

COPING
AUG. 3, 2007

Remember: You can live well with osteoporosis!

Eleanor Mills Inspiration Award
Christine Thomas
2007 Recipient

The *Eleanor Mills Inspiration Award* honors those special Osteoporosis Canada volunteers who, like our late Patron, Eleanor, have embraced their own osteoporosis, and by doing so have inspired others with their determination, perseverance and optimism, and have given of themselves to champion the osteoporosis cause. Further, this volunteer is seen as an inspiring positive role model who leads by example, providing hope, encouragement and support to all.

How can you not be inspired by this incredible woman? Christine Thomas, from Ottawa, is inspiring, dynamic, energizing and humble.

An Osteoporosis Canada volunteer for the past five years, Christine was drawn to Osteoporosis Canada following the birth of her daughter in 2001 when she sustained 5 fractures, 4 of them in her spine. She consequently struggled to regain her prior quality of life while running after a toddler.

Christine takes every opportunity to share with people the story of her fight with osteoporosis and the many lessons that she has learned over the past 6 years as a result of her many struggles. Her primary goal has always been to educate people on how to both prevent and manage the disease and about the differences that keeping a positive outlook has made on her life.

In her numerous public presentations, she regularly stresses the importance of being one's own health advocate and the coach of one's own health team.

One of this year's "faces of osteoporosis", Christine's story has been chronicled in *Osteoblast* as well as Osteoporosis Canada's *2004 Annual Report*, and within the pages of Ottawa's newspapers and magazines.

Christine takes full advantage of living in our nation's capital by making herself a noted fixture in the MP offices on Parliament Hill. Armed with scientific evidence and her personal story, Christine was one of the volunteers who advocated strongly for the successful adoption of the Ontario Osteoporosis Strategy several years ago.

An outstanding leader, she is praised by her fellow volunteers and recognized for not only the excellent job she does as Chair of the Ottawa Chapter – building it and shaping it -- but also for her ability to motivate people through her exuberance and seemingly endless supply of energy. It is this energy and enthusiasm that has also helped her foster many fundraising partnerships for the chapter.

Christine learned the importance of optimism in dealing with her osteoporosis and stopping the “negative talk”. As she has stated numerous times, “nothing’s going to keep me down”. She is passionate about educating people about osteoporosis, and through her actions, she provides hope, encouragement and inspiration to all.

Congratulations, Christine!

Funny Bone:

Golfers are happiest when they are feeling below par.

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** don’t forget to take it as directed.

COPING will come to you every second Friday. We hope you enjoy it and find the information useful. Don’t forget to log on to www.osteoporosis.ca for up to date information.

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AUG. 17, 2007

Remember: You can live well with osteoporosis!

Larry Funnell **Living with Osteoporosis**

Larry and his wife Alice live in Cloverdale British Columbia with their dog Leesha. They have two grown sons and three grandchildren. Now retired, Larry was the Director of Human Resources for Environment Canada’s Pacific and Yukon Region.

Larry was diagnosed with osteoporosis when he was 48 years old, shortly after moving to Vancouver from Ottawa. He became involved with Osteoporosis Canada because he was seeking information about the disease.

Responding to the Canadian Osteoporosis Patient Network’s call for membership, Larry is now a member of COPN’s executive committee, hoping to raise awareness of the disease among men. He recounts his experiences with osteoporosis.

“I was shocked when my doctor told me eight years ago I had osteoporosis. Like many others, I didn’t think that the disease affected men. Even though I broke many bones in my mid to late 40s, all from accidents no more severe than a fall from a standing position, it wasn’t until a tenth fracture that my doctor sent me for a bone scan. My history with bone breaks suddenly made sense.”

“As a man, I felt isolated by osteoporosis. The internet told me that one-third of those afflicted with osteoporosis were men. Really? Where were they hiding? Didn’t they want to talk to other men and share their experiences? Perhaps they too were embarrassed to learn they had the disease - my own embarrassment kept me from telling anyone other than my family that I had osteoporosis. I was initially so reluctant to disclose my condition that I agreed to go horseback riding with a group of colleagues on a team building exercise – even though I was absolutely terrified the whole time that I might fall and end up in a heap of broken bones.”

“I’m very pleased to be part of COPN. I want to help change the way osteoporosis is discussed and marketed. It’s not just a woman’s disease – we need to get the message out that osteoporosis affects men. Much can be done to prevent its onset or catch it at an early stage. Most of all, any man with the disease needs to know that he’s not alone, that there are others and of course the COPN to support him in his quest to live well and live safely.”

For more information about men and osteoporosis check the Osteoporosis Canada web site at www.osteoporosis.ca

Funny Bone:

Computers in cars are fine, but they’ll never replace backseat drivers.

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AUG. 31, 2007

Remember: You can live well with osteoporosis!

Here is an interesting article sent to Osteoporosis Canada by the Canadian Institute for Health Research Knowledge Exchange Task Force

Senior Citizens Improve Strength, Rejuvenate Muscle, Reverse Aging with Exercise

Seniorjournal.com, May 30, 2007

After training the strength of the older adults improved about 50%

May 30, 2007 - Not only does exercise make most people feel better and perform physical tasks better, it now appears that exercise – specifically, resistance training -- actually rejuvenates muscle tissue in healthy senior citizens. It is one of two studies released this month proving the ability of exercise to ward off the debilitating effects of aging.

A recent study involved before and after analysis of gene expression profiles in tissue samples taken from 25 healthy older men and women who underwent six months of twice weekly resistance training, compared to a similar analysis of tissue samples taken from younger healthy men and women.

The gene expression profiles involved age-specific mitochondrial function; mitochondria act as the "powerhouse" of cells.

Multiple studies have suggested that mitochondrial dysfunction is involved in the loss of muscle mass and functional impairment commonly seen in older people.

The study was the first to examine the gene expression profile, or the molecular "fingerprint", of aging in healthy disease-free humans. Results showed that in the older adults, there was a decline in mitochondrial function with age. However, exercise resulted in a remarkable reversal of the genetic fingerprint back to levels similar to those seen in the younger adults.

The study also measured muscle strength. Before exercise training, the older adults were 59% weaker than the younger adults, but after the training the strength of the older adults improved by about 50%, such that they were only 38% weaker than the young adults.

The results of this study, co-led by Buck Institute faculty member Simon Melov, PhD, and Mark Tarnopolsky, MD, PhD, of McMaster University Medical Center in Hamilton, Ontario, appear in the May 23 edition of the online, open access journal PLoS One.

“We were very surprised by the results of the study,” said Melov.

“We expected to see gene expressions that stayed fairly steady in the older adults. The fact that their ‘genetic fingerprints’ so dramatically reversed course gives credence to the value of exercise, not only as a means of improving health, but of reversing the aging process itself, which is an additional incentive to exercise as you get older.”

The study participants were recruited at McMaster University. The younger (20 to 35 with an average age of 26) and older (older than 65 with an average age of 70) adults were matched in terms of diet and exercise; none of them took medication or had diseases that can alter mitochondrial function.

Tissue samples were taken from the thigh muscle. The six month resistance training was done on standard gym equipment. The twice-weekly sessions ran an hour in length and involved 30 contractions of each muscle group involved, similar to training sessions available at most fitness centers. The strength test was based on knee flexion.

The older participants, while generally active, had never participated in formal weight training said co-first author Tarnopolsky, who directs the Neuromuscular and Neurometabolic Clinic at McMaster University.

In a four month follow up after the study was complete, he said most of the older adults were no longer doing formal exercise in a gym, but most were doing resistance exercises at home, lifting soup cans or using elastic bands. “They were still as strong, they still had the same muscle mass,” said Tarnopolsky. “This shows that it’s never too late to start exercising and that you don’t have to spend your life pumping iron in a gym to reap benefits.”

Future studies are being designed to determine if resistance training has any genetic impact on other types of human tissue, such as those that comprise organs; researchers also want to determine whether endurance training (running, cycling) impacts mitochondrial function and the aging process. The most recent study also points to particular gene expressions that could be used as starting points for chemical screenings that could lead to drug therapies that would modulate the aging process.

“The vast majority of aging studies are done in worms, fruit flies and mice; this study was done in humans,” said Melov. “It’s particularly rewarding to be able to scientifically validate something practical that people can do now to improve their health and the quality of their lives, as well as knowing that they are doing something which is actually reversing aspects of the aging process.”

Editor's Notes:

Joining Melov and Tarnopolsky as co-authors of the paper are Alan Hubbard and Krysta Felkey of the Buck Institute, and Kenneth Beckman of the Children’s Hospital of Oakland Research Institute. The work was supported by the National Institutes of Health, a Nathan Shock Award to the Buck Institute, a Ellison Medical Foundation Senior Scholar award to Simon Melov and a grant to Mark Tarnopolsky from the Canadian Institute for Health Research.

The Buck Institute is an independent non-profit organization dedicated to extending the healthspan, the healthy years of each individual's life. The National Institute of Aging designated the Buck a Nathan Shock Center of Excellence in the Biology of Aging, one of just five centers in the country. Buck Institute scientists work in an innovative, interdisciplinary setting to understand the mechanisms of aging and to discover new ways of detecting, preventing and treating age-related diseases such as Alzheimer's and Parkinson's disease, cancer, stroke, and arthritis. Collaborative research at the Institute is supported by genomics, proteomics and bioinformatics technology. For more information: <http://www.buckinstitute.org>

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Competing interests: The authors have declared that no competing interests exist.

Funny Bone:

One of the advantages of bowling over golf is that you seldom lose a bowling ball.

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