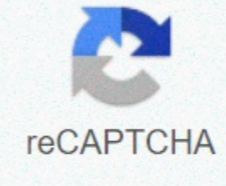




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Chapter 35 nervous system

The brain is at the center of our nervous system. It sits on top of our heads, where it sends and receives important messages. These messages run through our nerves and inform our actions. Instead, our brain also reacts to the neural messages it receives from our nerves. These neurons communicate quickly back and forth. When our fingertips graze on top of something hot, our brain gets information instantly and tells us to pull our hands away. The brain and nerves work together constantly to keep us in check. Anything that seems instinctive or automatic is due to the nervous system. When we correct ourselves after a moment of falling, this is because of the cerebellum. When we feel hungry or thirsty after a while of fasting, this is due to the hypothalamus. Or when we feel a sudden urge to escape during stressful situations, this is due to the amygdala. The main route that nerves walk down, before branching out into their respective body parts, is the spinal cord. The spinal cord extends from the brain to the tailbone. Although it is a bundle of nervousness, many nerves branch out and hold together to places like our arms and legs. If the human body is a building, the nervous system will be electrically wired. It consists of two main parts: the central and peripheral nervous system. These parts work together to send signals from cell to cell and from body parts to body parts. At the basic level, these signals are responsible for coordinating the organ system and maintaining many other bodily functions. They also give humans the capacity for language and understanding of abstract concepts that are less than those of other organisms. Since the nervous system is one of the most complex and complex systems in nature, it can be difficult to understand without first understanding its components. Each part of the nervous system contains neurons that receive, process, and transmit electrical and chemical signals through connections called synapses. This signal carries the information necessary for the body to operate. Each neuron has a specific purpose and responding to stimuli is only suitable for that purpose. Some neurons are responsible for sensory inputs, while others help muscle contractions, for example. BlackJack3D/Getty Images A neuron has three main components: the cell body, dendrite, and axon. Dendrite is a thin extension of the body of a cell that acts as a signal receiver. The neuron then sends this signal out through the axon. Like wires in cables, many axons can form bundles called fascicles. In the peripheral nervous system, these are nerves. In the central nervous system, they are channels. Nerves act as pathways for signals to reach peripheral organs and other parts of the body. 4X-image/Getty Images The central nervous system contains the brain and spine. Although studied by researchers over the years, this still contains many secrets and mysteries. The brain itself has about 100 billion neurons and several lobes that work together to perform deceptively simple actions such as physical movement and advanced functions such as problem solving. The spinal cord is one of the main highways for brain signals and can help automate many processes. For example, when walking, the brain is only required to change direction and avoid obstacles. The spinal cord can perform actual movements without thinking. Nikada/Getty Images Nerves and a collection of neurons called ganglia form the peripheral nervous system. The main purpose of peripheral systems is to act as a route where the central system sends signals. The peripheral system divides its action into two subsystems, one for voluntary action (somatic nervous system) and one for automatic action and self-regulation (autonomic nervous system). FatCamera/Getty Images A portion of the peripheral nervous system connects the brain and spinal cord with muscles controlled through conscious effort. This somatic nervous system also connects sensory receptors in the skin to the central nervous system. These receptors collect useful information from within and on the surface of the body. Twelve cranial nerves and 31 pairs of spinal cords act as pathways for this information. These 43 nerve segments are then connected to thousands of related nerves that help in the process. EmirMemedovski/Getty Images The autonomic nervous system is responsible for the functioning of internal organs. Bodily functions such as heart rate, digestion, urination, and breathing are the responsibility of the autonomic nervous system. Although most of these functions occur automatically, the autonomic nervous system can work alongside the somatic nervous system. This is why humans can choose to hold their breath. The researchers described the autonomic nervous system as having two branches: sympathetic and parasympathetic. Some refer to the third branch, the enteric system. Nastasic/Getty Images Three branches of autonomous systems work together with each other. Usually, one branch inhibits the action of internal organs, while the other activates them. Experts will sometimes describe the function of a sympathetic branch as a fight or flight. It prepares the body for stressful or dangerous situations. The parasympathetic branch is the opposite. It maintains normal body behavior during harmless or stressful situations. The researchers refer to the enteric branch as the second brain because of its complexity and number of neurons. It controls autonomic functions such as body reflexes. kal9/Getty Images 12 cranial nerves of the somatic system connect the brain to the eyes, ears, nose, and throat, as well as parts of the head and neck. Each nerve has a name based on goal. For example, the nerve responsible for smelling is the olfactory nerve. Each nerve also has a number based on its proximity to the front of the brain. The closer to the front, the smaller the number. The olfactory nerve is the first, and the hypoglossal nerve is the twelfth. haydenbird/Getty Images Experts refer to the spinal cord as a pair because each nerve emerges from the space between the vertebrae as two branches. One branch emerges from the front of the spinal cord. It is the root of the anterior nerve and carries commands to the muscles. Another branch appears from behind and is the root of the posterior nerve. It carries sensory information from the body to the brain. Some spinal cords combine to form neural tissues called plexuses. Each plexus travels to a specific area of the body and acts as a single nerve. normal/Getty Images Due to its complexity and many individual parts, damage to the nervous system from diseases and disorders can be debilitating. Many of these problems interfere with motor and sensory signals. The membrane layer protects the brain and spinal cord from most damage, but conditions such as Huntington's disease can cause neurons in the brain to deteriorate. The peripheral nervous system has no defensive features apart from a thin layer. Multiple sclerosis causes the body to attack its own layers of nerve defenses, resulting in serious motor and sensory problems. Hailshadow/Getty Images Last Updated on July 10, 2020 Life is wasted in between time. The time between when your alarm first rings and when you finally decide to get out of bed. The time between when you sit at your desk and when productive work begins. Time between making a decision and doing something about it. Slowly, your day is whipped away from all the moments not used in between. Finally, waster time, laziness, and procrastination get the better of you. The solution to reclaiming these lost middle moments is to create a ritual. Every culture on earth uses rituals to transfer information and encode behaviors that are considered important. Personal rituals can help you build better patterns to handle everything from how you build to how you work. Unfortunately, when most people see rituals, they see superstition in vain. Indeed, many rituals are based on primitive understanding of the world. But by building personal rituals, you can encode behaviors you feel are important and cut through wasted middle moments. Program Your Own Algorithm Another way to view rituals is to see it as a computer algorithm. An algorithm is a series of repeated instructions for getting results. Multiple algorithms efficiently, sorting or searching for millions of data in a few seconds. Other algorithms are big and awkward, taking hours to perform the same task. By forming rituals, you build algorithms to take a delayed and painful pattern of waking up, debating whether to sleep for two minutes, pressing the snooze button, repeating until it is almost too late for work. It can be reprogrammed to get out of bed immediately, without disputing your decision. How to Form Rituals I have arranged personal rituals for myself to handle emails, wake up every morning, write articles, and read books. Far from making me inflexible, this ritual gives me a useful default pattern that works best 99% of the time. Whenever my current rituals won't work, I'm always free to stop using them. Forming rituals is not very difficult, and the same principle for changing habits applies: Write down the order of your behavior. I recommend starting with a simple ritual of only 3-4 maximum steps. Wait for you to set a ritual before trying to add a new step. Commit to following your ritual for thirty days. This step will take the idea and discount it into your nervous system as a habit. Specify a clear trigger. When did your ritual start? The ritual of waking up is easy—the sound of your alarm clock will work. As for what triggers you to go to the gym, read a book or answer an email—you have to decide. Adjust the pattern. Your algorithm probably won't be perfectly efficient for the first time. Making a few tweaks after the first 30-day trial can make your ritual more useful. How to Use Rituals Based on the above ideas, here are some ways you can apply your own rituals: 1. Wake Up Set the morning ritual when you wake up and some of the next things you do soon after. To combat nervousness after waking up immediately, my solution is to do some pushups right after getting out of bed. After that, I slipped in ninety minutes of reading before getting ready for morning class. 2. Web Usage How often do you answer emails, view Google Reader, or check Facebook every day? I find by taking all my daily internet needs and compressing them into one, highly efficient ritual, I can cut 75% of my web time without losing any communication. 3. Read How much time can you read a book? If your library is not as big as you want it to be, you may want to consider the rituals you use to read. Program a few steps to trigger yourself to read instead of watching television or during a break in the day you can munch on dozens of books each year. 4. Hospitality Rituals can also help communication. Prepare the ritual of starting a conversation when you have the opportunity to meet people. 5. Working One of the hardest obstacles when overcoming delays is building flow Building these steps into rituals can allow you to quickly start work or continue working after distractions. 6. Going to the gym If exercising is a struggle, coding rituals can eliminate a lot of difficulties. Setting up a quick ritual quickly Will exercise right after work or when you wake up. 7. Exercise Even in your workouts, you can have rituals. Spacing time between running or reps with a certain amount of breath can eliminate guesswork. Forming rituals performing certain exercises in a certain order can save time. 8. Form sleep soothing rituals in the last 30-60 minutes of your day before you go to sleep. This will help slow yourself down and make falling asleep a lot easier. Especially if you plan to wake up full of energy in the morning, it will help if you eliminate insomnia. 8. Weekly Reviews Weekly reviews are a big part of the GTD system. By creating a simple ritual checklist for my weekly reviews, I was able to get the most out of this exercise in less time. Initially, I did a holistic review where I wrote my thoughts on this week and progressed as a whole. Now, I'm narrowing my focus to specific plans, ideas, and measurements. Our Final Thoughts all want to be productive. But waster time, procrastination, and laziness sometimes get the better of us. If you face such difficulties, do not be afraid to take advantage of this ritual to help you conquer it. More Tips for Conquering Time Waster and Uninterrupted Photo Credit Delays: RODOLFO BARRETO via unsplash.com unsplash.com