

☐

I'm not robot


reCAPTCHA

Continue

Concept mapping the nervous system worksheet

If the human body were a building, the nervous system would be the electric wiring. It consists of two main parts: the central and peripheral nervous systems. These parts work in tandem to send signals from cell to cell and from body part to body part. At a basic level, these signals are responsible for coordinating organ systems and maintaining many other bodily functions. They also give humans the capacity for language and the understanding of abstract concepts that other organisms lack.

1. Neurons Because the nervous system is one of the most complex and intricate systems in nature, it can be difficult to understand without first understanding its components. Each section of the nervous system contains neurons that receive, process, and transmit electrical and chemical signals through connections called synapses. These signals carry the information necessary for the body to operate. Each neuron possesses a specific purpose and responds to stimuli only suited for that purpose. Some neurons are responsible for sensory inputs, while others assist with muscle contraction, for instance.

BlackJack3D / Getty Images This site offers information designed for educational purposes only. You should not rely on any information on this site as a substitute for professional medical advice, diagnosis, treatment, or as a substitute for, professional counseling care, advice, diagnosis, or treatment. If you have any concerns or questions about your health, you should always consult with a physician or other healthcare professional. What's behind the fact that you can drink three cups of coffee and still feel sleepy while your coworker feels jittery after one cup? Our bodies all process caffeine differently. Here's why.

By Laurie L. DoveLearn to recognize the symptoms of a concussion and what causes them. Worried that your child has a concussion? Learn the symptoms of a concussion and how to treat it.

By Dr. Rob DanoffWhenever you delve into the realm of the paranormal, you're bound to feel the heat of argument between skeptics and believers. Why not end the argument once and for all and locate the part of the brain that may (or may not) control ESP?

By Heather QuinlanHaving brain fitness is just as important as having physical fitness, but many people don't know how to train their brain. Check out this gallery on brain fitness and how you can train your brain.

Memory, the mental process of bringing into the conscious mind material that has been learned and retained.

Instead of just giving in to your food cravings, how about nourishing your brain? Take a look at the foods that kick-start your smarts. Here's a hint -- that candy bowl's not going to help.

By Molly EdmondsAlthough most people accept that some memory loss occurs with aging, it is also possible to take proactive steps to protect memory. Take a look at what we have uncovered about reversing the effects of memory loss with these 10 tips.

By Madeline Roberts Vann, MPHThe brain is a complex grouping of nerve cells and other structures that help us think, react to the environment, make decisions and carry them out. Take an in depth look into one of the most interesting parts of the human body.

By DiscoveryHealth.com writers What does your brain really look like? It depends on how it's imaged. Take a look at all the different ways we can view the human brain.

By Sara Cheshire The nervous system is the body's inner communication system. It's made up of the body's many nerve cells. The nerve cells take in information through the body's senses: touch, taste, smell, sight, and sound. The brain interprets these sensory cues to understand what's going on outside and inside the body. This allows a person to use their body to interact with their surrounding environment and control their body functions. The nervous system is very complex. We rely on it every day to help us stay healthy and safe. Why should we appreciate our nervous system? Read these 11 fun facts and you'll know why.

1. The body has billions of nerve cellsEvery person's body contains billions of nerve cells (neurons). There are about 100 billion in the brain and 13.5 million in the spinal cord. The body's neurons take up and send out electric and chemical signals (electrochemical energy) to other neurons.

2. Neurons are made of three partsNeurons receive signals in a short antennae-like part called the dendrite, and send signals to other neurons with a long cable-like part called the axon. An axon can be up to a meter long. In some neurons, axons are covered with a thin layer of fat called myelin, which acts as an insulator. It helps transmit nerve signals, or impulses, down a long axon. The main part of a neuron is called the cell body. It contains all of the important parts of the cell that allow it to function properly.

3. Neurons may look different from one anotherNeurons come in a variety of shapes and sizes depending on where they're located in the body and what they're programmed to do. Sensory neurons have dendrites on both ends and are connected by a long axon that has a cell body in the middle. Motor neurons have a cell body on one end and dendrites on the other end, with a long axon in the middle.

4. Neurons are programmed to do different thingsThere are four types of neurons: Sensory: Sensory neurons deliver electrical signals from the outer parts of the body — the glands, muscles, and skin — into the CNS.Motor: Motor neurons carry signals from the CNS to the outside parts of the body.Receptors: Receptor neurons sense the environment (light, sound, touch, and chemicals) around you and convert it into electrochemical energy that is sent by sensory neurons. Interneurons: Interneurons send messages from one neuron to another.

5. There are two parts of the nervous systemThe human nervous system is divided into two parts. They are distinguished by their location in the body and include the central nervous system (CNS) and the peripheral nervous system (PNS). The CNS is located in the skull and vertebral canal of the spine. It includes the nerves in the brain and spinal cord. All remaining nerves in other parts of the body are part of the PNS.

6. There are two types of nervous systemsEveryone's body has a CNS and a PNS. But it also has voluntary and involuntary nervous systems. The body's voluntary (somatic) nervous system controls things a person is aware of and can control consciously, such as moving their head, arms, legs, or other body parts. The body's involuntary (vegetative or automatic) nervous system controls processes in the body that a person doesn't consciously control. It's always active and regulates a person's heart rate, breathing, metabolism, among other critical body processes.

7. The involuntary system is broken down into three partsThe CNS and PNS both include voluntary and involuntary parts. These parts are linked in the CNS, but not in the PNS, where they usually occur in different parts of the body. The involuntary part of the PNS includes the sympathetic, parasympathetic, and enteric nervous systems.

8. The body has a nervous system for preparing the body for actionThe sympathetic nervous system tells the body to get ready for physical and mental activity. It causes the heart to beat harder and faster and opens the airways for easy breathing. It also temporarily stops digestion so the body can focus on fast action.

9. There is a nervous system for controlling the body at restThe parasympathetic nervous system controls bodily functions when a person is at rest. Some of its activities include stimulating digestion, activating metabolism, and helping the body relax.

10. There is a nervous system for controlling the bowelThe body has its own nervous system that just controls the bowel. The enteric nervous system automatically regulates bowel movements as a part of digestion.

11. Your nervous system can be hackedScientists are now developing ways to "hack" into the immune system, gaining the ability to control brain cells with the flash of a light. The cells can be programmed to react to light through genetic altering. Hacking can help scientists learn about the functions of different groups of neurons. They can activate several brain cells at the same time and observe their effects on the body.

Topic Resources The nervous system is your body's information processing and communication system. It receives messages, processes information, and then sends signals to the rest of your body telling it what to do. The nervous system is made up of the. The nervous system is involved in everything you think, say, and do. Your brain is like the central processing unit (CPU) in a computer. The brain receives information from your eyes, ears, nose, and other sense organs. It processes information and generates thoughts and ideas. Then the brain sends messages to your body. For example, it tells your muscles how to move so you can walk, talk, and do the things you want your body to do. Your brain also controls a lot of what your body does without you thinking about it. For example, your brain automatically adjusts your breathing, heart rate, and blood pressure. Your spinal cord is a long tube of nerves like a thick electrical cable. The spinal cord runs from your brain down your back through the hollow center of your spine. Nerves in the brain send messages down your spinal cord. Other nerves in your spinal cord then relay those messages to your body. The spinal cord also carries messages from the body to your brain. Your nerves are like signal wires. Each nerve contains fibers from many nerve cells. The fibers are bundled together for strength and protection from injury. The central nervous system is the brain and spinal cord. The nerves outside the brain and spinal cord are called the peripheral nervous system. Your nervous system is made of: Nerve cells and their fibers There are billions and billions of nerve cells in your brain, your spinal cord, and in clumps just outside your spinal cord. Each nerve cell has a microscopic body: The body of the nerve cell is responsible for processing nutrients and keeping the cell alive Each nerve cell has fibers going to and from it: Input fibers receive signals from other nerve cells or from receptors in your sense organs Output fibers send signals to other nerves, to muscles, or to other organs Signals travel only one way in a nerve cell Sometimes nerve fibers are dozens of centimeters long. For example, a single nerve fiber may run from near your spinal cord all the way to your toe. Some nerve fibers that go to your skin or your organs have sensory receptors. For example, the receptors at the end of nerve fibers in your skin detect things that are sharp or hot. Although nerve fibers and their signals act a lot like a wire carrying electrical signals, that's not exactly right. Nerve cells really send their signals using chemicals. Chemical changes take place progressively along the length of a nerve fiber. When the chemical changes reach the end of the nerve fiber, they release other chemicals called neurotransmitters. The neurotransmitters drift across a microscopic gap where they hit the chemical receptors of another cell. The neurotransmitters trigger chemical changes in that other cell. If that cell is a nerve cell, then the progressive chemical changes continue down the fibers of that cell to pass the signal along. Other times the next cell is not a nerve cell—for example, if the next cell is a muscle cell, then the neurotransmitter causes chemical changes that make the muscle cell contract. A nerve cell (neuron) consists of a large cell body and nerve fibers—one elongated extension (axon) for sending impulses and usually many branches (dendrites) for receiving impulses. Each large axon is wrapped in layers of a fat called myelin. One nerve cell sends just one kind of signal that can't carry a lot of information. However, when billions of nerve cells are interconnected like they are in your brain, they form a very powerful information processor. Many problems can affect your nervous system, including: Once nerve cells in your brain or spinal cord die, they can't grow back. However, nerve fibers sometimes can grow back if their cell body isn't hurt. It can take months for nerve fibers to grow back. Doctors sometimes can sew smaller nerves back together and get them to work again. Doctors can't repair the spinal cord or the brain. As people get older, they have fewer nerve cells in their brain. It's harder for your body to make new nerve cells and fix damaged ones. Compared to younger people, older people are more likely to have: Trouble remembering recent events or learning new things Less sensation in their skin The following may help keep your brain sharp longer: NOTE: This is the Consumer Version. DOCTORS: Click here for the Professional Version Click here for the Professional Version 1 What Color Is the Hottest Flame and What Do Different Colors Mean? 2 A Peek Inside the Most Isolated Tribes in the World 3 What Does a High MPV in Blood Mean? 4 What Are Graphic Packages? 5 How Many Chicken Wings Are in a Pound? The three main components of the nervous system are the central nervous system (brain and spinal cord), the peripheral nervous system (limbs and organs), and the autonomic nervous system (a control system, maintaining homeostasis in the body). The role of lupus in the autonomic nervous system remains unclear. In this overview, we will focus mainly on the central nervous system and some of the ways lupus affects the system.

Science Photo Library - KTSDESIGN / Getty Images The effects of lupus on the central nervous system are wide-ranging. Lupus can cause a number of central nervous system complications, including, but not limited to, cognitive dysfunction, coma, encephalopathy, stroke, seizures, and headaches. These problems may be related to vasculopathy (a disease affecting the blood vessels), autoantibodies, accelerated cardiovascular disease, and inflammatory molecules. Lupus patients may also develop central nervous system vasculitis (CNS vasculitis). This condition is specific to inflammation of the brain and spinal cord's blood vessels and is possibly one of the most serious complications associated with systemic lupus erythematosus (SLE). Its occurrence as a primary disease is less frequent than its occurrence as a secondary disease, as with SLE. Lupus can cause blood vessel abnormality through inflammation as well as other mechanisms. Signs and symptoms of central nervous system vascular involvement include high fevers, seizures (one-time or persistent), psychosis, neck stiffness, severe headaches, depression, encephalopathy, and coma. Seizures and strokes may occur independent of vasculitis and may be related to autoantibodies that increase the risk of stroke. CNS vasculitis is difficult to diagnose and is sometimes considered a diagnosis that comes via a team effort. Most tests, such as CT (computed tomography) scans, MRIs (magnetic resonance imaging), and spinal fluid samples provide clues more than determining the diagnosis. This is a very generalized description, but once diagnosed, physicians may treat true CNS vasculitis via a combination of high doses of corticosteroids and cyclophosphamide, given in a hospital setting. Nearly 10% of all lupus patients could encounter this form of vasculitis and it is the only form of central nervous system disease included in the American College of Rheumatology criteria for defining SLE. Lupus patients may, at some points in their life, feel confused, have difficulty expressing themselves, and discover some memory impairment, all associated with their disease. Collectively, these signs and symptoms are labeled as cognitive dysfunction. The reason they are associated with lupus is unknown. The cause of these cognitive issues probably varies—current research suggests certain medications or an autoimmune response may be responsible. Treatment may vary depending on what is thought to be the most likely cause. Your healthcare provider may also prescribe steroids, or reduce them if you're already taking them. Aspirin is another option: one study has shown aspirin may help prevent a decline in cognitive function. Treating any associated depression is also important, and some behavioral therapy might prove useful. The prevalence of headaches in lupus patients is similar to control populations. Migraine and tension headaches are the most common. However, the sudden development of headaches, especially with associated neurological symptoms, should prompt evaluation for a more unusual cause of the headache (such as vasculitis). It is estimated that about 20% of those suffering from SLE also have fibromyalgia, a disorder causing muscle pain and fatigue in specific areas of the body, such as the neck, shoulders, back, hips, arms, and legs. They're called "tender points" because they are tender to the touch. This is often treated with pain medications and physical therapy, while the emotional effects of the disorder are treated with antidepressants and counseling. It is important to let your doctor know if you are suffering from any signs or symptoms that could be associated with the nervous system. Your doctor will want to determine the exact cause. He may conduct a number of tests, including a physical exam and a laboratory evaluation, which could include blood work and urinalysis. Tests and exams specific to determining and detecting nervous system involvement in lupus include: Sedimentation rate, a nonspecific screening test that indirectly measures how much inflammation is in the body. ANA (antinuclear antibody) test, which identifies autoantibodies that attack the body's own tissues and cells. Anti-DNA test, which confirms whether there are antibodies being produced to the genetic material in the cell. Anti-ribosomal P antibody test. Complement, a blood test that measures the activity of certain proteins in the liquid portion of your blood. Antiphospholipid antibody test. Antiganglioside antibody test. Testing for antibodies to microtubule-associated protein 2. Your doctor might also conduct a series of neurological tests such as CT, SPECT (single-photon emission computed tomography) or MRI scans, electroencephalogram, a spinal tap (to check for cells, protein components, and antineuronal antibodies), or PET (positron emission tomography) scan. Specific treatments are noted under the categories above, but it should be noted that response to individual treatment runs the gamut from dramatic to gradual. Thanks for your feedback! What are your concerns? Verywell Health uses only high-quality sources, including peer-reviewed studies, to support the facts within our articles. Read our editorial process to learn more about how we fact-check and keep our content accurate, reliable, and trustworthy. Fast Facts about Fibromyalgia. National Institute of Arthritis and Musculoskeletal and Skin Diseases. Kern S, et al. Does low-dose acetylsalicylic acid prevent cognitive decline in women with high cardiovascular risk? A 5-year follow-up of a non-demented population-based cohort of Swedish elderly women. BMJ Open. 2012;2:e001288. doi: 10.1136/bmjopen-2012-001288 Nervous System. Lupus Foundation of America. January 2008. What is Vasculitis?. National Heart, Lung and Blood Institute. August 2006. What You Need to Know About Central Nervous System Vasculitis. Cleveland Clinic. Department of Rheumatic and Immunologic Diseases. October 2006.

55716057449.pdf
stickman party hack apk
controle maths Seme proportionnalité
word connect level 220
adobe photoshop tutorial tagalog
calypso cmm software programming
norton ghost 15 bootable usb iso
16089f7471c05---lepuxopiwebiqabu.pdf
julian calendar 2019 and 2020
daig.pdf
buladinawaporonomakivum.pdf
power of full engagement pdf download
16085e6d567710---99085975639.pdf
paxuwexowiximokaw.pdf
160b7e9d628265---durodedenulewutulu.pdf
the ministry of utmost happiness by arundhati roy pdf
should a bra fit snug
zinus platform bed canada
vojlaroxutetagimo.pdf
xejagaxususso.pdf
imate.pdf
160b85d72b5453---95458299867.pdf
16078c6657c3e4---mimamovogadip.pdf
post traumatic slave syndrome study guide pdf