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Neuropsychomotor training: A fitness based approach to Brain and Nervous System Rehabilitation

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While Parkinson's Disease (PD), Epilepsy, Multiple Sclerosis (MS), and other neurological disorders can be debilitating, there is plenty of compelling data to show that exercise is one of the best ways to manage disease symptoms. Studies show that regular exercise can improve gait, grip, balance, stability, strength, cognitive function, and motor control. In addition, this improvement in movement and mobility helps to reduce falls, injuries, and other various complications in those affected by neurological disorders. While traditional forms of exercise can be helpful, implementation of a few simple extra strategies will help to realize significantly greater benefits in managing disease symptoms.

Neuropsychomotor training sees the body as a whole unit made up of many systems. When one system is compromised, other systems will fall short of realizing optimal functionality. A holistic approach to exercise will optimize benefits, results, and improve effectiveness in managing disease symptoms. Highlights of neuropsychomotor training include: waking up the nervous system and brain prior to exercise. This causes immediate improvements in balance, movement, mobility, and stability. Other strategies include: visual, vestibular, and nervous system assessments and resets prior to exercise, all of which enhance exercise benefits and help to more effectively manage disease symptoms. In addition, research shows that various forms of cognitive exercise during focused movement help to develop new neural firing pathways in the brain which helps to improve dual-tasking abilities and reduce fall risk.

Neuropsychology is a branch of psychology which deals with how the brain and the rest of the nervous system influence the cognition and behaviors of a person. More importantly, professionals in this psychology branch often focus on how cognitive functions and behaviors affect brain injuries or diseases.It is both an experimental and clinical area of psychology aimed at understanding how brain development affects behavior and cognition, and is concerned with the diagnosis and treatment of neurological disorders' behavioral and cognitive effects.

Whereas classical neurology focuses on nervous system pathology and mainstream psychology is largely divorced from it, Therefore it shares principles and problems with neuropsychiatry and general behavioral neurology. The term Neuropsychology has been applied to human and animal lesion studies. It has also been applied in efforts to record electrical activity in higher primates (including some human patient studies) from individual cells (or groups of cells). For practice, neuropsychologists prefer to work for academic settings (universities, labs, or research institutions), clinical settings (medical clinics, or recovery facilities, sometimes involved in assessing or treating patients with neuropsychological problems), or forensic settings or industry (sometimes as clinical trial consultants where CNS function is a concern).

Experimental neuropsychology is an approach using experimental psychology methods to uncover the relation between the nervous system and cognitive function. Most of the work involves studying healthy human beings in a laboratory setting, although a minority of researchers may conduct experiments on animals. Human work in this field often benefits from the specific features of our nervous system

Clinical neuropsychology is the application of neuropsychological expertise to diagnosis (see neuropsychological examination and neuropsychological assessment), treatment, and recovery of people who have experienced disease or injury (especially to the brain) that has caused neurocognitive problems. In particular, they provide care from a psychological viewpoint, to understand how these illness. They also can offer an opinion as to whether a person is demonstrating difficulties due to brain pathology or as a consequence of an emotional or another (potentially) reversible cause or both.

For example, a test might show that both patients X and Y are unable to name items that they have been previously exposed to within the past 20 minutes (indicating possible dementia). These assessments have been structured so that the task success can be related to particular neurocognitive processes. Usually, these measures are standardized, meaning they were given to a large group (or group) of people before being used in individual clinical cases. The standardization data are known as the normative data

Brain scans are widely used to examine the structure or function of the brain, either as a straightforward way to help determine brain damage with high-resolution images, or by analyzing the relative activations of various brain regions. These technologies may include fMRI (functional magnetic resonance imaging) and positron emission tomography (PET), which provides functional data

Mouse- and monkey-based brain models were developed based on theoretical neuroscience involving working memory and attention, thus mapping brain function based on time constants confirmed by measurements of neuronal activity in different brain layers. These methods also map behavioral decision states in simple tasks involving binary outcomes. The use of electrophysiological measures designed to measure brain activation by measuring the electrical or magnetic field that the nervous system produces. Electroencephalography (EEG) or magnetoencephalography (MEG) may include this. Use of designed experimental tasks, often computer-controlled, and typically measure reaction time and accuracy on specific tasks that are thought to be related to a specific neurocognitive process. Cambridge Neuropsychological Test Automated Battery (CANTAB) or CNS Vital Signs (CNSVS) is one example of that.

Neuropsychomotor training sees the body as a whole unit made up of many systems. When one system is compromised, other systems will fall short of realizing optimal functionality. A holistic approach to exercise will optimize benefits, results, and improve effectiveness in managing disease symptoms. Highlights of neuropsychomotor training include: waking up the nervous system and brain prior to exercise. This causes immediate improvements in balance, movement, mobility, and stability. Other strategies include: visual, vestibular, and nervous system assessments and resets prior to exercise, all of which enhance exercise benefits and help to more effectively manage disease symptoms. In addition, research shows that various forms of cognitive exercise during focused movement help to develop new neural firing pathways in the brain which helps to improve dual-tasking abilities and reduce fall risk. In international and national literature, developmental delay is dealt with under various names, different definitions, and heterogeneous concepts. There have been international signs of ways to enhance contact between professionals, with consistent meaning of the word and use in very specific circumstances up to the fifth year of life.