A Comprehensive Review of the Metabolic and Psychophysiological Effect of Regular Exercise on Healthy Life

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Abstract: Background: This review article aims to emphasize the psychophysiological and metabolic health effects of regular exercise on a healthy lifestyle. Materials and Methods In the search for scientific literature for this review, data from the US National Library of Medicine (PubMed), MEDLINE, PsycINFO, and SportDiscus were used, and the terms “regular exercise”, “psychophysiological health”, “healthy lifestyle”, and “overall health” were used. The relevant literature has also taken its source from the research of relevant articles from reference lists derived from data searches. Results: Physical activity is not just a regular exercise habit aimed at improving metabolic health or reaching ideal weight. It also has a very significant impact on psychological and mental health. Scientific research has shown that regular exercise habits improve psychological health, reduce stress and improve general mental health. Due to the hormonal systems and physiological mechanisms that regular physical activity activates to improve mood, the effects of regular exercise on psychophysiological and general health as part of a healthy lifestyle should be emphasized. Conclusion: The common results of scientific research show that a healthy and quality life is possible by acquiring regular exercise behavior throughout life. It’s clear that regular physical activity appears to provide a number of metabolic and psychophysiological benefits for a healthier lifestyle. These include reductions in symptoms of depression and anxiety, improvement in cognitive function, reduction in stress, and improvements in overall health and well-being.

Keywords: regular exercise; psychophysiological health; healthy lifestyle; overall health

1. Introduction

Regular physical activity has been shown to have numerous health benefits, including maintaining bone, muscle and joint health, improving physiological, metabolic and psychological parameters, and reducing the risk of chronic disease and premature death [1]. In addition to all these health effects, it is known that regular exercise habits can reduce the risk of heart disease, type 2 diabetes, colorectal cancer, breast cancer, obesity,
Furthermore, it has been suggested that exercise may have positive contributions to metabolic health, which can benefit both physical and psychological well-being. Scientific studies have demonstrated that it can help to reduce the risk of chronic diseases, including cardiovascular diseases, stroke, depression, Type 2 diabetes and osteoporosis. It can also play a therapeutic role in metabolic problems such as improving insulin sensitivity and glucose metabolism. It is also possible that exercise may help to prevent the onset of type 2 diabetes. Furthermore, it has been suggested that exercise may have positive contributions to metabolic health by causing improvements in lipid profiles such as decreasing total cholesterol and triglycerides and increasing HDL cholesterol.
It seems that clinical studies are increasingly indicating that regular exercise behavior may have a positive impact on general health, not only in terms of physical health but also in terms of psychological health. It is possible that your participation in sports could contribute to a number of positive outcomes, including increased self-confidence, body image, cardiovascular health and mental well-being. This demonstrates the positive interaction between lifestyle and regular exercise behavior.

Numerous scientific studies have shown that exercise, in addition to its benefits to metabolic health, is also associated with improved mental health. This study points out that regular exercise can reduce symptoms of depression and anxiety, and that regular exercise habits regular physical activity behavior increase cognition in many ways, such as increasing attention and memory. In addition to all these positive contributions to a healthy lifestyle, regular exercise routines have also been proven to have a positive effect on sleep quality. Research in this field has shown that people who exercise regularly have better sleep patterns and fewer sleep disorders. As a result, it becomes clear that the effects of regular exercise habits as part of a healthy lifestyle on psychophysiological and overall health are extremely important for a healthy life.

Many studies have found that exercise can potentially increase self-esteem in individuals with regular physical activity habits. Since regular physical activity can increase self-confidence, it is possible that exercise can improve body image and self-esteem in individuals who engage in regular physical activity. Therefore, it is understood that regular exercise behavior can contribute to a socio-psychologically healthier lifestyle and allow individuals to live an active and satisfying life, and more research is needed to clarify some health effects that have not yet been fully revealed.

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References

16. Andersson E.; Hovland A.; Kjellman B.; Taube J.; Martinsen E. Fysisk aktivitet lika bra som KBT eller läkemedel vid depression [Physical activity is just as good as CBT or drugs for depression]. Lakartidningen 2015, 47, 2102–2104.
21. Sarvimäki A.; Stenbock-Hult B. Quality of life in old age described as a sense of well-being, meaning and