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sur le vieillissement**
Research Centre on Aging

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universitaire de santé
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NEWSLETTER
on current research projects

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Help Older Adults with Disabilities Maintain Socially Active Lives



Social participation, can be defined as a person's involvement in activities that provide interactions with others in the community, have a positive impact on health and quality of life of older adults. Unfortunately, nearly one older adult out of four would like to take part in more social and leisure activities, but doesn't manage to. Lack of time or acquaintances, state of health, difficulties using community resources, or transportation-related challenges all play a role in limiting participation. With these issues in mind, Professor Mélanie Levasseur's research team conducted a study to assess the effects of a Personalised citizen assistance for social participation (APIC) on the social participation of 16 older adults with disabilities.

Personalised citizen assistance for social participation

APIC is a "tailored" program that consists in helping older adults with disabilities target and carry out activities they find important. The older adult is paired for a weekly 3-hour stimulation sessions with an attendant trained and supervised by the research team. The activities they engage in can be: going to a restaurant, taking a walk, or taking part in an activity offered by a community organization.

Research results, including thoughts from older adults who received APIC over a six-month period

At the end of APIC, participants had increased their mobility, ability to carry out social activities, and frequency in taking part in leisure activities. All of the older adults said that they were satisfied and recommended APIC: *"Being accompanied, you'll love it!"* Many older adults felt the program exceeded their expectations and must be implemented: *"Getting out is vital for the recovery of the people who are alone and to improve their situation."* The presence and support provided by the attendant helped compensate for an occasionally unavailable and crumbling social network: *"I told him things... because we have separate lives. It's better than confiding in my daughter. Brothers and sisters, it's valuable to maintain a good relationship... I hadn't expected that [attendant]."*

The older adults indicated that APIC helped them to improve their physical and mental abilities, in addition to increasing their physical and psychological well-being, self-esteem, and motivation: *"I had fun, I felt like other people, balanced, part of society... I looked forward to the following week to do another activity, especially since I chose it... I regained more physical energy...I'm able to start a project and go through with it... I can do things now that I couldn't do before."*

APIC also helped older adults to regain, maintain, explore, experiment with and improve the frequency of significant social activities, as shown in the diary of a couple's attendant: "He insists on joining us, saying it will do him good to change his ideas. Again, we really have fun and, indeed, he feels better. My presence and the mere fact of playing Rummy is very beneficial, according to him." These explorations and achievements were carried out in a reassuring, motivational context. They allowed older adults to regain confidence in their abilities and to mobilize their personal resources. APIC also enabled them to make future plans to stay physically and cognitively active as well as integrated into their community.

APIC allows older adults to receive individual support tailored to their needs and interests. This program is an innovative, promising intervention to promote social participation of older adults with disabilities.

For more information, please contact:

Joanie Lacasse-Bédard

819 780-2220, ext.: 45415

E-mail: Joanie.Lacasse-Bedard@USherbrooke.ca

Cyberbullying and Seniors



Chaire de recherche sur la maltraitance
envers les personnes âgées
Research Chair on Mistreatment of Older Adults

Bullying can occur at all ages and anywhere. Cyberbullying, however, appears to be associated exclusively with teens. That being said, seniors are increasingly using information and communications technologies (ICTs) to break out of isolation, stay in touch with their families, entertain themselves, and learn about various topics.

But just what is cyberbullying?

Cyberbullying is the aggressive use of information and communications technologies to systematically and repeatedly hurt someone who is weaker over a long period of time.

Marika Lussier-Therrien, a student advised by Professor Marie Beaulieu, holder of the Research Chair on Mistreatment of Older Adults, conducted a trial of cyberbullying among the elderly. This trial updates the state of knowledge on the topic and on some practices to combat this problem.

Unlike the case of cyberbullying targeting teens, there is little in the literature about the kind experienced by seniors. Nevertheless, studies clearly show that seniors are targeted. Indeed, a recent study in the Czech Republic indicates that 1.4% of participants age 50 or older reported having been ridiculed, humiliated, or hurt on the Internet several times a month. The bullies primarily used social networks and email to reach them.



The main behaviors experienced by seniors were being harassed, receiving hateful or threatening emails or instant messages, being the target of derogatory remarks, and seeing confidential information spread around the Internet or on social networks. As in the case of teenagers, senior victims of online bullying may experience shame, loss of intimacy, and fear, and may have suicidal thoughts.

This master's thesis has taken a first step in delineating the knowledge on cyberbullying among seniors. We want to continue documenting the problem and develop outreach strategies to combat cyberbullying of seniors. Specifically, the strategies would allow seniors to identify cyberbullying, know their rights, safely use ICTs, and denounce this phenomenon.

For more information, contact:

Marika Lussier-Therrien, research assistant,
Research Chair on Mistreatment of Older Adults
E-mail: Marika.Lussier-Therrien@USherbrooke.ca

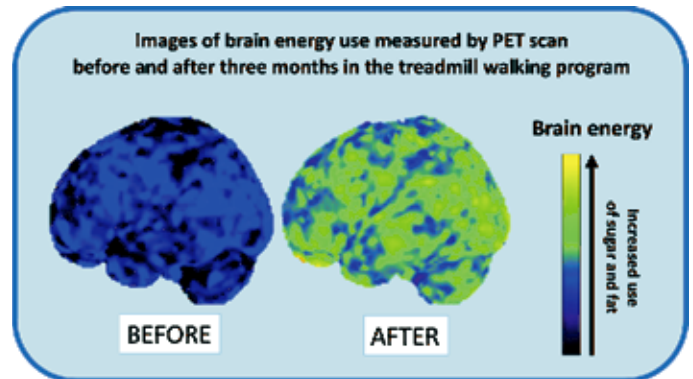
Increasing Brain Energy through Physical Activity: It Works!



While research continues to search for a therapeutic treatment for people with Alzheimer's disease, several alternative approaches such as exercise have made headlines in recent years. Recent studies have shown that physical exercise can improve cognition, quality of life, reduce stress, and more. But does it really work and, if so, how?

One theory to explain the memory problems seen in Alzheimer's disease is the brain not being able to properly use its fuels. This energy travels to the brain in the form of sugar (glucose) and fat (ketones). Physical activity can potentially increase the energy delivered to the brain.

Here at the Research Centre on Aging, Professor Cunnane's conducted a study in which people with Alzheimer's disease engaged in a personal training program on a treadmill for 3 months. The sessions lasted 15 to 45 minutes, three times a week. More than a dozen people took part in this study. The use of the two brain fuels (sugar and fat) was measured with positron emission tomography (PET), a brain imaging method. This study indicated the brain's energy function increased by 5% and that the participants performed slightly better on certain memory tests as a result of the three months of exercise.



These results are very encouraging, especially considering the short duration of the intervention, and partly explain the benefits of physical exercise for people with Alzheimer's disease.

So walk, get moving, go outside! What's good for your heart is good for your brain!

For more information about Professor Cunnane's research projects and lab, visit: www.recherche-cerveau-sherbrooke.ca or contact the coordinator, Melanie Fortier, at 819 780-2220, ext.: 45252

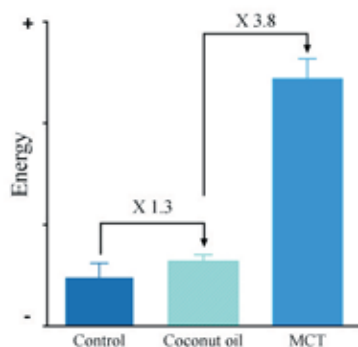
Coconut Oil: Brain Lubricant?

Coconut oil has been showing up in the media for a while now as being good for hair and for its dietary benefits. And coconut oil has attracted the interest of more than one researcher. Some believe that it is harmful to the heart and arteries due to its high saturated-fat content, despite a number of studies indicating that these fats are actually good sources of energy. Coconut oil contains about 70% of medium-sized saturated fats referred to as MCTs.

Since they are "smaller" than the long-chain saturated fats usually found in our food, they are more rapidly absorbed by the body and transformed almost immediately into energy in the form of ketones.

Ketones are molecules naturally produced by the liver from fat and are of particular interest to the brain.

Research findings : Quantity of ketones produced from fat over 8 hours



Currently, many researchers believe that this source of good fat would be useful in providing more energy to the aging brain and help prevent memory problems. Cunnane's team has examined the issue and compared the capacity of coconut oil (such as that found in grocery stores) and purified MCT oil (also commercially available in stores selling natural foods and sports supplements) to produce energy the brain can use. The study demonstrated that the purified MCT oil was almost four

times more efficient in producing ketones than the whole coconut oil. So, MCT would be more effective in providing energy to the brain.

That being said, coconut oil should not be put back on the shelf: it is reasonably priced, contains good fats, and is readily available on the market. As the research team aptly put it, coconut oil is a good daily source of fat that ensures the aging brain always has energy.

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or contact the coordinator,

Melanie Fortier, at 819 780-2220, ext.: 45252

96 Seconds against Pain

When we are in pain, we try to express it verbally. But what can patients with neurocognitive disorders such as Alzheimer's disease do? When they suffer, they are unable to communicate verbally and tend to show agitated behaviors.

Faced with this issue in Sherbrooke LTCCs, Monique Bourque, senior advisor with the Direction des soins infirmiers du CIUSSS de l'Estrie – CHUS, turned to Guillaume Léonard, a researcher at the Research Centre on Aging. With financial support from the Vitae Foundation, they studied the use of various instruments to identify and document pain in individuals with limited ability to communicate verbally. Their work confirmed that the PACSLAC-II is a rapid (average completion time of 96 seconds) and valid tool for assessing pain in people with neurocognitive disorders. The PACSLAC-II is a standardized checklist completed by caregivers to document behaviors related to the patient's pain.



These 96 seconds can make all the difference for patients and healthcare providers. During its implementation in the CIUSSS Estrie – CHUS, Bourque showed that this instrument was effective for screening patients' pain and adapting the treatment plan. As Professor Léonard pointed out, "simple analgesics improved the comfort and reduced the aggressive behavior of a number of individuals with neurocognitive disorders." Bourque is currently responsible for developing an education program for all teams working in LTCCs in the CIUSSS de l'Estrie – CHUS, so that the PACSLAC-II can be used regularly in care routines.

Myths and Realities about Physical Activity

Having good lifestyle habits could enable aging individuals to maintain physical and physiological performances that favor the maintenance of physical independence; this refers to as successful aging.

For people 65 and older, it is recommended to accumulate at least 150 minutes of moderate to vigorous intensity aerobic physical activity per week, in bouts of 10 minutes or more. When beginning, however, the recommendation is to start out with shorter sessions that can be lengthened over time. Nevertheless, a person's health and physical condition determine the goal of the exercise intervention. While a kinesiologist (specialist in physical activity) can come up with a variety of adaptations and make exercising fun and safe, many myths still persist. In the following lines, we will demystify three myths that still persist concerning exercise.

Avoiding exercise when you have joint pain - FALSE

A professional might modify certain exercises depending on the cause of the pain. It has been demonstrated, however, that stopping exercise is not helpful. In fact, the recommendation is to reduce the time you exercise, but increase the number of times you exercise in a day. In addition, the range of motion causing pain during exercise should be reduced, and the use of low-impact/non-weight bearing activities (such as biking or swimming) are recommended. Moreover, an adequate warm-up (8 to 10 minutes) will allow the cardiopulmonary system, muscles, and joints to get prepared for physical activity. A kinesiologist can help make any necessary adjustments and you can find one by visiting the Web site of the *Fédération des kinésiologues du Québec* or by inquiring at a fitness center.

Starting exercise after a certain age makes no sense because there are no benefits - FALSE

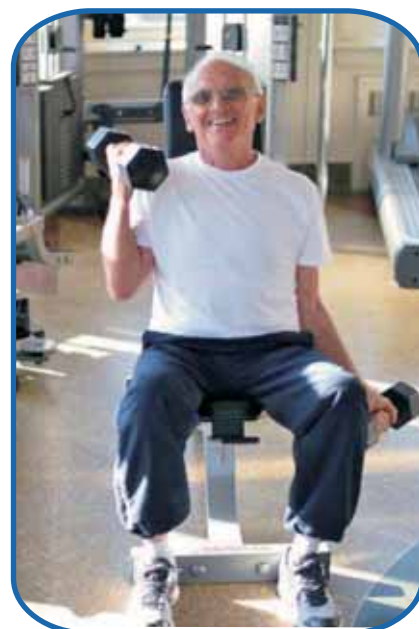
It is never too late to start exercising and get the benefits. Aerobic (e.g., walking) and strength exercise have complementary effects regardless of when you start. In fact, when combined, they have benefits for both physical health (e.g., blood lipids, physical ability) and quality of life. There is also strong evidence that starting exercise can be beneficial even when your health is deteriorated. For example, someone who has difficulty performing activities of daily living could engage in adapted exercise programs aimed at improving their range of motion, strength, balance and mobility.

Stretching is a waste of time! - FALSE

When properly executed and adapted to the person's abilities, stretching is an integral part of a healthy lifestyle. Indeed, stretching can be done after exercising or during free time, and helps achieve a greater range of motion. Stretching can therefore have a significant impact on quality of life and physical independence. For example, improving range of motion could increase a person's ability to reach for an overhead object or tie their shoes.

In short, with professional guidance, exercise can be adapted for everyone. It helps maintain and improve health, quality of life, and physical independence. Moreover, a number of activities such as tai chi, yoga, and the STAND UP! program help maintain or improve health and reduce the risk of falls. A caregiver can even come to a person's house for a personalized multifactorial intervention (PMI). For people who are in better physical shape, there are classes comprising more vigorous activities such as Zumba. So, do not hesitate to get active and have fun!

By Isabelle Dionne, Eléonor Riesco, and Marie-Noëlle Fontaine; article published in Vivre en Santé, Vol. 1, No. 2.



Diabetes in the Elderly

What is diabetes?

Diabetes is a disease that affects the amount of glucose (sugar) in your blood. The pancreas plays an important role in this by secreting a hormone called insulin, which regulates glycemia (blood-sugar level). Obesity, especially abdominal fat, can reduce the action of this hormone.

Moreover, insulin secretion by the pancreas can gradually decrease with increasing age. This can increase blood-sugar levels and lead to a diagnosis of diabetes, specifically, type 2 diabetes. The factors associated with higher blood sugar are :

- Family (genetic) factors
- Lifestyle: mismatch between diet and level of physical activity

Diabetes and Age

Some elderly individuals were diagnosed with diabetes as adults; others more recently. Generally, the complications of diabetes are related to two main factors:

- Duration of the condition
- Level of blood-glucose control

Complications and the Elderly

Diabetes-related complications are for the most part vascular. Small blood vessels—such as those in the kidneys and eyes—and large vessels—such as those in the legs, heart, and brain—can be affected. Other factors, such as high blood pressure and high cholesterol, can also damage large blood vessels. That applies to both middle-aged people and the elderly.

Studies have shown that diabetes increases the risk of developing Alzheimer's disease by 1.5 times and the risk of secondary dementia (vascular dementia) by 2.5 times. Good early control of these vascular risk factors and treatment of diabetes that prevents repeated episodes of low blood sugar most likely play a role in preventing dementia.



Treatment Differences

The medications used to control blood-sugar levels act in different ways:

- Increase insulin sensitivity
- Increase the amount of insulin secreted by the pancreas
- Increase the amount of blood sugar excreted by the kidneys
- Replace insulin by injecting it under the skin

All of these medications can be used with the elderly with adjustments taking into account kidney function, because the kidneys excrete most of them. Studies have shown that certain classes of medications entail a higher risk of hypoglycemia (low blood sugar) and that this risk increases with the person's age. Proper adjustments, however, can lower the risk, and the elderly should not be deprived of good blood-sugar control because of this issue.

In short, a person's age should not deprive them of adequate treatment for their diabetes. A personalized approach makes it possible to find the right combination of nutrition and medication so as to prevent complications.

By Dr. Daniel Tessier, article published in Vivre en Santé, Vol. 1, No. 2.

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1036, Belvedere South
Sherbrooke (Quebec)
J1H 4C4
Telephone: 819 829-7131

The Vitae Foundation, proud sponsor of the Research Centre on Aging, has launched its 20th mailing list campaign to make itself better known to the community. For more information or to make a donation, please contact Mrs. Brigitte Lambert at: 819 780-2220 ext. 46310

Thank you for your support!



Research... Means you!



Take Part in Our Projects!

Research on aging doesn't have an age limit.

We need your help to advance our knowledge and understanding of aging. All our research projects are conducted according to strict ethical protocols which ensure the safety and consent of participants. Men and women of all ages contribute to the development of programs which are subsequently applied in many social spheres to improve the health, care, and living conditions of the elderly.

Getting Involved in a Research Project

1- Respond to a call for a particular project

Consult our Web site for information about recruitment under way : www.cdrv.ca

2- Register with the CdRV's participant-recruitment centre

Give your consent to allow a representative of the Research Centre on Aging contact you if you fit the requirements for taking part in a specific research project. To register:

Telephone: 1 819 780-1832
Toll-free: 1 888 780-1832
Web site: www.cdrv.ca



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