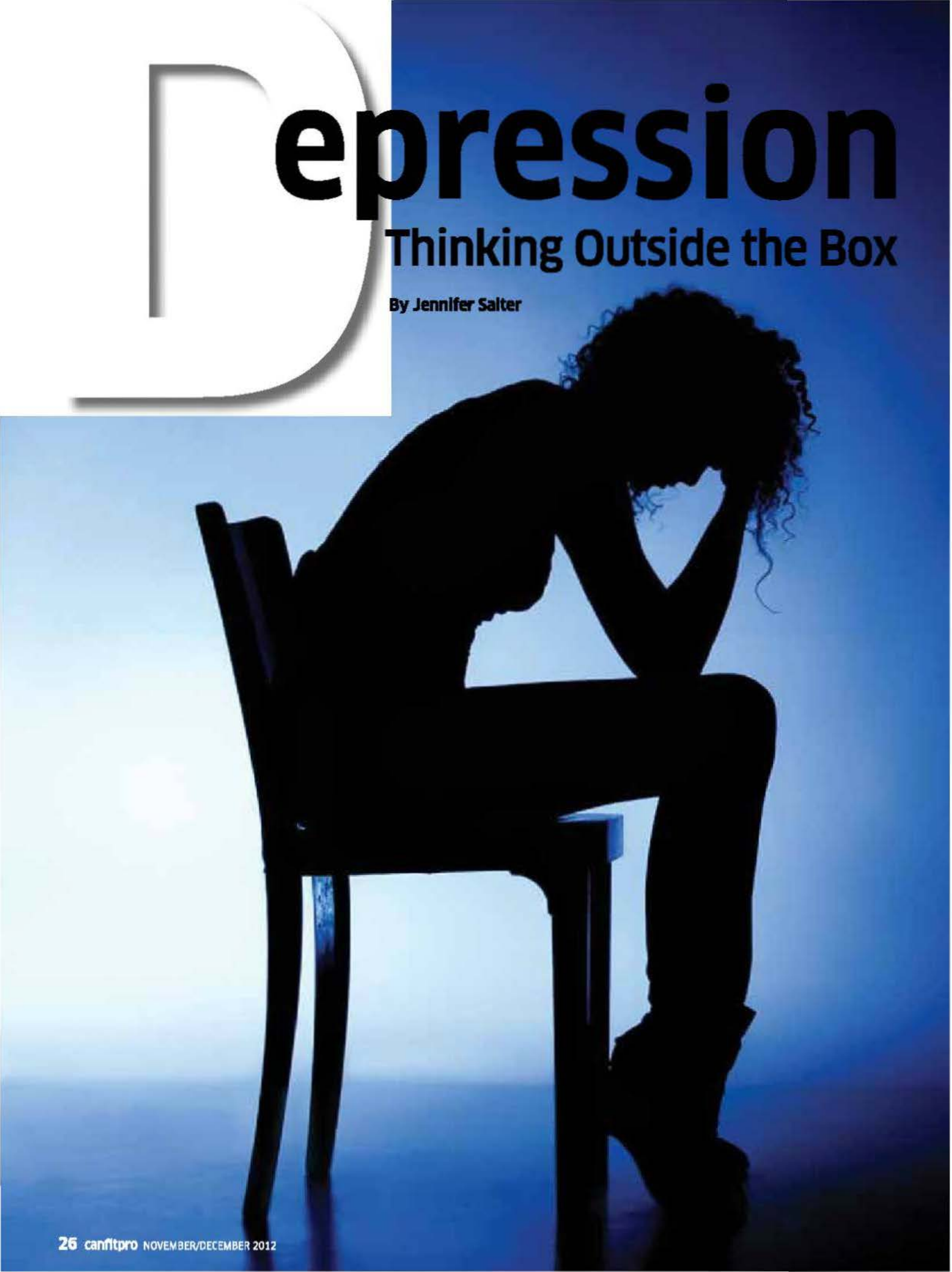
Depression

Thinking Outside the Box

By Jennifer Salter



The notion that depression was not entirely a psychological disorder emerged in the 1950s, when the first antidepressant drug was discovered. What was the original intended use for this first medical treatment for depression? It was a tuberculosis drug that made people "inappropriately happy"! Next, a new antihistamine medication produced similar mood-elevating effects, giving birth to a new class of drugs called tricyclic antidepressants. This led to a search for how the brain influences the mind, and rendered obsolete the concept of depression as a weakness of character.

Depression is caused by many factors. Although a full discussion of these is beyond the scope of this article, it is important to note that dysfunction in the limbic system is of particular interest to researchers. In particular, a small structure located at the base of the brain called the hypothalamus, which regulates many functions including body temperature, sleep, appetite, sexual drive, stress response, and control of the pituitary gland (which in turn regulates key hormones) has been studied extensively, as have other structures called the amygdala and hippocampus. All three areas of the brain are part of the limbic system, whose activities are so critical and complex that disturbances in any part of it, including how neurotransmitters function, will affect mood and behaviour.

It is largely through depression research that we know as much as we do about how aerobic exercise impacts the brain. Cardiovascular exercise, in fact, counteracts depression at almost every level. Endorphins, as well as the neurotransmitters norepinephrine and dopamine, contribute to the general feelings of well-being, increased self-esteem, and improved motivation and attention that often result from an exercise session. Note that norepinephrine and dopamine are two of the major neurotransmitters targeted by depression medications.

The statistics on depression are a wakeup call to action – according to the World Health Organization, depression is the leading cause of disability in the United States and Canada, ahead of coronary heart disease, any cancer, and AIDS. About 17 percent of adults experience depression at some point in their lives. Depression often co-occurs with anxiety disorders and substance abuse.

- One twenty-year longitudinal study of 8023 people found that inactive individuals were 1.5 times more likely to experience depression that active individuals.
- A massive Dutch study of 19,288 twins and their families published in 2006 showed that exercisers were less anxious, less depressed, less neurotic, and more socially outgoing.
- A Finnish study of 3403 people in 1999 demonstrated that those who exercise at least two to three times a week experience significantly less depression, anger, stress, and "cynical distrust" than those who exercise less or not at all.
- An epidemiological study from Columbia University from 2003 of 8098 people found the same inverse relationship between exercise and depression.
- A landmark study called SMILE (Standard Medical Intervention and Long Term Exercise) from Duke University in 1999 randomly compared three groups of patients: those who took Zoloft (an anti-depressant medication), those who exercised, or those who did both. The exercise group walked or jogged at 70-85 percent VO2max for 30 minutes three times per week. All three groups showed a significant drop in depression, including half who experienced a full remission.

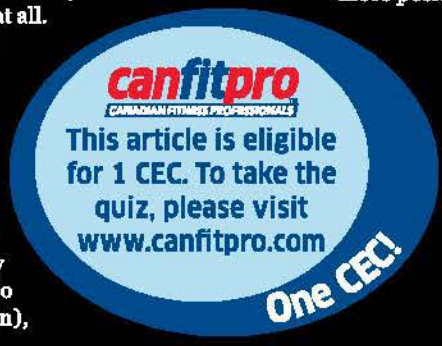
In Britain, doctors now use exercise as a first-line treatment for depression, but it is vastly underutilized in North America. Medication is often a critical part of any treatment plan, but unfortunately medication does not work for everyone or produces intolerable side effects. Moreover, a treatment plan that incorporates exercise along with medication will usually be more efficacious than medication alone. If you suspect you are suffering from depression, you must consult your doctor to establish a treatment plan that is appropriate for you, which may include both medication and physical activity.

Exercise Specialist Recommendations

The following recommendations are evidence-based, grounded in recent research on what is called the "dose-response ratio":

- Design an exercise program that incorporates three to five exercise sessions per week that last about one hour. A higher weekly caloric expenditure (how many calories you burn) is positively correlated with better management of depression symptoms.
- The intensity should be moderate to high. Research shows that low intensity cardiovascular exercise was only as effective as a placebo.
- Have clients increase intensity slowly over six to 12 weeks, to prevent injuries that can sideline their efforts.
- Instruct clients to download their favourite music/podcasts/books on tape onto their iPod/Phone. That way, workouts are transformed into rewarding personal time, as opposed to a punishment or a dreaded task.
- Whenever possible, have clients exercise first thing in the morning – which increases adherence. Seventy-five percent of people who exercise in the morning stay with it, as opposed to 25 percent of evening exercisers.
- Insist that your client schedule her workouts as appointments that cannot be cancelled.
- Remember that most people, barring very complex mental health issues such as bipolar disorder, and schizophrenia, can harness the power of physical activity in order to feel healthier, more positive, more energetic, and happier.

Finally, be clear with your clients that exercise becomes more enjoyable as a higher level of fitness is achieved.



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