

## Editorial

SUZETTE POLIQUIN, NATIONAL COORDINATOR, MONTREAL



It has been a busy and exciting year. In the spring of 2004, CaMos was granted government funds to continue the study for another 6 years. This allows us to complete the year 10 follow up of all our participants in 2005-2007. Collecting this data will help establish the proportion of Canadian men and women

who have osteoporosis in different regions of the country and find factors that may predict where new fractures are likely to occur. It has also allowed us to recruit a youth group aged 16-24 years, to help find out the average age that a person's bone mass reaches its peak and to collect some physical and nutritional data about this age group. In this issue of the newsletter you will find the following:

- The reasons for studying young men and women
- Risks related to new fractures in postmenopausal women
- Answers to more of your questions

After more than 10 years of leadership, Dr. Alan Tenenhouse has stepped down from the position of Principal Investigator. We are delighted that he has decided to continue to be involved with CaMos as a Senior Researcher. We welcome Dr. David Goltzman into the CaMos family. He will be involved in CaMos as Co-Principal Investigator. For more information, see the regional news section for Montreal.

We are grateful for your continued participation and interest in CaMos – we appreciate your commitment to this very important study. ♦

## Why are we recruiting young men and women?

DR. ALAN TENENHOUSE, SENIOR RESEARCHER, TORONTO



To determine the age at which peak bone density is reached because peak bone density is important for future bone health.

Bone is a dynamic tissue constantly being broken down (resorption) and being rebuilt (formation). This bone renovation process continues throughout life and is quite normal. Young people's bones grow in size and density until their growth is complete, then as life continues, bone tissue is replaced and renewed but the density slowly decreases. Many factors, such as diet, exercise and inherited characteristics affect bone health throughout life. The main bone changes occur when building in young people and losing in very old people. Although a high youth peak bone density doesn't guarantee a person will never break a bone or develop osteoporosis, it is a good start toward lifelong bone health. If we start out with less bone density, then we may be more likely to develop bones that are weak and break with life's normal stresses. We know this as "osteoporosis."

Our aim in gathering information from the youth cohort is to teach us exactly what personal characteristics are related to building a high peak bone density. Therefore, each of the nine centres is now enrolling 60 young men and 60 young women who are ages 16-24. We are interviewing participants, measuring their bone mineral densities, height and weight, and will repeat these observations in 2 years time. ➤

(See Tenenhouse on page 3)

# CaMos Findings

## NEW RESEARCH: RISKS RELATED TO NEW FRACTURES IN MENOPAUSAL WOMEN



Dr. Alexandra Papaioannou,  
Specialist in Geriatrics, Hamilton

Dr. Alexandra Papaioannou, a specialist in geriatrics (care of older people), and colleagues from Hamilton Centre for CaMos have published a paper in *Osteoporosis International* October 27, 2004.

This analysis looked at information from 5143 postmenopausal women enrolled in CaMos. They found that: 314 women, mainly older than 60, experienced a fracture in the first three years of the study.

Of those:

- 34 had compression fractures in the spine
- 280 had other fracture sites including wrists, hips, upper arms and ankles.
- These women were more likely to report weight loss, a past low-trauma fracture, and a lower quality of life at baseline.
- Other factors associated with a new fracture were height loss, reporting inflammatory bowel disease, stroke and/or transient ischemic attack (short-term stroke with full recovery) reported at baseline.
- Those who fractured were more likely to show lower bone densities of the hip and spine.

This new and important information is helping us to learn how to prevent fractures in the future. ♦

# Questions and Answers

## "I AM A 70-YEAR OLD MAN AND HAVE NEVER BROKEN A BONE AND ALWAYS SAY NO TO ALL YOUR QUESTIONS. HOW CAN I BE OF ANY USE TO YOUR STUDY?"



Dr. Lawrence Joseph,  
Methods Centre, Montreal

CaMos has many purposes. One of them is to estimate how many people break bones in the Canadian population. We typically break (no pun intended!) up this rate according to gender and age. So, for example, we are interested in the rate of broken bones in men aged between

65 and 70 years old. In order to learn the correct answer to how many men 65-70 have broken bones, we need to have information on both those with and without broken bones. If we just included participants who had broken bones, we would falsely figure that 100% of men of that age in Canada had broken bones. That's certainly not true!

Another purpose for CaMos is to find out what causes bones to break. Is it because of low calcium in the diet? Insufficient exercise? Lack of exposure to the sun? Again, in order to find this out, we need to be able to study people both with and without broken bones, to compare the two groups in terms of calcium intake, exercise, or sunlight exposure. ♦

## "WHAT IS THE CAUSE OF OSTEOPOROSIS AND ARE THERE PREVENTATIVE MEASURES AVAILABLE OTHER THAN CALCIUM AND DIET?"



Dr. Jerilynn Prior,  
Director, Vancouver

The main purpose of CaMos is to discover the causes of osteoporosis. We know that many factors contribute to this disease. There are likely others we are unaware of. We are still learning those answers thanks to your help and the participation of many others across Canada.

You are right that preventing osteoporosis includes calcium and diet. But I consider that preventing osteoporosis is "a whole meal deal" that involves much more.

That's why I wrote the "ABCs of Bone Health" that includes:

- A for *Activity*—be active—walk, bicycle, dance, kick box!, swim—half an hour a day,
- B for *Brawny* meaning not being too low in weight and muscle
- C for *Calcium* from food as well as supplements
- D is for vitamin *D*
- E for *Easy-going* because the hormone, cortisol, that goes up when we feel stressed is very hard on bones.
- F is for bone *Formation* and also for "*Fertility*" because both progesterone for women and testosterone for men are important for building new bone.
- G and H are for *Good Habits* like no cigarettes and limited caffeine

We need to aim for healthy lives involving all of these ingredients in the ABCs of bone health. ♦

If you have questions you would like answered in upcoming issues, please send them to us either by mail at our new coordinating centre address: CaMos, 687 Pine Avenue West, Room E1.64, Montreal, Quebec, H3A 1A1 or by e-mail to: [info@camos.org](mailto:info@camos.org)

(Tenenhouse from page 1)

► Some centres are also taking blood samples to measure markers of bone health and to test the frequency of genes that are associated with osteoporosis.

A clear understanding of how young people reach peak bone density will enable us to better plan for the prevention of osteoporosis and fractures in the elderly. ♦

## Regional News

### MONTREAL, A NEW CO-PRINCIPAL INVESTIGATOR



*Dr. David Goltzman,  
Co-Principal Investigator,  
Montreal*

**C**aMos has chosen a distinguished physician and scientist to be the Co-Principal Investigator with Dr. Nancy Kreiger for this important study. He is replacing Dr. Tenenhouse who has retired as Principal Investigator.

“We are pleased to have Dr. Goltzman join the CaMos team, he brings new ideas and energy and has a strong background in osteoporosis research” said Dr. Kreiger.

Dr. David Goltzman is a senior physician and endocrinologist at McGill University Health Centre. He has served as Chair of Medicine and of Physiology at McGill. He has been awarded the Order of Canada for his research on parathyroid

hormones (PTH), and other related hormones of bone and mineral metabolism, and has been the President of the American Society for Bone and Mineral Research. He has published his research in over 200 scientific papers.

Besides all that, “he’s a great guy to work with and chairs meetings with cheerfulness and efficiency” says Dr. Jerilynn Prior.

### TORONTO, CAMOS INVESTIGATORS EDUCATE GP’S

Toronto’s Osteoporosis Outreach Program held its first successful symposium for general practitioners in November 2004. This program provides up-to-date, scientifically sound and practical information for family physicians on osteoporosis. Two additional symposia are scheduled for 2005, one for specialists in the Spring, and a second GP event in the Fall. Six CaMos investigators will be part of a team of national and international osteoporosis experts who will take part in these important educational events, which we hope will be the first of many. ♦

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## CaMos Web Site

[www.camos.org](http://www.camos.org)

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## Thank you to our funding partners

The Alliance: sanofi-aventis and Procter & Gamble Pharmaceuticals  
Canadian Institutes of Health Research (CIHR)  
Eli Lilly Canada Inc.  
Merck Frosst Canada Ltd.  
Novartis Pharma Inc.