

Diseases of Faulty Cell Communication

Cell Communication Student Worksheet

Name _____

Date _____

Neural Communication

How do Nerve Cells Communicate?

<http://apu.sfn.org/content/Publications/BrainBackgrounders/communication.htm>

1. Nerve cells are also called _____.
2. Draw a diagram of a neuron. Label the dendrites, nucleus, cell body, axon, myelin sheath, axon terminal, and direction of impulse.
3. Describe how neurotransmitters relay messages from one neuron to another.

National Multiple Sclerosis Society <http://www.nmss.org/>

Choose the tab: **About MS** then follow the sequence: "What is MS" → "What causes MS" →...

4. Describe how Multiple Sclerosis (MS) occurs.

5. How can MS affect people physically?

Multiple Sclerosis Foundation <http://www.msfacts.org/msinfo.htm>
Select: "FAQ's"

6. How many people in the United States are diagnosed with MS every year?

7. Why is MS known as an "autoimmune" disease? What tissues are specifically targeted in the case of MS?

8. Can people with MS participate in normal society functions? Explain why or why not.

Hormonal Communication

Normal Regulation of Blood Glucose <http://www.endocrineweb.com/insulin.html>

9. What are the two hormones that regulate blood sugar (glucose)?
10. Which endocrine gland produces the two hormones?
11. When blood sugar is high, which hormone is secreted?
12. Which cells and/or tissues does this hormone target?
13. When blood sugar is low, which hormone is secreted?
14. Which cells and/or tissues does this hormone target?

What is Insulin? <http://www.endocrineweb.com/diabetes/2insulin.html>

15. Where is the pancreas located?
16. When insulin is released into the bloodstream, how does it signal to cells in the body to take up glucose?
17. Describe Type I diabetes.

18. Describe Type 2 diabetes.

19. Explain how insulin is manufactured currently.

Introduction to Diabetes <http://www.endocrineweb.com/diabetes/>

20. How many people in America are affected by diabetes?

21. What body tissues and/or organs can be affected in diabetes?