Exercise: An Alternative & Active Approach
to Helping Clients with Depression and Post Traumatic Stress

By Kristi Rajala B.A. Kin., R.R.P., Kinesiologist/Exercise Therapy Specialist
& Jason Molnar (Hons.) B.P.E., R.R.P., C.S.C.S.,
Behavioural Therapist/Medical Exercise Specialist
from Sibley & Associates Inc.

The effects of exercise on physical well-being are well understood by health practitioners and the general public alike. Although studied since the early 1980’s, the positive effects that exercise has on mental well-being, such as anxiety and depression, are only now coming to the attention of mental health practitioners. When researching this article, we came across an excerpt from a clinical case of a depressed man who had heart disease and thought it was an appropriate illustration to begin this article:

"He was so despondent that he wanted to die. Because his heart was weak, he thought the best way to commit suicide without embarrassing his family was to run around the block as fast as he could until he killed himself. After several futile attempts at causing a fatal heart attack in this manner, he discovered to his surprise that he began to feel better and eventually chose to live instead of die" (1).

Sub-heading: What is Depression?
In the most general terms, depression is a “disorder of the brain and body’s ability to biologically create and balance a normal range of thoughts, emotions, and energy.” (4) When approached from a strictly scientific angle, depression is a chemical disorder which alters the function of normal brain behavior. Unusual levels of chemicals such as the neurotransmitters beta-endorphin, serotonin, and dopamine cause the disorder. Depression can fluctuate greatly in severity, yet whatever levels one’s depression rests; the side effects of this illness alter all aspects of the body.

Sub-heading: Traditional Treatment for Depression
Sufferers of this illness most often require some variety of treatments to gain control over their depression. The most common two treatment methods are antidepressant medications and counseling or psychotherapy. Physicians often rely on drugs such as tricyclic antidepressants and specific serotonin reuptake inhibitors to monitor levels of serotonin in the brain.

Sub-heading: Exercise: Alternative Treatment for Depression
Exercise has become an appealing alternative to alter one’s mood. Many recent studies have been published supporting the belief that exercise has been proven effective in improving depression and in some cases has been able to prevent it all together. The basic reasoning behind the theory is that exercising has positive effects on one’s body and mind. In support of the psychological benefits, it is argued that exercising increases one’s self-confidence as well as
provides a feeling of accomplishment and mastery, which in turn may raise an individual’s overall outlook. As more studies are being performed on exercise and depression, scientists are finding that exercise can raise serotonin levels enough so that those suffering from depression have an alternative, which is healthy, inexpensive as well as beneficial for the entire body, for their entire life.

Sub-heading: The Research
A consistent finding of early research examining the effects of weight training, as well as aerobic training was that regular exercisers exhibited less depression, anger, confusion and tension than non-exercisers (2, 3, 4). Most recently, Hassmen et al (6) examined exercise habits and mental well being of 3,403 Finnish adults. Many of the Finnish population suffer from a depressive disorder known as SAD or Seasonal Affect Disorder brought about by the low number of sunlight hours over winter months. Hassmen found that individuals who exercised 2 -3 times per week reported significantly less depression, stress and anger than non-exercisers.

What are the mechanisms by which exercise has this positive effect on mental well being? Three main mechanisms have been put forward by researchers (5).

- **Biochemical Mechanisms** - Probably the most well known example of a biochemical contribution comes in the form of a feeling of euphoria following intense prolonged exercise. Also known as "runners high", increases in plasma-endorphin levels are believed to underlie this mental state. Other research suggests norepinephrine and serotonin as mechanisms for improved mood. Both are elevated following acute exercise. Given that many anti-depressant medications also work by increasing the levels of these neurotransmitters in the brain, it seems reasonable to assume that this may be the means by which exercise positively affects mental well being.

- **Physiological Mechanisms** - Many of the feelings of anxiety and depression we experience come from appraisals of the way our body feels at any given point. Given this, it is possible that the perceptions of oneself can change as a result of positive physiological adaptations that occur in response to exercise. For example, lower blood pressure, slower pulse rate and improved respiratory efficiency may contribute to less feelings of anxiousness. Also, an increase in energy may contribute to increased feelings of happiness and elevated mood.

- **Psychosocial Mechanisms** - Positive self-esteem is related to good mental well being. Many of the effects of exercise such as loosing body fat and improved muscle definition are ways to improve body image and therefore self-esteem. Changing our body appearance through exercise may also contribute to positive self-esteem through the sense of control we gain when we bring about change in our bodies. Furthermore, the social interaction that accompanies activities that involve exercise may contribute to increased feelings of self-worth.
A Healthy Body is a Healthy Mind”
There is still much to be learned about the relationship between exercise and depression. However, studies so far have shown undeniable coherency in pointing to the fact that exercise does have beneficial effects. Given that exercise is as effective as psychotherapeutic interventions in treating depression and anxiety (5), it seems illogical not to include it in clinical treatment protocols.

Why isn't exercise used as an adjunct to traditional treatment by psychologists/psychiatrists? Several reasons are offered:

- genuine lack of knowledge of exercise research and its effects on mental health.
- bias towards classical treatments.
- reluctance to believe that exercise could be as effective as medication and other psychotherapeutic techniques.

So spread the word, because research is proving that "a healthy body is a healthy mind” and it may be just what your depressed and/or post traumatic stress clients need as part of their recovery. Additional information about this topic is available through Sibley & Associates’ Resource Library and Educational Seminars. Please contact Angela Veri, National Director of Customer Relations at 1.800.363.8900.

References