Journal of
Novel Physiotherapies
ISSN: 2165-7025

Short Communication Open Access

Exercise and Physical Activity's Effects on Chronic Illnesses and Psychiatric Disorders like Anxiety

Geetha Shivakumar*

Department of Psychiatry, University of Texas, Southwestern Medical Center, Dallas, Texas, USA

Introduction

In the world of contemporary medicine, the benefits of regular physical activity on health are undeniable. Exercise is frequently the first step in modifying one's lifestyle to avoid and manage chronic illnesses. Regular exercise lowered causes of death by up to 30% for men and women, according to a US Department of Health and Human Services report on physical activity [1]. These health advantages can be noticed in people of all ages and ethnic backgrounds. All healthy persons should engage in 30 minutes of moderate- to high-intensity activity five days a week, according to the Centers for Disease Control and Prevention [1].

Regular exercise and physical activity reduces the prevalence of chronic disease, in addition to decreasing the causes of death (s). There is good evidence that 2–2.5 hours of moderate- to high-intensity exercise each week is enough to lower one's chance of developing a chronic illness (s). Exercise enhances one's self-esteem and sense of well-being, according to several epidemiological research. In compared to individuals who are more sedentary, people who exercise frequently had slower rates of age-related memory and cognitive deterioration. These findings have led to the use of exercise to enhance memory and cognition in cognitive illnesses like Alzheimer's disease. Adults who engage in regular physical activity had less depression and anxiety symptoms, supporting the idea that exercise might help prevent the development of mental illnesses [2].

Anxiety disorders are frequent mental illnesses in the United States, with a lifetime incidence of almost 29% [3]. These illnesses are long-term, debilitating, and have an influence on many parts of one's life. In the 1990s, the cost of anxiety disorders in the United States was estimated to be $42.3 billion (Greenberg et al., 1999). General Anxiety Disorder (GAD), Panic Disorder (PD), Posttraumatic Stress Disorder (PTSD), Obsessive Compulsive Disorder (OCD), Social Anxiety Disorder, and Specific Phobia are the most common anxiety disorders identified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). These disorders' specific origin and pathophysiology are yet unknown. Understanding the impact of exercise and physical activity on anxiety disorder processes might help us learn more about these mental conditions. The goal of this paper is to highlight the known and developing mechanisms that may contribute to exercise's calming effects.

Hypothalamic-Pituitary-Adrenal Axis: The HPA axis is important in the development of adaptive responses to physical and psychological stimuli. Depressive and anxiety symptoms have long been linked to dysregulations in the HPA axis [4]. Acute stress causes changes in the adrenocorticotropic hormone (ACTH) and an increase in glucocorticoid levels. Chronic stress has been linked to reduced peripheral cortisol levels and activation of glucocorticoid receptors, leading in higher central feedback sensitivity, as found in PTSD. Some studies have found lower plasma ACTH and corticosterone levels, while others have indicated increased corticosterone production, depending on the experimental paradigm utilized for chronic stress [5]. Voluntary exercise changes the release of corticotrophin-releasing factor (CRF) from the hypothalamus and ACTH from the anterior pituitary in preclinical investigations [6]. Exercise-induced alterations in the HPA axis appear to influence stress reactivity and anxiety in humans, according to these studies.

Conclusion

Animal studies show that exercise and regular activity have a favourable influence on the pathophysiological processes of anxiety. Exercise has also been linked to decreased anxiety in clinical settings, according to several research and meta-analyses. No one mechanism adequately explains for the anxiolytic aspect of exercise, just as no single mechanism adequately accounts for the heterogenic nature of anxiety. Physical activity has a favourable effect on a variety of biological and psychological systems. Exercise's involvement in enhancing neurogenesis in humans has received a lot of attention in recent years, and its implications for anxiety disorders are a fascinating field of research. Future research is needed to continue this line of inquiry, as well as research into the therapeutic uses of exercise in anxiety disorders.

Acknowledgments: Not applicable.

Conflict of Interest: There are no conflicts of interest to declare.

References

1. US Department of Health and Human Services (2002) Physical activity fundamental to preventing disease. Washington, DC: US DHHS, 2-19.
2. Van Minnen A, Hendriks L, Olff M (2010) When do trauma experts choose exposure therapy for PTSD patients? A controlled study of therapist and patient factors. Behav Res Ther 48:312-320.
3. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, et al. (2005) Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry 62:593-602.
4. Landgraf R, Wigger A, Holsboer F, Neumann I (1999) Hyper-reactive hypothalamo-pituitary-adrenocortical axis in rats bred for high anxiety-related behaviour. J Neuroendocrinol 11:405-407.
5. Kant GJ, Leu J R, Anderson SM, Mougey EH (1987) Effects of chronic stress on plasma corticosterone, ACTH and prolactin. Physiol Behav 40:775-779.
6. Salmon P (2001) Effects of physical exercise on anxiety, depression, and sensitivity to stress: a unifying theory. Clin Psychol Rev 21:33-61.

***Corresponding author:** Geetha Shivakumar, Department of Psychiatry, University of Texas, Southwestern Medical Center, Dallas, Texas, USA, E-mail: geethask@va.gov

Received: 26-Mar-2022, Manuscript No. jnp-22-59992; **Editor assigned:** 28-Mar-2022, PreQC No. jnp-22-59992 (PQ); **Reviewed:** 11-Apr-2022, QC No. jnp-22-59992; **Revised:** 15-Apr-2022, Manuscript No. jnp-22-59992(R); **Published:** 22-Apr-2022, DOI: 10.4172/2165-7025.1000517

Citation: Shivakumar G (2022) Exercise and Physical Activity's Effects on Chronic Illnesses and Psychiatric Disorders like Anxiety. J Nov Physiother 12: 517.