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## PHYSICAL ACTIVITY REDUCES ANXIETY

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### Abstract

*Anxiety symptoms are common in older adults with or without anxiety disorders. Pharmacological options may be limited for these patients. Alternative treatments are important for these patients. There is a general belief that physical activity and exercise have positive effects on mood and anxiety and a great number of studies describe an association of physical activity and general well-being, mood and anxiety. Exercise is a natural and effective anti-anxiety treatment. It relieves tension and stress, boosts physical and mental energy, and enhances well-being through the release of endorphins. This paper will present a broad overview of research involving the efficacy of physical activity on anxiety.*

**Keywords:** *anxiety disorders, physical activity*

**JEL classification:** *I0, Z20*

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### Introduction

Anxiety is one of the most common disorders of affectivity, because the world in which we live is one of violence, misconduct, and decline in moral values. We become more and more dependent on work, we fall asleep at late hours, we wake up too early, we work many hours over the usual schedule, do not rest and relax as much as we should and eat junk food.

The physical benefits of exercise - improving physical condition and fighting disease - have long been established, and physicians always encourage staying physically active. According to a US Department of Health and Human Services report on physical activity, regular exercise significantly reduced causes of mortality by up to 30% for men and women. These health benefits are seen consistently across all age groups and racial/ethnic categories. The Centers for Disease Control and Prevention currently recommends 30 min of moderate- to high-intensity exercise for at least 5 days a week for all healthy individuals <sup>2</sup>

### Content

The prevalence of depression in Romania is 12-20%, and that of anxiety disorders reaches the threshold of 28%. Romania ranks third in the world in terms of anxiety disorders

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<sup>2</sup> DHHS, 2002



Anxiety can be defined as a set of physiological and behavioral responses that protect individuals from danger<sup>3</sup>. Anxiety disorders are the most common psychiatric illnesses affecting children and adults. "Anxiety disorder" includes generalized anxiety disorder, panic disorder and panic attacks, agoraphobia, social anxiety disorder, selective mutism, separation anxiety, and specific phobias. These disorders are chronic, debilitating, and impact multiple aspects of one's life.

„Anxiety sensitivity is a term for the tendency to misinterpret and catastrophize anxiety-related sensations based on the belief that they will result in disastrous physical, psychological, and/or social outcomes. Exposing someone with high anxiety sensitivity to the physiological symptoms they fear, such as rapid heartbeat, in the context of physical exercise increases their tolerance for such symptoms”<sup>4</sup>.

Physical activity is any activity that contracts muscles and expends energy and can include work or household or leisure activities.

Exercise is a planned, structured and repetitive body movement done to improve or maintain physical fitness. Exercise is also considered vital for maintaining mental fitness, and it can reduce stress. „There are a number of neurovegetative disorders which mitigates and even disappear by practicing moderate exercise because it contributes to strengthening and balancing the cortical processes”<sup>5</sup>. Studies show that it is very effective at reducing fatigue, improving alertness and concentration, and at enhancing overall cognitive function. This can be especially helpful when stress has depleted your energy or ability to concentrate.

Exercise and other physical activity produce endorphins - chemicals in the brain that act as natural painkillers - and also improve the ability to sleep, which in turn reduces stress.

„Scientists have found that regular participation in aerobic exercise has been shown to decrease overall levels of tension, elevate and stabilize mood, improve sleep, and improve self-esteem. About five minutes of aerobic exercise can begin to stimulate anti-anxiety effects.”<sup>6</sup> Exercise also tires the body enough that it becomes easier to sleep with anxiety - something that many anxiety sufferers struggle with. Sleep is crucial for anxiety management, to the ability for exercise to improve sleep is incredibly valuable.

#### *Inactivity and Anxiety*

Science has also provided some evidence that physically active people have lower rates of anxiety and depression than sedentary people. Exercise may

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<sup>3</sup> Coutinho FC, Dias GP, do Nascimento Bevilaqua MC, Gardino PF, Pimentel Rangé B, Nardi AE. 2010

<sup>4</sup> Anderson Elizabeth, Shivakuma Geethar 2014

<sup>5</sup> Dominteanu, T., (2013).

<sup>6</sup> www.adaa.org, 2014



improve mental health by helping the brain cope better with stress. In one study, researchers found that those who got regular vigorous exercise were 25 percent less likely to develop depression or an anxiety disorder over the next five years.”<sup>7</sup>

Inactivity is not the cause of anxiety for everyone. Some people are genetically prone to anxiety. Others have had experiences that shaped their anxiety symptoms. The relationship actually starts at inactivity. Studies have shown a very strong correlation between a lack of physical activity and the development of anxiety disorders. This relationship isn't entirely clear, but many of the proposed causes of this include:

- *unused energy* - one of the most frequently cited reasons for anxiety is unused energy. The body was made to move, and unfortunately when it doesn't move it creates tension. We see this actually with dogs often - dogs that don't get their daily walks often become anxious and high strung, because if they don't work out their energy, that energy turns first into physical tension, and then into mental tension;

- *increased stress hormone* - when you feel stress, the body releases a hormone known as cortisol. There's evidence that movement is what depletes cortisol, bringing it back to normal levels. This makes sense, because anxiety itself is the "fight or flight" system. When your body experiences it, it expects you to fight or flight. Inactivity is essentially doing nothing, and that may cause body to start misfiring your stress and anxiety hormones. Nearly everyone living with anxiety likely has an excess of cortisol in their body, as a result of the stress that anxiety places on them. Exercise depletes that cortisol, preventing many of the symptoms that lead to further anxiety, such as concentration problems and fatigue;

- *immune system malfunction exercise* - is also necessary for a regulated immune system, as well as maintaining a healthy hormone balance. There's reason to believe that inactivity prevents these important things from occurring.

„Psychologists studying how exercise relieves anxiety and depression suggest that a 10-minute walk may be just as good as a 45-minute workout. Some studies show that exercise can work quickly to elevate depressed mood in many people. Although the effects may be temporary, they demonstrate that a brisk walk or other simple activity can deliver several hours of relief, similar to taking an aspirin for a headache”<sup>8</sup> In the tests it was shown that exercise reduces anxiety by as much as 90%. Basically, walking or lifting weights is the best "medication" that can be prescribed for anxiety, say scientists. The best answers are patients who are exercising for a shorter but longer time. The ideal exercise time is 30 minutes

*Physical activity for anxiety*

Swimming is more intense than walking;

Running - releases endorphins;

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<sup>7</sup> www.adaa.org, 2014

<sup>8</sup> www.adaa.org, 2014



Hiking in the woods - increase human immune function;

Yoga - focuses on deep breaths and internal focus;

Dancing - reduced anxiety;

Strength Training - may improve the body's central nervous system functioning which could positively effect on a person's mental health<sup>9</sup>.

Tai Chi - is a form of exercise originating from China that incorporates Chinese martial arts with meditative movements<sup>10</sup>.

- Rhythmic exercises, such as running or jumping the rope, have been found to increase the activity of alpha waves in the brain, which produces a state of relaxation similar to that induced by meditation.

- Speed sports, which require concentration (like tennis), are useful in this aspect.

- Running, cycling, skating, or solitary exercise offer time to free from resentment and aggression, or simply give the chance not to think of anything special.

- Team sports have a special advantage: they satisfy the company's need and reduce the depression-induced isolation.

Doing 30 minutes or more of exercise a day for three to five days a week can significantly improve depression symptoms. Exercises release your mind from negative thoughts. Physical effort in sport will help you become more creative and "refresh" your mood. Physical exercise is a release: it tired in the good sense of the word, reduces muscle tension, soothes and offers the chance of a good sleep.

### Conclusions

The physical benefits of exercise—improving physical condition and fighting disease—have long been established, and physicians always encourage staying physically active.

Regular exercise has many psychological and emotional benefit. It can help:

- to release neurotransmitters and endorphins
- to reduce immune system chemicals that can worsen depression
- to increase body temperature, which may have calming effects
- to gain confidence. Meeting exercise goals or challenges, even small ones, can boost self-confidence. Getting in shape can also make feel better.
- to take r mind off worries. Exercise is a distraction that can get you away from the cycle of negative thoughts that feed anxiety and depression.
- get more social interaction. Exercise and physical activity may give the chance to meet or socialize with others
- to cope in a healthy way. Doing something positive to manage anxiety or depression is a healthy coping strategy.

<sup>9</sup> O'Connor, P.J., Herring, M.P. and Carvalho, A. (2010)

<sup>10</sup> Wang F, Lee EK, Wu T, Benson H, Fricchione G, Wang W, Yeung AS. 2014



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