



## **COPING**

### **‘A newsletter from COPN’**

### **December 23, 2010**

***Remember: You can live well with osteoporosis!***

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### **SEASONS GREETINGS!**

This issue of COPING draws to a close our series of articles on the 2010 Clinical Practice Guidelines for the Diagnosis and Management of Osteoporosis in Canada. It's a fitting way to wrap up the year – with the promise of new tools for physicians and patients to help prevent fractures and maintain strong bones for life.

The series of guidelines articles was but one success in a year of significant milestones for COPN. The Osteoporosis Patient Bill of Rights, launched in October, was perhaps the most important. As a statement of our position, it provides a strong foundation for our ongoing efforts to improve osteoporosis care across Canada. Did you know that you can download your own Bill of Rights poster from the OC website for use in your community?

Our virtual forums continue to draw rave reviews from those who wish to connect directly with the experts on osteoporosis. More than 1200 of you have now participated in one or more of the six sessions held to date. Stay tuned to *COPING* for news on how you can join the next virtual forum from the comfort of your own home, or participate in one of the community viewings to be held in locations across the country. For those of you who were not able to participate in these informative, interactive sessions they are available to view at our on line archive.

Another cause to celebrate? There are now 3600 women and men enjoying the benefits of COPN membership.

None of this would have been possible without the commitment of a small army of enthusiastic volunteers and the hard work of dedicated staff at Osteoporosis Canada. Authors, editors, translators, communications specialists, presenters, physicians, webmasters, researchers, caregivers and yes patients – there are too many volunteers

to name individually. On behalf of all 3600 members, we would like to extend to each and every one of you our heartfelt thanks.

Wishing you a safe and happy holiday and a fracture free New Year,

Your COPN Executive Committee,

*Annabel Diane Ina Larry Margaret Sarah Sheila and Christine*

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## **DRUG TREATMENTS**

### **Their role in fracture reduction and treatment of osteoporosis**

#### **Part 2**

#### **DENOSUMAB**

Denosumab (Prolia®) belongs to a new class of osteoporosis treatment called a Rank ligand inhibitor.

#### **HOW DOES DENOSUMAB WORK?**

Denosumab is an anti-resorptive treatment that inhibits the development and activation of osteoclasts (the cells that eat away bone).

#### **HOW EFFECTIVE IS IT?**

Denosumab reduces the risk of fractures of the spine, hip and other sites in women with postmenopausal osteoporosis.

#### **WHO CAN TAKE IT?**

Denosumab can be used to reduce the risk of fractures in postmenopausal women with osteoporosis. At this time (December 2010), the clinical trials using denosumab in men with osteoporosis are still ongoing.

#### **HOW IS IT TAKEN?**

Denosumab is an injection under the skin given by a trained healthcare professional, twice a year. The dose is 60 mg.

#### **ARE THERE SIDE EFFECTS?**

Side effects may include pain in the muscles, arms, legs or back and a skin condition with itching, redness and/or dryness. It also slightly increases the risk of cellulitis, a skin infection that is treated with antibiotics. In rare cases, osteonecrosis of the jaw has been reported in patients treated with denosumab.

#### **HORMONE THERAPY (HT)**

HT (or estrogen/progesterone) is commonly used to relieve the symptoms of menopause. HT is also an effective treatment to help reduce the risk of osteoporotic

fractures. Treatment can consist of estrogen alone or estrogen and progesterone in combination.

#### HOW DOES HT WORK?

During their reproductive years, women produce significant amounts of estrogen in their body. Estrogen helps to build and maintain bone density. During menopause, a woman's estrogen level decreases as her ovaries cease to function and this leads to a loss in bone density. In some women, this loss in bone density is significant enough to cause osteoporosis. HT supplements the very low levels of menopausal hormones.

#### HOW EFFECTIVE IS IT?

Estrogen/progesterone treatment can reduce the risk of spine and hip fractures as well as other fractures due to osteoporosis.

#### WHO CAN TAKE IT?

In general, HT is used to treat osteoporosis only in women who also suffer from menopausal symptoms such as hot flashes, etc. Estrogen is an effective treatment to alleviate such menopausal symptoms.

#### HOW IS IT TAKEN?

Estrogen/progesterone can be taken in a variety of ways and is available as a pill, a gel or a patch. In women who have had a hysterectomy, estrogen is given alone. For women who still have their uterus, estrogen is given in combination with progesterone to help reduce the risk of developing uterine cancer.

#### ARE THERE SIDE EFFECTS?

HT may increase the risk of heart attack, stroke and breast cancer. It also increases the risk of blood clots, the type of blood clot that can form in the veins of the legs (sometimes called phlebitis or thrombo-phlebitis) and may travel to the lungs (this is called pulmonary embolism). Because of this, other options for the treatment of osteoporosis should be explored first unless the woman is also suffering from significant menopausal symptoms.

Side effects of HT can include depression, headaches, breast tenderness, premenstrual syndrome (PMS), skin irritation and weight gain. Vaginal bleeding can occur and this would be investigated by a physician. Experimenting with doses, types (gels, pills, patches) and regimens may help to eliminate (or minimize) some of these side effects.

#### **PARATHYROID HORMONE (PTH)**

Parathyroid hormone (PTH) and its analogue, teriparatide (Forteo®), are a class of osteoporosis treatments called bone formation agents. Teriparatide is the only drug from this class available in Canada currently (December 2010).

#### HOW DOES TERIPARATIDE INJECTION WORK?

Teriparatide works by activating the osteoblasts to generate new bone faster than old bone can be resorbed by the osteoclasts.

#### HOW EFFECTIVE IS IT?

Teriparatide reduces the risk of both vertebral fractures and other fractures associated with osteoporosis.

#### WHO CAN TAKE IT?

Teriparatide can be used in postmenopausal women with osteoporosis. There has not been an adequate clinical trial of teriparatide in men with osteoporosis at this point. Teriparatide can also be used to prevent fractures in people taking Prednisone®.

#### HOW IS IT TAKEN?

It is taken as a subcutaneous injection into the thigh or abdomen, 20 mcg (micrograms) once a day. This medication should not be taken for longer than 24 months.

#### ARE THERE SIDE EFFECTS?

Possible side effects include dizziness, nausea and leg cramps. There may be mild redness and/or tenderness at the site of injection.

#### **SERMS**

Raloxifene (Evista®) is from a family of drugs called SERMs (Selective Estrogen Receptor Modulators). Although SERMs are non-hormonal, they act like the hormone estrogen in some parts of the body, such as the bones. In other parts of the body, such as the uterus and breast, they block the effects of estrogen.

#### HOW EFFECTIVE IS IT?

Raloxifene reduces the risk of fractures in the spine. It does not reduce the risk of fractures in other bones.

#### WHO CAN TAKE IT?

Raloxifene can only be used in postmenopausal women.

#### HOW IS IT TAKEN?

One 60 mg tablet is taken each day, preferably at the same time of day.

#### ARE THERE SIDE EFFECTS?

Raloxifene may increase hot flashes and may cause leg cramps. There is also an increased risk of blood clots (phlebitis and/or pulmonary embolism), similar to that seen in women using hormone or estrogen therapy. The risk of stroke is not increased with raloxifene, but should a stroke occur, the risk of dying is slightly increased while on this drug.

#### **CALCITONIN**

Calcitonin (Miacalcin\*NS® and generics) is a hormone found naturally in our bodies. It is made by the thyroid gland and controls the activity of the osteoclasts (bone-eroding cells). A synthetic form of calcitonin is used in a nasal spray.

## HOW DOES CALCITONIN WORK?

Calcitonin slows down the work of the osteoclasts.

## HOW EFFECTIVE IS IT?

Nasal calcitonin is a weak drug that helps prevent fractures of the spine. It does not reduce the risk of fractures in other bones.

Calcitonin can also be used to reduce the pain associated with vertebral fractures.

## WHO CAN TAKE IT?

Nasal calcitonin can be used in postmenopausal women. There has not been an adequate study of calcitonin in men.

## HOW IS IT TAKEN?

The daily dosage is one spray (200 IU) in one nostril, alternating nostrils each day.

## ARE THERE SIDE EFFECTS?

Side effects can include nasal dryness and nasal congestion. Occasionally, there may be mild nasal bleeding.

## TESTOSTERONE THERAPY

There is no evidence that testosterone can reduce fractures in men, even in men with low testosterone levels. Osteoporosis Canada does not recommend the use of testosterone for osteoporosis.

## USING THERAPIES IN COMBINATION

The combination of osteoporosis drugs given together, such as HT with a bisphosphonate or raloxifene with a bisphosphonate, is not recommended as there are no studies that show that using two drugs is any more effective at reducing fractures than using a single drug. Using combination treatment will increase the risk of side effects.

## HOW LONG SHOULD I STAY ON MY MEDICATION?

Individuals at high risk of fracture should stay on their osteoporosis medication. There is not enough information to support a “drug holiday” in such patients at the present time.

## CALCIUM AND VITAMIN D

Osteoporosis drugs work best when you pay attention to your bone health. No matter what drug therapy you choose, remember that you still need:

- a diet rich in calcium (and a calcium supplement if your diet is low in calcium)
- a vitamin D supplement
- physical exercise
- attention to posture and fall prevention

## A FINAL NOTE

If you are at high risk of fracture, it is important that you take your osteoporosis medication as recommended. If you experience side effects or have concerns, please remember to mention them to your doctor. Always talk with your doctor before you make any changes in your medications

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## **Funny bone**

A Christmas thought: STRESSED is just DESSERTS spelled backward.

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## **Notices/references**

i. Remember: It is important for you to eat a healthy diet, get some appropriate exercise, take your calcium and vitamin D and if your doctor has prescribed a medication, remember to take it as directed.

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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](http://www.osteoporosis.ca) for up-to-date information.

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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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iv. To have your name removed from the COPN mailing list please contact us at the email below.

**You must provide the first and last name for which you registered in order to be removed from this list.**

<[PatientNetwork@osteoporosis.ca](mailto:PatientNetwork@osteoporosis.ca)>

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## **NUTRITION**

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