Depression and Bone Loss: Is There a Connection?

Among elderly Canadians, about 9% of women and 3% of men suffer from depression. In recent years, research has shown that there may be a relationship between depression and osteoporosis-related fractures in both women and men. This may be due to:

(1) the depression itself
(2) the medication used to treat depression or
(3) both.

Depression itself can be related to a malfunctioning of special glands in the brain and the body that control certain hormones. In response to stress, such as depression, one of these hormones, cortisol, is produced in larger quantities than usual. Excess cortisol can result in bone loss.

In addition, depression can affect lifestyle, as it can change the way that people behave. For example, depression can lower a person’s energy levels. It can also increase or decrease a person’s appetite. As a result, depressed people may not get enough exercise and they may not eat a healthy diet so as to consume adequate bone-building nutrients such as protein and calcium.

Medications used to treat depression can also result in bone loss. Such medications are called antidepressants and they include a variety of drugs. Selective serotonin reuptake inhibitors (SSRIs) include antidepressant drugs known as Prozac®, Luvox®, Paxil®, Zoloft®, Celexa® and Cipralex®. Serotonin-norepinephrine reuptake inhibitors (SNRIs) include drugs known as Effexor®, Effexor XR®, Pristiq® and Cymbalta®. Tricyclic antidepressants (TCAs) include drugs known as Elavil®, Tofranil®, Sinequan®, Surmontil® and many others. In addition to these drugs and drug classifications, there are many more that are very commonly prescribed for depression.

In addition to bone loss, depression has also been associated with fractures. However, these fractures seem to be caused by falls rather than by the depression itself. Depressed people are at greater risk for falls when they first start taking an antidepressant medication because they may experience dizziness while their body is getting used to the drug. They are also at greater risk for falls when they abruptly stop taking their antidepressant medication because they may experience dizziness without
the drug to which their body has grown accustomed. For these and other reasons, all antidepressant medications need to be started and stopped gradually and under medical supervision. This process can take several weeks both when starting and when stopping an antidepressant drug.

The Canadian Multicentre Osteoporosis Study (CaMos) research group conducted a study that followed over 5000 men and women aged 50 or over. In this study, people taking SSRIs daily showed roughly twice the risk of osteoporotic fractures. In addition, bone mineral density (BMD) was reduced in patients reporting daily use of SSRIs. SSRI users also had a higher risk of falling. Although it is not clear why, SSRIs can lower blood pressure, which may lead to falls.

Our current guidelines for determining the risk of developing osteoporosis do not include depression or antidepressant medications as a risk factor. This is because more research is needed on assessing the effect of SSRIs on bone health.

In the meantime, if you need to take or are taking antidepressants, you should continue taking them under the guidance of your doctor. Abruptly stopping an antidepressant can lead to dizziness, falls and fractures. If you are not certain you need to continue taking your antidepressants, check with your doctor before making any changes to your medications.

For those taking antidepressant medications, be aware that these drugs may increase your risk of fracture by about 10%. In consultation with your doctor, undergo a fracture risk assessment and ask your doctor if you need a bone density test. If your fracture risk is high, you should be prescribed medication for osteoporosis. All Canadian adults, but especially those individuals at risk of osteoporosis, need to do regular weight-bearing exercise. They should also have a diet rich in calcium, they should take adequate vitamin D supplementation, and they should avoid bad habits such as smoking and excessive alcohol, which can contribute to further bone loss.

*With thanks to Dr. David Goltzman MD, FRCPC. Dr. Goltzman is a Professor in the Departments of Medicine and Physiology of McGill University, Director of the McGill Centre for Bone and Periodontal Research, and Senior Physician and Director of the Clinical Bone Centre at the McGill University Health Centre (MUHC). He is National Principal Investigator of the CaMos Study and a member of the Scientific Advisory Council of Osteoporosis Canada.*

**Funny Bone –** Don’t let aging get you down. It’s too hard to get back up!

**Notices/references**

i. Remember: It is important for you to eat a calcium rich diet (take calcium supplements, if necessary), get some appropriate exercise, take your vitamin D and if your doctor has prescribed a medication don’t forget to take it as directed.

ii. COPING Weekly will come to you every second Friday. We hope you enjoy it and find the information useful. Remember to log on to www.osteoporosis.ca for up-to-date
information or call us toll-free at 1-800-463-6842 to speak with an information counsellor about your questions and concerns.

iii. The material contained in this newsletter is provided for general information only. It should not be relied on to suggest a course of treatment for a particular individual or as a substitute for consultation with qualified health professionals who are familiar with your individual medical needs. Should you have any healthcare-related questions or concerns, you should contact your physician. You should never disregard medical advice or delay in seeking it because of something you have read in this or any newsletter.

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