

# *Exercise is Medicine for Brain Health*

Presented by:

Manuel Montero-Odasso MD, PhD



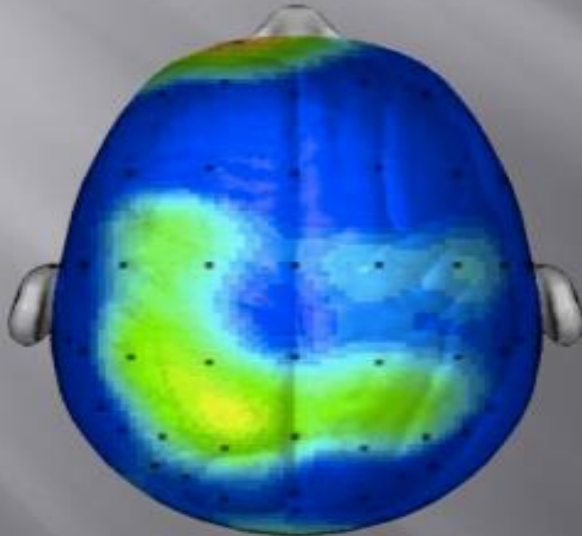
**CCNA**  
Canadian Consortium  
on Neurodegeneration  
in Aging



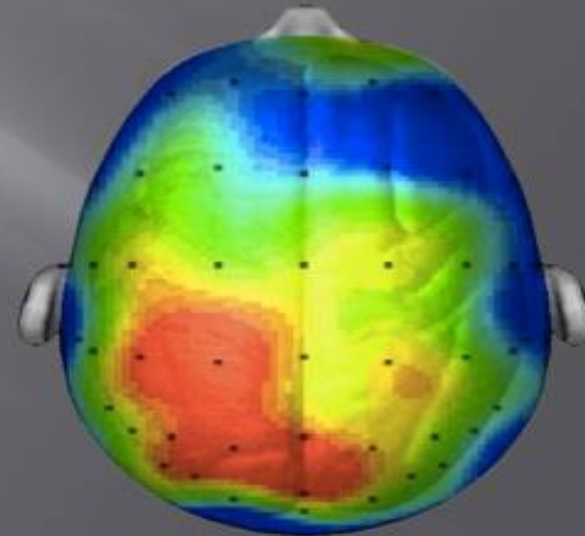
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en neurodégénérescence  
associée au vieillissement

# Exercise is Medicine

BRAIN AFTER SITTING  
QUIETLY



BRAIN AFTER 20 MINUTE  
WALK



Research/scan compliments of Dr. Chuck Hillman University of Illinois

# Exercise is Medicine



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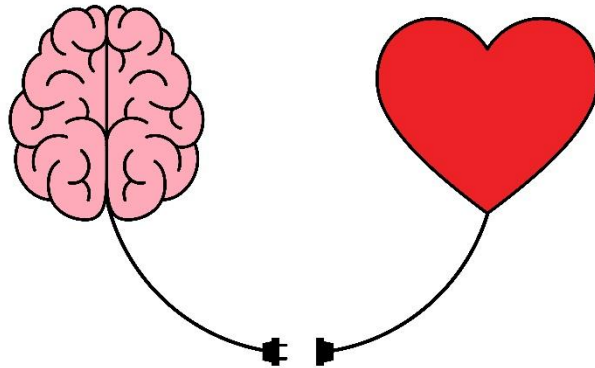
# Wait, But Which Exercise?

- Types of exercise
  - Aerobic training
    - Running, walking, swimming
  - Resistance training
    - Lifting weights
  - Anaerobic training
  - Balance/Agility training
  - Others: Yoga, Tai Chi, dance



*Photo courtesy of SYNERGIC participants, London site*

**What is good for your heart,  
is good for your brain!**



# THE NEW YORKER



***“I have been working out for six months,  
but all my gains have been in cognitive function”***

*Kaamran Hafeez in the The New Yorker, October 2015*

**What are the effects of aerobic exercise (walking, swimming) on brain health in older adults?**

# Aerobic Training





# Aerobic Training

- Studies that examined the effect of regular weekly walks (2 or 3 times a week) found:
  - Improvements in functions, such as decision making and memory
  - Reversal of some brain changes associated with aging, such as Hippocampus volume



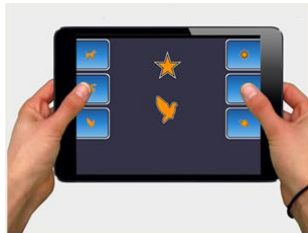
# What About Resistance Training?

- Less studied than aerobic training
- Has a role in healthy aging
- A focus in our SYNERGIC Trial



# SYNERGIC Trial

- **200** individuals with Mild Cognitive Impairment (MCI)
- **3** interventions





Western  
UNIVERSITY • CANADA

Université  
de Montréal

# SYNERGIC TRIAL

Cutting-edge interventions to improve cognition, mobility and falls.

CCNA  
Canadian Consortium  
on Neurodegeneration  
in Aging



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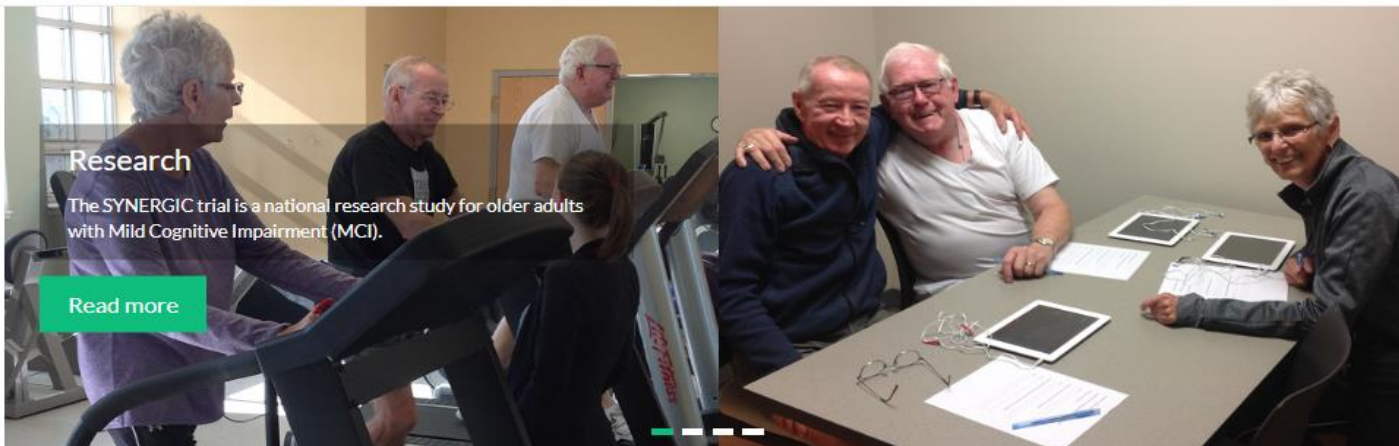


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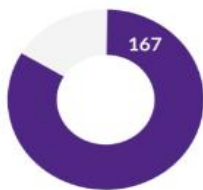
## Research

The SYNERGIC trial is a national research study for older adults with Mild Cognitive Impairment (MCI).

[Read more](#)



Canadian Provinces  
represented



Participants enrolled  
out of 200



Participants who have  
completed 5-month  
intervention



Participants who have  
completed all study  
visits

## Join Us!

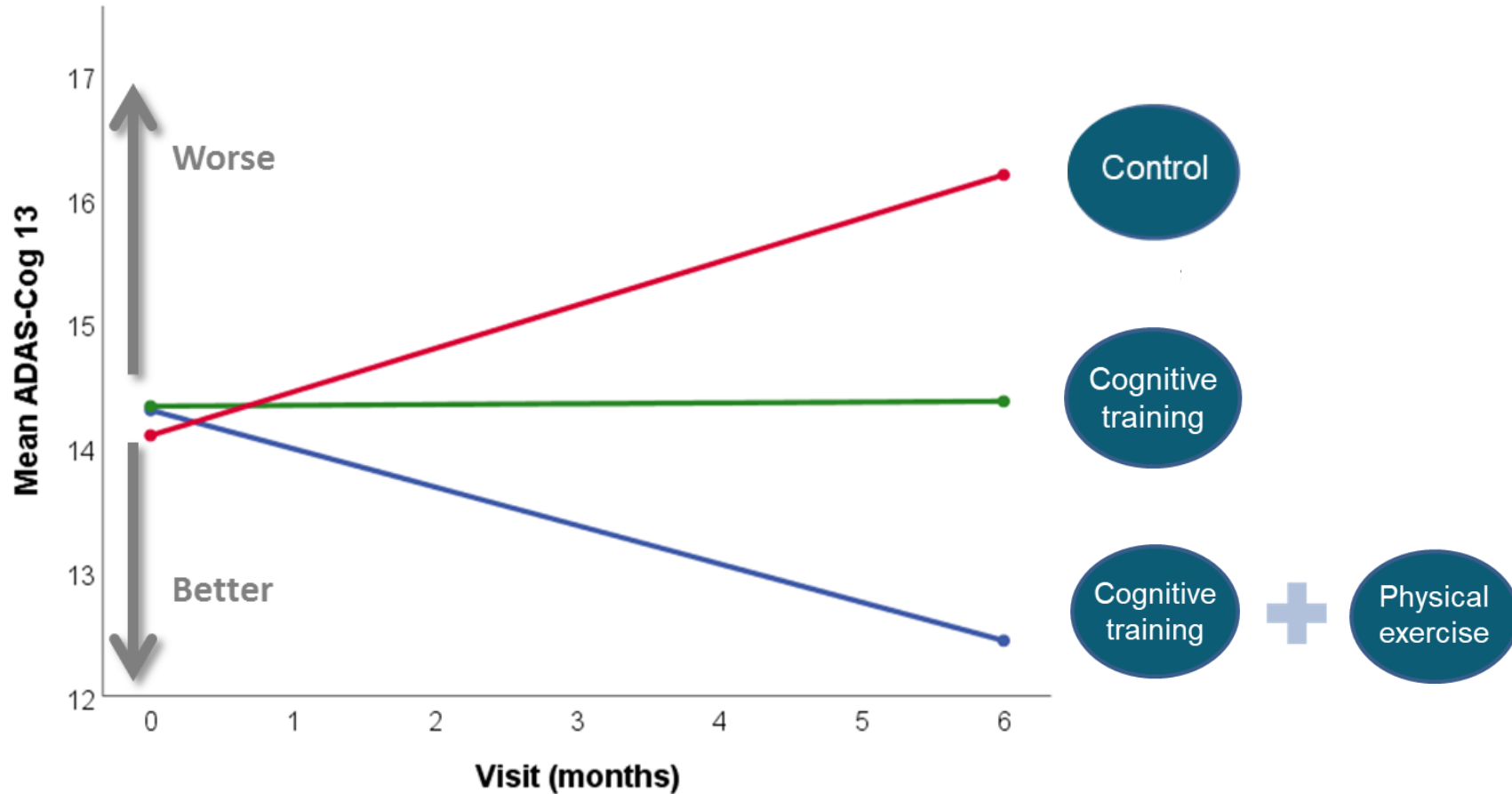
Are you feeling forgetful?

Have you had changes in you memory?

Are you 60 years old or older?

[Contact one of our sites](#) for more  
information about how you can join us!

# Preliminary Results



# Conclusions of the SYNERGIC Trial

- Combining aerobic training, progressive resistance training, and cognitive training is feasible, improved cognition, and showed a synergistic effect
- Cognitive improvements seen was at least as good or better than using cognitive enhancers medication
- We are not yet able to see the impact of Vitamin D supplementation, at this point in our research



# Talk Bottom Lines

- What's **recommended** for older adult's brain health?
  - Perform moderate-intensity aerobic training, for a minimum of 30 minutes/day, 5 days/week.
  - Start slow and progress gradually
  - Try to choose an activity you like!

# What Can You do at Home?

## Aerobic Exercises

- Marching on the spot
- Dancing
- Follow along aerobic exercise videos
- Stair climbing

\* Remember to warm up and cool down!





# What Can You do at Home?

## Strength Training Exercises

*Activities that requires you to move your limbs against resistance. Helps to build muscular strength, endurance and strengthens bones!*

- Body weight
- Resistance bands
- Weights
- Household objects (water bottles, back packs, soup cans)

\* Remember to warm up and cool down!



# Final Tips and Links

## FINAL TIPS

- 1-Identify what exercises/activities you may already do
- 2-Try new physical exercises that you think that you will enjoy
- 3-In a safe community or area, walk to your destination, or park farther away from the entrance
- 4- Take the stairs instead of the elevator
- 5- Get moving throughout your day
- 6- Be patient and persistent
- 7- To stay motivated, consider doing physical activities with other people.
- 8- Make concrete plans to move your body – think about when, where and with whom you will be physically active

## • Internet exercise programs:

- [National Institute On Aging YouTube Channel](#)
- [Silver Sneakers YouTube Channel](#)
- [Greater Toronto YMCA YouTube Channel](#)
- [Victoria Order of Nurses SMART program YouTube Channel](#)

## • Printable programs:

- [Home Support Exercise Program](#)
- [National Institute On Aging Tracking Sheets](#)
- [Seniors Helping Seniors Toolkit](#)

# CCNA Team 12

CCNA's Team 12 (**Mobility**, **Exercise**, and **Cognition**) focuses on the relationship between physical activity, motor performance, and cognitive decline related to aging and neurodegeneration.

The team, composed of 22 researchers, is led by Drs Manuel Montero-Odasso and Louis Bherer



Manuel Montero-Odasso



Louis Bherer

# Team 12 Members



**Quincy Almeida**  
U Wilfrid-Laurier



**Cindy Barha**  
UBC



**Olivier Beauchet**  
U McGill



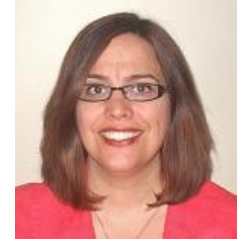
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U McGill



**Sarah Fraser**  
U Ottawa



**Karen Li**  
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**Mark Speechley**  
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**Akshya Vadusev**  
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**THANK YOU**  
**Questions?**

