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SEX AND LONGEVITY IN THE GOLDEN YEARS

by Tania Elaine Schramek

Sexuality is not necessarily the first thing that comes to mind when we think of issues surrounding the older adult. But, for a group of Taiwanese researchers, sexuality and the older adult actually go hand in hand.

They followed a group of 2453 older adults for 14 years and examined the relationship between sexual activity, libido, widowhood, and mortality. Starting at 65 years of age until their deaths, older adults completed annual questionnaires designed to assess their levels of sexual desire and sexual activity. The scientists from the Institute of Preventative Medicine in Taiwan then looked at the timing and cause of death in older adults divided into groups according to their frequency of sexual activity.

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IMPROVING THE RECOVERY OF STROKE SURVIVORS

An interview with Nancy Mayo, Ph.D., School of Physical and Occupational Therapy, and Division of Clinical Epidemiology, Division of Geriatrics, McGill University

by Daniel Auld

Nancy Mayo, Ph.D., is at the School of Physical and Occupational Therapy at McGill University and is also a member of the Division of Clinical Epidemiology, Division of Geriatrics. She spends a good portion of her time studying survivors of stroke in an effort to improve their lives. Indeed, 'survivor of stroke' is the term that defines her work and her outlook. The attitude of her research is positive and forward thinking – not one of victimization – and her program espouses an attitude of self-improvement and recovery.



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BRAINY BOOMERS

Lecture Series on Healthy Aging and Memory Boost

“Memory and Aging”

Thursday, October 11, 2007

Time: 6:30-8:30 p.m.

Speaker: Loraine Mazzella, MD, CCFP(C)

Location of the Lecture Series:

Jewish General Hospital
B106—Block Amphitheatre
Montréal (Québec)
Côte-des-Neiges Entrance

“Nutrition for a Healthy Brain”

Thursday, October 18, 2007

Time: 6:30-8:30 p.m.

Speaker: Risa Sigal, PDT, BSc

Cost of registration is \$30.

For more information, please contact:

The Alzheimer Society of Montreal:
Tel.: 514 369-0800 • Fax: 514 369-4103
Email: info@alzheimermontreal.ca
or

The McGill Centre for Studies in Aging
Tel.: 514 766-1009 • Fax: 514 888-4050
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An interview with Nancy Mayo, Ph.D., School of Physical and Occupational Therapy, and Division of Clinical Epidemiology, Division of Geriatrics, McGill University

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She originally trained in physiotherapy at Queens University and the patient recovery focus has stayed with her. She moved on to McGill and completed a Ph.D. in Epidemiology and Biostatistics. That is where her perspective broadened from a single patient focus to one encompassing many patients and she was naturally drawn to research. Specifically, her research interests lie with survivors of stroke after they leave the hospital setting. Her research involves exploring ways to improve the quality of life of survivors of stroke.

Stroke is primarily a condition that afflicts older individuals, with greater than 50% of stroke survivors being over 70 years old. It is difficult enough to face the challenges of normal aging; facing those challenges following a stroke is even more daunting, a situation that the current health care system does little to help. Most of the health care for stroke is intensely focused on the first few weeks following stroke. After that point there are few resources available to help stroke survivors be able to “get on with the rest of their lives”.

So far, the research community has focused on certain obvious and compelling demands of recovering from stroke, such as learning to walk again. A lot of effort has gone into this question and we now have good knowledge of how to help people to walk after a stroke. Nancy Mayo is bringing stroke recovery research to the next level, one that promotes the overall health and fitness of survivors. Indeed, she believes that more should be done to improve the health, fitness and ultimately the quality of life for survivors of stroke.

Dr. Mayo credits successful recovery from stroke to what she calls “reserve” or those resources a person

has at hand to combat the stressors that inevitably characterize aging or recovering from a major illness or accident. These resources are physiological, functional, emotional, and psychological. (Social resources are also important but they come from outside of the person.) For example, one key element for successful recovery from stroke is the maintenance of physical fitness at the highest achievable level. As a general rule, she says that people who are fitter recover from stroke more successfully. The psychological and emotional reserves are just as important. How one interprets the challenges of stroke recovery goes a long way to determining how well one recovers, and the deeper the emotional reserve the smoother is the road to recovery.

The key question is, of course, can the reserve of a stroke survivor be built up to help them cope with the challenges? Following the functional reserve theory, Dr. Mayo wondered whether a fitness program could help stroke survivors in their recovery process. The research program that she designed to address this question was subsequently funded by the Canadian Institutes of Health Research and is currently ongoing. In this project, stroke survivors use an exercise bicycle to improve their physical fitness. As an outcome, Dr. Mayo measures how far the stroke survivor can walk in 6 minutes and it is hoped that exercise will improve their performance for the walk. If they cannot walk at least 280 meters in 6 minutes, everyday tasks such as grocery shopping or walking in the community will prove difficult. It is hoped that this program will improve physical fitness, thereby improving stamina that will help in other areas of their life.

Dr. Mayo points out that recovery from stroke is for life. Indeed this

research, aimed at improving stamina, exemplifies the general theme of Dr. Mayo’s work, that is to help stroke survivors get on with the rest of their lives. In fact, Dr. Mayo has based her research directions on what stroke survivors are asking for in their lives, which she says are four things. The first is access to an exercise program and physical activity. The second is the opportunity to learn new things – stroke survivors want to be intellectually challenged. Thirdly, they want to connect and to develop a social network of other stroke survivors. Fourthly, and perhaps most importantly, they want to have fun.

Taking this wish list into consideration, Dr. Mayo designed an ambitious program which she likens to a Stroke Boot Camp. One part of the boot camp is exercise and the second part is called “Mission Possible”. “Mission Possible” incorporates project-based learning, leisure therapy, and cognitive/behavioral training. To accomplish the “mission”, stroke survivors team up with a buddy from the community whose age can range from 20 and up. Buddies are trained in how to best help stroke survivors, especially as many are unsure that they can manage the “boot camp”. With their buddies encouraging and assisting them, stroke survivors choose a project that would interest them and is a step along a process to attain a desired goal. For instance, one gentleman expressed interest in relearning how to bowl. This could be turned into a project by doing research on bowling – the rules, the technique, the location of the bowling alley, etc. The person would learn how to access the internet and library resources. Once the information had been gathered,

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POLICY AND POLITICS

INAUGURAL MEETING OF THE NATIONAL SENIORS COUNCIL

by Elaine Waddington Lamont

Older Canadians can now be assured of having the ear of the federal government on issues related to their health and well-being. The first meeting of the National Seniors Council was convened recently by the Honourable Marjory LeBreton, Secretary of State (Seniors). Our new government appointed the National Seniors Council in March of this year, with the intention of providing a voice for older Canadians including organizations that currently provide services to seniors and engage in studies related to aging. Jean-Guy Soulière, formerly Chair of the Congress of National Seniors Organizations, has been named the first Chair of the National Seniors Council, along with 8 other members selected through a public recruitment process. They are: Sandra Hirst, Calgary, Alberta; Marilyn Loveless, Victoria, British Columbia; Daphne Nahmiash, Montreal, Quebec; Cécile Plourde, Montreal, Quebec; Rémi Plourde, Chicoutimi, Quebec; The Reverend Canon Derwyn Shea, Toronto, Ontario; Joan Tufts, Saulnierville, Nova Scotia; and Beverly Ola Weeks, Harvey, New Brunswick. The council may have a maximum of 12 members, including the Chair, and members may serve a term of up to three years.

The goals of the council are to advise the government on issues related to the “quality of life, health and well-being of seniors, both now and in the future”, and to make sure that federal government policies, programs and services reflect the evolving needs of older adults in Canada. The council have the power to commission research, convene panels of experts, hold round tables and meetings with senior’s organizations and groups that provide services to older adults, and consult with provincial or territorial

advisory groups and other stakeholders, in order to fully represent all of these varied interests in a fair and balanced manner.

According to Minister Solberg, the appointment of the council is a step in the right direction toward meeting the needs of Canadian seniors. “I am very proud that we have been able to deliver on this important commitment for older Canadians,” said Minister Solberg. “I look forward to receiving the advice of the National Seniors Council because we want to continue to listen as we put in place the many initiatives our government has brought forward for seniors.”

At the inaugural meeting, held in Ottawa on May 25, 2007, the Honourable Marjory LeBreton gave the keynote speech, where she outlined the mandate of the National Seniors Council. She said that the first focus will be to study and prevent elder abuse and to provide support to a particularly vulnerable group, unattached, low-income senior women. Naturally, health care and the well-being of older Canadians is also of primary concern, given Canada’s current and future demographics. She pointed out that in the next 20 years, Canadians over the age of 65 will make up 25% of Canada’s population. For this reason, along with the increasing average life expectancy of Canadians, our health care system will have to be fine-tuned to meet the needs of older adults.

For example, she discussed the need for more gerontologists, and the statistics that she gave are sobering. “Imagine this: there are currently 4 million seniors in Canada. Remember that in the next 20 years, that number will double to roughly 9 million. Right now there are just 200

working geriatricians, according to a recent CBC radio report. Currently, in the year 2007, there are eight new students in Canada practicing geriatric medicine. Eight students in the entire country. In 2011, when the first batch of the baby boomers are set to retire, close to 1/3 of the 200 geriatricians in Canada will have retired themselves”.

This highlights some of the health care issues facing Canada’s older adults. She then went on to describe how the National Seniors Council intends to address them: “Simply put, our communication must be a two way street. This Council has the mandate to study and report on seniors’ issues of national importance. To do that, the Council will have to seek out those issues by meeting seniors, listening to them, and most of all, by reaching out. I sincerely hope that we can use this Council as a vehicle to engage the views of all seniors, in all parts of this country.

If you are interested in making your opinion heard about the issues facing older adults, then the National Seniors Council would like to hear from you.

For more information on the National Seniors Council, visit <http://www.seniorscouncil.gc.ca>.

An interview with Nancy Mayo, Ph.D., School of Physical and Occupational Therapy, and Division of Clinical Epidemiology, Division of Geriatrics, McGill University

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the person would make a presentation about bowling to his peers, developing skills and confidence in public speaking. The group would be involved by practicing bowling and then by planning an outing. This is one example of a project. Projects are as varied as the group's interests, and have ranged from Sudoku to cookbooks. As is clear, "Mission Possible" addresses many of the desires of stroke survivors: learning, a social network, and most certainly fun. Add the exercise and there is a recipe for success.

The pilot project has been running for 5 months and a group of stroke survivors meet twice per week. It is essential that the community is involved, as this type of activity would not be eligible for funding through health or education budgets. Accordingly, Dr. Mayo is working with a community organization, The Cummings Centre.

It is through innovative programs like "Mission Possible" and practical research, such as the exercise for stroke survivors, that lifelong recovery from stroke will be more successful in years to come. Hopefully there will be many stroke survivors who will benefit from the fruits of Dr. Mayo's research.

SNACKING IS GOOD FOR OLDER ADULTS

by Elaine Waddington Lamont

Have you ever been on a weight reduction diet? If so, you may have been told that snacking is bad. Well if you are an older adult, forget all of the conventional wisdom. A recent study by Claire A. Zizza, Francis A. Tayie, and Mark Lino suggests that for older adults, snacking is actually good. Unintentional weight loss is a significant problem for older adults. Whether it is due to medication, eating alone, or other factors, the reduction in caloric intake in older adults can be significant: as many as 800-1200 fewer calories per day, with protein being the hardest hit. The goal of the study was to learn the eating habits of older Americans to prevent unintentional weight loss and poor nutrition. The National Health and Nutrition Examination Survey, 1999-2002, examined eating habits for a single 24-hour day in a sample of more than 2000 Americans over the age of 65, representing all of the major socioeconomic and ethnic groups in the United States. Each subject was personally interviewed and care was taken to record the quantity, type, time and "occasion" of each meal in order to determine its caloric and nutritional value and whether it was a meal or a

snack. They found that both snackers and non-snackers ate a similar number of calories at meal times, but snackers ate 2-3 snacks per day and took in an additional 150 calories per snack. Snackers were getting more calories, but also more protein each day than their non-snacking counterparts. So unlike younger adults, who may find that snacking can lead to unwanted weight gain, older adults are actually healthier if they start snacking.

Source:

Claire A. Zizza, Francis A. Tayie, and Mark Lino. (2007). Benefits of Snacking in Older Americans. Journal of the American Dietetic Association, 107: 800-806.

PROTEINS THAT PREVENT CANCER ALSO PREVENT AGING: THE FINE BALANCE STRUCK BY ARF AND p53

by Daniel Auld

Arf and p53 are intensely studied proteins that play an important role in how our bodies resist cancer. In fact, when a cell starts down the road to becoming cancerous, often by damage to their DNA, these proteins send out the alert. Once damaged DNA is found, p53 helps the cell to commit suicide, thereby eliminating the danger of this cell becoming cancerous. A popular theory of ageing holds that aging results from an accumulation of damaged cells in an organism. The gradual build-up of damaged cells leads to the less-than-optimal functioning that we call aging. Recently, Spanish researchers reasoned that since p53 can identify damaged cells destined to become cancerous, it may also be able to identify damaged cells and eliminate those that contribute to the aging process. They genetically manipulated mice so that they expressed a high level of p53 and Arf and let them age. Remarkably, the mice with more p53 and Arf had fewer age-related problems. Indeed, they had fewer damaged cells, better coordination, faster hair growth, and less oxidative damage (oxidative damage is caused by an excess of free radicals that tends to occur during aging). Thus, it was as though the mice with extra p53 and Arf were younger, at least according to these markers of aging. This fascinating research implicates p53 and Arf as being important for keeping the body young. Indeed, impaired functioning of p53 and Arf may leave us more susceptible to cancer as we get older, as well as lead to an acceleration of the aging process. p53 and Arf may thus offer scientists a great place to continue the quest for unraveling the mysteries of the aging process.

Reference:

Matheu A, Maraver A, Klatt P, Flores I, Garcia-Cao I, Borrás C, Flores JM, Viña J, Blasco MA, Serrano M. (2007) Delayed ageing through damage protection by the Arf/p53 pathway. *Nature*.;448(7151):375-9.

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More specifically, low frequency of sexual activity was defined as none or less than once a month, medium frequency was once a month to about once a week and high frequency was more than once a week. They showed that sexually active older adults had a higher survival rate than their non-sexually active counterparts. Indeed people who fell into the high and medium frequency groups showed a 13% lower risk of death. Interestingly, the researchers controlled for many of the factors that could account for greater sexual activity and for the established risk factors for death and still found that sexual activity was linked to greater longevity. Very interestingly, sexual activity seemed to be particularly protective for individuals who previously had a stroke.

The study also revealed that older adults need not be sexually active per se to benefit from the protective effects of sex. Just having a healthy libido (i.e. high levels of sexual desire) was enough to increase one's lifespan.

Thus, not only do older adults enjoy a healthy sex life but they also appear to remain healthier for longer as a result.

Source:

Chen HK, Tseng CD, Wu SC, Lee TK, Chen TH (2007). A prospective cohort study on the effect of sexual activity, libido and widowhood on mortality among the elderly people: 14-year follow-up of 2453 elderly Taiwanese. *Int J Epidemiol*. Jun 11.

SCIENCE HERE AND NOW

A FIRST IN CANADA: THE NUAGE STUDY OF NUTRITION AS A DETERMINANT OF SUCCESSFUL AGING

by Tania Elaine Schramek

Entering the word 'aging' in specialized search engines for scientific publications yields a plethora of articles discussing the aging process from a pathological perspective. To be sure, aging does involve changes that, when in relation to younger individuals, signal a decline of some sort. A smaller proportion of studies concerned with aging discuss the notion of 'successful aging' instead. This term was born from studies that compared older adults to their

age-matched peers and found that not everyone ages the same way. While some individuals show declines in health, others maintain optimal health and autonomy. These individuals are deemed successful agers.

Naturally, researchers then began to try and identify the determinants of successful aging. The ideal way to do this is to find a group of older adults and follow them for a number of years and see which ones fare better and then see how they differ (or what they do differently) from those that do not. Sounds simple doesn't it. In reality, doing this represents a large undertaking that requires the concerted efforts of scientists with expertise ranging from genetics, molecular biology, endocrinology, immunology, gerontology, nutrition, cognitive science, to sociology. While there are studies such as these out there, to date none have taken an in-depth look at how nutrition might play a role in successful aging.

The NuAge study, funded by CIHR and launched in the fall of 2003, has done precisely this and has released its first set of results. Pierrette Gaudreau (full professor of medicine, University of Montreal) and a multidisciplinary team of scientists from Montreal and Sherbrooke followed 1793 older adults between the ages of 68 and 82 at the time of recruitment for five years and took annual measures of their diet, food habits, appetite, muscle strength, physical activity, and their physical, cognitive, and mental health, as well as information about their social networks and participation in various activities. They also took blood, urine and saliva samples to look at genetic factors and markers of cognitive, endocrine, immune and metabolic functions.

Interestingly, in one portion of the study the research team found that the group of 80-year-old women showed higher circulating levels of insulin-like growth factor 1 (IGF-1) than younger individuals. IGF-1 is known to have anabolic effects, which means that it can help to "build up"

tissues and organs by stimulating protein synthesis and muscle growth. The functional implications of these findings however, remain to be determined. Also, people who ate foods rich in anti-oxidant content had higher levels of anti-oxidants in their blood which increases their ability to eliminate free radicals. This is a good thing given that free radicals are involved in many diseases such as atherosclerosis, Parkinson's disease and Alzheimer's disease.

These findings however are only the tip of the iceberg. This multidisciplinary study will indeed yield a wealth of information on whether nutritional factors can predict successful aging. In addition, the nature of the data collected in this study will inform many subfields in the science of aging. So, for now, what the study can say is to keep eating those blueberries and other foods rich in anti-oxidants; there may indeed be some truth to the old adage "an apple a day keeps the doctor away".

Source:

Gaudreau P, Morais JA, Shatenstein B, Gray-Donald K, Khalil A, Dionne I, Ferland G, Fulop T, Jacques D, Kergoat MJ, Tessier D, Wagner R, Payette H. Nutrition as a Determinant of Successful Aging: Description of the Quebec Longitudinal Study NuAge and Results from Cross-Sectional Pilot Studies. *Rejuvenation Res.* 2007 Aug 20; [Epub ahead of print] PMID: 17708689 [PubMed – as supplied by publisher]

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TRANSLATION

Lacoste Royal

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