



*Exercise & Alzheimer's
Prevention:
How Can Exercise Help?*

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A man with a grey beard and a green beanie is running on a pier. He is wearing a grey long-sleeved shirt and grey pants. The background shows a body of water and a building in the distance. A blue vertical bar is in the top right corner.

**Exercise Has
Been Shown
To Help
Prevent
Many
Conditions...**

Over 25 Different Chronic Conditions!





How Does It Affect Our Risk Of Alzheimer's Disease?

Exercise & Alzheimer's Disease



WHAT IS
ALZHEIMER'S?



EFFECTS OF
EXERCISE



EXERCISE
GUIDELINES

Common Myth: Loss of Memory Is A Normal Part Of Aging



- ▶ Many Seniors Live Very Healthy, Long Lives Without Developing Dementia
- ▶ While Increasing Age Increases Our Risk, It Does Not Mean Every Senior Develops Dementia

What Is Alzheimer's?

- ▶ A Form Of Dementia
 - ▶ General Term For Memory Loss And Reduction In Other Cognitive Abilities
- ▶ A Progressive Disease
- ▶ The Average Person Lives 4-8 Years After Diagnosis
 - ▶ However, This Can Vary Drastically Between Patients
- ▶ Two Theories About The Cause:
 - ▶ Deposits Of Protein Bits ("Plaques") Build Up Between Nerve Cells
 - ▶ Twisted Fibers ("Tangles") Build Up Inside Nerve Cells



What Is Alzheimer's?

- ▶ Symptoms Can Include:
 - ▶ Trouble Remembering New Information
 - ▶ Mood/Behavior Changes
 - ▶ End Stage Symptoms Can Include Trouble Walking, Speaking Or Eating
- ▶ There Is No Known Cure
 - ▶ But There Are Treatments To Slow Down The Progression



Risk Factors



- ▶ Age
- ▶ Family History
- ▶ Other Health Conditions, Such As:
 - ▶ Heart Disease
 - ▶ Diabetes
 - ▶ Traumatic Brain Injury
- ▶ Diet High In Saturated Fats & Low In Fiber
- ▶ Physical Inactivity

“Regular Exercise Can Reduce The Risk Of Developing Dementia By About 28%. For Alzheimer's Disease Specifically, The Risk Was Reduced By 45%”

ALZHEIMER'S SOCIETY

Effects Of Exercise



- ▶ Higher Physical Activity Levels Are Associated With A Reduced Risk Of Disease Development
- ▶ Shown To Improve:
 - ▶ Memory
 - ▶ Attention Span
 - ▶ Processing Speed
- ▶ Compared To Medication:
 - ▶ Fewer Side Effects
 - ▶ Better Adherence

Effects Of Exercise



- ▶ There Are 3 Theories About The Effects Of Exercise:
 1. Improve Blood Flow
 2. Increase In Brain Volume
 - ▶ Especially The Hippocampus, Which Is Known For Memory Storage
 3. Neurogenesis i.e. Creation Of New Brain Cells
- ▶ Dosage Still Unclear
 - ▶ Some Evidence Shows High Levels Of Exercise Decreases Risk
 - ▶ “The Ones Who Exercised The Least (The Bottom 10%) Were More Than Twice As Likely To Develop Alzheimer’s Disease As The Ones Who Exercised The Most (The Top 10%)” - Alzheimer's Society

ACSM Exercise Guidelines

- ▶ Consult Your Physician To Ensure You Are Safe To Start An Exercise Routine
- ▶ Long, Continuous Bouts Of Exercise Are More Helpful
 - ▶ Depending On Your Current Health Status, Start Slow And Work Your Way Up
- ▶ Incorporate Various Modes Of Exercise
 - ▶ Strength, Endurance, Flexibility
- ▶ Ensure You Have A Warmup And Cool Down Period
- ▶ Have Supervision Present If Necessary
 - ▶ Especially If You Have Various Health Conditions

ACSM Exercise Guidelines



Aerobic

3 Days/Week

Start With Light Intensity And Progress Slowly

10 Mins Bouts At First
30-60 Min Bouts, Either
Continuous Or Accumulated
Walking, Cycling, Swimming...



Strength

2-3 Days/Week

Start With Light Intensity And Progress Slowly

8-12 Repetitions Of Exercises That Focus On Large Muscle Groups
Start With Bands Or Body Weight



Flexibility

2-3 Days/Week

Use Your Full Range Of Pain Free Motion

Hold Stretches For 10-30 Seconds,
2-4 Repetitions Of Each
Ensure Slow Static Stretches

For health benefits, adults aged 65 years or older should be physically active each day, minimize sedentary behaviour, and achieve sufficient sleep.

A healthy 24 hours includes:

PHYSICAL ACTIVITY

Performing a variety of types and intensities of physical activity, which includes:



- **Moderate to vigorous aerobic physical activities** such that there is an accumulation of at least 150 minutes per week
- Muscle strengthening activities using major muscle groups at least twice a week
- Physical activities that challenge balance



- Several hours of **light physical activities**, including standing

SLEEP



- Getting 7 to 8 hours of good-quality sleep on a regular basis, with consistent bed and wake-up times


SEDENTARY BEHAVIOUR



- Limiting sedentary time to 8 hours or less, which includes:
 - No more than 3 hours of recreational screen time
 - Breaking up long periods of sitting as often as possible



Replacing sedentary behaviour with additional physical activity and trading light physical activity for more moderate to vigorous physical activity, while preserving sufficient sleep, can provide greater health benefits.

 Progressing towards any of these targets will result in some health benefits.

CSEP Exercise Guidelines For Seniors

Where To Learn More:

www.alz.org

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Alzheimer's Changes the Whole Brain

Alzheimer's disease leads to nerve cell death and tissue loss throughout the brain. Over time, the brain shrinks dramatically, affecting nearly all its functions.

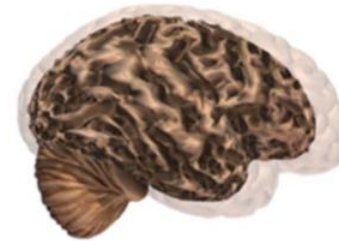
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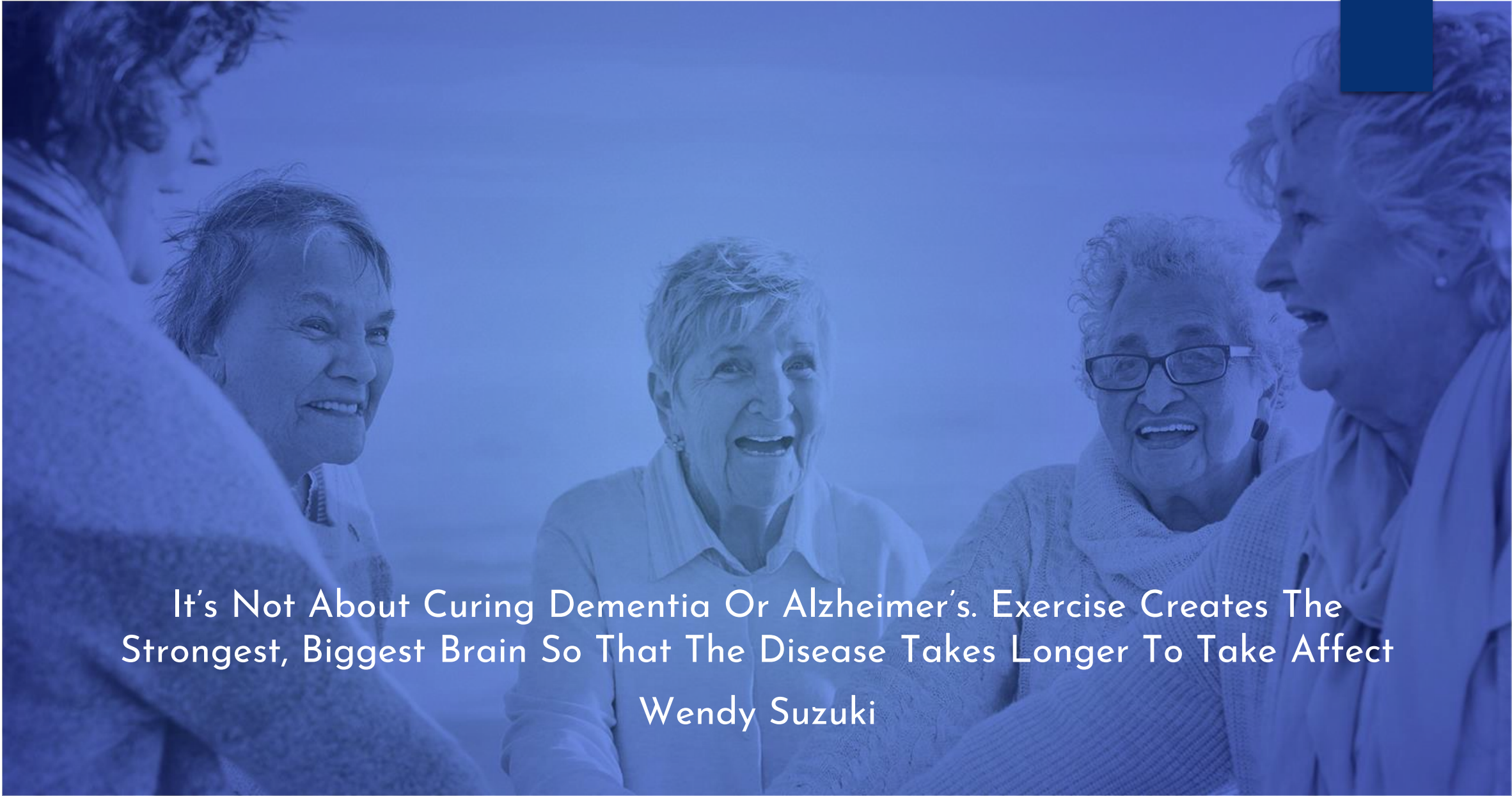
A brain without the disease.



A brain with advanced Alzheimer's.



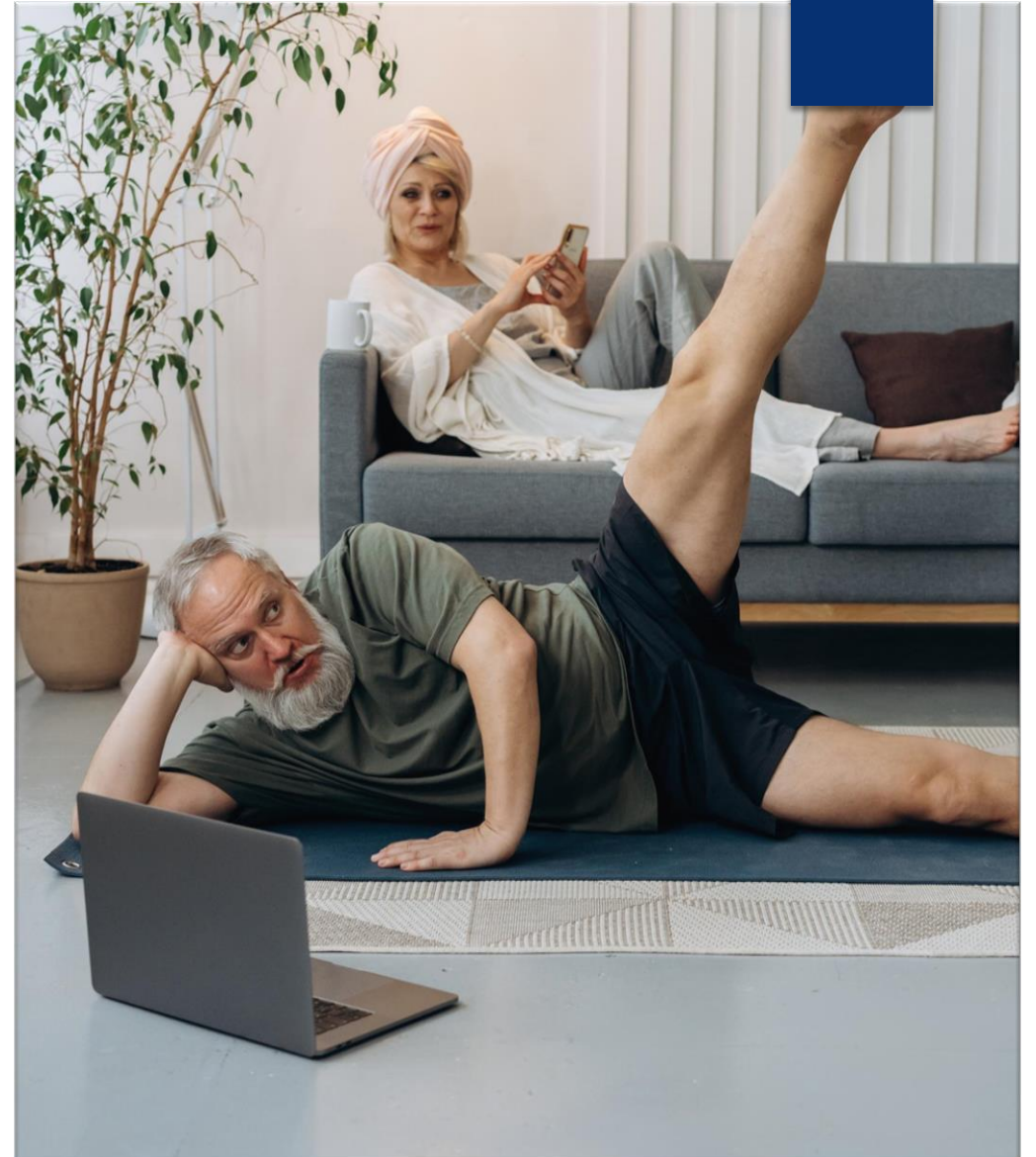
How the two brains compare.



It's Not About Curing Dementia Or Alzheimer's. Exercise Creates The Strongest, Biggest Brain So That The Disease Takes Longer To Take Affect
Wendy Suzuki

Want Additional Support?

- ▶ Book A Virtual Appointment With Me!
 - ▶ 1 Hour One On One For Initial Session
- ▶ An Exercise Physiologist Can Help You Use Exercise For:
 - ▶ Chronic Diseases And Injuries
 - ▶ Arthritis
 - ▶ Low Back Pain
 - ▶ Tendonitis And Bursitis
 - ▶ Falls Prevention
 - ▶ Performance
 - ▶ Improving Health And Independence



Any Questions?



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