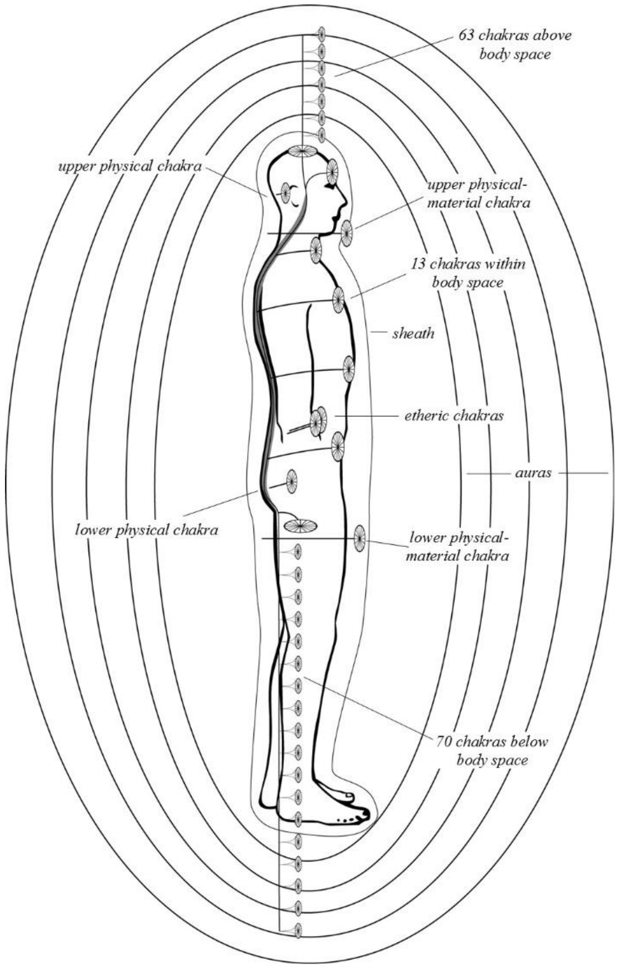
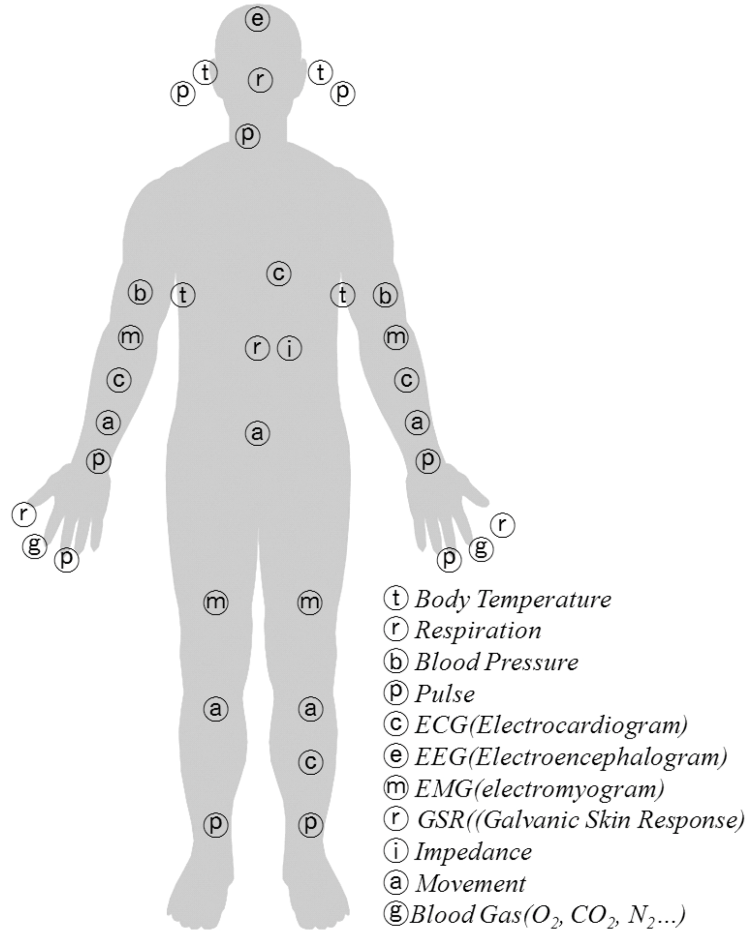
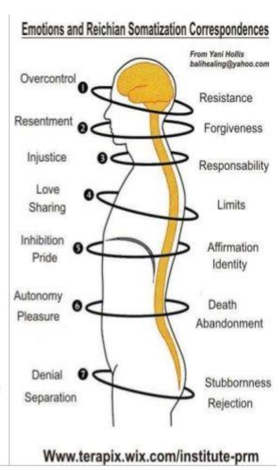
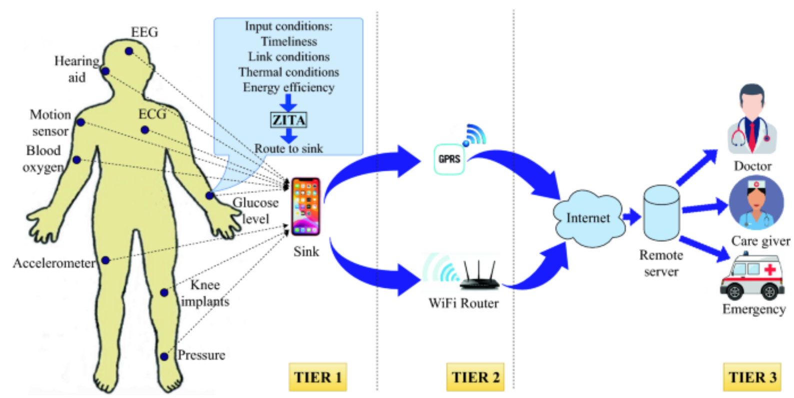








<u>The Biofield and Your Central Nervous System</u>

https://odysee.com/@Psinergy:a or https://rumble.com/user/Psinergy or https://x.com/psinergy_SDW

www.psinergy.com

https://pmc.ncbi.nlm.nih.gov/articles/PMC4654783/

Glob Adv Health Med

. 2015 Nov 1;4(Suppl):35–41. doi: 10.7453/gahmj.2015.015.suppl

Biofield Physiology: A Framework for an Emerging Discipline

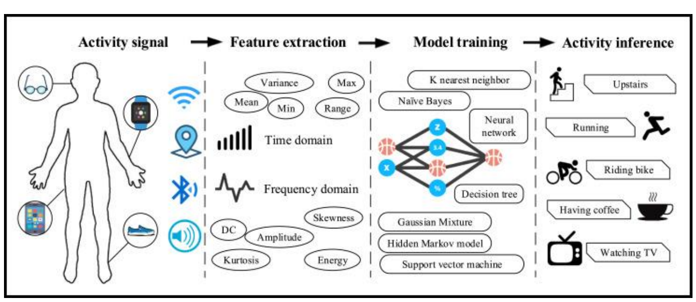
PMCID: PMC4654783 PMID: 26665040

Biofield physiology is proposed as an overarching descriptor for the *electromagnetic, biophotonic, and other types of spatially-distributed fields that living systems generate and respond to as integral aspects of cellular, tissue, and whole organism self-regulation and organization*. **Medical physiology, cell biology, and biophysics provide the framework within which evidence for biofields, their proposed receptors, and functions is presented**. As such, biofields can be viewed as **affecting physiological** regulatory systems in a manner that complements the more familiar molecular-based mechanisms. ***Examples of clinically relevant biofields are the electrical and magnetic fields generated by arrays of heart cells and neurons that are detected, respectively, as electrocardiograms (ECGs) or magnetocardiograms (MCGs) and electroencephalograms (EEGs) or magnetoencephalograms (MEGs)***. At a basic physiology level, electromagnetic activity of neural assemblies appears to modulate neuronal synchronization and circadian rhythmicity. Numerous nonneural electrical fields have been detected and analyzed, including those arising from patterns of resting membrane potentials that guide development and regeneration, and from slowly-varying transepithelial direct current fields that initiate cellular responses to tissue damage. Another biofield phenomenon is the coherent, ultraweak photon emissions (UPE), detected from cell cultures and from the body surface. *A physiological role for biophotons is consistent with observations that fluctuations in UPE correlate with cerebral blood flow, cerebral energy metabolism, and EEG activity.* Biofield receptors are reviewed in 3 categories: molecular-level receptors, charge flux sites, and **endogenously generated electric or electromagnetic fields**.

2015 --→

In summary, sufficient evidence has accrued to consider biofield physiology as a viable scientific discipline. Directions for future research are proposed.

Key Words: Biofield, electromagnetic fields, biophotons, physiological regulation, biofield physiology



“Using the **peripheral nervous system** as a medium for delivering therapy is largely new territory and it’s rich with potential to manage many of the conditions that impact the readiness of our military and, more generally, the **health of the nation**,” Weber said. “It will be an exciting path forward.”

https://www.darpa.mil/news/2015/self-healing-body-mind

Integrated, international efforts under ElectRx program blend mapping of neural circuits and development of novel bio-electrical interfaces

Oct 5, 2015

DARPA has selected seven teams of researchers to begin work on the Agency’s Electrical Prescriptions (ElectRx) program, which has as its goal the development of a closed-loop system that treats diseases by modulating the activity of peripheral nerves. The teams will initially pursue a diverse array of research and technological breakthroughs in support of the program’s technical goals. Ultimately, the program envisions a complete system that can be tested in human clinical trials aimed at conditions such as chronic pain, inflammatory disease, post-traumatic stress and other illnesses that may not be responsive to traditional treatments.

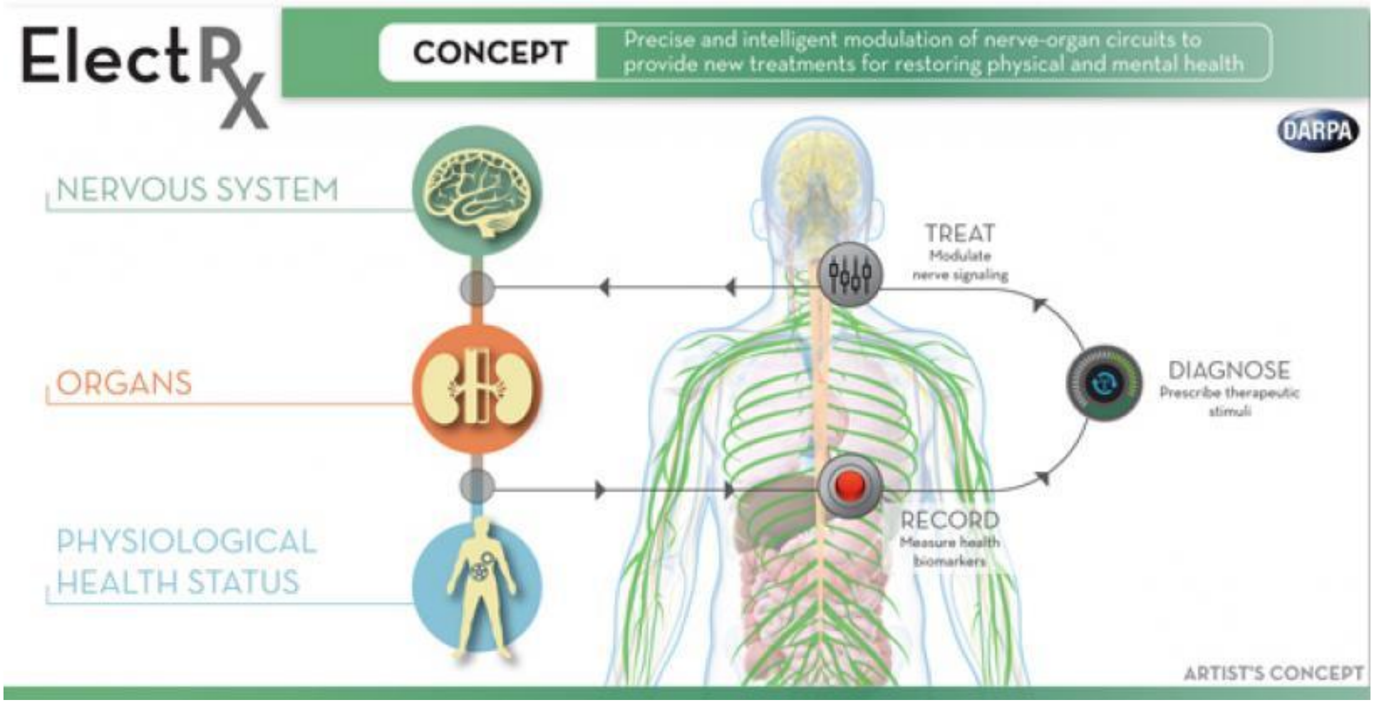
“The peripheral nervous system is the body’s information superhighway, communicating a vast array of sensory and motor signals that monitor our health status and effect changes in brain and organ functions to keep us healthy,“ said Doug Weber, the ElectRx program manager and a biomedical engineer who previously worked as a researcher for the Department of Veterans Affairs. “We envision technology that can detect the onset of disease and react automatically to restore health by stimulating peripheral nerves to modulate functions in the brain, spinal cord and internal organs.”

The oldest and simplest example of this concept is the cardiac pacemaker, which uses brief pulses of electricity to stimulate the heart to beat at a healthy rate. Extending this concept to other organs like the spleen may offer new opportunities for treating inflammatory diseases such as rheumatoid arthritis. Fighting inflammation may also provide new treatments for depression, which growing evidence suggests might be caused in part by excess levels of inflammatory biomolecules. Peripheral nerve stimulation may also be used to regulate production of neurochemicals that regulate learning and memory in the brain, offering new treatments for post-traumatic stress and other mental health disorders.

“Through the combination of a growing understanding of how the nervous system regulates many aspects of our health and advancing technology to measure and stimulate nerve signals, I believe we’re poised to make fundamental changes to the way we diagnose and treat disease,” Weber said. “To that end, DARPA has assembled a performer team and outlined a research way-ahead that we anticipate can move us toward a capability to safely and reliably modulate the peripheral nervous system to fight disease.”

The main thrusts for Phase I of ElectRx are fundamental studies to map the neural circuits governing the physiology of diseases of interest to DARPA and preliminary development of novel, minimally invasive neural and bio-interface technologies with unprecedented levels of precision, targeting and scale. The teams include a mix of first-time and prior DARPA performers. Many have partnered with established medical device manufacturers to support trials in the near term and ultimately facilitate transition of ElectRx interface devices as they mature.

- Circuit Therapeutics (Menlo Park, Calif.), a start-up co-founded by Karl Deisseroth and Scott Delp, is a new DARPA performer. The team plans to further develop its experimental optogenetic methods for treating neuropathic pain, building toward testing in animal models before seeking to move to clinical trials in humans.
- A team at Columbia University (New York), led by Elisa Konofagou, will pursue fundamental science to support the use of non-invasive, targeted ultrasound for neuromodulation. The team aims to elucidate the underlying mechanisms that may make ultrasound an option for chronic intervention, including activation and inhibition of nerves.
- A team at the Florey Institute of Neuroscience and Mental Health (Parkville, Australia), led by John Furness, is a first-time DARPA performer. Team members will seek to map the nerve pathways that underlie intestinal inflammation, with a focus on determining the correlations between animal models and human neural circuitry. They will also explore the use of neurostimulation technologies based on the cochlear implant —developed by Cochlear, Inc. to treat hearing loss, but adapted to modulate activity of the vagus nerve in response to biofeedback signals—as a possible treatment for inflammatory bowel disease.
- A team at the Johns Hopkins University (Baltimore), led by Jiande Chen, aims to explore the root mechanisms of inflammatory bowel disease and the impact of sacral nerve stimulation on its progression. The team will apply a first-of-its-kind approach to visualize intestinal responses to neuromodulation in animal models.
- A team at the Massachusetts Institute of Technology (Cambridge, Mass.), led by Polina Anikeeva, will aim to advance its established work in magnetic nanoparticles for localized, precision in vivo neuromodulation through thermal activation of neurons in animal models. The team's work will target the adrenal gland and the splanchnic nerve circuits that govern its function. To increase specificity and minimize potential side effects of this method of stimulation, the team seeks to develop nanoparticles with the ability to bind to neuronal membranes. Dr. Anikeeva was previously a DARPA Young Faculty Awardee.
- A team at Purdue University (West Lafayette, Ind.), led by Pedro Irazoqui, will leverage an existing collaboration with Cyberonics to study inflammation of the gastrointestinal tract and its responsiveness to vagal nerve stimulation through the neck. Validation of the mechanistic insights that emerge from the effort will take place in pre-clinical models in which novel neuromodulation devices will be applied to reduce inflammation in a feedback-controlled manner. Later stages of the effort could advance the design of clinical neuromodulation devices.
- A team at the University of Texas, Dallas, led by Robert Rennaker and Michael Kilgard, will examine the use of vagal nerve stimulation to induce neural plasticity for the treatment of post-traumatic stress. As envisioned, stimulation could enhance learned behavioral responses that reduce fear and anxiety when presented with traumatic cues. Dr. Rennaker is a U.S. Marine Corps veteran who served in Liberia, Kuwait and Yugoslavia.



https://defencescienceinstitute.com/funding-opportunity/darpa-biological-technologies-hr001124s0034/

DARPA – Biological Technologies – HR001124S0034

- September 18, 2024

DARPA's Biological Technologies Office is seeking innovative proposals in relation to specific topics in the following areas:

- biological technology topic areas that fit the national security scope of BTO's mission.
- research into market opportunities, constraints, and communities affecting financing and commercialization of bioindustrial and biomedical technologies.
- machine learning and AI – eg models, technologies, virtual testbeds, digital twins, non-experimental models
- human performance – eg treatment and resilience in neurological health and cognitive function, interventions for assessment and optimisation; **continuous physiology monitoring, human-machine interfaces**
- **materials, sensors and processing – eg novel materials, sensors or processes, foundation models or prediction engines, engineering of biological systems, platform technologies, hybrid biological/engineered systems, remote sensing, biological sensor platforms**
- ecosystem and environmental – eg countermeasures to global food and water supplies, concealment and camouflage, leveraging synthetic biology, ecosystem restoration

- biosecurity and biosafety – eg characterising emerging pathogens, infectious disease treatment, prevention, forecasting, detection,
- biomedical and biodefense – eg causal relationships underlying acute and chronic diseases, critical molecule, next-gen cellular therapeutics, platform technologies, diagnostics, prophylactic and therapeutic approaches

Abstracts (encouraged but not compulsory) and proposals will be accepted and assessed on a rolling basis until **9 October 2025**.

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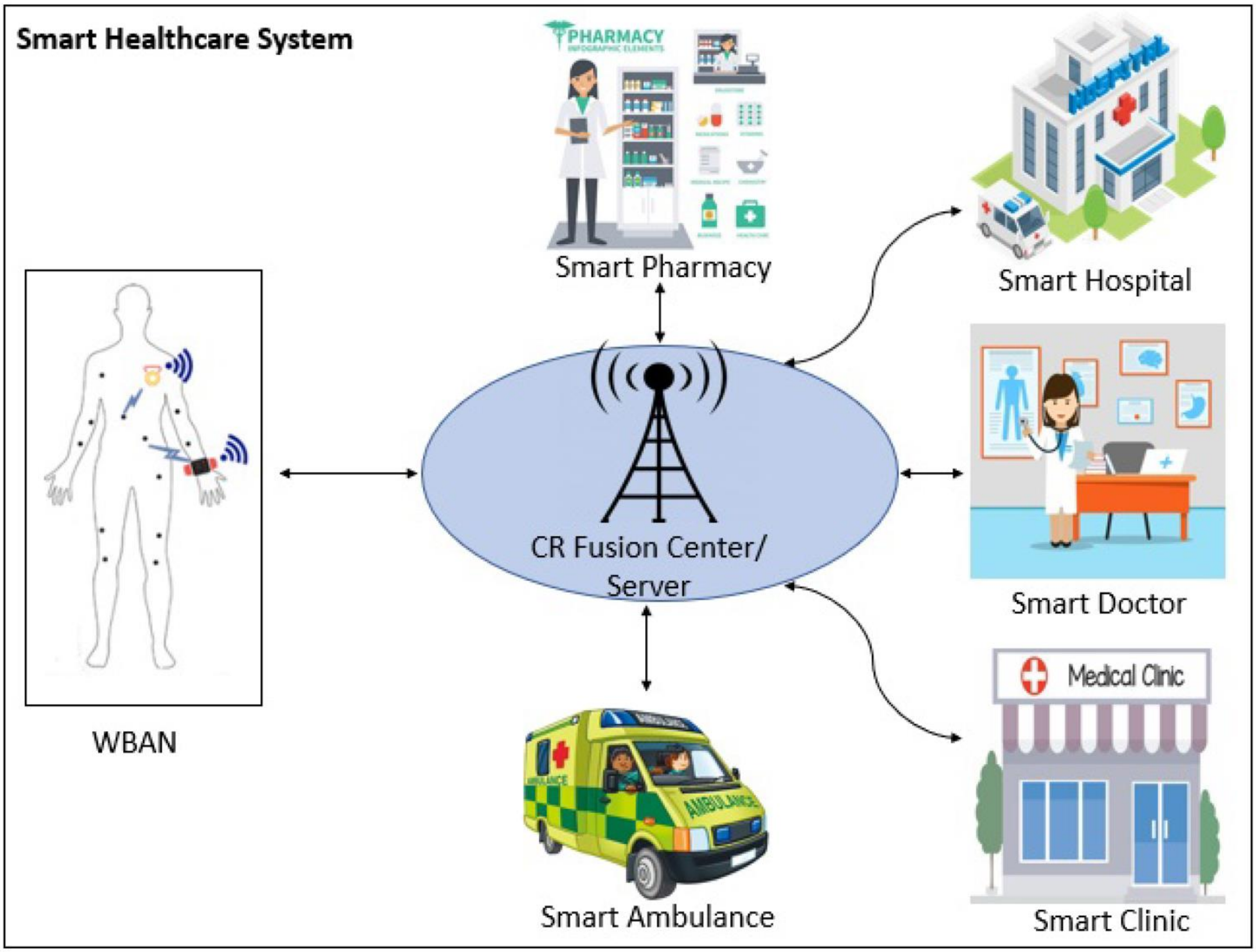
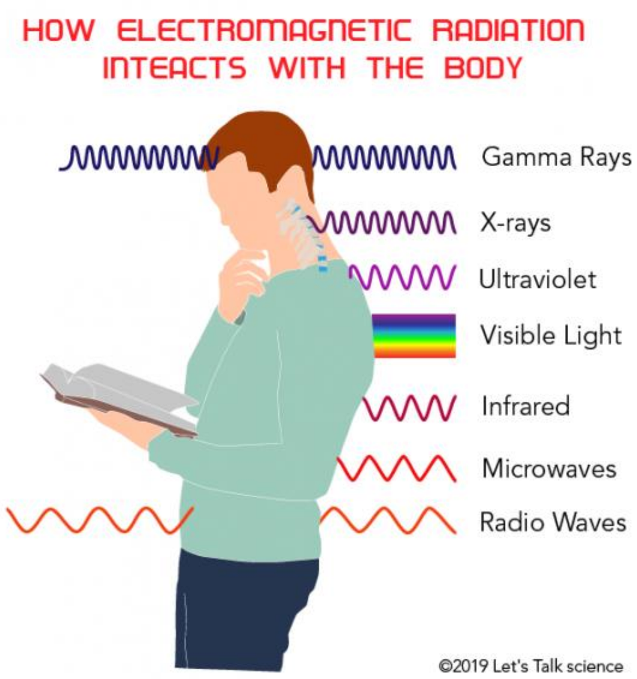
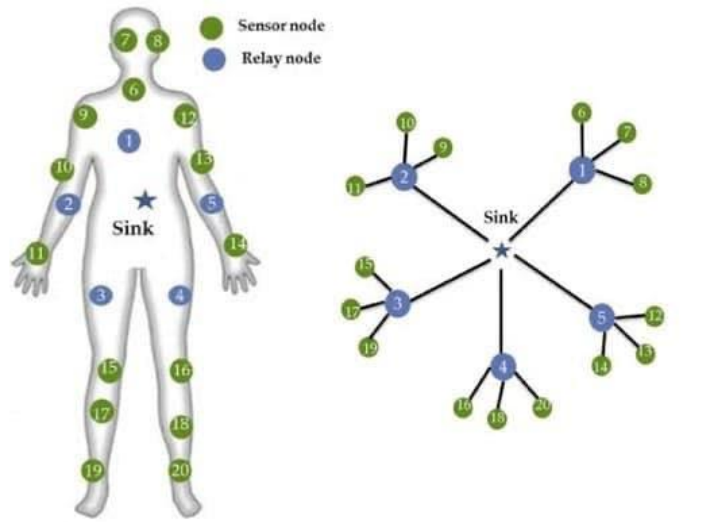
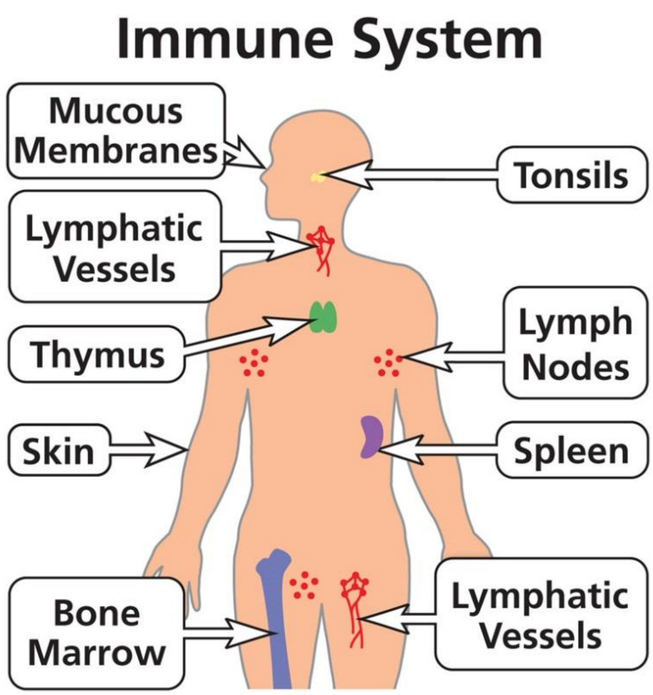
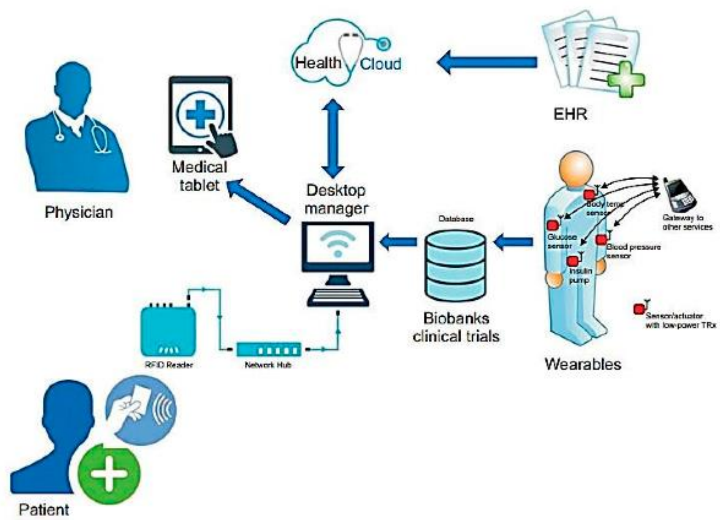






(a) Relaying node position (b) Virtual transport backbone





The biofield is not a single structural part of the nervous system, but rather an emergent electromagnetic field generated by the entire nervous system's activity—primarily synchronized neural signaling, brainwaves (EEG), heart activity (ECG), and cellular electrical currents. It represents the comprehensive, coherent signaling network surrounding the body.

Key relationships between the biofield and the nervous system include:

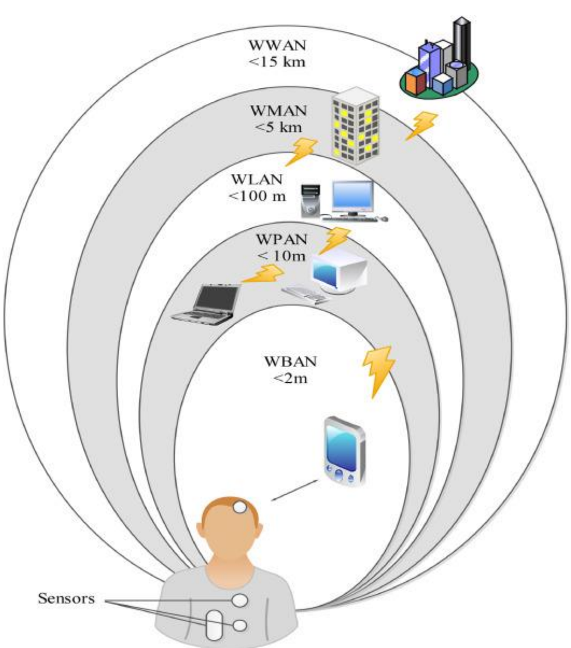
- **Brainwaves and Neural Activity:** The biofield is heavily influenced by rhythmic, coordinated brainwave activity (EEG) and synchronized neuron firing.

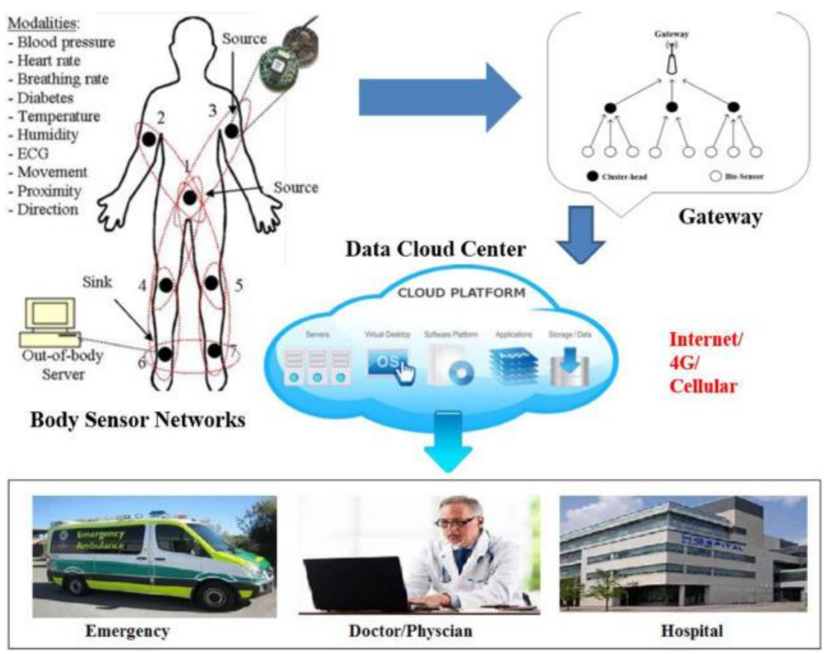
- **The Autonomic Nervous System (ANS):** The biofield is intimately connected to the autonomic nervous system, which regulates involuntary bodily functions and connects directly to the heart and immune system.
- **Heart-Brain Coherence:** The heart acts as a major generator of this field, with its electromagnetic activity playing a key role in whole-body coherence, detectable asHeart Rate Variability (HRV).
- **Cellular Communication:** It arises from the electrical currents (bioelectricity) generated by ion movements across cell membranes throughout the body, providing a layer of communication.
- **Electromagnetic Interaction:** The biofield is the collective, low-level electromagnetic field produced by these neural, cardiac, and cellular actions.

In summary, the biofield acts as a regulatory, information-based network, often described as an extension of the central and autonomic nervous systems' electrical activity.

https://draiello.com/learn/the-biofield-neurologic-coherence/

https://paloaltou.edu/resources/business-of-practice-blog/biofield-and-dbt-synergy-rewiring-neuroplasticity-through-energy-aware-emotion-regulation





https://www.lakesideintegrativepsychiatry.com/post/brainwaves-and-the-biofield-energy-work-in-psychiatry

Brainwaves and the Biofield: Energy Work in Psychiatry

Faith Carini-Graves

- Dec 22, 2025

An evidence-forward look at the biofield concept and its overlap with neuroscience.

The term **"biofield"** is used to describe the complex, spatially distributed electromagnetic, biophotonic, and physiological fields that surround and arise from living organisms. Over recent decades the idea of a human biofield — once chiefly a metaphysical concept — has been recast in more measurable, biophysical terms. Scientists now discuss components of the biofield in language tied to electrophysiology (EEG/EMG), magnetophysiology (MEG/MCG), biophotons, and systemic rhythms produced by the heart and autonomic nervous system. Several peer-reviewed reviews and empirical studies summarize this emerging field and its open questions.

What makes up the "biofield"? — the measurable components

Rather than a single mysterious energy, the biofield is best thought of as a **bundle of measurable signals** generated by physiological activity:

• **Brain electrical activity (EEG)** — Populations of neurons firing in synchrony produce electrical potentials recorded on the scalp. These signals are grouped into canonical frequency bands (delta, theta, alpha, beta, gamma) and reflect states such as sleep, attention, and emotional arousal. EEG is a long standing and well-validated tool to identify the brain's contribution to the biofield.

• **Magnetic fields from the brain (MEG)** — The tiny magnetic fields produced by neuronal currents are measurable with magnetoencephalography (MEG). MEG and EEG provide complementary pictures of neural network dynamics and are widely used in neuroscience research.

• **Cardiac electrical and magnetic fields (ECG / MCG)** — The heart generates the strongest rhythmic electromagnetic field in the body. Magnetocardiography (MCG) and sensitive magnetometers can detect the heart's magnetic field outside the torso; these cardiac fields interact with autonomic state and can entrain other physiological rhythms. The heart's field is often a dominant component of the measurable human bio-electromagnetic environment.

• **Muscle and peripheral electrical activity (EMG)** — Skeletal and smooth muscle activity produce measurable electric signals that contribute to the body's overall electromagnetic signature.

• **Biophotons and weak optical emissions** — Experimental groups have reported ultra-weak photon emissions from living tissue; this is a smaller, more controversial area of study but is sometimes discussed as a biofield component.

Taken together, these signals form a dynamic, multi-modal field around the body — what many researchers call the biofield. Importantly, most of these components are measurable with accepted laboratory techniques (EEG, MEG, ECG/MCG, EMG), which is why the concept has moved from metaphor toward experimental science.

How brainwaves (EEG) fit into the biofield picture

Brainwaves are central to the biofield because they represent organized electrical activity at different frequencies that travel through the brain and produce both local electrical potentials and associated magnetic fields. Different EEG bands are associated with different functional states:

- **Delta (0.5–4 Hz):** deep sleep, restorative processes
- **Theta (4–8 Hz):** memory consolidation, drowsiness, meditative states
- **Alpha (8–12 Hz):** relaxed wakefulness, inhibitory control

- **Beta (13–30 Hz):** active thinking, attention
- **Gamma (>30 Hz):** high-level integration and binding

Because EEG rhythms reflect large-scale neural coordination, changes in those rhythms are sensible candidates for being part of an individual's biofield signature. Alterations in EEG power and connectivity have been observed in pain states, mood disorders, and following some biofield interventions — offering a plausible neurophysiological bridge between reported subjective effects and measurable brain activity.

Evidence linking biofield interventions and measurable brain/body changes

A number of controlled studies and systematic reviews have examined **biofield-based therapies** (healing touch, Reiki, therapeutic touch, non-contact interventions), with mixed but sometimes promising results. Physiological studies report modulation of EEG, heart-rate variability, skin conductance, and other metrics during or after biofield interventions. Reviews urge cautious interpretation: some trials show measurable effects, others show small or inconsistent findings, and methodological heterogeneity is common.

A growing body of experimental work also documents that practitioner and patient physiological states (heart rhythm coherence, respiration, EEG patterns) can change during intentional healing states — suggesting bidirectional interactions between people's measurable fields. These observations do not yet prove a therapeutic "energy" in the metaphysical sense, but they do show that subtle physiological coupling and entrainment can occur and be quantified- giving hope to many energy healers.

Mechanisms under consideration

Researchers propose several non-exclusive mechanisms by which biofield-related phenomena might arise or exert influence:

- **Electromagnetic coupling and entrainment:** rhythmic biological signals (heart, brain, muscle) can entrain neighboring tissues or interacting systems via weak electromagnetic fields. The heart's field is orders of magnitude stronger than the brain's magnetic field and can be a dominant source for coupling.
- **Autonomic-behavioral pathways:** changes in perceived support, expectation, or relaxation during biofield therapies drive autonomic shifts (vagal tone, cortisol) that in turn alter pain and mood circuits. These are well-established psychophysiological pathways.
- **Cellular signaling cascades:** in vitro and cell-level studies suggest that externally applied electromagnetic fields can alter cellular behavior (gene expression, ion channel activity), although translating these findings to whole-body clinical effects remains an active research area.

Limitations and scientific caution

The science of the biofield is still **emerging**. Many studies are small, use heterogeneous methods, or lack adequate blinding. Systematic reviews call for larger, better-controlled trials and rigorous replication. Importantly, measurable physiological fields (EEG, ECG/MCG, MEG) are well-established; the more speculative claims (e.g., long-range "healing energy" that acts beyond known electromagnetic coupling mechanisms) require stronger, reproducible evidence. Researchers are actively working to clarify what aspects of the biofield are physical and measurable, and which claims remain unproven. Moving research forward will only provide more evidence as to how we can influence the biofield to promote personal healing.

Bottom line for clinicians and curious readers

- The **biofield** is a helpful organizing concept for a host of measurable physiological fields (brainwaves, cardiac magnetism, muscle electrical activity, and weak photon emissions).
- **EEG and MEG** provide the best-established measures of the brain's contribution to an individual's biofield; **MCG and ECG** demonstrate that the heart is a major electromagnetic source.
- Some **biofield therapies** are associated with measurable changes (EEG, HRV, subjective outcomes), but evidence varies and higher-quality trials are needed.
- For the many reasons listed above, psychiatric providers are considering how they can promote a healthy biofield to contribute to their patient's overall mental health.

Selected peer-reviewed references (for clinicians)

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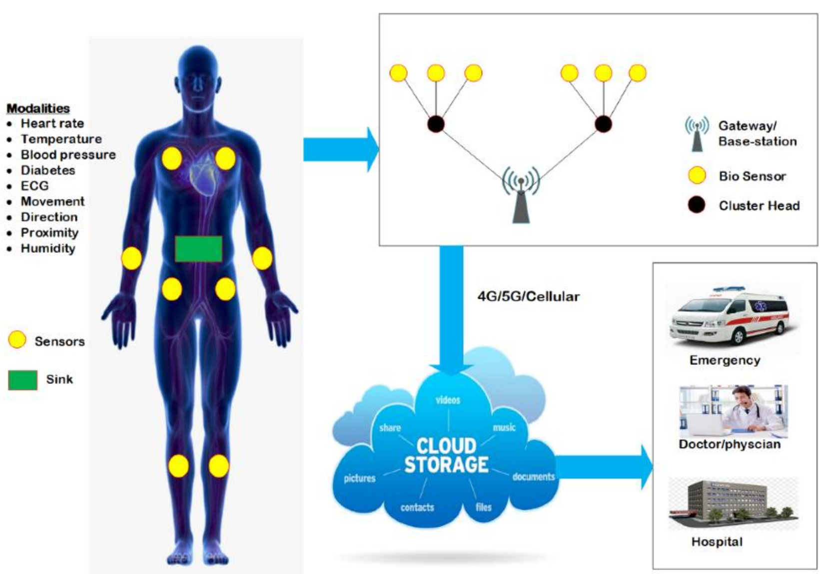


https://courses.lumenlearning.com/suny-ap1/chapter/the-nervous-system-and-nervous-tissue/

The Central and Peripheral Nervous Systems

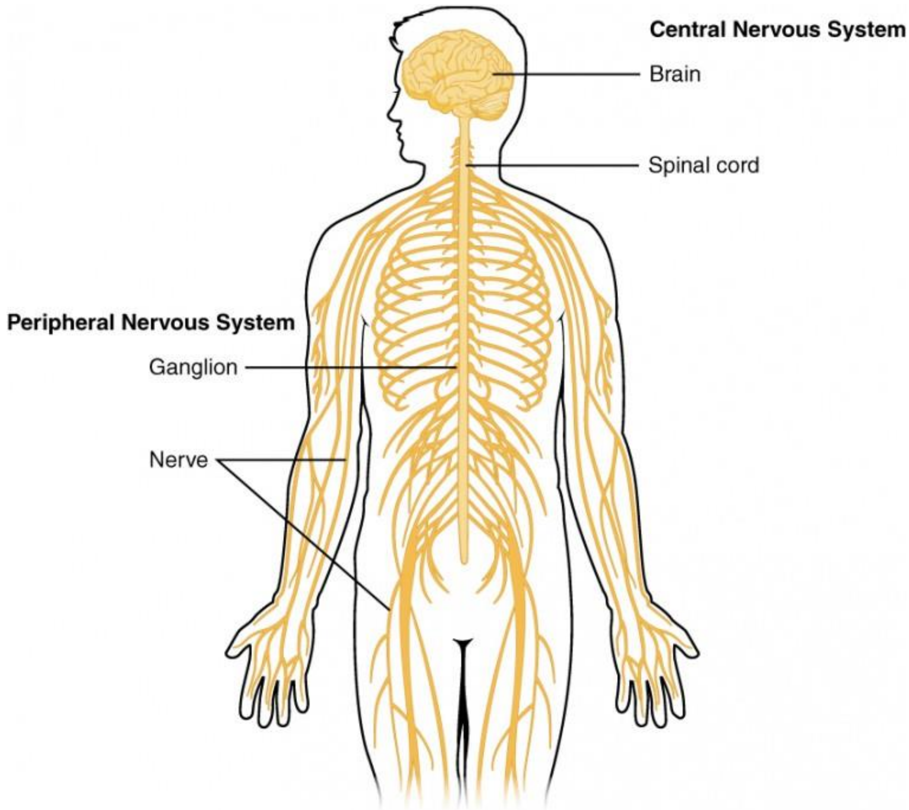


Figure 1. Central and Peripheral Nervous System The structures of the PNS are referred to as ganglia and nerves, which can be seen as distinct structures. The equivalent structures in the CNS are not obvious from this overall perspective and are best examined in prepared tissue under the microscope.

The nervous system can be divided into two major regions: the central and peripheral nervous systems. The **central nervous system (CNS)** is the brain and spinal cord, and the **peripheral nervous system (PNS)** is everything else (Figure 1). The brain is contained within the cranial cavity of the skull, and the spinal cord is contained within the vertebral cavity of the vertebral column. It is a bit of an oversimplification to say that the CNS is what is inside these two cavities and the peripheral nervous system is outside of them, but that is one way to start to think about it. In actuality, there are some elements of the peripheral nervous system that are within the cranial or vertebral cavities. The peripheral nervous system is so named because it is on the periphery—meaning beyond the brain and spinal cord. Depending on different aspects of the nervous system, the dividing line between central and peripheral is not necessarily universal.

Nervous tissue, present in both the CNS and PNS, contains two basic types of cells: neurons and glial cells. A **glial cell** is one of a variety of cells that provide a framework of tissue that supports the neurons and their activities. The **neuron** is the more functionally important of the two, in terms of the communicative function of the nervous system.

In order to describe the functional divisions of the nervous system, it is important to understand the structure of a neuron. Neurons are cells and therefore have a **soma**, or cell body, but they also have extensions of the cell; each extension is generally referred to as a **process**. There is one important process that every neuron has called an **axon**, which is the fiber that connects a neuron with its target. Another type of process that branches off from the soma is the **dendrite**. Dendrites are responsible for receiving most of the input from other neurons.

https://courses.lumenlearning.com/suny-intropsychmaster/chapter/parts-of-the-nervous-system/

Biopsychology

Parts of the Nervous System

Learning Objectives

By the end of this section, you will be able to:

- Describe the difference between the central and peripheral nervous systems
- Explain the difference between the somatic and autonomic nervous systems
- Differentiate between the sympathetic and parasympathetic divisions of the autonomic nervous system

The nervous system can be divided into two major subdivisions: the central nervous system (CNS) and the peripheral nervous system (PNS), shown in **[link]**. The CNS is comprised of the brain and spinal cord; the PNS connects the CNS to the rest of the body. In this section, we focus on the peripheral nervous system; later, we look at the brain and spinal cord.

The nervous system is divided into two major parts: (a) the Central Nervous System and (b) the Peripheral Nervous System.

Peripheral Nervous System

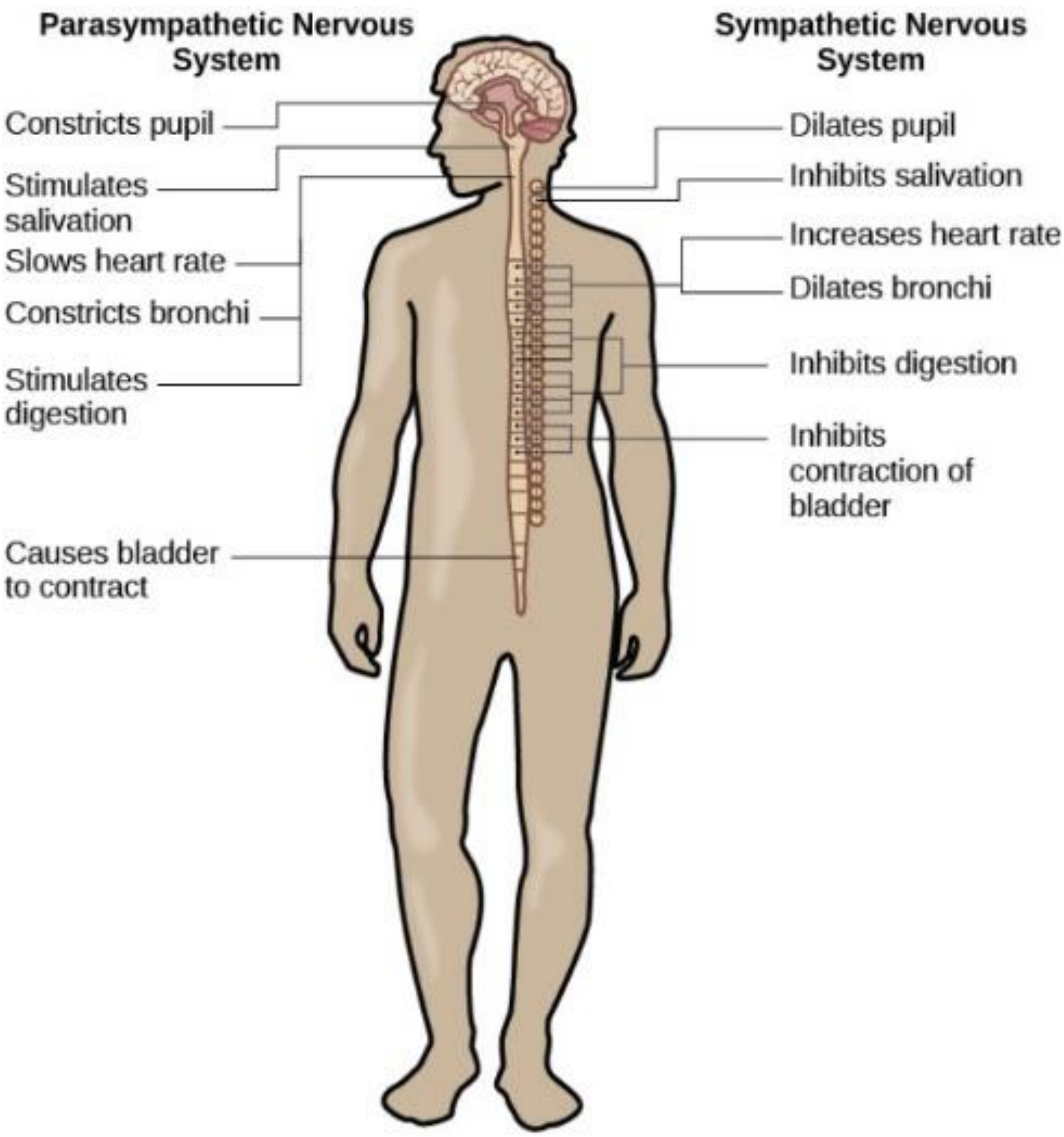
The peripheral nervous system is made up of thick bundles of axons, called nerves, carrying messages back and forth between the CNS and the muscles, organs, and senses in the periphery of the body (i.e., everything outside the CNS). The PNS has two major subdivisions: the somatic nervous system and the autonomic nervous system.

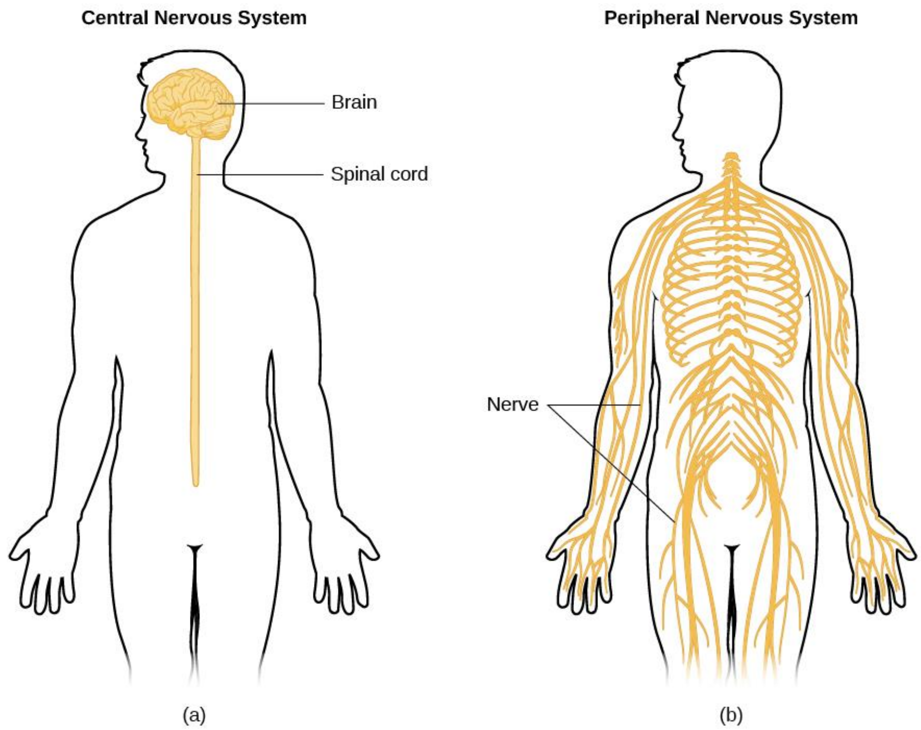
The somatic nervous system is associated with activities traditionally thought of as conscious or voluntary. It is involved in the relay of sensory and motor information to and from the CNS; therefore, it consists of motor neurons and sensory neurons. Motor neurons, carrying instructions from the CNS to the muscles, are efferent fibers (efferent means “moving away from”). Sensory neurons, carrying sensory information to the CNS, are afferent fibers (afferent means “moving toward”). Each nerve is basically a two-way superhighway, containing thousands of axons, both efferent and afferent.

The autonomic nervous system controls our internal organs and glands and is generally considered to be outside the realm of voluntary control. It can be further subdivided into the sympathetic and parasympathetic divisions (**[link]**). The sympathetic nervous system is involved in preparing the body for stress-related activities; the parasympathetic nervous system is associated with returning the body to routine, day-to-day operations. The two systems have complementary functions, operating in tandem to maintain the body’s homeostasis. Homeostasis is a state of equilibrium, in which biological conditions (such as body temperature) are maintained at optimal levels.

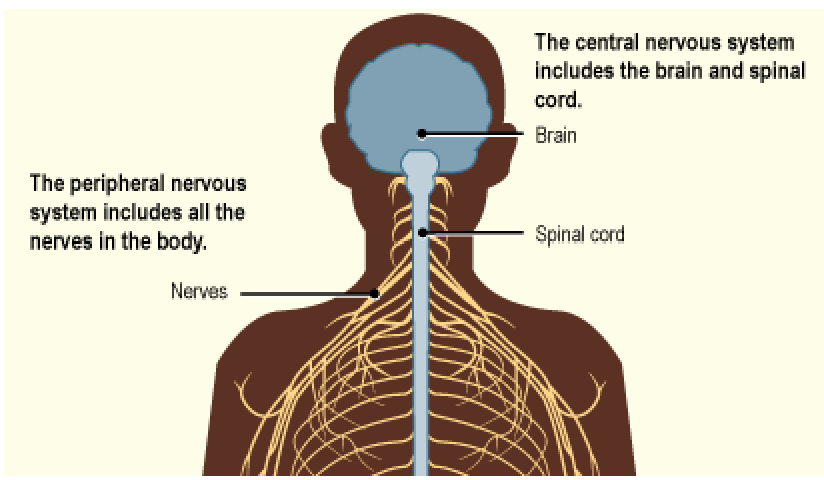
The sympathetic and parasympathetic divisions of the autonomic nervous system have the opposite effects on various systems.

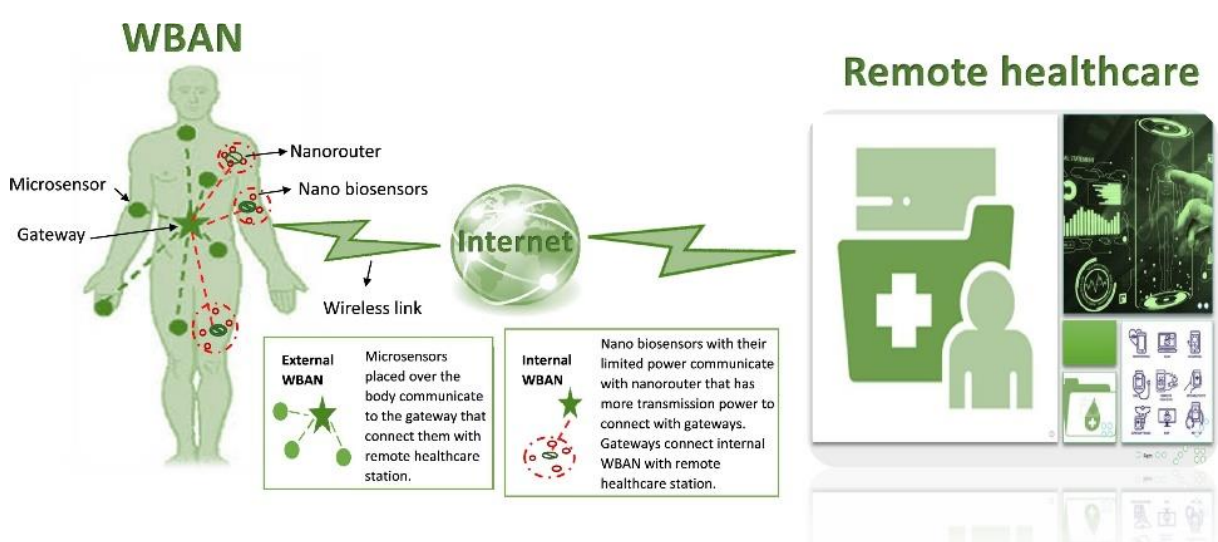
The sympathetic nervous system is activated when we are faced with stressful or high-arousal situations. The activity of this system was adaptive for our ancestors, increasing their chances of survival. Imagine, for example, that one of our early ancestors, out hunting small game, suddenly disturbs a large bear with her cubs. At that moment, his body undergoes a series of changes—a direct function of sympathetic activation—preparing him to face the threat. His pupils dilate, his heart rate and blood pressure increase, his bladder relaxes, his liver releases glucose, and adrenaline surges into his bloodstream. This constellation of physiological changes, known as the fight or flight response, allows the body access to energy reserves and heightened sensory capacity so that it might fight off a threat or run away to safety.





https://kidshealth.org/en/parents/central-nervous-system.html





Voluntary piloerection (VGP), or consciously controlling goosebumps, utilizes the

sympathetic nervous system **(SNS)**, which typically controls involuntary bodily functions. Although considered an autonomic response, individuals with this ability trigger the contraction of the arrector pili muscles through enhanced, conscious, or emotional cognitive input, allowing them to activate this sympathetic pathway on command.

Key details regarding the neural mechanisms involved:

- **The Sympathetic Pathway:** Even in voluntary cases, the mechanism remains the same as in involuntary reactions: sympathetic nerves release neurotransmitters that cause the smooth arrector pili muscles at the base of hair follicles to contract.
- **Voluntary vs. Involuntary:** While usually a fight-or-flight response to fear, cold, or intense emotion, VGP indicates a, rare, conscious connection to this, usually, involuntary system.
- **Emotional Link:** Voluntary control is often linked to strong emotional experiences (e.g., awe, intense music) and a higher-than-average capacity for internal emotional states, this is discussed in this PeerJ preprint.
- **Neurochemical Action:** The process is mediated by

-1 adrenergic receptors that respond to nerve impulses, specifically using norepinephrine to drive the muscle contraction.

https://pmc.ncbi.nlm.nih.gov/articles/PMC6071615/

2018 Jul 30;6:e5292. doi: 10.7717/peerj.5292

The voluntary control of piloerection

What part of the brain controls piloerection?

According to this view, studies of pilomotor seizures that are common to temporal lobe epilepsy (Loddenkemper et al., 2004) and direct electrical stimulation of the human brain (Fish et al., 1993) suggest the involvement of cortical areas, particularly in the temporal lobe area, in episodes of piloerection.Jun 4, 2020

https://www.frontiersin.org/journals/neuroscience/articles/10.3389/fnins.2020.00590/full

Volitional Control of Piloerection: Objective Evidence and Its Potential Utility in Neuroscience Research

Which nervous system is responsible for goosebumps?

Piloerection (goosebumps) requires concerted actions of the hair follicle, the arrector pili muscle (APM), and the sympathetic nerve, providing a model to study interactions across epithelium, mesenchyme, and nerves.

https://www.mentalfloss.com/science/biology/people-can-control-their-goosebumps

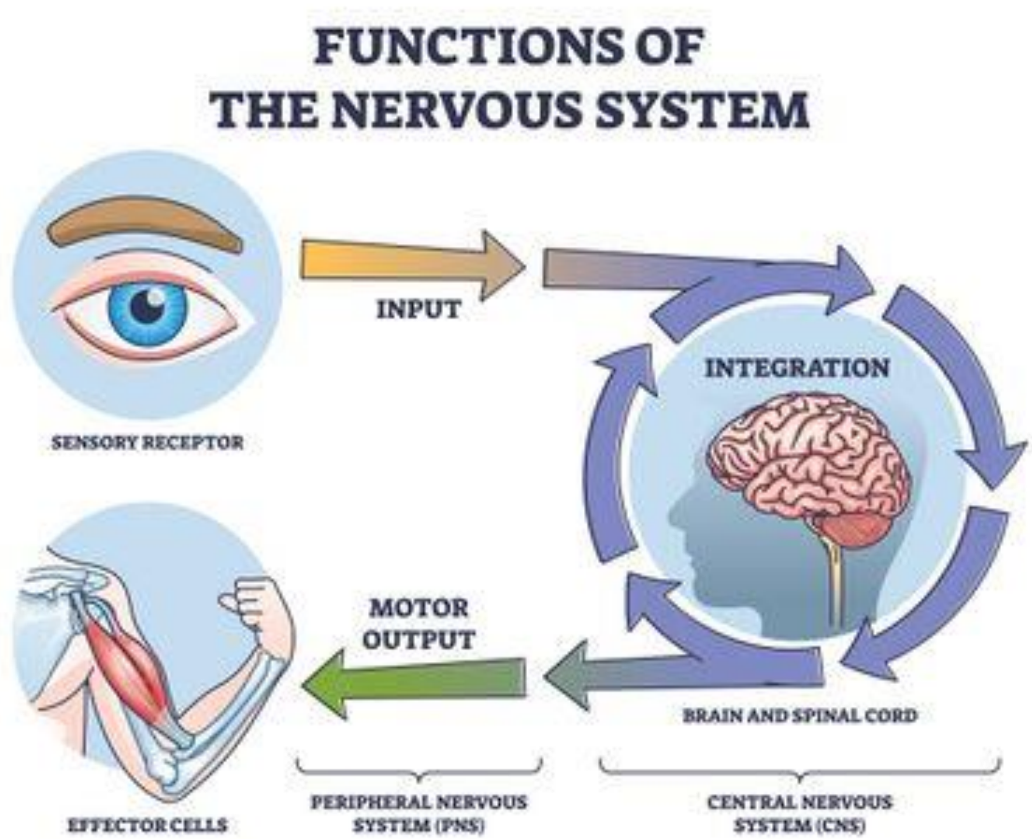
Some People Can Control When They Get Goosebumps—and Scientists Are Stumped

ByLórien MacEnulty|Apr 6, 2020

What is the sympathetic and parasympathetic nervous system?

The sympathetic nervous system is responsible for setting off the fight-or-flight response. The parasympathetic nervous system is responsible for the body's rest and digestion response.

https://www.physio-pedia.com/Introduction_to_Neuroanatomy

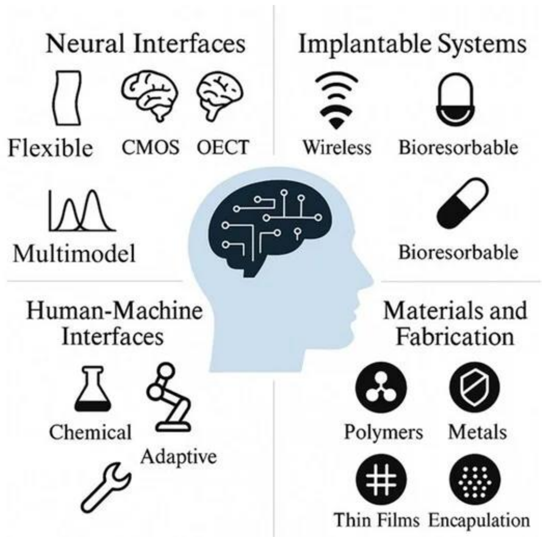


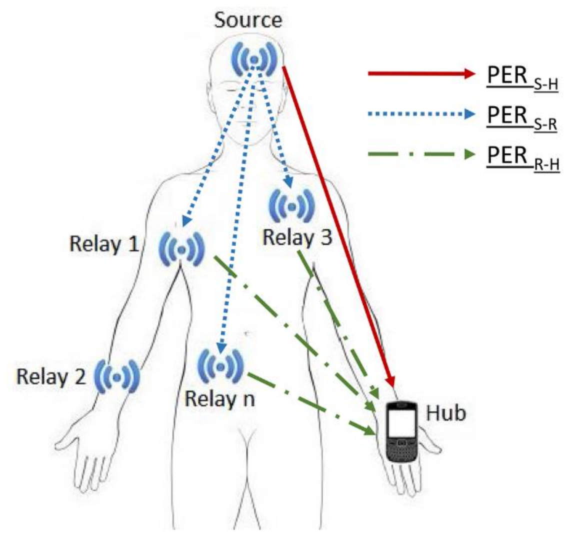
Yes, the sympathetic nervous system (SNS) is a major component of the peripheral nervous system (PNS). Specifically, it is a branch of the autonomic nervous system, which is part of the PNS responsible for involuntary, "fight-or-flight" responses like increased heart rate and dilated pupils.

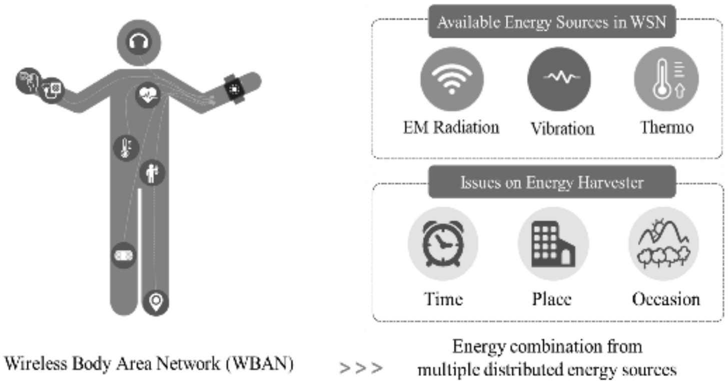
Key details:

- **Location:** While it originates from the spinal cord (CNS), its nerve pathways, ganglia, and connections spread throughout the body, classifying it within the peripheral nervous system.
- **Function:** It works opposite the parasympathetic nervous system (also in the PNS) to manage stress, energy expenditure, and rapid reaction.
- **Structure:** It acts as a bridge between the central nervous system and organs/glands to initiate rapid, involuntary responses.

The peripheral nervous system (PNS) consists of the nerves outside the brain and spinal cord, further divided into the sensory-somatic and autonomic nervous systems. The autonomic system is then divided into the sympathetic (fight-or-flight) and parasympathetic (rest-and-digest) divisions.







Sometimes a little rudeness to establish that you don't fancy nonsense is important.

https://www.healthline.com/health/sympathetic-nervous-system

What is Your Sympathetic Nervous System?

Your sympathetic nervous system is one of the branches of your autonomic nervous system. It controls functions under unconscious control related to "fight or flight."

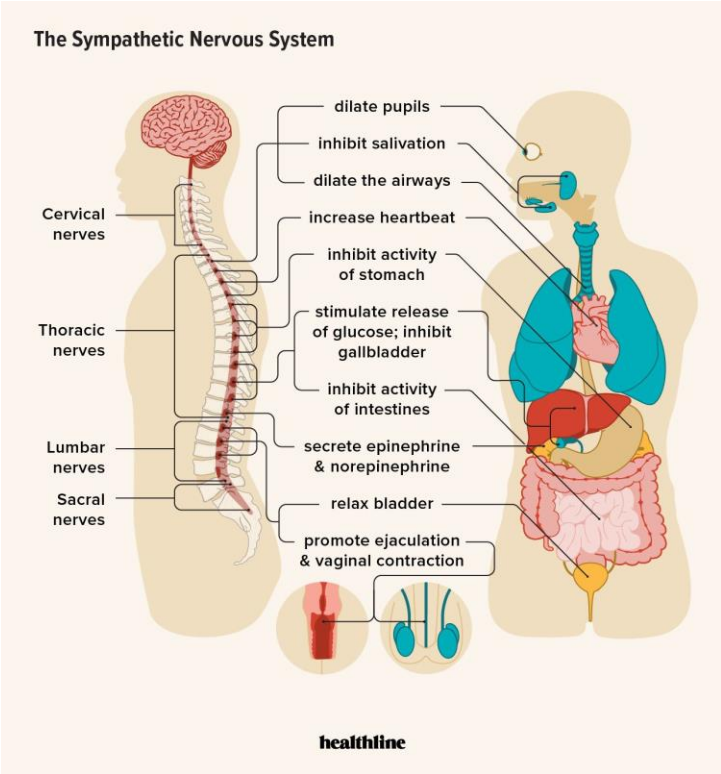
Your nervous system plays a critical role in almost all bodily functions. Without it, you wouldn't be able to think, move, or survive.

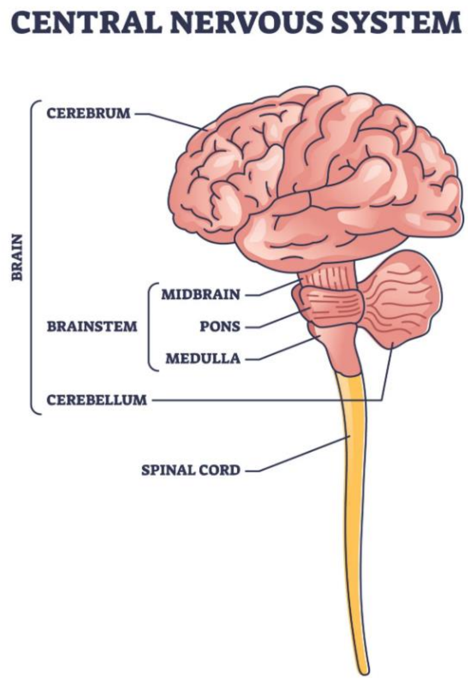
The autonomic nervous system (ANS) is the branch of your peripheral nervous system (PNS) that controls subconscious functions. It can be further broken down into two categories:

- **Sympathetic nervous system:** Carries out your body's "fight or flight" functions
- **Parasympathetic nervous system:** Carries out your body's "rest and digest" functions

Sympathetic nerve fibers exit your central nervous system and affect many of your major organs.

Read on to learn more about the sympathetic nervous system including what it does and what problems can affect it.





https://www.simplypsychology.org/central-nervous-system-vs-peripheral-nervous-system.html

Psychology » Biopsychology

Central Nervous System Vs. Peripheral Nervous System

By Olivia Guy-Evans, MSc

June 25, 2025

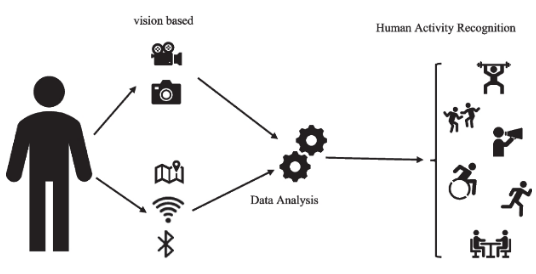
Reviewed by Saul McLeod, PhD

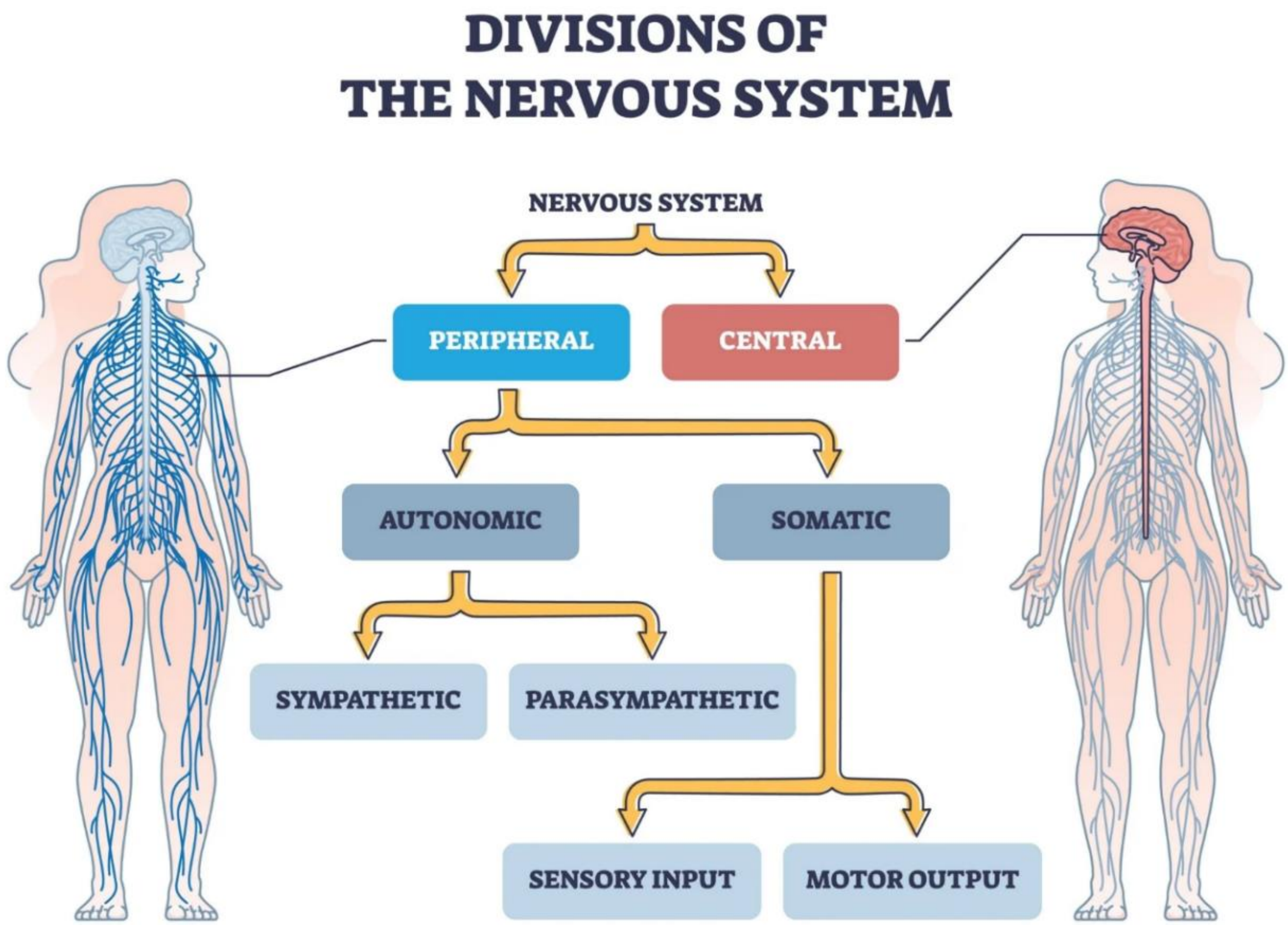
The nervous system is divided into two main parts based on location and role.

The Central Nervous System (CNS) is the command center, consisting of the brain and spinal cord. It is responsible for integrating sensory information and coordinating responses.

The Peripheral Nervous System (PNS) consists of all the cranial and spinal nerves that branch off from the CNS to the rest of the body.

Its primary function is to serve as a communication relay, sending sensory data toward the CNS and carrying motor commands away from it to the muscles and glands.





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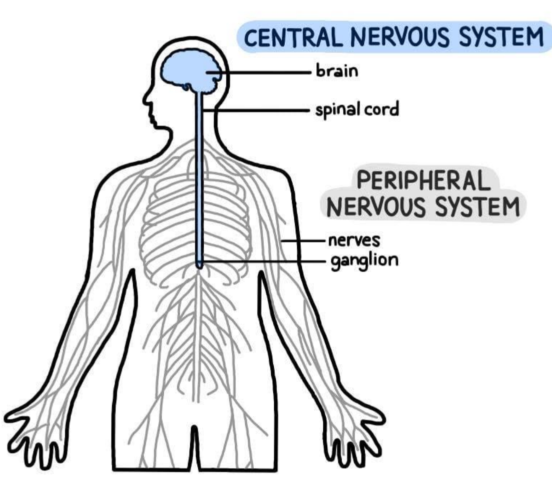
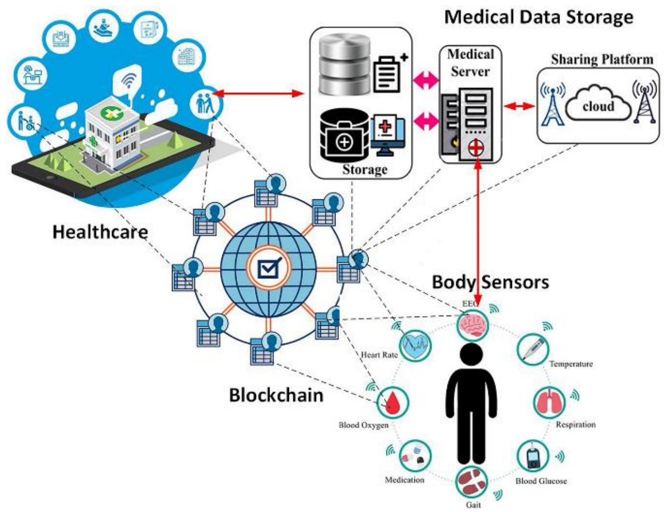




"Using the **peripheral nervous system** as a medium for delivering therapy is largely new territory and it's rich with potential to manage many of the conditions that impact the readiness of our military and, more generally, the **health of the nation**," Weber said. "It will be an exciting path forward."

https://www.darpa.mil/news/2015/self-healing-body-mind

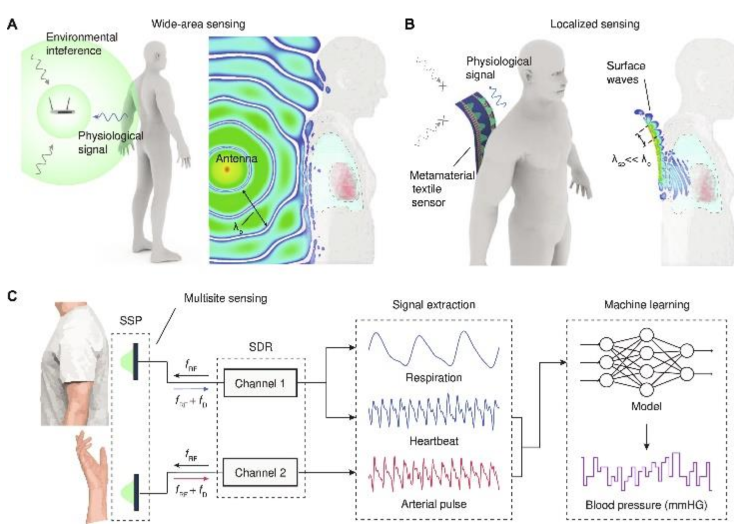
~

Sabrina Wallace since April 2022:

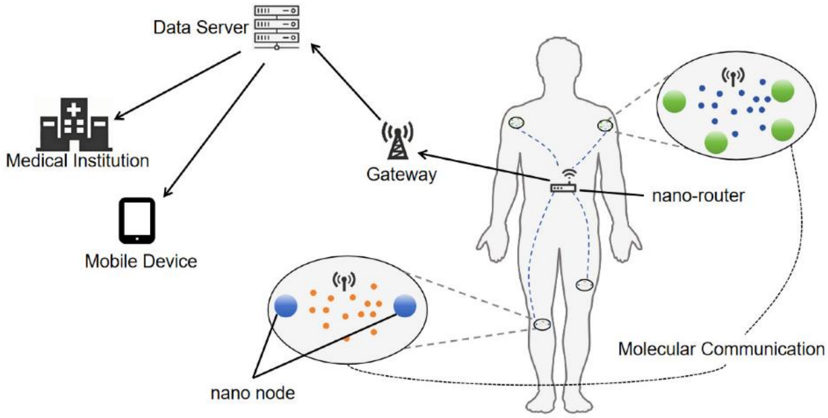
"They did not give you a new technology. They /stole/ your biology and are using YOUR neurons, UNDER your skin to manipulate your cellular function."

Do you believe in your peripheral nervous system?

Do you believe in neurons or heart cells?



<u>Darpa knows all about your peripheral nervous system; so why don't you?</u>



Who told you the human nervous system was "religious or spiritual"?

The people logging into the WBANs since 1995.

https://ieeexplore.ieee.org/document/7033222

Conferences >2014 IEEE 19th International ...

The hunter: Tracking randomly moving WBAN targets

Abstract:

Wireless Sensor Networks are often large networks comprised of nodes that monitor through sensors interesting targets. Wireless Body Area Networks are always small networks that often monitor the health of a single human subject. Although WBANs are limited in size, the information they monitor is urgent and important. Information from a WBAN producer may be transmitted over a WSN to the intended consumer.

Published in: 2014 IEEE 19th International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD)

May you have many stem cells with your arrector pilii and groovey tunes ~ Mark 5:36, amen.