

THE RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND DEPRESSION

Aleksandar Zejak

MEDICINSKI FAKULTET, NOVI SAD, HAJDUK VELJKOVA 3

Summary: Introduction: Physical activity is any movement of skeletal muscles that uses energy. The earliest records of purposeful physical activity date as far back as 2500 BC from China, which tells us that even then people knew that it was essential for maintaining health. However, today man is more and more busy and generally sits most of the day and has no time to move. All this affects our mental health. Depression as one of the main problems of today is interesting when it comes to physical activity because it is believed that movement can improve its symptoms.

The aim of the study: The aim of our work is to explain what depression is, what are its symptoms and how it is generally treated. However, the main goal is to explain how physical activity affects the improvement of depression symptoms.

Depression: Depression is a mental disorder characterized by feelings of sadness and loss of will and interest in most things. It is classified into five different entities. Important for our work is major depressive disorder, which, according to statistical data, occurs more and more often. The occurrence of depressive disorder is influenced by genetics and environmental factors.

Physical activity and depression: The positive impact of exercise on mental health is an increasingly common subject of research and interest in the general population. There are a number of ways that regular physical activity can improve mood and alleviate symptoms of depression. However, certain physical activity can also have a negative impact on the psyche.

Conclusion: In order for physical activity to have a positive impact on health, it is important that it is carried out regularly and correctly. A person with depression should choose an activity that suits them, preferably in nature. It is also important to eat healthy food, get enough sleep and drink enough water.

Key words: depression, major depressive disorder, physical activity, mental health, feelings of sadness

Introduction

By physical activity we mean any movement of skeletal muscles that requires energy. Also, it is a movement of the body that is made possible by the musculoskeletal system and results in energy consumption that is greater than what the body consumes while it is at rest. Physical activity can be doing housework, recreational activities such as cycling or running, or going to the gym and lifting weights [1]. Physical activity was a condition for survival, the survival of the individual and the whole community. (Stevo Popović). The earliest records of targeted and organized exercise come from ancient China (2500 BC). Back then, people were encouraged to do exercises modeled after the movements of animals (tiger) and today our association of Kung Fu with violent fighting is wrong. This skill actually started as medical gymnastics, and some believe it was adapted from yoga, which was still popular in India at the time [2].

Today, man has less and less time for these

activities because modernization has led to such conditions that everything is easier for man. Shopping and payment are over the Internet, work is done from home, mostly in a sitting position, and walking and physical activity have become a luxury [3].

The Centers for Disease Control and Prevention, as well as many other institutions, recommend that the general population, and even people with certain medical conditions, engage in regular physical activity. This is the best way to improve public health and prevent disease. 30 minutes of physical activity of moderate intensity, a couple of days a week, and ideally every day, has a positive effect on the prevention and control of hypertension, diabetes mellitus (insulin dependent), osteoporosis and similar conditions. But what about mental health, ie depression? It is considered that physical activity can be very effective for the prevention and control of psychiatric diseases [4]. Of course, apart from physical activity, it is important what kind of air we breathe, what kind of food we eat

and what kind of water we drink, as well as in what quantity. It seems that these last aspects are given special importance, and we rarely hear that physical activity is equally important [5]. Depression is defined as a mood disorder characterized by persistent feelings of sadness and loss of interest [6]. When a person is suffering from depression it often seems like the last thing they want to do is any kind of physical activity, however this can be extremely helpful. This is precisely what our work deals with.

The goal of the work

The goal of our work is to explain what depression is, how it manifests itself and how to recognize it. We will also explain how depression is diagnosed and how it is most often treated. The main goal of our work is to explain what physical activity is and how it has a positive effect on mental health, specifically on depression, and who should engage in physical activity and to what extent. Also, we will mention the negative sides of persistent training. Depression

Depression is by definition a mood disorder that makes a person sad and prone to losing interest and more often affects women. Most people will not seek medical help, 60% because of false perceptions, and the rest because of stigma and prejudice from the environment.

Depressive disorders are classified into five categories and each of them is characterized by sadness, emptiness, irritable mood that can be accompanied by somatic or cognitive changes. The categories of depression are as follows:

Mood regulation disorder,
major depressive disorder,
Persistent depressive disorder (dysthymia),
Premenstrual dysphoric disorder,
Depressive disorder due to another medical condition [6].

The World Health Organization estimates that the proportion of the population (globally) that has depression is 4.4%. These are data from 2015, which would mean that there were 322 million people with depression at that time. Today, those numbers are much higher, even the number from 2015 increased by 18.4% compared to 2005 [7]. In 2022, the share of depression increased by a whopping 25%, and the main reason was the COVID-19 pandemic [8]. As we can conclude, depression is not at all a naive problem and it is extremely important to

understand why it occurs and how it manifests itself, in order to be able to control it properly. In our work, we will specifically deal with major depressive disorder.

Etiology and symptoms

The etiology of major depressive disorder is multifactorial, that is, its appearance is influenced by both genetic and environmental factors. Depression can also occur in people who do not have a positive family history, but the chances are three times higher in those whose parents suffer from depression. Diseases such as Alzheimer's or Parkinson's, stroke, cancer, chronic pain or similar conditions increase the chances of developing depression. Most people react badly to the loss of a close person or some unfavorable situation in life, so this can also be a reason for depression [6].

Symptoms of depression can be:

Common symptoms of depression include:

Constantly sad, anxious or "empty" mood,
Feelings of hopelessness or pessimism,
Feeling irritable, frustrated or restless,
Feelings of guilt, worthlessness or helplessness,
Loss of interest or pleasure in hobbies or activities,
Decreased energy (fatigue),
Difficulty concentrating, remembering or making decisions,
Difficulty sleeping, early morning awakening or oversleeping,
Changes in appetite or unplanned weight changes,
Pain, headaches, cramps, or digestive problems with no clear physical cause and that are not relieved even by treatment,

Suicide attempts or thoughts of death or suicide. For a person to be diagnosed with depression, they must have five symptoms every day, almost all day, for at least 2 weeks. One of the symptoms that must occur is a depressed mood or loss of interest in all activities. It is important to distinguish between irritability and depression [9].

Physical activity and depression

Depression is usually treated with medication, psychotherapy, or a combination of both. What kind of therapy will be depends solely on the severity of the symptoms and the depression itself [9]. However, sometimes the drugs do not have the desired effect, but have a counter-effect and the patient falls into even greater mental problems. Few people know the impact of

regular physical activity on mental health, and even fewer know how physical activity can affect depression.

The positive impact of physical activity on the prevention and control of physical diseases is clear, and today there is increasing interest in the impact on mental health and depression [5]. Even a large number of studies have proven the positive effects of exercise on mental health, and one even showed that regular physical activity significantly reduces the risk of depression. Even a single exercise session has also been proven to improve mood and reduce symptoms of depression [1].

Physical activity is a cheap and effective solution for all people who suffer from depression or simply want to preserve their mental health, and at the same time do not want to take medication. One study showed that people who exercise continuously for a couple of years have a 22% lower risk of mental illness. It is very important to understand that you should not engage in physical activity only if you are at risk of developing depression, or if you already have a diagnosis. Even if you're in a bad mood, exercise can help you feel better and alleviate feelings of sadness or loneliness, while also helping you sleep better [5].

Mechanism of action and recommended dose of exercise

The mechanism of the beneficial effect of regular physical activity on depression is described as follows:

distraction,

Social contact and

Self-efficacy.

The effect of distraction is explained by the fact that a person diverts attention from unfavorable stimuli during and after exercise and directly improves mood. The effect of self-efficacy is reflected in the fact that the physical activity itself is a challenge for the individual and the ability to successfully perform it leads to an improvement in mood and an increase in the sense of self-confidence. Social interaction is perhaps the most obvious, given that we previously stated that people with depression are often isolated and have no desire for interactions or any activities. Interacting with others helps them have someone to talk to and gives them support. Apart from these three mechanisms, the effect of physical activity on depression is also reflected in the release of hormones. During exercise, the neurotransmitter

monoamine is secreted, and its synaptic transmission increases and is said to function as an antidepressant. The hormone endorphin (enogenic opioid), which is secreted during exercise, causes a feeling of calmness and improves mood [4].

Different studies have shown different results and most have come to the conclusion that you should train five times a week. The recommended time and duration of exercise varied, some suggested 150 minutes a week, some more than 240 and so on [10]. However, the duration of physical activity is less important in our opinion. What is important is that the person focuses as much as possible on that physical activity and applies it regularly. The positive physical and mental effects will be apparent after a while, but it is also equally important that a person eats healthy and drinks enough water.

Excessive exercise and the impact on mental health

For some people, physical activity turns into an obsession, that is, they become preoccupied with training, which can affect the psyche and personal and professional relationships. As a consequence of this obsession, a person can develop eating disorders, muscle dysmorphia (dissatisfaction with appearance), use of anabolic steroids, obsession with intense training, mood disorders, cycle disorders in women and simply too much training [4]. It is important to listen to your body and do only what pleases the person and makes him feel better.

Conclusion

From all of the above, we can conclude that regular and proper physical activity can help prevent many diseases, as well as depression. However, it can be harmful at the same time if a person overdoes it and does not implement it properly. You should choose physical activities that you genuinely enjoy, that suit your lifestyle, and it is always advised that they be outside in nature.

Depression is not a naive condition and it is important to have enough real information to be able to recognize it in time. For all people who suffer from depression or have some other psychological problem, it is advised that in addition to physical activity, they have the following:
enough sleep,

Regular and healthy meals,
Avoiding alcohol, nicotine, drugs, even medicines
not prescribed by a doctor.

Regular physical activity can improve mood and
is especially beneficial for mild to moderate
depression. Every type of activity is useful, but

only when it is done continuously and if it is not
overdone. It may sound like a difficult process,
but it is necessary to find the motivation and
start yourself.

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