The Nervous System

by Pat Cook 5/29/15

The nervous system is the master control and communication system of the body. It controls everything you do, including breathing, walking, thinking, and feeling. It is made up of the brain, the spinal cord and the nerves of the body. The nervous system works along with the endocrine system to regulate body functions.

The nervous system has 3 overlapping functions:
  1-It uses sensory receptors to monitor changes occurring both inside and outside the body.
  2-It processes and interprets the sensory input and decides what should be done at each moment.
  3-It then effects a response by activating muscles or glands.

The nervous system is divided into two distinct parts: the central nervous system-the brain and spinal cord (which act as the integrating and command centers of the nervous system); and b:the peripheral nervous system -the nerves extending from the brain and spinal cord (which serve as communication lines).

In addition to the brain and spinal cord, there are organs that are involved in information processing. The eyes, ears, taste, smell, and sensory receptors located in the skin, joints, muscles and other parts of the body which all help send input to the brain for processing. The nerves that input information from areas we control are part of the somatic nervous system. Nerves that regulate our body without our being aware are part of the autonomic nervous system.

There are 2 divisions of the autonomic nervous system: The sympathetic division (our "fight-or-flight" system), and the parasympathetic division (our "resting-and-digesting" system).

The sympathetic division can accelerate heart rate, widen bronchial passages, decrease movement of the large intestine, constrict blood vessels, increase peristalsis in the esophagus, cause pupil dilation, goose bumps and sweating, and raise blood pressure.

The parasympathetic division activities include keeping blood pressure and heart rates at low normal levels, the digestive tract actively digesting food, the skin warm, the eye pupils constricted and the lenses of the eye set for close vision.

Disorders of the nervous system may involve the following:

- **Vascular disorders**, such as stroke, transient ischemic attack (TIA), subarachnoid hemorrhage, subdural hemorrhage and hematoma, and extradural hemorrhage
- **Infections**, such as meningitis, encephalitis, polio, and epidural abscess
- **Structural disorders**, such as brain or Spinal cord injury, Bell's palsy, cervical spondylosis, carpal tunnel syndrome, brain or Spinal cord tumors, peripheral neuropathy, and Guillain-Barré syndrome
- **Functional disorders**, such as headache, epilepsy, dizziness, and neuralgia
- **Degeneration**, such as Parkinson's disease, multiple sclerosis, amyotrophic lateral sclerosis (ALS), Huntington's chorea, and Alzheimer's disease

Our nervous system is one of the most important systems of our body. We need to be sure to support and maintain it. Here are some suggestions:

**Ensure optimal nutrition**

Nutrition has an effect on brain cell development and proper brain function. It determines proper formation of nerve cells in the brain to facilitate memory formation and learning. Vitamin D helps to guide the behavior of
brain stem cells in rats, according to a study published in the "International Journal of Developmental Neuroscience"

nervous system functions also rely on myelin-which surrounds and insulates nerve fibers. It is made up of proteins and fats and increases the rate at which nerves transmit signals. Many nutrients, including copper and vitamin B-12, contribute to the myelin sheath, and are important to nervous system function.

A deficiency of tryptophan (a component of protein), vitamins B-6, B-12, B-1, B-3, B-5 and C may impede your body's ability to synthesize neurotransmitters, and interfere with communication in the nervous system.

Vitamin B-12 deficiency includes difficulty in thinking and remembering, panic attacks, weakness, loss of balance, numbness in the hands and feet, and agitated depression. Vitamin B-12 is best absorbed from animal sources.

The minerals Sodium and Potassium both contribute to making up the electrochemical signals that transmit nerve impulses.

Proteins and amino acids produce most of the essential chemical substances in the brain and CNS. It is very important to ensure that a developing fetus, newborns and young children have an adequate supply of amino acids, which are derived from proteins.

**Boron**
Boron supplementation has been reported to improve balance, memory and cognition.

**Vitamin K**
Dr Weston Price found that healthy traditional peoples were eating foods containing fat-soluble vitamins, vitamins A and D; vital to health because they act as catalysts to mineral absorption and protein utilization. Without them, we cannot absorb minerals, no matter how abundant they may be in our food. Dr. Price discovered an additional fat-soluble nutrient, which he labeled Activator X, that is present in fish livers and shellfish, and organ meats and butter from cows eating rapidly growing green grass in the Spring and Fall. All primitive groups had a source of Activator X, now thought to be vitamin K, in their diets.

Saturated fats are required for the nervous system to function properly, and over half the fat in the brain is saturated. Saturated fats also help suppress inflammation. Saturated animal fats carry the vital fat-soluble vitamins A, D and K2, which we need in large amounts to be healthy.

**Bone Broth**
Bone Broth contains the full spectrum of minerals which are easily absorbed. The minerals dissolved in broth are essential for proper nerve function. The fats found in the broth are also essential to nerve health as the myelin sheath is made up of these fats. A hormone produced in bones, known as osteocalcin, has been proven to have a direct effect on brain function, improving memory and mood.

**Benefits of eating Liver**
When sourced from healthy, grass fed cows, liver is loaded with a wide spectrum of vitamins, minerals, proteins and fats that are difficult to obtain anywhere else. It is particularly rich in the essential fatty acids EPA, DHA and AA, as well as vitamin B12.

It is an excellent source of protein, contains all of the fat soluble vitamins A, D E & K, is the most concentrated source of vitamin A, has all the B vitamins, is one of the best sources of natural Folic Acid- a B vitamin, is a highly usable form of iron, has many trace elements such as copper, zinc and chromium, has CoQ10, and is a good source of Purines-a nitrogen containing compound that serves as a precursor for DNA and RNA.

Liver is extremely rich in biotin and is even a decent source of vitamin C.
Desiccated liver does not supply fat-soluble vitamins or essential fatty acids.

**Cod Liver Oil**
Provides vitamins A and D and DHA, but does not provide B vitamins or iron.

Supplement fatty acids in small amounts. Avoid vegetable oils and excessive supplementation with fish oils and instead, obtain essential fatty acids from liver, muscle meat, butter, occasional fatty fish and very small amounts of high-vitamin cod liver oil.

**Modalities that Support and Maintain the Nervous System**

**Foot Zone therapy**
Foot Zone therapy uses the feet’s natural healing intelligence to establish balance, release tension, improve circulation, increase energy, and create a state of balance.

**Jin Shin Jyutsu**
Jin Shin Jyutsu is an energy healing technique that utilizes the same principles of Eastern medicine as acupressure, except that little or no pressure is applied. It is based on the premise that energy flows through our bodies along certain pathways, and when that energy is blocked, we experience disharmony, including pain. It is practiced by placing the fingertips (over clothing) on designated safety energy locks, to harmonize and restore the energy flow. This facilitates the reduction of tension and stress, which accumulate through normal daily living. Clients also learn how to use gentle touch in simple “holds” on their own body to induce a deep sense of serenity and reduce stress and pain-related symptoms.

**Herbs**
Herbal treatment is based on the use of plants or plant extracts that may be eaten or applied to the skin. It is taken in the form of extracts, tinctures, capsules and tablets as well as teas and ointments.

Here are some herbs that help the nervous system:

- **Scullcap**: Calms the nervous system without narcotic properties, quiets the person & often brings about natural sleep.
- **Black Cohosh**: Works directly on and calms the nervous system. soothes local pain, used as a tonic for the central nervous system and is regarded as a nervine. It is an excellent, safe sedative. It is reported to be good for medulla oblongata damage, caused by hallucinogenic drugs. relieves or prevents spasms, is used for epilepsy. **Caution**: not to be taken during early pregnancy. It can be used for final weeks of pregnancy, but only to ease and or induce labor.
- **Cramp Bark**: Relieves muscle tension and spasms, recommended for convulsions and spasms, antispasmodic for asthma and hysteria.
- **Lady's Slipper**: A good tonic for the exhausted nervous system, has a sedative effect, beneficial nervine calming action, reduces the problems with twitching muscles, crawling skin and other nervous conditions.
- **Chamomile**: **Caution**: may cause allergic reactions in persons sensitive to Ragweed or Chrysanthemum. Helps one to relax, one of the finest nervine herbs that there is, soothing tonic for the nerves, remedy for nightmares.
- **Mistletoe**: Avoid during pregnancy-can cause uterine contractions-quiet, soothe, and tone the nerves and lessen cerebral excitement.
- **Peppermint**: Good for increases the functions of respiration.
- **Queen of the meadow/Gravel root**: Is said to influence the whole sympathetic nervous system.
- **Rosemary**: Used to calm and soothe irritated nerves and calm strenuous anxiety, counteracts depression, is a specific nerve combinations that eases neuralgia, neuritis, tendinitis and muscle pain, will help soothe the nerves and strengthen the nervous system.
St Johns Wort - Relieves pain, has a sedative effect, treatment of neuralgia, anxiety and nervous tension, for treatment over the spine for relief of nervous diseases related to the spine, sciatica, neuralgia, rheumatic pains, chronic fatigue syndrome, mental burn out, calms the nerves.

Wild Lettuce - Often used to induce sleep and treat severe nervous disorders, calms restlessness, anxiety, sedative and hypnotic, the leaves contain sedative properties that act like morphine, only molder and without the addiction.

Wood Betony - Is good for nervous disorders, calming to the nerves.

Valerian - Has been used for many centuries to calm all kinds of nervous disorders, is a primary sedative when sleep disorders are the result of anxiety, nervousness, exhaustion, headache or hysteria, has an influence on the cerebrospinal system and is employed as a sedative of the primary nerve centers for affections such as St Vitus Dance, nervous unrest, neuralgia pain, epileptic fits, hysteria, restlessness and wakefulness, helps addicts sleep easily, relax and mellow out, calms the nerves without the side effects of comparable drugs, a proven sedative, improves coordination, anti-spasmodic and equalizing, works to calm the nerves and relieves pain ad spasms, decreases anxiety and aggression and aids in insomnia.

Homeopathics

Homeopathic remedies are a system of treatment based on three principles:

Like Cures Like-whatever causes the symptoms in full form would be the remedy in homeopathic form

Minimal Dose-the remedy is taken in an extremely dilute form: normally one part to around 1 trillion parts water

The Single Remedy-Only one remedy is taken at a time

When the correct remedy is taken it is extremely effective, rapid and permanent. It is completely safe and there are no side effects. It works in harmony with your immune system and non addictive.

Here are some homeopathics that support the nervous system.

Silicea Terra-Silica - Used for nervous system problems.

Citrullus Colocynthis-Colocynthis - Used for colicky or neuralgic pain caused by suppressed anger.

Gelsemium Sempervirens-Gelsemium - Mainly affects the brain and Spinal cord, the motor nerve, nervous disorders, such as MS.

Hypericum Perforatum-Hypericum - Used for shooting nerve pain and nerve injuries, injuries to any part of the body with a high concentration of nerve endings, effective for concussion, acts on spinal nerves, severe back pain that travels up or down the spine, nerve pain in the rectum.

Aethusa Cynapium-Aethusa - Used for convulsions, concentration.

Avena Sativa-Avena - Used mainly as a tincture to strengthen the nerves, in nervous exhaustion or worry and anxiety.

Causticum Hahnemanni-Cauticum - Mainly used for weakness or paralysis of the nerves and muscles in the bladder and right side of the face. Raw burning pain is characteristic.

Datura Stramonium-Stramonium - The main use is for disorders of the nervous system with fears and muscle spasms. Recurrent twitching and jerking, restless legs, epilepsy, meningitis, and strokes.

Delphinium Staphysagria-Staphysagria - Most often used for complaints involving the nerves, neuralgia, teething.

Kali Bromatum-Kali Brom - Used for epilepsy and skin complaints.

Magnesia Phosphorica-Mag Phos - Used for complaints that affect the nerves and muscles, neuralgic pain, a constricting sensation.
**Essential Oils**

Essential oils are the volatile aromatic compounds that are found in the seeds, bark, stems, roots, flowers, and other parts of plants. They can be inhaled or applied topically as single oils, blends, or within a carrier.

Here are some essential oils that support the nervous system:

- **Peppermint**: Anti-inflammatory to the nerves, has antispasmodic properties, may help with fatigue, hysteria, elevate and open the sensory system, it is purifying and stimulating to the conscious mind and may aid with memory and mental performance.
- **Basil**: Anti-inflammatory and antispasmodic properties, stimulates the adrenal cortex and nerves, uplifting—may be used for alertness, anxiety, concentration, nervous depression, headaches, poor memory, helps one maintain an open mind and increases clarity of thought.
- **Black Pepper**: Antispasmodic, stimulates nervous system, increases energy.
- **Lavender**: Balances the body, antispasmodic and analgesic properties, helps with inflammation and pain, has calming and sedative properties, relieves mental stress, found to lower sympathetic nerve activity while elevating parasympathetic nerve activity.
- **Lemon**: Promotes health, healing, and energy.
- **Grapefruit**: Calming and sedative properties, helps with fatigue and stress, its balancing and uplifting to the mind and may reduce anxiety.
- **Frankincense**: Has sedative properties, has anti-inflammatory properties, soothing to the skin and nerves, may help promote a positive attitude.
- **Geranium**: For neuralgia, regenerating nerves.
- **Roman Chamomile**: Calms and promotes nerve health, restless legs reduces irritability and minimizes nervousness in children. Calming and relaxing. It eliminates some of the emotional charge of anxiety, irritability and nervousness. Soothes and clears the mind.
- **Rosemary**: Used for nervous exhaustion, palpitations, stress related illness. Stimulates memory and opens the conscious mind.
- **Sandalwood**: Relieve symptoms associated with the sciatic nerves. Depression, nerves, nervous tension. Calms, harmonizes and balances the emotions. Helps enhance meditation.
- **Vetiver**: Antispasmodic, calming grounding, sedates the nervous system. Helps anxiety, depression, insomnia, nervousness and stress. Inhaled it relieves stress, helps people recover from emotional traumas and shock. Natural tranquilizer.

**Flower Essences**

Flower essences are herbal infusions or decoctions made from the flowering part of a plant. They address emotional and mental aspects of wellness.

Here are some flower essences that support the nervous system:

- **Agrimony**: Appear care-free and humorous in order to mask anxieties and unhappiness.
- **Chamomile**: Emotional tension, particularly in stomach and solar plexus region, to stabilize emotions.
- **Cosmos**: Nervous speech patterns which are too rapid, speaking which cannot keep pace with or adequately access higher thought, inability to focus-integration of thinking and speech.
- **Elm**: Feeling overwhelmed and depressed, don't feel that you can do it all.
- **Filaree**: Letting go of worries and anxieties that tend to limit one's free participation in life.
- **Five-Flower Formula, Rescue Remedy**: Immediate calm in accidents of life-threatening situations.
- **Garlic**: Release of nervous fears and insecurities.
- **Gorse**: Feeling extreme hopelessness and despair.
- **Hornbeam**: Depression when facing the tasks of daily life, mental weariness.
- **Impatiens**: Easily irritated and impatient, think quickly and are energetic, but tense.
- **Indian Pink**: Maintaining centered attitude amidst confusion.
- **Lady's Slipper**: Prone to nervous idiosyncrasies, inability to focus and harness spiritual forces and express them in one's body and work.
- **Lavender**: Soothing frayed or over-stimulated nerves.
- **Milkweed**: Deeply depressed state.
- **Mimulus**: Calming when nervous, fretful, or overly anxious about events of daily life.
Morning Glory - nervous problems from over-stimulation or chaotic lifestyle.
Mustard - When you feel depressed for no reason.
Nicotiana - Using tobacco addiction to calm nerves.
Olive - Mentally or physically exhausted.
Peppermint - Greater mental attention and wakefulness.
Pink Yarrow - Absorbing emotional qualities of others.
Rabbitbrush - Mental flexibility and alertness.
Red Chestnut - Releasing worry or over concern for others.
Red Clover - Brings calm to situations of panic and group hysteria.
Rock Rose - Frozen fear, terror.
Rosemary - Poor memory.
Star of Bethlehem - To soothe and harmonize the effects of shock or trauma.
Vervain - Frayed nerves from over-striving, minds that race ahead of events.
White Chestnut - Constant over-activity of the mind.

Stress
When a person is stressed the Sympathetic nervous system generates the "fight or flight response" which means the body shifts all of its energy resources toward fighting off a life threat or fleeing from an enemy. Adrenal glands release the hormones adrenalin and cortisol. This causes the heart to beat faster, respiration rate to increase, blood vessels in the arms and legs to dilate, digestive processes to change and glucose levels in the blood to increase to deal with the emergency. Chronic stress can result in a drain on the body. As the Sympathetic nervous system continues to trigger physical reactions it causes chronically tense muscles, increased heart rate, elevated blood pressure, shallow breathing, nausea, butterflies and a change in the bowels. This is all caused by the nervous system's constant reaction to feeling threatened.

Here are some Lifestyle ideas to combat Stress reactions:

Meditation
Meditation is a relaxed, focused practice that can be done many ways. During meditation you focus your attention which clears away the information overload that builds up every day and contributes to stress.

Ways to meditate include:
- Guided meditation - Using guided imagery or visualization.
- Mantra meditation - Silently repeating words, or phrases.
- Mindfulness meditation - Having an increased awareness of the present moment.
- Transcendental meditation - Repeating a personal assigned mantra in a specific way.

Qi Gong and Tai Chi
Both of these forms of movement are characterized by relaxed, focused movement and breathing. The different movements move the energy in and around your body, as well as getting the lymph moving and oxygenating the body.

Yoga
Yoga is a mind-body practice that combines stretching exercises, controlled breathing and relaxation. Yoga can help reduce stress, lower blood pressure, strengthen the muscles, oxygenate the body, relax the body, increase balance and flexibility and range of motion.

There are many styles, forms and intensities. My favorites are Kundilini Yoga - Involves chanting and breath exercises.
Hatha Yin Yoga - Involves slowly moving into poses (or a variation of the pose) and sitting in the stretch focusing on the breath.
Walking
Walking is free and can be done by most people. Moderate walking can reduce stress and promote feelings of calm. Walking can put your brain in a meditative state, boost endorphins, increase energy and reduce fatigue.

Exercising the brain
brain exercise is a great way to keep your mind sharp. There are many things to try-Crosswords, Soduko, Writing on paper, Learning a new language, Playing a musical instrument, Joining the local choir, Taking a class.

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