

Nutrition and Brain Health

June 24th, 2026 @1:30 MST
Julia Zanon – Dietetic Intern



Indigenous Services
Canada

Services aux
Autochtones Canada

Canada

Land Acknowledgement



Learning Objectives

- Recognize basic functions of the brain
- Understand how nutrition influences brain health
- Describe how specific nutrients can improve brain functions
- Learn which brain-boosting foods can enhance your diet and health



**The brain requires the
most energy and
nutrients than any
other organ.**

True or False?

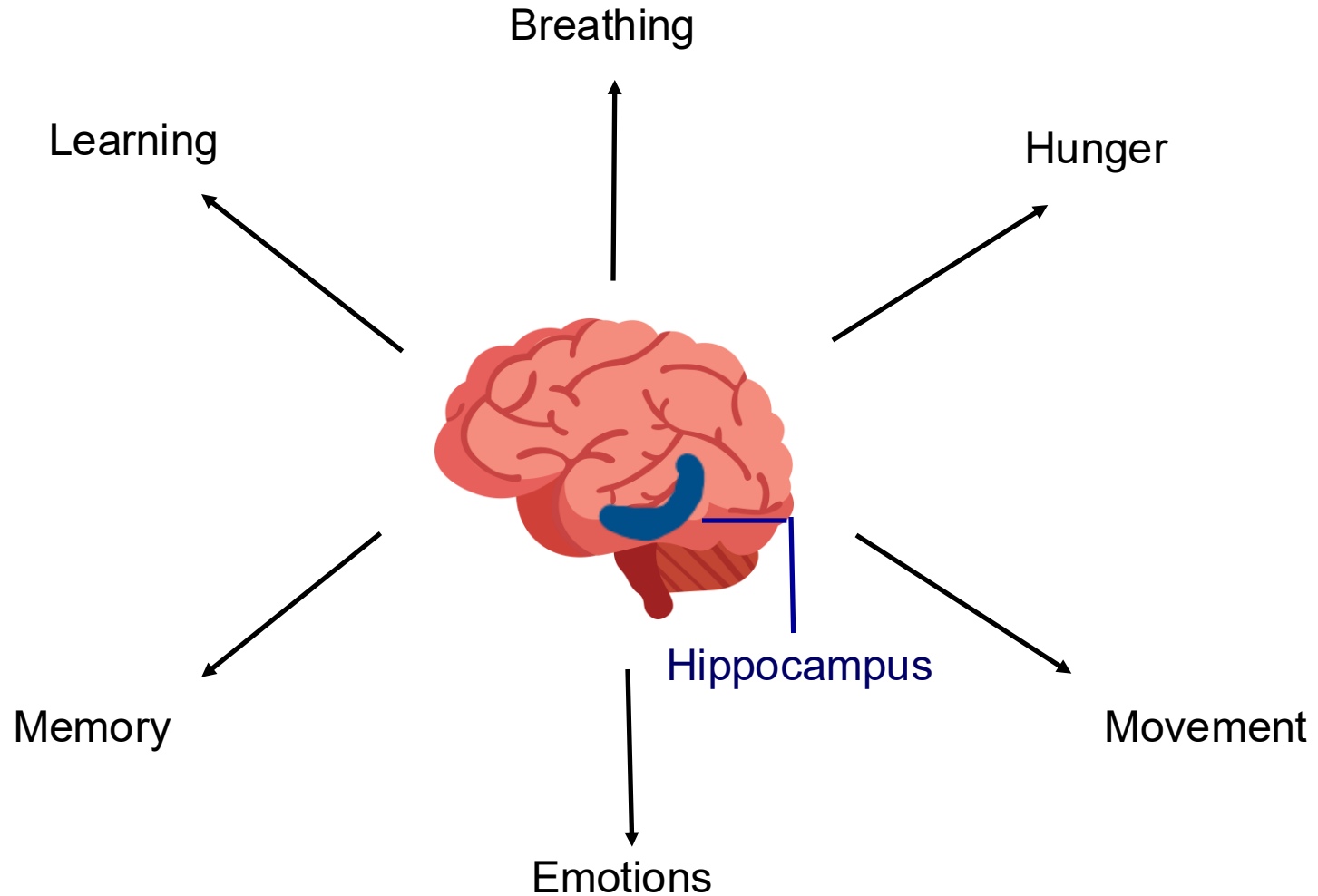


The brain requires the most energy and nutrients than any other organ.

True or False?



Brain Functions



What is the 'Western Diet' Doing to our Brains?

- **Western diet:** an energy-dense, nutrient-poor diet high in fats, sugars, and salt
- Increased weight gain is linked to poor learning and memory, emotional disorders, and inflammation in the brain
- Even eating high fat and/or sugar foods for a short amount of time can poorly impact brain function
- Hippocampus: '**appetite or hunger regulator**'



What is the 'Western Diet' Doing to our Brains?

Evidence shows:

- Consuming a 75% high-fat diet (75% of calories from fat) for 5-7 days significantly changes attention and reaction times in healthy young men
- High caloric intake ($>2,143$ kcal/day) was shown to double the odds of developing mild brain decline in elderly adults without dementia



Nutrition Improves Brain Health

Eating whole foods, such as fruits, vegetables, whole grains, and healthy fats can:

- Improve memory
- Support brain function
- Reduce inflammation
- Reduce brain decline / protect against dementia



So which nutrients improve brain health?



Omega-3s
Antioxidants
Vitamin D
Fibre

Omega-3s

- A type of **healthy fat**
- Plays a role in brain development and brain health across the lifespan
- Promotes **learning, memory, cognition, blood flow to the brain, reduced inflammation, and protection against brain cell damage**
- Good evidence for reducing brain decline



Omega-3 - Sources

Fatty Fish (salmon, sardines, herring)



Nuts & Seeds
(walnuts, almonds, pumpkin seeds)



Oils (canola, olive)



Antioxidants

- Antioxidants are found in food and **help protect your body from cell damage** that can lead to disease (i.e. Alzheimer's Disease)
- Essential in **immune system function** and **reducing inflammation**
- **Rainbow foods** - brightly coloured fruits and vegetables linked with reduced:
 - heart disease
 - depression
 - Alzheimer's disease



Antioxidant - Sources

Berries (blueberries, strawberries, saskatoons)



Vegetables (tomato, broccoli, cabbage)



Herbs & Spices (cinnamon, oregano, clove, turmeric)



Labrador Tea



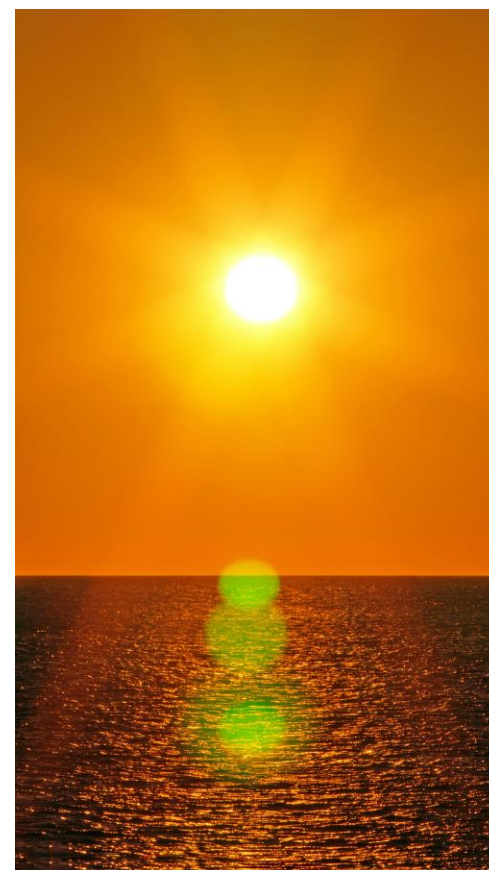
Dark Chocolate



Pro Tip: the higher the percentage of cocoa (i.e. 70%), the higher the antioxidants!

Vitamin D

- Sunshine vitamin
- Important for brain development and function
- Encourages **brain cell growth and protection**, as well as **immune system support**
- Low vitamin D levels = increased risk, symptom severity, and worsening of mental health conditions and brain health decline
- Vitamin D has been shown to **reduce ADHD symptoms** in children who have low vitamin D



Vitamin D - Sources

Fatty Fish (salmon, sardines, mackerel)



Fortified Dairy Products (milk, yogurt, margarine)



Egg Yolks



Supplements

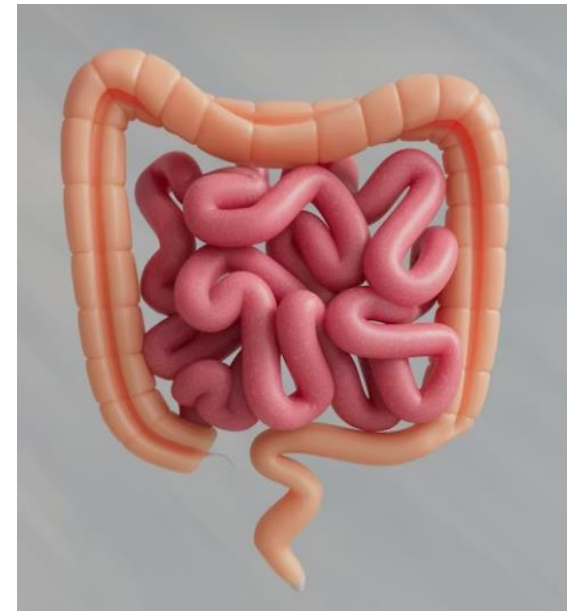


Mushrooms



Fibre

- When our gut is happy, so is our brain!
- Fibre feeds healthy bacteria in your gut, which can **improve brain functioning** and help **mood regulation**
- Research shows that people who eat ~20 grams of fibre daily had the lowest rates of dementia, vs those who eat ~8 grams of fibre daily
- High fibre intake is linked with **lower odds of developing depression**



Fibre – Sources

Vegetables & Fruit



Whole Grains (whole wheat bread, oatmeal, brown rice, barley)



Nuts & Seeds (almonds, sunflower seeds)



Air-popped Popcorn



Beans (canned beans, baked beans, black beans)



What about Supplements?

- More is not always better
- Expensive urine
- Supplements lack fibre and other nutrients you would otherwise receive from whole foods
- *Necessary if deficient in a nutrient*

Recommendation: get your nutrients through natural, whole food sources for optimal brain health



But it is all about balance!

- Although these specific foods are important for brain health, focusing on eating a variety of whole foods is key for overall health
- Don't forget that physical activity, sleep, and a healthy lifestyle can also support brain health



Recipe: Blueberry and Walnut Overnight Oats

1 serving

- 1/2 cup quick oats
- 1/2 milk, yogurt, or water
- 1/2 cup fresh or frozen blueberries
- 1 tbsp walnuts, chopped
(alternatives: any other nut or seed)
- Dash of cinnamon (optional)

Directions:

- Mix the first two ingredients together in a bowl or jar and let soak in the fridge overnight.
- Add blueberries, walnuts, and cinnamon - enjoy!



Recipe: Cranberry Chocolate Energy Balls

16 servings (1 energy ball/serving)

- 1 ½ cups quick oats
- 1/3 cup dried cranberries/raisins
- 1/3 cup chocolate chips
- ¼ cup chopped nuts (or seeds)
- 2/3 cup peanut butter, natural
- 3 tbsp honey or maple syrup
- 1 tsp vanilla extract (optional)

Directions:

- Mix first 4 ingredients together in a bowl.
- In a separate bowl, combine the peanut butter, honey, and vanilla extract.
- Add liquid ingredients into the dry ingredients and stir to combine. Chill in the fridge for 30 minutes.
- Roll into 16 balls. Enjoy!



Store in the fridge for up to 7 days.

Thank you!
Questions?

