

Research Update

Practical, leading edge research results applied to physical activity for older adults, in plain language for health practitioners and leaders.
Sponsored by the Active Living Coalition for Older Adults (ALCOA).

Healthy Eating and Regular Physical Activity: A Winning Combination for Older Adults

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As we grow older, many changes occur which can increase our risk of developing chronic diseases such as diabetes, heart disease, and certain types of cancer. Growing older also alters our body composition. We tend to lose lean body mass and bone mass and experience a concomitant increase in fat mass, affecting our functional capacity and our ability to perform daily activities, and increasing our frailty and dependence on others. These changes are perceived as unavoidable consequences of the aging process. However, research shows that many of these changes are due to inactivity and poor eating habits rather than a direct consequence of aging.

Regular physical activity and healthy eating are each known to contribute to overall well-being. Physical activity not only reduces the risk factor for developing certain chronic diseases but also leads to favourable changes in body composition, fitness level and functional capacity. Similarly, healthy eating has been shown to influence the onset and management of various chronic conditions, as well as body composition and functional capacity. While the importance of healthy eating and regular physical activity has been widely examined and recognized, only 24% of older adults are active enough to gain

health benefits and a significant percentage consume less than optimal nutrition. As such, health promotion initiatives should focus on promoting a combination of healthy eating and regular physical activity.



Defining healthy eating and healthy active living concepts

To clarify the healthy eating concept, *Canada's Food Guide to Healthy Eating* was developed. Healthy eating has been described as consuming a variety of foods in sufficient quality and quantity for health and well-being. The key to healthy eating lies in including a variety of foods in moderation and establishing a balance in the choices made. The food guide includes four food groups: grain products, fruits and vegetables, milk

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products, and meats and alternatives. Each food group provides its own set of key nutrients. The food guide also contains a category of foods called "other foods" which include foods that are high in sugar, fat and salt as well as beverages such as water, tea, coffee, alcohol and soft drinks. The foods in this category contribute fewer nutrients than the four food groups. As people age, total energy requirements decline while the requirements for nutrients remain the same or increase. For example, requirement for calcium and vitamin D increases with age, whereas the need for several B vitamins and magnesium remain the same. As such, careful planning of diet is critical for meeting the nutritional needs of older adults.

Canada's Physical Activity Guide to Healthy Active Living for Older Adults recommends levels of activity that will help reduce the risk of developing some of the diseases mentioned above. It also recommends accumulating 30 to 60 minutes of physical activity most days of the week. As well, older adults should try to include all components of physical activity (endurance, strength, balance, and flexibility). There are many different physical activities to choose from. Age is no barrier to starting regular physical activity.

Healthy Eating, Regular Physical Activity and Chronic Conditions

Regular physical activity and healthy eating are inseparable parts of the overall health equation, yet these domains are seldom explored together. A majority of research has examined the beneficial effect of healthy eating and regular physical activity separately. Recent studies show that combining these two health practices maximizes the beneficial health outcomes. A recent SENECAs study showed that there was a greater risk of death when unhealthy eating and a lack of regular physical activity were combined than when either factor existed alone. The positive results of healthy eating and regular exercise on many chronic disease factors are complementary. The risk, onset and management of diabetes, cardiovascular disease

and certain types of cancer are moderated by diet and exercise. For example, in a one-year trial involving sedentary, overweight individuals who began a regular exercise program and a low caloric low-fat diet, researchers observed increased weight loss, improved lipoprotein pattern, and a further decrease in the 12-year coronary heart disease risk. Also, a study of diabetics showed that exercise and dietary intervention improved lipoprotein profile, insulin sensitivity and regulation of blood sugar. Furthermore, evidence of an inhibitory effect of diet and exercise on prostate cancer growth has been documented. Diets low in fat, high in fiber, and sufficient in energy along with moderate exercise have been shown to have major benefits in the prevention and management of chronic conditions.

Healthy Eating, Regular Physical Activity and Body Composition

Integration of healthy eating and regular physical activity has been shown to have a beneficial impact on body composition, particularly on the loss of lean body mass and bone mass, which typify the aging process. For instance, adequate dietary intake of calcium and vitamin D are needed to maintain bone health and prevent osteoporosis, while weight-bearing activities help retain calcium within the bones to keep them strong. Therefore, the effects of an adequate intake of dietary calcium and weight-bearing exercise combine to retain calcium in the bones and prevent osteoporosis. The increase in bone and muscle strength (and flexibility) in turn leads to everyday benefits such as reduced risk of falls and fractures, the ability to carry groceries, and the ability to walk up stairs. These everyday benefits help older adults to maintain their independence.

Age-related loss of muscle mass has been partially attributed to physical inactivity and to inadequate dietary protein. Dietary supplements with high energy and protein content along with resistance training have been effective in increasing body mass and fat free mass. Also, resistance training has been shown to offset the

loss of skeletal muscle due to a low-protein diet, which is common among older adults. A combination of diet and exercise is needed to optimize the potential for healthful shifts in body composition.

Healthy Eating, Regular Physical Activity and Energy Balance

Changes in body composition and diminished physical activity reduce the energy requirement among the elderly. Although the energy requirement decreases with age, the need for many other nutrients remains the same, except for such nutrients as calcium and vitamin D, where the requirement increases with age. This scenario makes it challenging for older adults to obtain all the nutrients they need.

Also, with age, our ability to control food intake is significantly reduced. Since overeating and undereating occur routinely as part of the normal pattern of energy regulation, these findings may help explain the vulnerability of older people to unexplained weight gain or weight loss. In addition, individuals overestimate energy expenditure and underestimate energy intake. Unintentional weight gain or loss is a significant predictor of mortality and morbidity among the elderly. When energy intake is not adjusted to reflect the declining energy requirement, a gradual increase in body weight occurs. Careful dietary management with regular physical activity is critical for maintaining body weight and obtaining all the nutrients needed for metabolic and physiological processes. As people age, foods high in energy content with very small amounts of other nutrients should be avoided and foods with high nutritional value should be consumed more often. Also, moderate physical activity can increase resting metabolic rate in older adults. With resistance training, the mean energy intake required for body weight maintenance increased by approximately 15%. Unfortunately, regular physical activity is not a gateway to healthy eating and vice versa. Health promotion initiatives should address both physical activity and healthy eating among older adults.

Healthy Eating and Regular Physical Activity for Bereaved Seniors

In Canada, 32% of seniors are widowed. Bereavement literature reports that normal signs of grief include poor appetite and weight loss. Among widowed seniors,

eating disorders are considered to be one of the most troubling problems related to bereavement. Also, bereaved seniors indicated that the daily times they would have spent with their spouses, such as mealtimes, were the most difficult and this resulted in the disruption of normal patterns of eating. Furthermore, for individuals coping with bereavement, research shows that some develop more negative dietary strategies such as meal skipping, less dietary variety, and reduced home food production. They also frequently reduce their level of physical activity. These changes could ultimately translate into poor health.



Cultural Diversity and Health Practices

In Canada, the ethnic makeup is increasingly diverse. The 2001 census showed that 18% of the total population was born outside Canada. While Canada is becoming increasingly diverse, little research is available on the current health status of recent immigrants. Available longitudinal studies show that immigrants who have lived in the country for ten years or less tend to have better health than their fellow Canadians. This phenomenon, known as the Healthy Immigrant Effect, deteriorates over the years that they have been in Canada. The reversal of the healthy immigrant effect could be partly attributed to changing health practices. Immigrants tend to adopt the health behaviours of the host country as part of the integration process, by necessity and/or by choice. Some factors are the availability of certain foods and a desire to integrate into the new culture. Also, economic status tends to influence the level of acculturation and integration. Limited research shows that immigrants tend to change their consumption of major traditional foods (e.g., rice and fish to hamburger) but continue to enjoy their "comfort" foods (specialty pickles and other foods high in calories, fat and salt). Also, the level of

physical activity seems to change with acculturation. Maintaining health practices, particularly nutrition and exercise, is important for health and well-being.

Some useful web sites

- Active Living Coalition for Older Adults:
www.alcoa.ca
- Canada's Food Guide to Healthy Eating:
<http://www.hc-sc.gc.ca/nutrition>
- Canada's Physical Activity Guide for Healthy Active Living:
www.paguide.com
- Canadian Health Network:
www.canadianhealthnetwork.org
- Canadian Centre for Activity and Aging:
www.uwo.ca/actage

Key Statements in Canada's Food Guide to Healthy Eating

- ✔ Enjoy a variety of foods from each group every day.
- ✔ Choose whole grain and enriched products more often.
- ✔ Choose lower-fat foods more often.
- ✔ Choose dark green and orange vegetables and orange fruit more often.
- ✔ Choose lower-fat milk products more often.
- ✔ Choose leaner meats, poultry and fish, as well as dried peas, beans and lentils.
- ✔ Use foods and beverages that are not part of the four food groups in moderation.

Key Statements in Canada's Physical Activity Guide to Healthy Active Living

- ✔ Be active, your way, every day for life.
- ✔ Consider joining a group for exercising.
- ✔ Increase endurance activities four to seven days a week. These may include: walking, swimming, dancing, aerobics, bicycling, cross country skiing.
- ✔ Increase flexibility activities daily. These may include: stretching, gardening, reaching and bending, bowling, Yoga, T'ai Chi.
- ✔ Increase strength and balance activities two to four days a week (Lifting weights or household items such as laundry or groceries, climbing stairs,

wall push-ups or standing and sitting several times in a row.)

Choose Lower Fat Foods More Often

Meat and Alternatives:

- ✔ Choose extra-lean or lean ground meat. Drain all the fat after cooking.
- ✔ Remove the skin and visible fat from meat and poultry before cooking.
- ✔ Consume fish often.
- ✔ Try roasting, baking, broiling or microwaving instead of frying.
- ✔ Minimize consumption of high fat meats (bacon, hot dogs, chicken wings, ribs).

Milk Products:

- ✔ Choose a lower-fat milk (i.e., Skim, 1%).
- ✔ Choose lower-fat cheese and yogurt.

Grain Products:

- ✔ Limit consumption of nuts and seeds.
- ✔ Read labels on granola cereals and bars carefully as some may be very high in fat.

Vegetables and Fruit:

- ✔ Limit sauces and dips.
- ✔ Limit consumption of avocados.



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Research Update Reader Survey

Please take a few moments to complete this survey. Your comments and feedback will help ALCOA improve the *Research Update*. Please be assured that your responses will remain confidential.

If you are interested in being entered into a draw for prizes, please submit your details in the space provided at the end of this survey.

YOUR THOUGHTS ON THE HEALTHY EATING AND PHYSICAL ACTIVITY ISSUE

1. Please circle the response that best describes how much new information you learned about each of the following topics.

	Learned a great deal	Learned some new things	Did not learn anything new
a. The benefits of healthy eating and physical activity	1	2	3
b. Tips on eating a healthy diet	1	2	3
c. The kinds of diet and the types of exercises that will help keep bones and muscles strong	1	2	3

2. Please rate the issue on the following components (circle your response).

	Excellent	Good	Fair	Poor	Not Sure
a. Selection of topics	1	2	3	4	NS
b. Quality of information	1	2	3	4	NS
c. Usefulness of information	1	2	3	4	NS
d. Use of visuals (e.g., pictures, layout)	1	2	3	4	NS
e. Overall rating of the Issue	1	2	3	4	NS

3. Is there anything that you intend to do based on what you have read? Yes No
If Yes, what do you intend to do?

YOUR THOUGHTS ON THE ALCOA RESEARCH UPDATE NEWSLETTER

4. Please rate the EFFECTIVENESS of the *Research Update* in meeting the following objectives.

	Not at All Effective	Somewhat Effective	Very Effective
a. Keeping you informed on up-to-date information	1	2	3
b. Communicating in clear and plain language	1	2	3
c. Providing you with practical tips for using the research	1	2	3

5. Do you have any suggestions for future newsletter topics? Yes No
If Yes, what topics would you like to see covered?

6. Do you have any suggestions to improve the *Research Update*? Yes No
If Yes, how so?

DISTRIBUTION OF THE NEWSLETTER

7. How do you receive the *Research Update* newsletter? (check all that apply)

- Through the mail
 At my work or organization
 Download from ALCOA web site
 As part of Joe Taylor's Active Living Newsletter
 Other. (Please specify.) _____

8a. Do you distribute or share any of the information included in the *Research Update*? Yes No

b. If Yes, with how many others (approx.) do you share the newsletter? _____

c. If Yes, with whom are you sharing the newsletter? (check all that apply)

- older adults practitioners/leaders other _____

9. Do you know of anywhere else that you can get the type of information contained in the *Research Update*?

Yes No

DEMOGRAPHIC INFORMATION

10. Age: 54 years of age or less 55 –74 years 75 – 90 years Over 90 years

11. In which province / territory do you reside? _____

12. What type of organization do you work for or represent? Check all that apply.

- I do not work for or represent an organization Non-governmental/Volunteer organization Public Health Department/Unit/Board
 Senior's Organization Government Other (please specify)
 Coalition Education System _____
 Healthcare System Corporate or Private Sector

13. Is your organization ... Local Provincial Federal Not Sure

14. Please describe your role within your organization. Check all that apply.

- Health Practitioner Consultant Residence Staff
 Active Living Programs Leader University Staff Volunteer
 Fitness Professional University Faculty/Researcher Other (please specify)
 Recreation Leader Student _____

ALCOA thanks you for taking the time to fill out this questionnaire.

Please mail your response to ALCOA, 33 Laird Drive, Toronto, ON M4G 3S9 or fax us at 416-423-2112.

If you would like to be entered into a draw for a prize, please provide your name, email address, or phone number.

Name _____ Email _____ Telephone number _____