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Possible biological underpinnings of sport movement psychotherapy

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Increasing prevalence of mental disorders despite the accelerated development of pharmacological and psychiatric therapies encourages research and a search for more effective interventions with fewer adverse effects. In developing an alternative clinical approach in the form of sport movement psychotherapy, we research biological underpinnings of psychical activity impact on mental health. With a systematic literature review we combine findings of 21 papers into five models depending on the effect level: At structural level, physical activity affects neural and vascular cerebral structure by stimulating neurogenesis, angiogenesis, neuroplasticity, and neuroprotective processes. Important positive effects involve prevention of neurodegenerative diseases, cognitive and affective disorders, and better regulation of cognitive and emotional responses. At neurochemical level, synthesis and release of neurotransmitters, opioids, and hormones are stimulated, which impacts various brain areas and improves emotional, cognitive, and behavioral functioning. In strengthening the systems of pleasure and reward, it significantly influences motivation, and consequently, active behavior. The main effects on the neuroendocrine level involve optimization of stress axis functioning, therefore physically active individuals are more resistant to stress, and experience faster stress relief due an optimized negative feedback mechanism. At cerebral activity level, physical activity impacts the ability to process larger amounts of information in less time and improves the capacity of executive control. Overview of biopsychological mechanisms confirms that physical activity intervenes at the etiological origin of mental disorders and acts as a key protective factor of mental health.

Biography

Malka Ceh is a postgraduate student of psychotherapy science at Sigmund Freud University Vienna, and a psychoanalyst in training. She is a founding member Physiopsychological Research Association PsyPhys, member of International Neuropsychoanalysis Society, member of International Association of Clinical Neuropsychotherapy, and holds a National Council on Strength and Fitness certificate. Her research interests include (bio)psychotherapy, (bio)psychoanalysis, and sport psychotherapy.

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