

Exercise: Its benefits on physical and mental health

Stephanie McIntyre, M.A.

Licensed Professional Counselor-Intern

After going through some very difficult lifestyle changes a few years ago, I discontinued my workout routine. I gradually slipped into a deep depression. Who knows which came first...the depression or the stopping of exercise? Either way, I felt and looked terrible. I was not eating or sleeping well. I felt completely unmotivated to do much of anything. After several months of not exercising, I decided I had to get out there and get active again for both my mental and physical well-being. Even though it was hard to start back, I knew I needed it. I returned to the gym to take classes and I began running again. I felt my health, my mood and my appearance improve. Slowly, my appetite and sleeping patterns improved also.

So, what does the research say about exercise? Fortunately, there is a wealth of information about the links between exercise and mental health as the experts have begun to realize that health is indeed affected by the interplay of biological, psychological and sociological factors (Smith, 2006). The World Health Organization (as cited in Edwards, 2006) defines health as not only the absence of illness but also a state of complete physical, mental and social well-being. More and more, we are beginning to realize that even though depression and anxiety have been seen as mind disorders, they can be treated through the body via exercise. Also, it has been recognized that anxiety and depression are often accompanied by bodily disorders. Somatic disorders that can accompany depression may include diabetes, hypertension, arthritis and obesity. Anxiety and depression can both be the

cause of and the result of comorbid conditions (Smith, 2006). But which comes first—the mental distress or the lack of physical activity? I know that in my own case, it was hard to tell whether the depression caused me to feel unmotivated, thus exacerbating the depression or whether the lack of activity was the impetus for the depression. Either way, it is not an enjoyable state to be in.

It is also being seen that exercise helps slow the effects of aging. Scientific studies are now showing that aerobic exercise not only halts the brain shrinkage that normally occurs starting in a person's 40's, but exercise can actually reverse this shrinkage (Begley, 2006). Adults who were athletic had denser brains than their non-athletic counterparts (Jozefowicz, 2004). Until recently, it was generally believed that old brains did not develop new neurons but Urbana scientists conducted an experiment where patients, aged 60 to 79 were given MRI's both before and after the study. One group participated in low-intensity aerobic exercises, another group did non-aerobic exercises such as stretching and the third group did nothing. The second MRI showed that those who did aerobic exercise actually increased their brain volumes, especially in the gray matter of the frontal lobes where executive thinking occurs (Begley, 2006).

It is believed that a protein called BDNF (brain-derived neurotrophic factor) is responsible for these improvements in the brain. This protein helps the nerve cells grow and connect and is crucial in the development of the fetus. It appears to be important in the adult brain as well. In adults it is believed that this protein actually helps rewire the brain and influences brain functions such as memory and mood. Lab rats that were boosted with BDNF were able to navigate their mazes faster than non-boosted rats. Boosted rats showed faster

healing of brain injuries and were better able to avoid the rodent-equivalent form of depression. It is simple to boost levels of BDNF with short periods of aerobic exercise. Scientists are able to prove this in lab animals and it is believed that human levels of BDNF react similarly after short stints of exercise (Jozefowicz, 2004).

Now it appears that exercise not only improves mood and physical fitness levels but it also increases brain mass and mental clarity. Scientists are beginning to see that aerobic exercise causes the cells in the brain to reinforce old connections between neurons and also to create new connections. Due to a denser network of neurons, the brain is better able to process and store information (Jozefowicz, 2004). In short, exercise makes you smarter and slows the effects of aging on the brain. This aerobic exercise doesn't need to be intense; it could be as simple as walking around the block. A study done by biostatistics professor Robert Abbott, Ph. D. (as cited in E.B., 2007) shows that elderly people who walk the most, have the best mental functions.

Not only does exercise show proven mental benefits for those who have been inactive, but people who were already exercising and who continued to maintain their regimens, showed continued improvements in mood and mental clarity. Edwards (2006) states that research has shown that those who exercise regularly are more mentally healthy and psychologically well than those who don't exercise and that their routine of regular exercise, in particular, was associated with these states of well-being. Edwards' study shows that continued exercise shows increased improvements in well-being.

Science has proven that participation in regular exercise can improve the outcome of medical conditions while also reducing the severity of these conditions and the amounts of

medication required to treat them because exercise benefits both the mind and the body.

Some illnesses that have shown improvements through exercise include hypertension, diabetes and arthritis (Smith, 2006). Exercise can slow the brain's aging and lower a person's risk for Alzheimer's (E.B., 2007). Exercise also promotes social interactions that can be lacking in certain groups like the mentally ill or aged since exercise is often conducted in group settings.

Certain populations such as the elderly and young adult women are more prone to experience depression. It is believed that young adult women are less able to handle stress than young adult men, making them more prone to suicidal ideation and depression (Blakin, Tietjen-Smith, Caldwell & Shen, 2007). These groups have shown improvements after participating in physical exertion. Exercise has been proven to reduce depression and even heal wounds in the elderly and even low-intensity exercise can improve mental cognition (Smith, 2006). A study conducted by Balkin, Tietjen-Smith, Caldwell and Shen (2007) found that young adult women who had participated in aerobic exercise reported significant decreases in their levels of depression and suicidal ideation while those in the anaerobic and control groups did not.

And finally, people with severe mental illnesses, especially those who live in psychiatric facilities, often have poor health due to their limited physical activities. In turn, they are at higher risk for the occurrence of physical, emotional and psychological problems and can greatly benefit from even mild forms of aerobic activity. Individuals with severe mental illness who began participating in exercise programs also showed improvements in their levels of personal hygiene and pursuit of independence outside the institution in which they lived (Perham, 2007). The severely mentally ill and the elderly who live in institutions and group

homes can be more at risk for depression and other health-related issues due to the fact that the nature of their environments limits their participation in exercise.

Even though exercise has proven benefits, some may choose not to partake in it. For some, this may be due simply to their reluctance to exercise or ignorance in realizing the interconnection between their somatic illness and the need to exercise. In other words, some people feel more comfortable in admitting a physical illness than a mental one. Another factor to be considered is that those who are suffering with depression, often experience a lack of energy and motivation which makes the pursuit of exercise difficult which can in turn, lead to greater depressive symptoms (Balkin, Tietjen-Smith, Caldwell & Shen, 2007).

Research conducted by the Mental Health Foundation in London (as cited in Halliwell, 2005) finds that only five percent of physicians recommend exercise as a method to treat depression. Because of this lack of recognition of the link between physical health and mental wellness, the counselor may be the only one who would recommend exercise as a treatment for depression. During a counseling session, the counselor would be wise to consider the client's physical health because the way one feels emotionally is usually affected by how the client feels physically (Perham, 2007). The client's current exercise patterns should be assessed and the counselor would do well to consider "prescribing" aerobic exercise as part of the patient's treatment regimen (Balkin, Tietjen-Smith, Caldwell & Shen, 2007). Another aspect to consider and for counselors to recommend is that the client not only participate in aerobic exercise to improve mood, fitness and cognition levels but that this exercise be conducted outdoors. A study cited in the Journal of Holistic Healthcare (2007) found that those who walked outdoors reported greater decreases in their depression levels than those who walked

indoors. And finally, one more important benefit of exercise is that it can improve sleep. Better sleeping patterns can in turn, improve cognition, mental functioning and overall well-being (Smith, 2006).

The benefits of exercise on both physical and mental health cannot be overlooked. Counselors would be wise to work with their clients to determine their current activity levels and recommend implementing an exercise program when appropriate. Before beginning any strenuous activities, the client would be advised to consult with his or her medical doctor to rule out any reasons against exercising.

References

- Balkin, R., Tietjen-Smith, T., Caldwell, C., & Shen, Y. (2007). The Utilization of Exercise to Decrease Depressive Symptoms in Young Adult Women. *AdultSpan Journal*, 6(1), 30-35
- Begley, S. (2006, November 16). How to Keep Your Aging Brain Fit: Aerobics; Forget Crossword Puzzles—Study Says 3 Hours of Exercise a Week Can Bolster Memory, Intellect. *The Wall Street Journal*, D. 1
- E.B. (2007, March). Fit Body, Fit Brain. *Natural Health*, 37(3), 24
- Edwards, S. (2006). Physical exercise and psychological well-being. *South African Journal of Psychology*, 36(2), 357-373
- Geraci, R., & Good, B. (2000, Jul/Aug). The 31 Best Health Tips in the World. *Men's Health*, 15(6), 76
- Go green to beat the blues... (2007, August). *Journal of Holistic Healthcare*, 4(3), 3-4
- Halliwell, E. (2005). Reflections...on exercise and depression. *Healthcare, Counseling & Psychotherapy Journal*, 5(3), 4-5
- Jozefowicz, C. (2004). Sweating Makes You Smart: Exercise doesn't just make you look and feel better—it also keeps your brain young and strong. A good workout may be as good for your mind as it is for your muscles. *Psychology Today*, 37(3), 56-58
- Perham, A., & Accordino, M. (2007, Oct). Exercise and Functioning Level of Individuals with Severe Mental Illness: A Comparison of Two Groups. *Journal of Mental Health Counseling*, 29(4), 350-362
- Smith, T. W. (2006). Blood, Sweat, and Tears: Exercise in the Management of Mental and Physical Health Problems. *Clinical Psychology: Science & Practice*, 13(2), 198-202