>
<td>abnormally _______________ consciousness</td>
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<td>Key Term</td>
<td>Frame</td>
<td>Definition</td>
<td>Know It?</td>
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<tr>
<td>24. computed tomography</td>
<td>13.53</td>
<td>a procedure that involves the use of a computer to interpret a series of x-ray images and construct from them a three-dimensional view of the _____________</td>
<td></td>
</tr>
<tr>
<td>25. concussion</td>
<td>13.30</td>
<td>an injury to soft tissue that results from a blow or violent _____________</td>
<td></td>
</tr>
<tr>
<td>26. convulsion</td>
<td>13.10</td>
<td>a series of involuntary muscular _____________ caused by an uncoordinated excitation of motor neurons that trigger muscle contractions</td>
<td></td>
</tr>
<tr>
<td>27. craniectomy</td>
<td>13.54</td>
<td>the surgical _____________ of part of the cranium</td>
<td></td>
</tr>
<tr>
<td>28. craniotomy</td>
<td>13.55</td>
<td>a surgical _____________ through the cranium to provide access to the brain</td>
<td></td>
</tr>
<tr>
<td>29. dementia</td>
<td>13.80</td>
<td>an impairment of mental function characterized by memory _____________, disorientation, and confusion</td>
<td></td>
</tr>
<tr>
<td>30. dyslexia</td>
<td>13.81</td>
<td>a reading handicap with a neurological cause in which the brain _____________ the order of some letters and numbers</td>
<td></td>
</tr>
<tr>
<td>31. echoencephalography</td>
<td>13.56</td>
<td>a procedure that uses _____________ technology to record brain structures to look for abnormalities</td>
<td></td>
</tr>
<tr>
<td>32. effectual drug therapy</td>
<td>13.57</td>
<td>a general type of treatment to manage _____________ disorders</td>
<td></td>
</tr>
<tr>
<td>33. electroencephalography</td>
<td>13.58</td>
<td>a diagnostic procedure that records _____________ impulses of the brain to measure brain activity</td>
<td></td>
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<tr>
<td>34. encephalitis</td>
<td>13.31</td>
<td>inflammation of the _____________</td>
<td></td>
</tr>
<tr>
<td>35. encephalomalacia</td>
<td>13.32</td>
<td>a(n) _____________ of brain tissue that is usually caused by deficient blood flow to the brain</td>
<td></td>
</tr>
<tr>
<td>36. epidural</td>
<td>13.59</td>
<td>the injection of a spinal block _____________ into the epidural space to manage pain during childbirth labor or following severe trauma to the pelvic region</td>
<td></td>
</tr>
<tr>
<td>37. epilepsy</td>
<td>13.33</td>
<td>a brain disorder characterized by recurrent _____________, including convulsions and temporary loss of consciousness</td>
<td></td>
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<tr>
<td>Key Term</td>
<td>Frame</td>
<td>Definition</td>
<td>Know It?</td>
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<tr>
<td>38. evoked potential studies</td>
<td>13.60</td>
<td>a group of diagnostic tests that measure changes in brain ______________ during particular stimuli</td>
<td>□</td>
</tr>
<tr>
<td>39. ganglionectomy</td>
<td>13.61</td>
<td>the surgical ______________ of a ganglion, also called a gangliectomy</td>
<td>□</td>
</tr>
<tr>
<td>40. glioma</td>
<td>13.34</td>
<td>a(n) _______________ of neuroglial cells</td>
<td>□</td>
</tr>
<tr>
<td>41. hydrocephalus</td>
<td>13.35</td>
<td>a congenital disease characterized by an abnormally increased volume of cerebrospinal _______________ in the brain ventricles of a child before the cranial sutures have closed, resulting in cranial enlargement</td>
<td>□</td>
</tr>
<tr>
<td>42. hyperalgesia</td>
<td>13.11</td>
<td>an excessive sensitivity to ________________ stimuli</td>
<td>□</td>
</tr>
<tr>
<td>43. hyperesthesia</td>
<td>13.12</td>
<td>a(n) _______________ sensitivity to a stimulus</td>
<td>□</td>
</tr>
<tr>
<td>44. lumbar puncture</td>
<td>13.62</td>
<td>the withdrawal of cerebrospinal fluid (CSF) from the subarachnoid space in the lumbar region of the ________________ cord</td>
<td>□</td>
</tr>
<tr>
<td>45. magnetic resonance imaging</td>
<td>13.63</td>
<td>a diagnostic procedure in which powerful _______________ are used to observe soft tissues in the body, abbreviated MRI</td>
<td>□</td>
</tr>
<tr>
<td>46. mania</td>
<td>13.82</td>
<td>an emotional disorder of abnormally _______________ psychomotor activity</td>
<td>□</td>
</tr>
<tr>
<td>47. meningioma</td>
<td>13.36</td>
<td>a benign _______________ of the meninges</td>
<td>□</td>
</tr>
<tr>
<td>48. meningitis</td>
<td>13.37</td>
<td>inflammation of the _______________</td>
<td>□</td>
</tr>
<tr>
<td>49. meningocele</td>
<td>13.38</td>
<td>a(n) _______________ of the meninges usually caused by a birth defect in the skull or spinal column</td>
<td>□</td>
</tr>
<tr>
<td>50. meningomyelocele</td>
<td>13.38</td>
<td>a protrusion of the meninges and _______________ _______________</td>
<td>□</td>
</tr>
<tr>
<td>51. multiple sclerosis</td>
<td>13.39</td>
<td>a disease characterized by the _______________ of the myelin sheath covering axons within the brain</td>
<td>□</td>
</tr>
<tr>
<td>52. myelitis</td>
<td>13.40</td>
<td>inflammation of the _______________</td>
<td>□</td>
</tr>
<tr>
<td>53. myelogram</td>
<td>13.64</td>
<td>an x-ray _______________ of the spinal cord following injection of a contrast dye</td>
<td>□</td>
</tr>
<tr>
<td>Key Term</td>
<td>Frame</td>
<td>Definition</td>
<td>Know It?</td>
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</tr>
<tr>
<td>54. myelography</td>
<td>13.64</td>
<td>the diagnostic ____________ in which contrast dye is injected into the spinal cord to produce a myelogram</td>
<td></td>
</tr>
<tr>
<td>55. narcolepsy</td>
<td>13.41</td>
<td>a(n) ____________ disorder characterized by sudden uncontrollable episodes of sleep, attacks of paralysis, and hypnagogic hallucinations</td>
<td></td>
</tr>
<tr>
<td>56. neuralgia</td>
<td>13.13</td>
<td>pain in a(n) ____________</td>
<td></td>
</tr>
<tr>
<td>57. neurasthenia</td>
<td>13.14</td>
<td>generalized body ____________ often associated with mental depression</td>
<td></td>
</tr>
<tr>
<td>58. neurectomy</td>
<td>13.65</td>
<td>the surgical ____________ of a nerve</td>
<td></td>
</tr>
<tr>
<td>59. neuritis</td>
<td>13.42</td>
<td>____________ of a nerve, usually caused by a bacterial or viral infection of the connective tissue coverings surrounding a nerve</td>
<td></td>
</tr>
<tr>
<td>60. neurologist</td>
<td>13.66</td>
<td>a(n) ____________ who specializes in neurology, the study and medical practice of the nervous system</td>
<td></td>
</tr>
<tr>
<td>61. neurology</td>
<td>13.66</td>
<td>the study and medical practice of the ____________ system</td>
<td></td>
</tr>
<tr>
<td>62. neurolysis</td>
<td>13.67</td>
<td>the procedure of ____________ a nerve by removing unwanted adhesions</td>
<td></td>
</tr>
<tr>
<td>63. neuroma</td>
<td>13.43</td>
<td>a(n) ____________ originating from nerve cells</td>
<td></td>
</tr>
<tr>
<td>64. neuropathy</td>
<td>13.44</td>
<td>a(n) ____________ affecting any part of the nervous system</td>
<td></td>
</tr>
<tr>
<td>65. neuroplasty</td>
<td>13.68</td>
<td>the surgical ____________ of a nerve</td>
<td></td>
</tr>
<tr>
<td>66. neurorrhaphy</td>
<td>13.69</td>
<td>the ____________ of a nerve</td>
<td></td>
</tr>
<tr>
<td>67. neurosis</td>
<td>13.83</td>
<td>an emotional disorder that involves a counterproductive way of dealing with ____________ stress</td>
<td></td>
</tr>
<tr>
<td>68. neurotomy</td>
<td>13.70</td>
<td>an incision into a(n) ____________</td>
<td></td>
</tr>
<tr>
<td>69. paranoia</td>
<td>13.84</td>
<td>an experience of persistent ____________ of persecution that results in mistrust and combativeness</td>
<td></td>
</tr>
<tr>
<td>70. paraplegia</td>
<td>13.45</td>
<td>muscle ____________ from the waist down</td>
<td></td>
</tr>
<tr>
<td>71. paresthesia</td>
<td>13.15</td>
<td>an abnormal sensation of ____________ and tingling</td>
<td></td>
</tr>
<tr>
<td>Key Term</td>
<td>Frame</td>
<td>Definition</td>
<td>Know It?</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>72. Parkinson disease</td>
<td>13.46</td>
<td>a chronic, degenerative disease of the brain characterized by ________________, rigidity, and shuffling gait</td>
<td>□</td>
</tr>
<tr>
<td>73. phobia</td>
<td>13.85</td>
<td>an irrational, obsessive ________________</td>
<td>□</td>
</tr>
<tr>
<td>74. poliomyelitis</td>
<td>13.47</td>
<td>a disease characterized by ________________ of the gray matter of the spinal cord, often resulting in paralysis</td>
<td>□</td>
</tr>
<tr>
<td>75. polyneuralgia</td>
<td>13.16</td>
<td>pain in _______________ nerves</td>
<td>□</td>
</tr>
<tr>
<td>76. polyneuritis</td>
<td>13.42</td>
<td>_______________ of many nerves at once</td>
<td>□</td>
</tr>
<tr>
<td>77. polyneuropathy</td>
<td>13.44</td>
<td>a disease affecting many parts of the _______________ system</td>
<td>□</td>
</tr>
<tr>
<td>78. positron emission</td>
<td>13.71</td>
<td>a computerized diagnostic procedure that involves a scan using an injected radioactive chemical to provide a map of blood _______________ within the body; useful for evaluating brain function</td>
<td>□</td>
</tr>
<tr>
<td>79. posttraumatic stress</td>
<td>13.86</td>
<td>a disorder caused by a severe mental strain or emotional _______________ that includes sleeplessness, anxiety, and paranoia</td>
<td>□</td>
</tr>
<tr>
<td>80. psychiatry</td>
<td>13.72</td>
<td>the branch of _______________ that addresses disorders of the brain resulting in mental and emotional disturbances</td>
<td>□</td>
</tr>
<tr>
<td>81. psychology</td>
<td>13.73</td>
<td>the study of _______________ behavior</td>
<td>□</td>
</tr>
<tr>
<td>82. psychopathy</td>
<td>13.87</td>
<td>a general term for a(n) _______________ or emotional disorder</td>
<td>□</td>
</tr>
<tr>
<td>83. psychosis</td>
<td>13.88</td>
<td>a disease characterized by a gross _______________ or disorganization of mental capacity; the most common form is schizophrenia</td>
<td>□</td>
</tr>
<tr>
<td>84. psychosomatic</td>
<td>13.89</td>
<td>pertaining to the influence of the _______________ over bodily functions, especially disease</td>
<td>□</td>
</tr>
<tr>
<td>85. psychotherapy</td>
<td>13.73</td>
<td>a technique used in psychology to treat _______________ and emotional issues</td>
<td>□</td>
</tr>
<tr>
<td>86. quadriplegia</td>
<td>13.45</td>
<td>paralysis from the _______________ down including all four limbs</td>
<td>□</td>
</tr>
<tr>
<td>Key Term</td>
<td>Frame</td>
<td>Definition</td>
<td>Know It?</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>87. rabies</td>
<td>13.48</td>
<td>an acute, often fatal, infection of the central nervous system caused by a(n)</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td></td>
<td>transmitted to humans by the bite of an infected animal</td>
<td></td>
</tr>
<tr>
<td>88. radicotomy</td>
<td>13.74</td>
<td>a surgical incision into a nerve</td>
<td>□</td>
</tr>
<tr>
<td>89. reflex testing</td>
<td>13.75</td>
<td>a series of diagnostic tests performed to observe the body’s response to</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td></td>
<td>___________ stimuli; includes deep tendon reflexes</td>
<td></td>
</tr>
<tr>
<td>90. schizophrenia</td>
<td>13.90</td>
<td>a form of psychosis characterized by delusions, ___________, and extensive</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td></td>
<td>withdrawal from people and the world</td>
<td></td>
</tr>
<tr>
<td>91. syncope</td>
<td>13.17</td>
<td>a temporary ___________ of consciousness</td>
<td>□</td>
</tr>
<tr>
<td>92. vagotomy</td>
<td>13.76</td>
<td>a surgical procedure in which several branches of the vagus nerve are</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td></td>
<td>by incision to reduce acid secretion in the stomach</td>
<td></td>
</tr>
<tr>
<td>93. ventriculitis</td>
<td>13.49</td>
<td>___________ of the ventricles of the brain; if it strikes an infant, it results in</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hydrocephalus</td>
<td></td>
</tr>
</tbody>
</table>
Crossword Puzzle

Directions: Fill in the crossword puzzle with the words missing from the sentences below. Match the number of the sentence to the boxes placed across or down the grid. If filled out correctly, the words will fit neatly into the puzzle.

ACROSS
6 The procedure of separating a nerve by removing unwanted adhesions is known as ___________.
8 In the procedure ___________, ultrasound technology is used to record brain structures in the search for abnormalities.
9 The Latin word that means “not in the mind,” __________, is an impairment of mental function characterized by memory loss, disorientation, and confusion.

DOWN
1 A disease characterized by the progressive atrophy of muscle caused by hardening of nervous tissue on the lateral columns of the spinal cord is called amyotrophic lateral ___________.
2 A sleep disorder characterized by sudden uncontrollable episodes of sleep, attacks of paralysis, and hypnagogic hallucinations is called ___________.
3 The condition of a stationary blood clot in an artery of the brain is known as cerebral ___________.
4 The most common form of pain management is the use of ___________, such as aspirin, ibuprofen, and acetaminophen.
5 ___________ is a series of involuntary muscular spasms caused by an uncoordinated excitation of motor neurons that triggers muscle contraction.
7 A nerve impulse begins when a nerve cell, or ___________, opens its membrane channels to sodium and potassium ions, resulting in a flow of these ions across the cell membrane.
CHAPTER 13
The Nervous System and Mental Health

Worksheet 1 Answers

Phonetic Spelling Challenge

1. Polyneuropathy
2. Rabies
3. Echoencephalography
4. Neuroplasty
5. Cerebral angiography
6. Lumbar puncture
7. Neurotomy
8. Psychiatrist
9. Encephalomalacia
10. Schizophrenia
11. Megalomania
12. Anesthesia
13. Radicotomy
14. Electroencephalography
15. Ganglionectomy
16. Dementia
17. Psychosis
18. Quadriplegia
19. Pyromania
20. Poliomyelitis

Spelling Challenge

1. Glioma
2. Hydrocephalus
3. Encephalitis
4. Alzheimer
5. Syncope
6. Aphasia
7. Cephalalgia
8. Paresthesia
9. Aneurysm
10. Meningocele
11. Poliomyelitis
12. Anesthesia
13. Neurectomy
14. Vagotomy
15. Analgesics

Abbreviation Matchup

1. MS
2. PET
3. CP
4. ALS
5. PD
6. EEG
7. ADD
8. DTR
9. ADHD
10. CVA

True/False

1. F
2. T
3. T
4. F
5. T
6. F
7. T
8. T
9. F
10. T
Fill in the Blank

11. Pyromania
12. psychosomatic
13. aphasia
14. radicotomy
15. analgesics
16. neuritis
17. monoplegia
18. myelitis
19. epilepsy
20. neuroma

Short Answer

21. A developmental disorder that varies in its severity with the patient, characterized by withdrawal from outward reality and impaired development in social conduct and communication.
22. A disease that involves the brain undergoing gradual deterioration, resulting in confusion, short-term memory loss, and restlessness.
23. The disease affects arteries supplying the brain. The vessels gradually close due to the accumulation of fatty plaques, reducing the flow of blood to the brain.
24. An emotional disorder of abnormally high psychomotor activity, which includes excitement, a rapid movement of ideas, unstable attention, sleeplessness, and confusion between reality and imagination.
25. Anxiety is the apprehension of danger, filling a person with fear over the future. An anxiety disorder occurs when this mental state dominates behavior. It is usually an acute response that includes restlessness, psychological tension, tachycardia, and shortness of breath.
Word Search

1. autism
2. dementia
3. lumbar
4. psychiatry
5. Rabies
6. encephalitis
7. cerebral
8. pain
9. Alzheimer
10. aneurysm
11. coma
12. meninges
13. neuropathy
14. autism
15. cerebrovascular
Dictation Report

Write each numbered term as you hear it, spelling each term correctly. This exercise will help you learn to hear, comprehend, visualize, and spell the new medical terms accurately.

The (1) nervous system connects our brain to all other parts of our body. It is made up of the (2) central nervous system and the (3) peripheral nervous system. A (4) neurologist is a physician who specializes in (5) neurology, or the care of people with disorders of the nervous system.

Many things can go wrong with the brain, resulting in neurological problems. The brain has electrical components that can misfire, causing recurrent seizures, including convulsions and temporary loss of consciousness, known as (6) epilepsy. The term epilepsy literally means “to be seized upon.” An (7) electroencephalogram measures the electrical components of the brain. A tumor can grow from cells of the nervous system called (8) neuroma. Infection can cause problems with the nervous system, creating diseases like (9) meningitis and (10) encephalitis. Nervous tissue can produce benign tumors, including (11) gliomas and (12) meningiomas. There can also be damage to the brain as in a (13) cerebrovascular accident, or stroke. A blow to the head can result in a (14) concussion. Any of these conditions could result in (15) coma or even death.

There are many procedures used to treat disorders of the nervous system. A procedure involving the use of a computer to interpret a series of images and construct from them a three-dimensional view of the brain is known as (16) computed tomography. A diagnostic procedure that reveals blood flow to the brain by x-ray photography is known as (17) cerebral angiography. In the frequently used diagnostic procedure (18) magnetic resonance imaging, powerful magnets are used to observe soft tissues in the body, including the brain. A (19) lumbar puncture aspirates (20) cerebrospinal fluid from the subarachnoid space in the lumbar region of the spinal cord.
The nervous system and brain are closely related to the functioning of the mind. Common mental disorders include (21) anxiety disorder, (22) attention deficit disorder, (23) mania, (24) bipolar disorder, (25) dyslexia, (26) dementia, (27) neurosis, (28) psychosis, (29) paranoia, (30) phobias, and (31) posttraumatic stress disorder.
CHAPTER 13
The Nervous System and Mental Health

Worksheet 3 Answers

Word Surgery

1. Encephalomalacia
   Definition: Softening of brain tissue
   Prefix and definition: en-, within, upon, on, over
   Combining form and definition: cephal/o, head
   Suffix and definition: -malacia, softening

2. Schizophrenia
   Definition: Psychosis characterized by inability to distinguish the real from the imaginary; split mind
   Combining form and definition: schiz/o, split; phren/o, mind
   Suffix and definition: -ia, condition

3. Paresthesia
   Definition: Condition of decreased or altered sensation such as numbness or tingling
   Prefix and definition: par-, alongside, abnormal
   Combining form and definition: esthesi/o, sensation
   Suffix and definition: -ia, condition

4. Psychosis
   Definition: A condition of the mind; generally used to characterize patients with mental health disorders that display abnormal behaviors and mental processes
   Combining form and definition: psych/o, mind
   Suffix and definition: -osis, condition

5. Analgesic
   Definition: A medication that is designed to relieve pain
   Prefix and definition: an-, without, absence of
   Combining form and definition: algesi/o, pain
   Suffix and definition: -ic, pertaining to

6. Diagnosis
   Definition: The identification of the disease process, technically means “through knowledge”
   Prefix and definition: dia-, through
   Combining form and definition: gnos/o, knowledge
   Suffix and definition: -is, related to

7. Neuroglioma
   Definition: A tumor made up of support cells of the nervous system
   Combining form and definition: neur/o, nerve; gli/o, glue
   Suffix and definition: -oma, tumor

8. Hydrocephalus
   Definition: Condition, usually congenital, where excessive fluid accumulates within the cranial vault putting pressure on the brain and increasing the size of the head
   Combining form and definition: hydr/o, water; cephal/o, head
   Suffix and definition: -us, pertaining to
9. Quadriplegia
   Definition: Paralysis of all four limbs
   Prefix and definition: quadri-, four
   Combining form and definition: pleg/o, paralysis
   Suffix and definition: -ia, condition

10. Poliomyelitis
    Definition: A viral disorder of the gray matter of the spinal cord that results in paralysis
    Combining form and definition: poli/o, gray; myel/o, spinal cord
    Suffix and definition: -itis, inflammation

11. Epidural
    Definition: Pertaining to the space between the outer layer of the meninges and the bony
        parameters of the cranium and spinal column
    Prefix and definition: epi-, upon, over, above, on top
    Combining form and definition: dur/o, hard
    Suffix and definition: -al, pertaining to

12. Meningocele
    Definition: A condition associated with spina bifida wherein a portion of the meninges
        herniates between vertebrae
    Combining form and definition: mening/o, membrane
    Suffix and definition: -cele, herniation, protrusion

13. Angiosclerosis
    Definition: Hardening of vessels, resulting in a loss of elasticity.
    Combining form and definition: angi/o, vessel; scler/o, hard
    Suffix and definition: -osis, condition

14. Polyneuralgia
    Definition: Pain associated with activation of multiple nerves
    Prefix and definition: poly-, excessive, over, many
    Combining form and definition: neur/o, nerve
    Suffix and definition: -algia, condition of pain

15. Narcolepsy
    Definition: Condition characterized by persistent sleepiness and the tendency to fall asleep
        frequently for short periods and often with the eyes open.
    Combining form and definition: narc/o, numb
    Suffix and definition: -lepsy, seizure
CHAPTER 13
The Nervous System and Mental Health

Worksheet 4 Answers

Case Study
1. hemiplegia
2. aphasia
3. hypertension
4. hypercholesterolemia
5. arteriosclerosis
6. arteriostenosis
7. atheroma
Chapter 13
The Nervous System and Mental Health

Worksheet 5 Answers

Medical Report Analysis

A. Nerve pain
B. Drug used to relieve pain
C. Headache
D. Abnormal sensation of numbness in the nerves
E. Inside the head
CHAPTER 13
The Nervous System and Mental Health

Worksheet 6 Answers

Which Term Does Not Belong?

1. C -phrenic is a suffix rather than a word root.
2. D Neuroglia make up the support structures of the nervous system and are not a sign or symptom.
3. B Cerebrum is the largest portion of the brain rather than a disease or condition.
4. D Epilepsy is a condition of the nervous system characterized by seizures rather than a treatment or condition.
5. E Psychiatry is the practice of treating disorders of the mind rather than a specific treatment or procedure.
CHAPTER 13
The Nervous System and Mental Health

Worksheet 7 Answers

Labeling

Central nervous system
Brain
Spinal cord

Peripheral nervous system
Peripheral nerves

Gray matter (neuron cell bodies)
White matter (axons)

Ganglion
Neuron cell bodies
Nerve
Connective tissue
Blood vessels
Axon
CHAPTER 13
The Nervous System and Mental Health

Worksheet 8 Answers

Key Terms Double Check

1. ability 36. anesthetic
2. brain 37. seizures
3. muscle 38. waves
4. pain 39. removal
5. surgical 40. neoplasm (or tumor)
6. anesthesia 41. fluid
7. depression 42. painful
8. anxiety 43. excessive
9. speak 44. spinal
10. attention 45. magnets
11. congenital 46. high
12. paralysis 47. tumor
13. high 48. meninges
14. headache 49. protrusion
15. inflammation 50. spinal cord
16. wall 51. deterioration
17. brain 52. spinal cord
18. close 53. photograph (or image)
19. clot 54. procedure
20. bleeding 55. sleep
21. paralysis 56. nerve
22. blood 57. fatigue
23. decreased 58. removal
24. brain 59. inflammation
25. shaking 60. physician
26. spasms 61. nervous
27. removal 62. separating
28. incision 63. tumor
29. loss 64. disease
30. reverses 65. repair
31. ultrasound 66. suturing
32. neurological 67. mental
33. electrical 68. nerve
34. brain 69. delusions
35. softening 70. paralysis
71. numbness
72. tremors
73. fear
74. inflammation
75. many
76. inflammation
77. nervous
78. flow
79. trauma
80. medicine
81. human (or mind, mental)
82. mental

83. distortion
84. mind
85. behavioral
86. neck
87. virus
88. root
89. touch
90. hallucinations
91. loss
92. severed
93. inflammation
CHAPTER 13
The Nervous System and Mental Health

Worksheet 9 Answers

Crossword Puzzle

Solution:

\[
\begin{array}{cccccc}
S & C & L & E & T & R \\
A & H & O & C & R & A \\
N & E & U & R & O & L & Y & S & I & S & O & C \\
A & N & O & I & N & N & O \\
L & M & S & V & E & L \\
G & B & U & U & E \\
E & C & H & O & E & N & C & P & H & A & L & O & G & R & A & P & H & Y \\
S & S & S & O & S \\
I & I & D & E & M & E & N & T & I & A & N & Y \\
C & S & O \\
S & N \\
\end{array}
\]