# Remember: You can live well with osteoporosis! Depression, Anthorpressants and Osteoporosis

How They Interact to Increase the Risk of a Broken Bone

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### Depression

With nearly one out of six people developing depression during their lifetime, depression is a chronic medical condition and a major health problem. It is predicted to become the second leading cause of disability worldwide by 2020 after cardiovascular disease.

Depression is very different from the day-to-day mood changes and the short emotional reactions we often experience in response to daily stresses. Major depression, also called major depressive disorder or clinical depression, affects how you feel, think and behave, and can cause a variety of emotional and physical symptoms. These include prolonged sadness or unhappiness, loss of interest or pleasure in normal activities, difficulty sleeping, changes in appetite and weight, restlessness, feelings of worthlessness, loss of energy, feeling tired even with small tasks, poor concentration, unexplained physical problems such as headaches or back pain and recurring thoughts of suicide. To be diagnosed with major depression, you must have five or more of these symptoms over a minimum of two weeks, and one of the symptoms must be a depressed mood or a loss of interest or pleasure. Research suggests that almost twice as many women suffer from depression than men, but this may be because women are more likely than men to seek treatment for their depression.

### **Depression and Osteoporosis**

There are certain **lifestyle factors** associated with depression that may reduce bone mass and increase the risk of developing osteoporosis and broken bones. These include:

- smoking
- alcohol abuse
- poor nutrition resulting in lower calcium intake
- weight loss that leads to low body weight (< 60 kg or 132 lb)</li>
- a sedentary lifestyle with reduced physical activity leading to muscle weakness and an increased risk for falls.

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### Fracture Fact:

Regular physical activity benefits older adults who have gone through depression and anxiety. Symptoms are more likely to decrease with physical activity. Self-confidence improves. Regular exercise is good for the brain: it helps thinking, memory & concentration.

In addition, there are certain **biological changes** that occur during depression that may also reduce bone mineral density and increase fracture risk such as high blood levels of a stress hormone (cortisol) and low levels of sex hormones.

Depression affects people differently and symptoms can be mild, moderate or severe. If you think you may be suffering from depression, we encourage you to see a healthcare professional such as a family physician, psychiatrist or psychologist as soon as possible. There are many effective treatments for depression including a variety of antidepressant medications and different forms of psychological counselling. Depression can be treated using any combination of these treatment options depending on the individual.

### **Antidepressants and Their Effect on Bone**

Antidepressant medications (most commonly SSRIs) are often prescribed to treat the symptoms of moderate to severe depression, usually in combination with some form of counselling. While antidepressants are very important for the treatment of moderate to severe depression, more research is needed to better understand how antidepressants affect bone. The table below summarizes the different classes of antidepressant drugs and our current knowledge on their effect on bone.

Antidepressant	Class	May Decrease Bone Density	May Increase Fracture Risk	Comment on Fracture Risk
Citalopram (Celexa®)	SSRI	Yes	Yes	Increases as dose increases
Escitalopram (Cipralex®)	SSRI	Yes	Yes	
Fluoxetine (Prozac®)	SSRI	Yes	Yes	Increases as dose increases
Fluvoxamine (Luvox®)	SSRI	Yes	Yes	
Paroxetine (Paxil®)	SSRI	Yes	Yes	No effect at low doses but may
				have an impact at higher doses
Sertraline (Zoloft®)	SSRI	Yes	Yes	No effect at low doses but may
				have an impact at higher doses
Desvenlafaxine	SNRI	?	;	Insufficient evidence
(Pristiq®)				
Duloxetine (Cymbalta®)	SNRI	?	,	Insufficient evidence
Mirtazapine	SNRI	?	?	Insufficient evidence
(Remeron®)				
Venlafaxine (Effexor®,	SNRI	?	?	Insufficient evidence
Effexor XR®)				
Amitriptyline (Elavil ®)	TCA	?	Yes	Increases as dose increases
Clomipramine	TCA	?	?	Insufficient evidence
(Anafranil®)				
Doxepin (Sinequan®)	TCA	?	,	Insufficient evidence
Imipramine (Tofranil®)	TCA	?	Yes	No effect at low doses but may
		_		have an impact at higher doses
Nortriptyline (Aventyl®)	TCA	?	Yes	No effect at low doses but may
	_	_	_	have an impact at higher doses
Trimipramine	TCA	?	,	Insufficient evidence
(Surmontil®)			_	
Isocarboxazid	MAOI	?	,	Insufficient evidence
(Marplan®)		2	2	
Moclobemide	MAOI	?	,	Insufficient evidence
(Manerix®)				

### **Classes of Antidepressants**

SSRIs = Selective Serotonin Reuptake Inhibitors

SNRIs = Serotonin and Norepinephrine Reuptake Inhibitors

TCAs = Tricyclic Antidepressants

MAOIs = Monoamine Oxidase Inhibitors

Depending on the dose, both SSRIs and TCAs can double an individual's risk of breaking a bone (fracturing) compared to those not taking these antidepressants. The increase in fracture risk when taking these drugs depends on both the specific drug used and the dose taken. There is insufficient evidence to determine if there is any increase in fracture risk with the other classes of antidepressants.

Stopping an antidepressant suddenly may result in dizziness and poor balance leading to fall-related injuries such as broken bones. For these reasons, it is important to consult with your healthcare provider (including your pharmacist) whenever starting or stopping antidepressant medication. If these drugs are started and stopped gradually, over a period of several weeks and under the guidance of a healthcare professional, unpleasant symptoms leading to falls or broken bones can often be avoided.

#### What Does This Mean For You?

Although there is an association between depression, antidepressant medications and increased fracture risk, more research is still needed to better understand this area. For this reason, Osteoporosis Canada does not currently recommend bone mineral density testing just because someone is suffering from depression and/or taking antidepressant medication.

If you suffer from depression or are taking an antidepressant drug, you should continue taking your medication as prescribed. If you are uncertain about taking your antidepressant medication please check with your healthcare professional *first* before making any changes to your treatment. You should also see your doctor for a fracture risk assessment and to find out if you need a bone mineral density test. (See fact sheet on <u>Diagnosis</u> by clicking <u>here</u> or by calling 1-800-463-6842 to request a copy). Always remember to follow a healthy lifestyle for good bone health such as regular exercise, a diet rich in calcium, adequate vitamin D supplementation, avoiding smoking and limiting alcohol intake. All of these healthy lifestyle factors will not only reduce bone loss and your risk of fracture; they may also help improve your symptoms of depression.

With thanks to Dr. Debra A. Butt MD, MSc, CCFP, FCFP, Dr. Irene Polidoulis MD, CCFP, FCFP, and Dr. Rowena Ridout MD, FRCP(C). Also thanks to Dr. David Goltzman MD, FRCP(C) whose article, "Depression and Bone Loss", published in COPING July 8, 2011, inspired this reconsideration of an important topic.

### We Welcome Your Feedback

- Have a question?
- Is there an osteoporosis-related topic that you would like to see featured in the newsletter?
- Looking for a great volunteer opportunity?

Please contact us by calling Osteoporosis Canada's toll-free number **1-800-463-6842** or emailing <a href="mailto:copn@osteoporosis.ca">copn@osteoporosis.ca</a>.

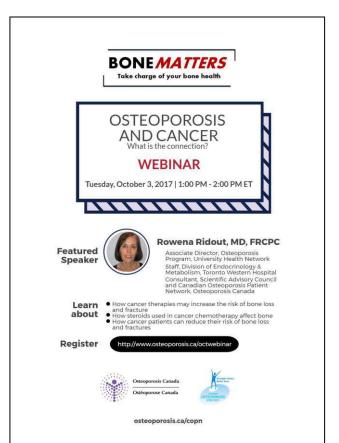
### OSTEOPOROSIS CANADA'S ANNUAL GENERAL MEETING 2017

Osteoporosis Canada (OC) will be hosting its annual general meeting (AGM) on Saturday, September 30, 2017 at 9:00 a.m. at the Novotel Hotel, 45 The Esplanade, Toronto, Ontario.

The annual general meeting (AGM) is hosted by the chair of Osteoporosis Canada's National Board of Directors. The other members of the Board also attend as well as the President and CEO of Osteoporosis Canada, members of OC's senior management team, the COPN Executive Committee members, and OC's Operations Advisory Council. All Osteoporosis Canada members in good standing are eligible to vote on motions. Members will receive an AGM information package in the mail and they can vote in person by attending the meeting or submit their proxy to Corona Steele at csteele@osteoporosis.ca. The AGM is also open to the public.

Both the chair of the Board and OC's President and CEO will reflect on the accomplishments and challenges of the past year and present their vision of future priorities and directions for Osteoporosis Canada. Members will vote to accept the audited financial statements for 2016-2017 and to accept the nominations for new members of the Board. Osteoporosis Canada's Annual Report will be presented at the meeting and made available afterwards to all as a downloadable file on Osteoporosis Canada's website at www.osteoporosis.ca.

In summary, the annual general meeting provides the organization the opportunity to confirm with its members that Osteoporosis Canada (and all of its components including COPN) is on the right track in meeting its mandate and serving its clients. An upcoming issue of COPING will report on the outcome of the AGM and the other events like OC's annual awards presentations that take place around it.



# BONE MATTERS

Take charge of your bone health

Are you concerned about if cancer and cancer therapies might affect bone health?

Join us for our next **Bone** *Matters* presentation with Dr. Rowena Ridout on the topic of Osteoporosis and Cancer. Dr. Ridout will discuss the potential links between cancer therapies, bone health and fracture risk, as well as practical strategies and tips for cancer patients on how to reduce their risk of bone loss and fractures.

This presentation will air on **Tuesday, October 3, 2017** at **1:00 PM ET** 

For more information and to register, please visit: <a href="http://www.osteoporosis.ca/osteoporosis-and-you/copn/virtual-forum/#cancer">http://www.osteoporosis.ca/osteoporosis-and-you/copn/virtual-forum/#cancer</a>

## **FUNNY BONE:**

Don't let aging get you down. It's too hard to get back up!

### A Recipe from our Sponsor

# Spice Roasted Peach and Yogurt Parfaits

Course: *Desserts & Sweets*Preparation Time: 15 mins
Cooking Time: 20 mins
Yields: 6 servings

1/2 milk product serving(s) per person

**Calcium:** 10% DV/ 114 mg



Fruit and yogurt get special treatment in this dessert. Fragrant spices and a touch of sugar, along with roasting the peaches, add intense flavour and the spiced, glazed seeds add crunch. Layered with vanilla-perfumed thick and creamy yogurt and you've got a parfait fit for company, yet easy enough for every day.

### **Ingredients**

3 tbsp (45 mL) packed brown sugar
1/2 tsp (2 mL) ground cinnamon
1/4 tsp (1 mL) ground ginger
Pinch ground allspice
3 large peaches, cut into 1/2-inch (1 cm) wedges
1/2 cup (125 mL) unsalted sunflower and/or
pumpkin seeds
2 cups (500 mL) plain **Greek yogurt**1 tsp (5 mL) vanilla extract

#### **Tips**

The peaches can be roasted up to 8 hours ahead. Let cool, then cover and store at room temperature until assembling the parfaits. The seeds can be toasted up to 3 days ahead; once cooled, store in a cookie tin at room temperature. The parfaits are best assembled just before serving.

Substitute 3 large black or red plums for the peaches; they may require about 5 minutes longer baking time depending on the firmness of the fruit.

### Preparation

Preheat oven to 400°F (200°C). Line a small baking sheet with parchment paper.

In a small bowl, combine sugar, cinnamon, ginger and allspice.

Place peaches in an 8-inch (20 cm) square glass baking dish; sprinkle with half of the sugar mixture and toss gently to coat. Spread in a single layer. Roast for about 15 to 20 minutes or until peaches are tender and lightly browned. Let cool slightly, or to room temperature.

Meanwhile, in a small skillet, toast sunflower seeds and/or pumpkin seeds over medium heat, stirring constantly, for about 3 minutes or until starting to turn golden; add remaining sugar mixture cook, stirring, for about 2 minutes or until toasted and glazed. Spread out onto parchment paper and let cool.

To assemble, in a bowl, combine yogurt and vanilla. Divide half of the yogurt equally among 6 dessert dishes and top with half of the roasted peaches, then half of the glazed seeds; repeat layers.



### **Nutrition Tip**

Give plain yogurt an exotic touch by adding pieces of pineapple and coconut.

### For more information about this recipe:

https://www.dairygoodness.ca/getenough/recipes/spice-roasted-peach-and-yogurt-parfaits

### This issue of COPING is sponsored by Dairy Farmers of Canada

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These newsletters are not intended to replace individualized medical advice. Readers are advised to discuss their specific circumstances with their healthcare provider.

