



Step into a healthier brain: A new physical activity toolkit for the prevention and management of Alzheimer's disease

Carla Arasanz, Jennifer Heisz, Tiffany Scarcelli



Outline

- Background and context
- Evidence
- Toolkit: Information pamphlet & calendar
- Impact
- Where to find the toolkit?

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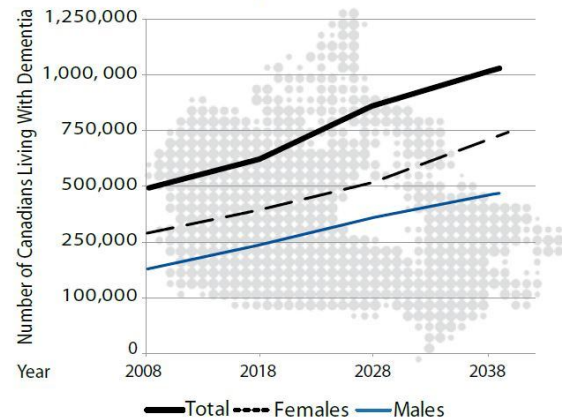
Context

- The Ontario Brain Institute's vision is to improve brain health
- Alzheimer's Disease and dementia are a priority
- Goal is to take *what we know* and make it *what we do*
- Focus on information that is actionable: Prevention

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Why Alzheimer's

Prevalence of Dementia by Sex 2008 to 2038



Rising Tide, 2010 Alzheimer Society of Canada

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What can be done?

- Currently, there are few treatments available for Alzheimer's disease – although research is actively pursuing new options
- In the meantime, what can be done? What is cost-effective and actually works?

Rising Tide, 2010 Alzheimer Society of Canada

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Lifestyle Factors

Five modifiable lifestyle factors linked to Alzheimer's Disease:

- Smoking
- Education
- Social Engagement
- Diet
- Physical Activity

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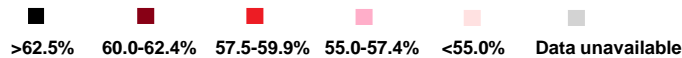
Most Canadians are physically inactive

Data derived from the Canadian Community Health Survey 2009/2010.
Chronic Disease Infobase, Surveillance Division, CCDPC, PHAC.



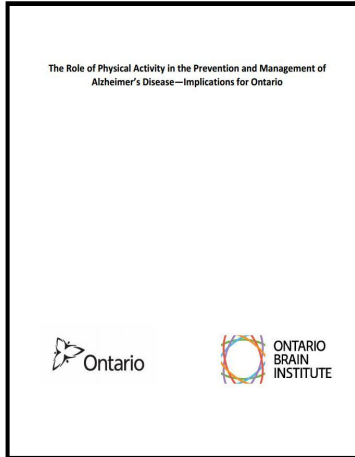
Canada: 57.6%
Males: 51.4%
Females: 62.6%

Ontario: 59.7%
Males: 53.0%
Females: 65.2%



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Evidence



Physical activity can cut risk of Alzheimer's, report suggests

WENCY LEUNG
The Globe and Mail
Published Friday, Mar. 08 2013, 7:00 AM EST
Last updated Tuesday, Mar. 19 2013, 1:56 PM EDT



- Over 30 print, tv, and radio features
- Every major city in Canada
- Pakistan Times, The Mirror

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About Dr. Jennifer Heisz



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Understanding how body fitness affects brain health across the lifespan.



Neurophysiology
of Fitness Lab

PACE

Physical Activity
Centre of Excellence



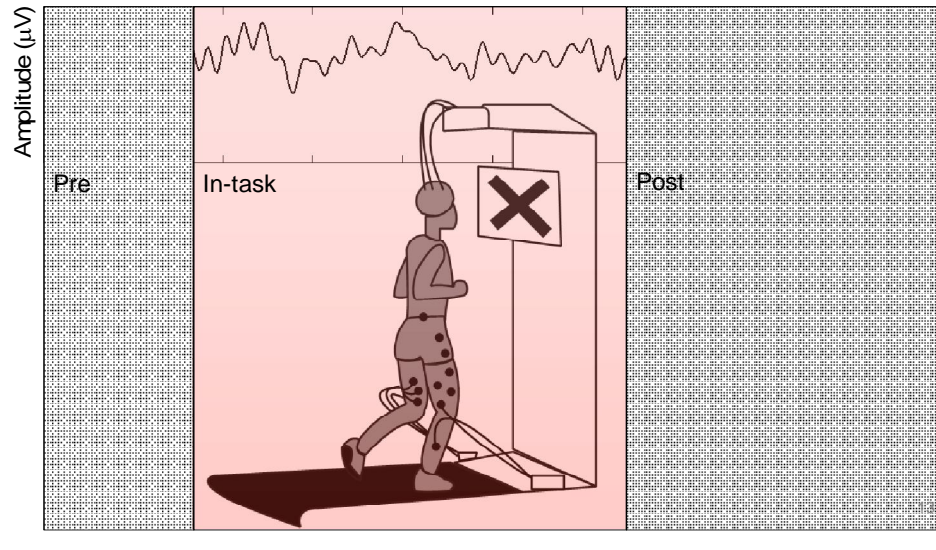
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Physical Activity Centre of Excellence (PACE) at McMaster University



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EEG can be recorded before, during and after exercise.

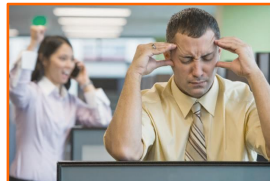


Physical activity has cognitive benefits for healthy older adults.

Processing Speed



Focus



Memory

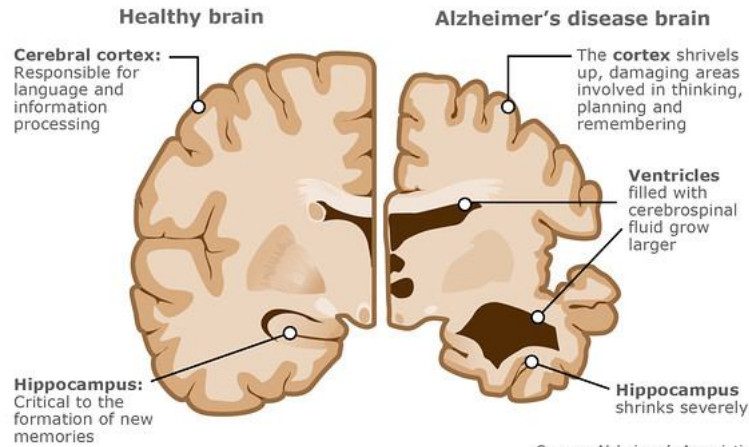


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Clark et al., submitted.

Alzheimer's disease (AD) changes the brain to alter behaviour.

Alzheimer's disease



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Physical activity is a promising way to prevent and manage Alzheimer's disease.

1. Can physical activity be used to prevent and manage Alzheimer's disease?
2. How do we motivate people to be sufficiently active for good health?

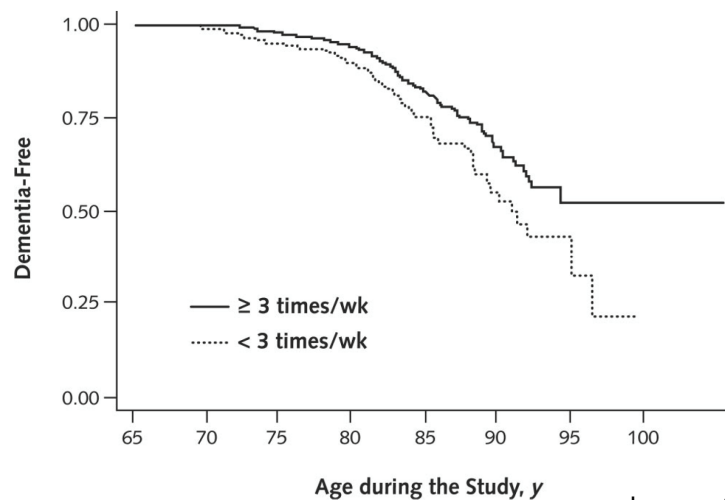
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Physical activity reduces the risk of Alzheimer's disease and dementia.



Physical activity may help to manage Alzheimer's disease symptoms.

Activities of daily living

Mood

Mobility

Cognition



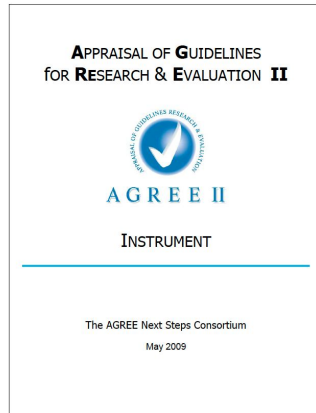
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How do we translate the research into something that healthcare providers/citizens can use?



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A key way to translate knowledge is to develop an evidence-based recommendation.



1. Scope and Purpose
2. Stakeholder Involvement
3. Rigour of Development
4. Clarity of Presentation
5. Applicability
6. Editorial Independence

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Purpose

To develop evidence-based resources to help those who have Alzheimer's Disease, and those who are trying to prevent Alzheimer's Disease, become more physically active.

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We reviewed the literature and developed an evidence-based recommendation.



Consensus statements on the benefits of physical activity for the prevention and management of Alzheimer's disease.

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Physical activity for Alzheimer's disease prevention and management.

1. Habitual physical activity is associated with a reduced risk of developing Alzheimer's Disease.
2. Among older adults with Alzheimer's Disease, routine/regular physical activity may help to manage some of the symptoms associated with the disease.

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Physical activity is a promising way to prevent and manage Alzheimer's disease.

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Most older adults are not sufficiently active for good health.



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How do we help citizens become more physically active?



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We conducted a systematic review of the literature and developed a tool.

Promoting Physical Activity for Older Adults
The Challenges for Changing Behavior
Lawrence R. Rowley, PhD, W. Jack Rejeski, PhD, Abby C. King, PhD

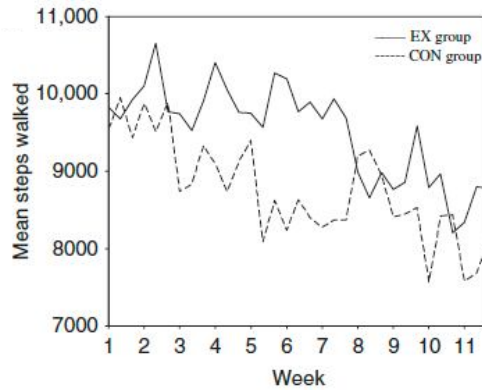
The Theory of Planned Behavior: A Review
Its Applications to Health-related Behaviors
Gaston Godin, Gerjo Kok



Evidence-informed physical activity resources for people who have Alzheimer's disease or are trying to prevent it.

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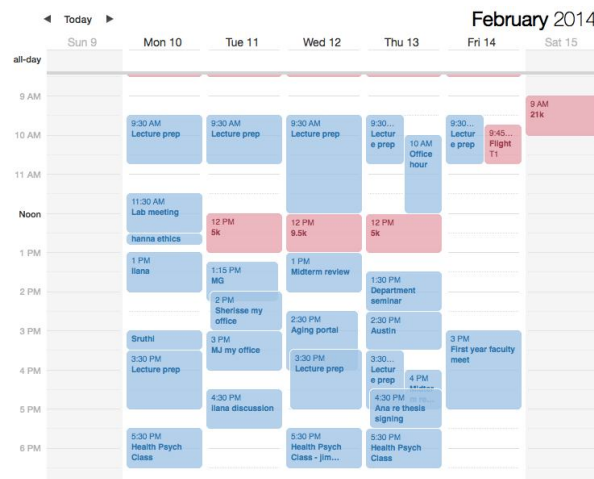
Simply putting exercise into a calendar increased individuals' activity level



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Arbour & Martin Ginis, 2009.

Adding exercise to my calendar helps me reach my fitness goals even when I'm busy.



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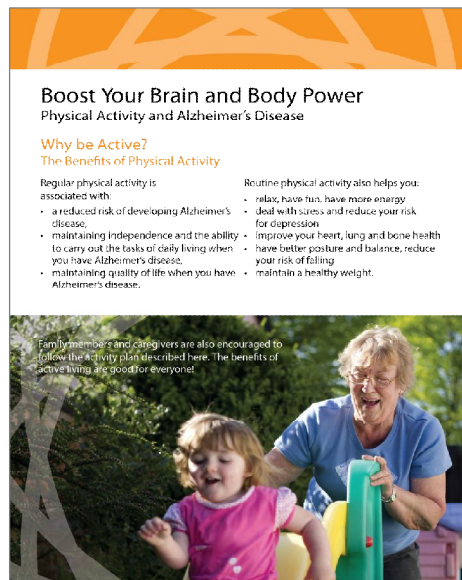
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What Does The Toolkit Include?

1. Information Pamphlet
2. Calendar

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Information Pamphlet: Front Cover



Evidence-Based Benefits

Senior-Friendly Imaging

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Information Pamphlet: Centre-Fold

Getting Started

If you are already active the goal is to continue. However, you should discuss your plans to become more active with a health professional if:

- You have a medical condition such as heart disease or diabetes
- You tend to lose your balance when being active
- You have a bone or joint problem (e.g., a problem with your back or hips).

It's not too late to start. Begin with what is comfortable for you. Then add a few minutes or additional activities when you feel ready.

What Kinds of Physical Activity Should I do?

The Ontario Brain Institute recommends that you aim to meet the Physical Activity Guidelines for Older Adults from the Canadian Society for Exercise Physiology <http://bit.ly/1ac8yfm>

Move more every day. For example:

- get up and move about every 2 hours
- Try deep breathing and lifting your arms over your head
- use the stairs
- enjoy active hobbies (e.g., bird watching, fishing, gardening)
- move to music
- engage in light housework (e.g., doing dishes or laundry)
- play with your grandchildren
- take an after dinner walk with your partner
- go shopping at the mall and carry your parcels.

Enjoy aerobic activity.

Aim for 150 minutes (2.5 hours) per week in bouts of 10 minutes or more of moderate activities which make you breathe harder and sweat a little. Aerobic activities are continuous, whole body activities such as:

- brisk walking, pole walking
- snowshoeing
- hiking
- cycling on a stationary bike
- swimming
- cross-country skiing
- skating
- rowing, paddling and kayaking

continued on next page...

Strengthen your muscles and bones.

Aim to do activities 2 days a week and work your large muscle groups (arms, legs, back, abdomen). Feel your muscles working but no pain. Exercises can be done sitting or standing. Examples include:

- exercises using resistance (e.g., elastic bands, weights, machines or your own body weight)
- exercise classes
- heavy yard work and gardening (e.g., digging, raking leaves, hauling soil, lifting rocks or debris)
- aqua fitness classes
- curling and bowling/lawn bowling
- heavier house work (e.g., sweeping, vacuuming, scrubbing).

there are many ways to get active, find your passion





get outside, get some fresh air

Enhance your balance.

Breathe deeply, stretch and bend every day. Stretch slowly, feel your muscles and joints working but no pain. Examples include:

- tai chi
- yoga
- golf
- dancing
- stretching and relaxation exercises (e.g., breathe deeply as you raise both arms over your head and then slowly lower them)
- balance exercises (e.g., standing on one foot).

Information Pamphlet: Back Cover

Safe Practices

Stay Safe

If you have difficulty balancing, use a chair, hold on to a counter or be within reach of a grab bar.

Take extra care as a pedestrian. Wear an ID bracelet if you are walking alone.

Always wear a life jacket in boats and have a friend when in and around the water. Swim at pools with a qualified lifeguard on duty.

If you start to have trouble walking and moving around, continue to do safe activities such as light housework, stationary bike cycling, chair yoga and sitting exercises. Use a cane or other mobility aid if you need to. Join a program with a qualified instructor or ask a health professional to help you modify your activities.

For more information about Alzheimer's disease and other dementias, visit alzheimerontario.ca or call 211 to contact the Society near you.


Stay Motivated

Be active with others (including pets). It means more fun, social interaction, social support and friendship. You are more likely to get moving if you make a commitment to do it with someone else.


Use the action planner to make a routine.

More may be better. Challenge yourself. You may be surprised at what you can do.

Build on your abilities, interest and skills. Choose activities you like and have fun!



Inspiration & Motivation



Calendar

Challenge Yourself to Move

Did you know that physical activity benefits both your body and your brain?

Why I will become active:

What motivates me? _____

What are my goals? _____

How I will build my weekly routine:


Include in my plan the activities I enjoy.

	SUN	MON	TUES	WED	THURS	FRI	SAT
AM							
PM							

My activity pal(s): _____


How I will keep my routine when:

The weather is bad.




- Exercise indoors
- Go for a swim
- Do strength training

I'm not feeling well.




- Reschedule for another day

My activity pal cancels.




- Have a list of people to call
- Plan group activities

I missed my planned activity.



- Go now if it is safe
- Reschedule right away
- Restart your routine tomorrow



Inspirational & Evidence-Based Statements

Behaviour Change Items

Weekly Planner

Relapse Plan

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Calendar

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Layout:

- Active voice
- Large font
- No technical language
- Easy to use, understand
- Fillable

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Physical Activity Launch



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Physical Activity Launch

Alzheimer's tool kit

Posted: 2014-06-22 04:03 PM | Last updated: June 22, 2014 02:04:03 PM
 Category: Health Ontario
 Tags: alzheimers disease, Ontario Brain Institute, prevention



The Ontario Brain Institute is launching a physical activity tool kit to help people with Alzheimer's manage the disease – and to help others prevent it.

The fitness kit was developed by experts from McMaster University and the Ontario Brain Institute. It took nearly a year to develop.

In all of his 96 years, John Nagy can't recall a time he wasn't physically active. "Hockey, baseball, football, lacrosse. The whole bit back there and at that time you could swim in the bay – it was not polluted!

Sharp as a whittle he works out every day of the year and credits that for his longevity. First of all, I exercise at home before I get here for about 40 minutes, then I walk to the gym two miles away, that's another 40 minutes. Then another hour and half at the gym."

He loves the social atmosphere Mac's Place facility provides for older fitness enthusiasts: "We talk a lot over there and we laugh and laugh it's about half a dozen of us."

He says a cluster of laughing old men must be a sight to behold for some. "Students must be around there thinking old people laugh – what do they see so funny – maybe they think we're mentally challenged."

Experts say exercise can ward off cognitive diseases.

Kathleen Martin-Ginis: "Exercise has been shown evidence it can reduce risk of people developing Alzheimer's and for those who have disease can manage the symptoms of Alzheimer's."

Alzheimer's Disease: Tips for exercise as a form of prevention

Older adults don't get enough physical activity, but it can be important for memory

By Erin O'Keefe, CBC News | Posted: Jun 22, 2014 9:50 AM ET | Last updated: Jun 22, 2014 9:50 AM ET



Moderate activities in bouts of just 10 minutes can make a difference in older adults' mental health. (Matt Turshak/Associated Press)

Facebook Twitter Reddit 8+ 5 Share Email

It's no surprise that exercise is good for your mind and your body, but the Ontario Brain Institute has launched an initiative to study the specific effects of physical activity on the prevention and management of Alzheimer's Disease.


In partnership with McMaster University in Hamilton, the institute released tips for safe physical activity for older adults, saying "it's not too late to start."

"Most older adults are not getting sufficient exercise for good health," said Jennifer Heisz, an assistant professor at McMaster on the research team.

CHCH News, Hamilton Spectator, CBC News, Argentina Star, North Korea Times


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Dissemination



**ADVOCACY
BENEFITS
COMMUNITY**

**PRIMARY CARE
FAMILY CLINIC**



**ONTARIO
BRAIN
INSTITUTE**


**INSTITUT
ONTARIEN
DU CERVEAU**

Converge. Discover. Deliver. Mobilize. Découvrir. Produire.

Société Alzheimer Society


BRANT • HALDIMAND NORFOLK • HAMILTON HALTON

SUVIEN APP



**ALBERTA CENTRE FOR
Active Living**

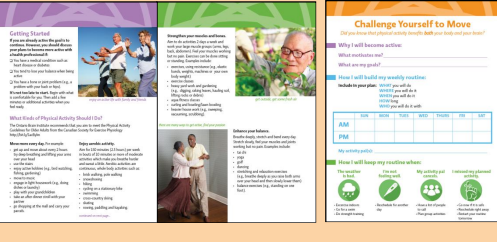
Research and education
for the promotion of physical activity




ALCOA

Active Living Coalition
for Older Adults


OBI Physical Activity Guide





**McMaster
University**

**ABORIGINAL
HEALTH ACCESS
CENTRES**



**Alzheimer Society
ONTARIO**

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Société Alzheimer Society

Minds in Motion®

A physical activity and brain stimulation program for people with dementia and their care partners.



**Give your mind
and body a boost!**



**ONTARIO
BRAIN
INSTITUTE**

**INSTITUT
ONTARIEN
DU CERVEAU**

Ontario Brain Institute is funding the start-up phase of
Minds in Motion® Ontario



Western Canadian Centre for Activity and Aging

Ontario Trillium Foundation

Fondation Trillium de l'Ontario

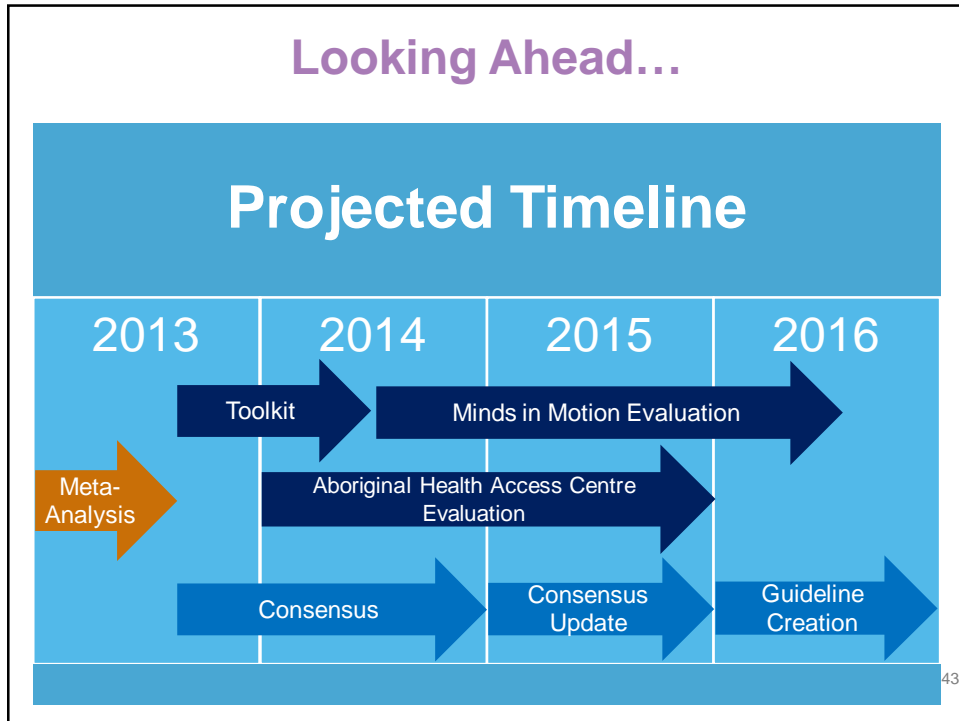
PARKS AND RECREATION ONTARIO

OACAO
The Voice of Older Adult Centres
La voix des centres pour aînés

UNIVERSITY OF WATERLOO
FACULTY OF APPLIED HEALTH SCIENCES
Department of Kinesiology

Brock University 50
1964-2014

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Where Can I Get the Physical Activity Toolkit?

Hardcopies

- Minds in Motion pilot sites
- Alzheimer Society
- Active Living Coalition of Older Adults (ALCOA)

Downloadable Copies

- Ontario Brain Institute's website



ONTARIO BRAIN INSTITUTE
INSTITUT ONTARIEN DU CERVEAU

