

ALI-388

FOOD FOR THE BRAIN



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Importance of the Brain & Intelligence

- *The role of the Aql in the heart is like the role of the lamp in the middle of the house. Holy Prophet (SAW)*
- *Intelligence is a natural treasure given to the human being. It is increased through knowledge and experience. Imam Ali (AS)*
- *There is no treasure greater than intelligence. Imam Ali (AS)*
- *The friend of every human being is his intelligence. Imam Ali (AS)*

Session Outline

- Factors that contribute to brain health
- Connection to metabolic disorders
- Evidence on dietary patterns that lower risk for Alzheimer's and Cognitive Impairment
- Current Research: The Brain Health Food Guide
- Simple tips to help you make smart food choices

Brain Protective Factors

- Genetics
- Education
- Bilingualism
- Occupational Complexity
- Volunteering
- Exercise



- Cognitive Engagement
- Social Engagement
- Mental Health
- **Physical Health**
- **Diet**

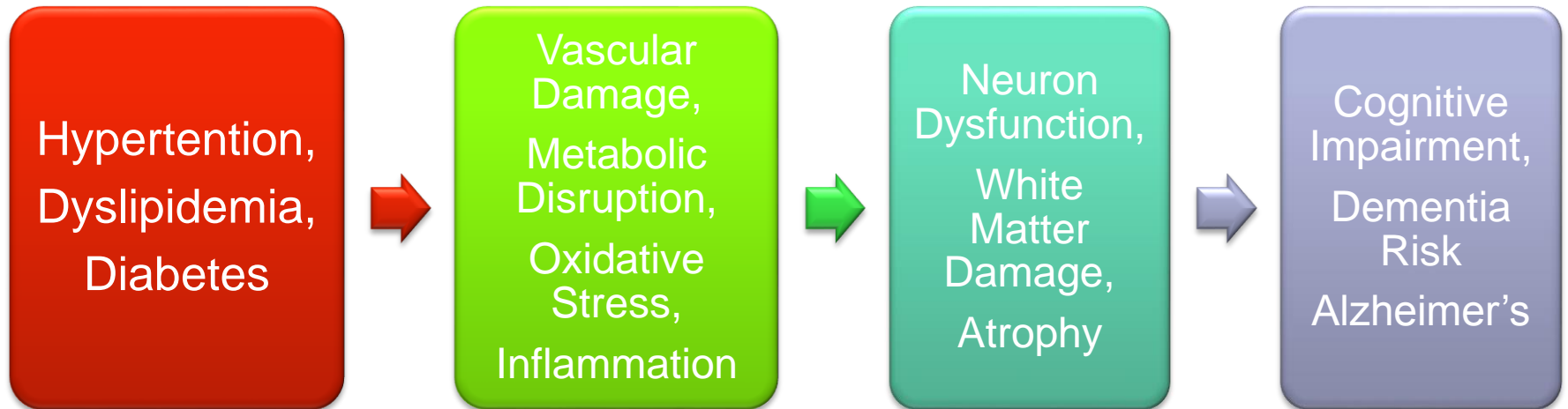
Diet Connection to Chronic Disease & Brain Health

Many major chronic diseases are dementia risk factors and have a diet connection:

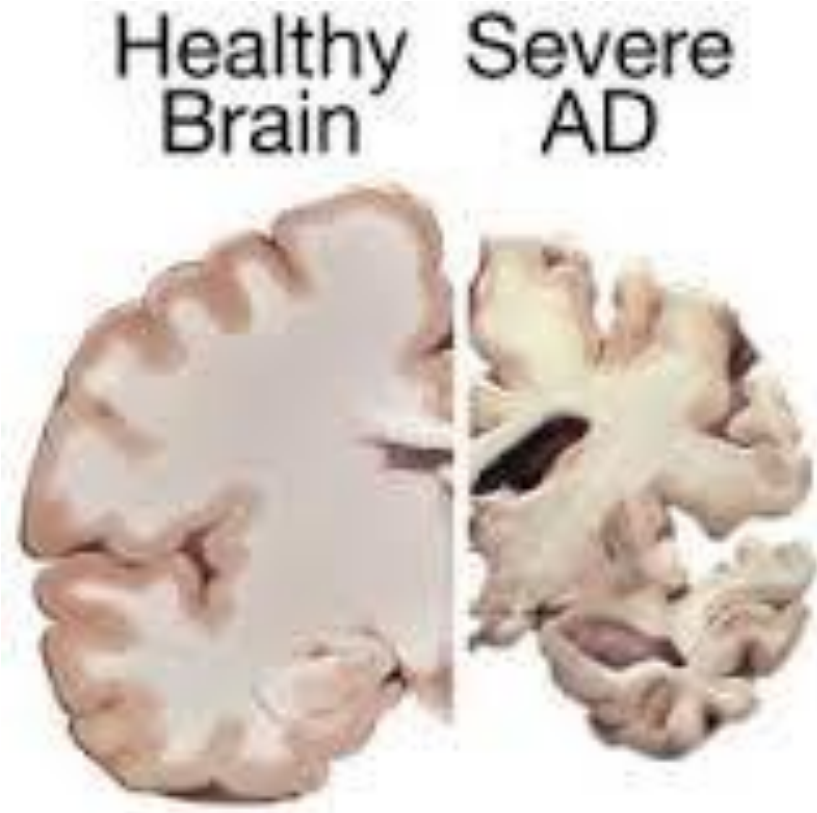
- Heart Disease
- Elevated blood cholesterol
- High blood pressure
- Type 2 Diabetes



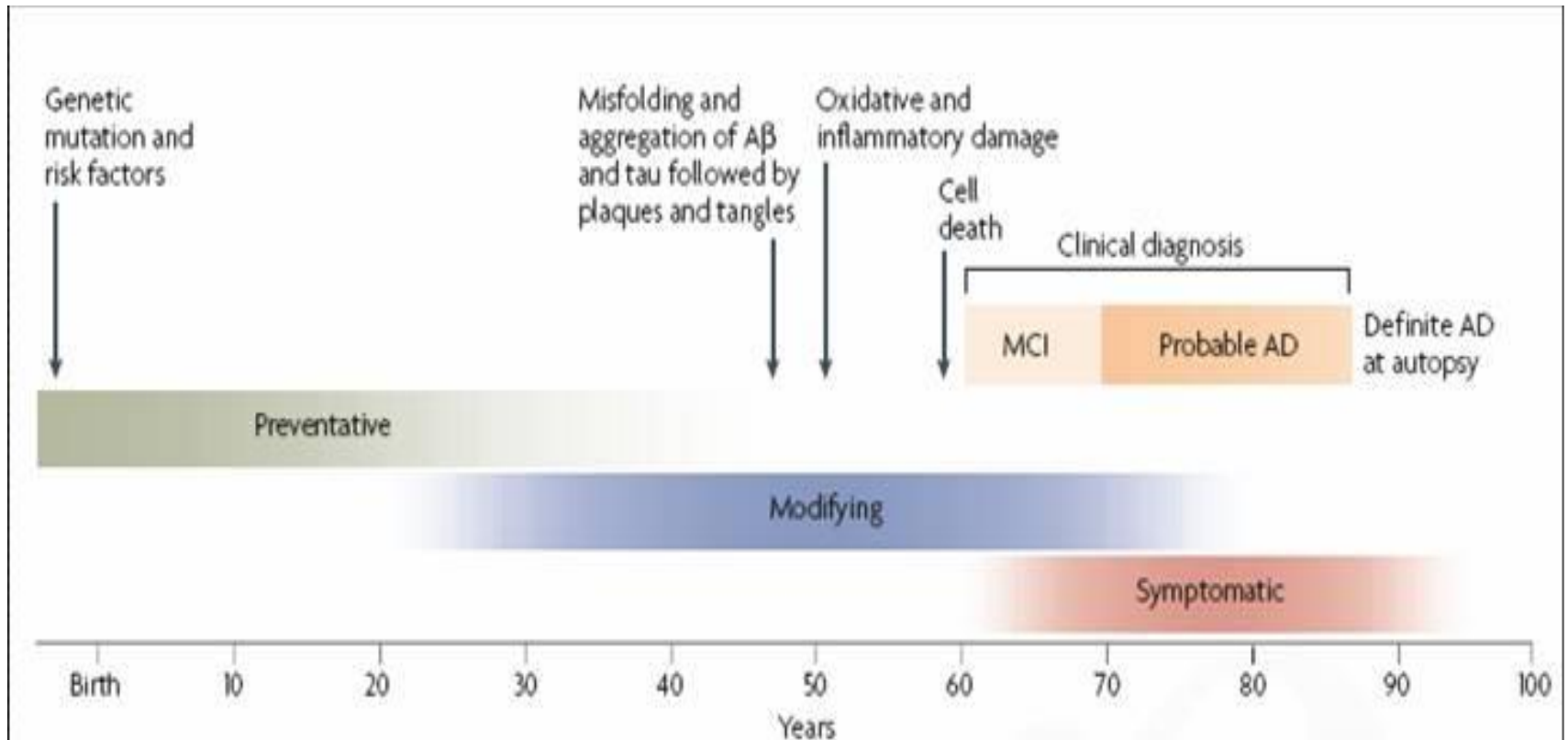
Consequences of Metabolic Disorders



What Happens To The Brain In Dementia & Alzheimer's?



Brain Aging Through The Lifespan



Shaw et al. Nat Rev Drug Discovery, 6:295-303, 2007.

Symptoms of Alzheimer's

- Progressive cognitive and functional decline.
- Memory loss “forgetfulness”.
- Orientation, comprehension, learning, language and judgement also affected.
- Slow and progressing: can take years for symptoms to appear.



2016 Alzheimer's Statistics

- Worldwide, nearly **45 million** people have Alzheimer's or related dementia.
- **1 in 9** Americans over 65 has Alzheimer's disease.
- **65%** are women.
- Every **66 seconds**, someone in America is diagnosed with the disease.
- **1 in 3 Seniors** die with Alzheimer's or other dementia.

Can We Prevent Alzheimer's?

- 30% of Alzheimer's Disease *risk* is attributed to **7 modifiable risk factors**: diabetes, midlife hypertension, midlife obesity, physical inactivity, depression, smoking and low education.
- A 10% reduction in prevalence of each of these risk factors would reduce Alzheimer's prevalence in 2050 by 8.3%.
- A 20% reduction in prevalence of risk factors would reduce Alzheimer's prevalence by 15.3%.

WDC Dementia Risk Reduction Statement



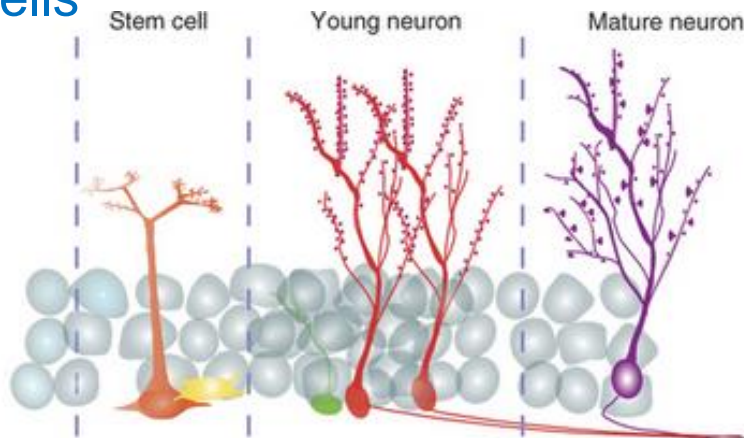
Global action
against dementia

“Regular physical activity and management of cardiovascular risk factors (e.g. diabetes, obesity, smoking, and hypertension) are associated with a reduced risk of cognitive decline and may reduce the risk of dementia.

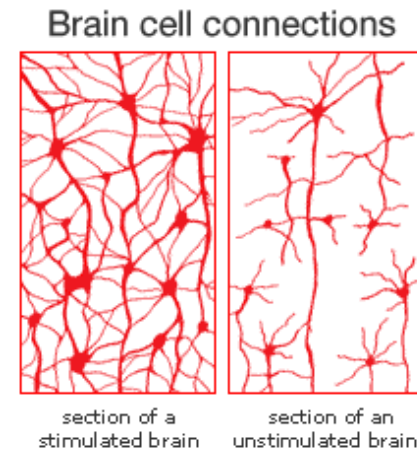
*Further, a **healthy diet** and lifelong learning/cognitive training may also reduce the risk of cognitive decline.”*

How Does Nutrition Help?

Maturation (or birth) of new brain cells



Increased cell connections



- Nutrition contributes to an optimal environment to enable these processes to occur.
- Multiple nutrients needed to support these processes, so focus on a single nutrient/food is unlikely to be successful.

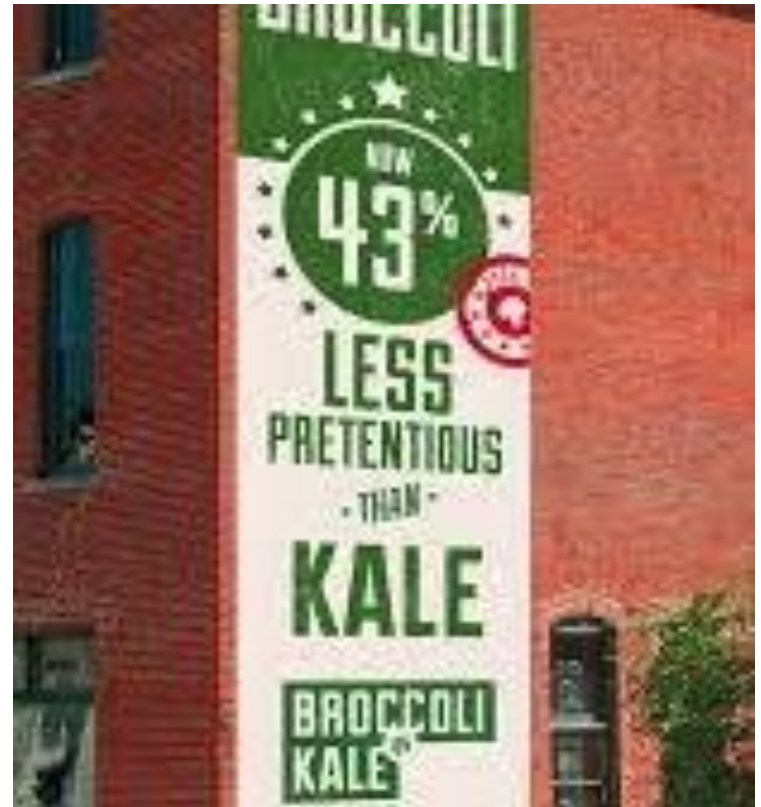
**The high fat, low fibre,
low fruit & vegetable
North American diet
is not good for our brains!**



Is There One Super Food or Supplement?



- NO!
- A single nutrient cannot provide a 'quick fix' to a complex problem.
- No successful clinical trials on specific antioxidants or vitamins.
- Eating healthy is not about focusing on a single food, rather it's about your overall pattern of eating.



**What's good for the heart
is good for the brain!**

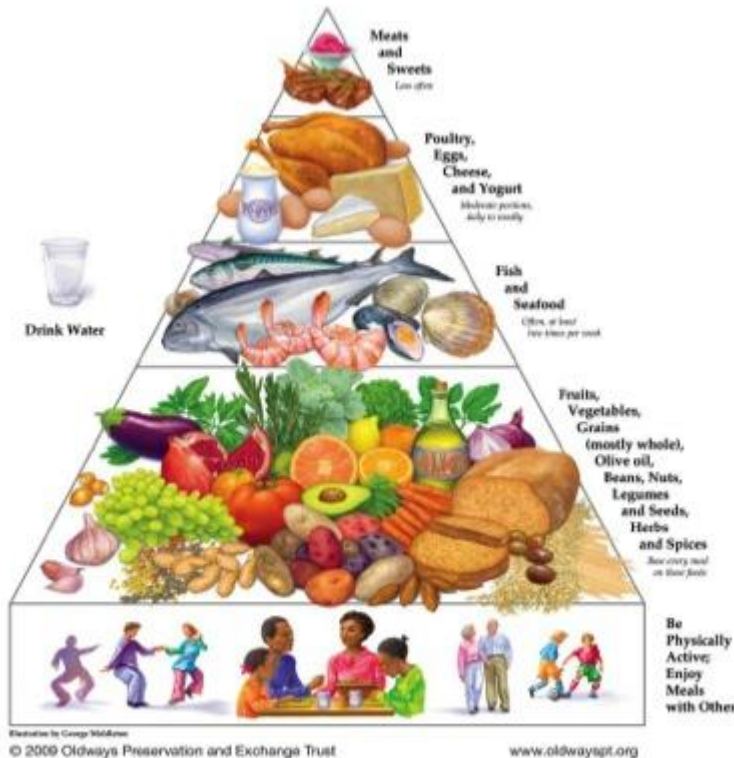


Mediterranean Diet



- Rich in plant foods: vegetables, fruits, whole grains, legumes
- More fish, less red meat
- Unsaturated fat from olive oil, nuts, seeds
- Low in processed foods and sweets
- 27% lower risk of mild cognitive impairment
- 36% lower risk of Alzheimer Disease

Mediterranean Diet



- Not just food from Italy, Greece and Spain...
- Can be adapted to any culture!
- Focus on plants, un-processed foods.
- 30% lower risk of MI or CVA
- 50-70% lower risk of recurrent cardiac events.

DASH Diet

- Dietary Approaches to Stop Hypertension
- Similar to the Mediterranean Diet: plant based, low in animal fat and processed foods
- Lower sodium
- Significantly reduces blood pressure
- Studies show it leads to improvements in cognitive performance, especially when combined with exercise



Current CCNA Research



Brain Health Food Guide

- Based on evidence from both longitudinal studies and clinical interventions.
- Combines information across studies to capture the most consistent aspects of diet that are associated with brain health.
- Designed to maximize flexibility for individual food choices and preferences.



Brain Health Food Guide

- Simple diet changes can have a powerful effect on brain health.
- After only 4 months of eating well, older adults performed as if they were 9 years younger on tests of reading and writing speed.
- Individuals who ate well for 4 years did not experience any memory loss.



Foods to Include



Vegetables

5 servings total *per day*

1 serving raw leafy greens *per day*

3 servings cruciferous vegetables *per week*



$\frac{1}{2}$ cup raw or cooked (125 ml)



1 cup (250 ml)



Fruits

4-5 servings total *per day*



1 medium fruit, $\frac{1}{2}$ large fruit,
 $\frac{1}{2}$ cup (125 ml) fruit salad,
2 Tbsp. (60 ml) dried fruit

3 servings berries *per week*



$\frac{1}{2}$ cup (125 ml)

Fish & Seafood

3 servings of fish or seafood per week,
including **1** or more servings of fatty fish



3-4 oz. (deck of cards sized), $\frac{1}{2}$ cup canned fish,
3-4 pc seafood

Nuts & Nut Butters

1 serving of unsalted nuts or *natural* nut butter per day,
Including 4 or more servings of walnuts per week



¼ cup (60 ml) of nuts, 2 Tbsp. (30 ml) *natural* nut butter

Legumes

2-3 servings per week



$\frac{1}{2}$ cup (125 ml) canned or cooked dried beans or lentils or
tofu

*“Eating beans increase the marrow of the leg-bones, enlarges the brain
and produces fresh blood” Imam Jaffer As-Sadiq A.S.*

Olive Oil



For cooking, baking and salads

Olives mentioned in the Holy Quran 7 times.

“Eat olive oil and anoint with olive oil as it is a blessed tree.”

Holy Prophet S.A.W.

Choose Whole Grains



Choose Lower Fat Dairy



Skim or 1% milk, 1-2% MF yogurt, <22% MF cheese

*“We produce for your drink, milk, pure and agreeable to those who drink it”
Surah Nahl, 66.*

*“Take milk, as it grows the flesh and strengthens the bone”
Imam Jaffer As-Sadiq A.S.*

Choose Poultry or Meatless Meals Instead of Red Meat



Foods to Limit



Red & Processed Meats



Less than 1 serving per week

White Bread & Rolls



1 or less servings per week

Butter, Cream & High Fat Dairy Spreads



Less than 1 serving per week

Pre-packaged Foods, Salty Snacks, Commercial Desserts, Baked Goods, Candy, Chocolate, Soda & Sugared Drinks



3 or less servings per week

Sugar & Salt Guidelines

- Sodium guidelines: 1500mg per day
- (1 teaspoon salt = 2300mg sodium)

- WHO *added* sugar guidelines: Max 6-9 tsp. per day
- (1 tsp. sugar = 4g)
 - 1 glass pure juice = 7 tsp. sugar
 - 1 can soda = 10 tsp. sugar

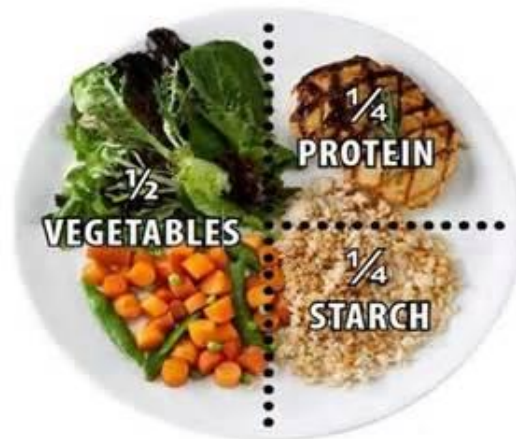


Brain Health Food Guide



Remember

- It's all about *moderation and variety*: use the Brain Health Food Guide to plan out your weekly meal choices and 'treats'.
- Plan ahead for meals you will be eating out or at mosque.
- Keep healthy, easy to prepare foods on hand at home.
- Find healthy, unprocessed foods that YOU enjoy.
- Watch your portion size: use the plate method for lunch and dinner:



Many Ways To Eat Healthy



Breads

Instead of:



Try:



Look for “100% Whole Grain”

South Asian

Instead of:



Butter chicken, fried samosas,
biryani rice

Try:



Whole wheat chapatti, daal,
vegetable curry

Middle Eastern

Instead of:



Beef Shawarma

Try:



Shish Tawouk

Fast Food

Instead of:



Try:



Pizza

Instead of:



White crust, meat toppings

Try:



Whole grain crust,
vegetable toppings

East Asian

Instead of:



Try:



Seafood

Instead of:



Battered, deep fried fish

Try:



Grilled fish

Convenience Foods

Instead of:



Try:



OR



Desserts

Instead of:



Try:



Sweet Snacks

Instead of:



Try:



Salty Snacks

Instead of:



Try:



Beverages

Instead of:



Try:



Coffee Shop

Instead of:



Double Double



Try:



Latte made with
low fat milk



Healthy Eating Resources

- Eat Right Ontario: *eatrightontario.ca* 1-877-510-510-2
- Dietitians of Canada: *dietitians.ca*
- UHN: *cardiaccollege.ca*, *diabetescollege.ca* and coming soon – *preventioncollege.ca* (all in multiple languages)



cogniciti.com

Cogniciti's Online Brain Health Assessment

Free, Private, and Clinically Researched
by Baycrest, a world leader for memory and aging

Start New Assessment



View Last Report



What's New?

Brain Health
Powered By Science

Your Results

Your Score: **45**

Overall Brain Health

0 7

Below Normal For You

Your overall performance is within expectations for your age and education. There is no indication of brain disease. Now is the perfect time to take action to keep your memory sharp and brain healthy. We have a "Next Page" button at the bottom of this page to take a look.

Your score is a percentile ranking that lets you see how you performed relative to adults similar to you. Your score is a percentile ranking that lets you see how you performed relative to adults similar to you. 55% of people your age and education would score lower than you on the assessment and 55% would score higher.

The science of

These tests are based on scientific methods for assessing attention, memory, and brain health. The tests were validated between the ages of 50-79. Your score is based on your age and education.

Interested in Brain Research?

- Do you, or anyone you know suffer from mild memory issues?
- Do you have a strong family history of Alzheimer's?
- Can you spare 3 hours per week to attend nutrition education and exercise sessions in North Toronto?
- Participate in a free 6 month diet and exercise study that can cut your risk of cognitive decline and chronic disease as you age!
- **Contact: cardiacdietitian@gmail.com**

Acknowledgments

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Questions?

