

# *Exercise & Nutrition in Mental Health*

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# Statistics

- According to the National Alliance of Mental Health (2021), 1 in 5 adults suffer from mental illness each year.
- According the CDC (2021), approximately 1 out of every 6 adults will have depression at some time in their life.
- Depression is a leading cause of disability worldwide (World Health Organization 2020).
- The Anxiety and Depression Association of America (2021) reports that anxiety disorders are the most common mental illness in the U.S. They affect 40 million adults in the United States age 18 and older.
- Anxiety disorders are highly treatable, yet only 36.9% of those suffering receive treatment (Anxiety and Depression Association of America 2021).



# Importance of Exercise and Nutrition

- Exercise and nutrition have been found to improve mental health and can reduce anxiety, depression, and negative mood by improving self-esteem and cognitive function (Sharma et al., 2006).
- In the article Nutrition and Fitness: Mental Health, Grave (2020) found that nutrition and physical activity plays an important part in maintaining mental health and can be used as interventions to improve the management of mental disorders.
- In another study, it was found that participants that never exercised had approximately 2 to 2.5-fold increased odds of having a history of self-harm and suicidal behavior, compared to participants that exercise almost every day (Grasdalsmoen, 2020).



# Importance of Exercise and Nutrition

- In a study on adolescents, it was indicated that exercise and physical activity might be an effective universal depression prevention intervention for youth and young adults (Pascoe et al., 2019).
- Lastly, in the study conducted by Klimova, it was found that there is an association between nutrient intake, physical activity, and depressive symptoms among the elderly population. This proves that nutrient intake (e.g., vitamins or minerals) have a positive effect on the prevention or reduction of depressive symptoms in the aging population (Klimova et al., 2020).



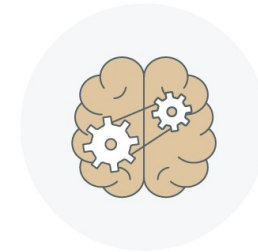
# Exercise and the Brain

- Exercise can reduce anxiety, depression, and negative mood by improving self-esteem, cognitive function, and memory.
- Exercise has also been found to alleviate symptoms such as social withdrawal or social anxiety.

Exercise Improves:



MENTAL HEALTH



COGNITIVE FUNCTIONING



MEMORY

and reduces:



STRESS



SOCIAL ANXIETY



DEPRESSION

# The Brain at Work- Neurotransmitters

- Exercise increases endorphins which are neurotransmitters that are released when we experience stress or pain to reduce their negative effects and increase pleasure throughout the whole body.
- Serotonin, also known as the happy chemical, is a neurotransmitter that sends messages about appetite, sleep, and mood throughout the body.
- Dopamine and GABA are neurotransmitters that help process visual information, determine heart rate, and affects emotions as well as the ability to think.
- Norepinephrine helps the brain deal with stress more efficiently, increases concentration, and provides energy throughout the body.



# YOUR BRAIN LOVES THE GYM

(OR SIDEWALK, BIKE TRAIL, POOL,...)

WHEN YOU EXERCISE...

Norepinephrine is released, improving attention, perception and motivation.

Endorphins are released, dulling the sensation of pain.

Brain-derived neurotrophic factor (BDNF) is released, protecting and repairing neurons from injury and degeneration.

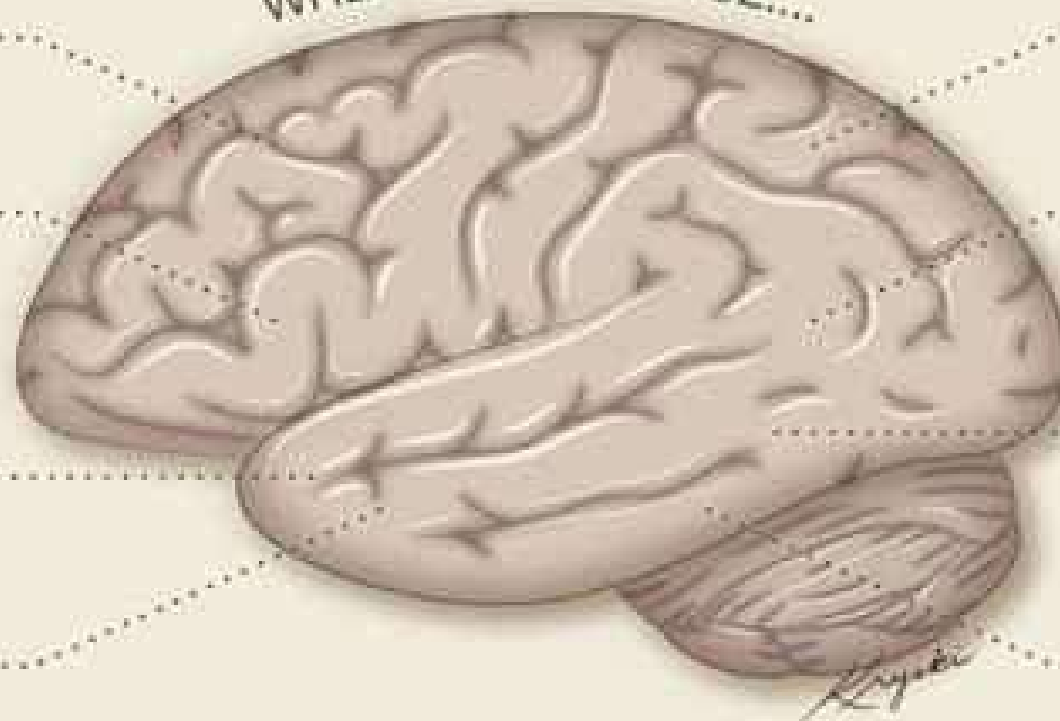
Serotonin is released, enhancing mood.

Hormones combine with BDNF to grow brain cells, regulate mood and provide mental clarity.

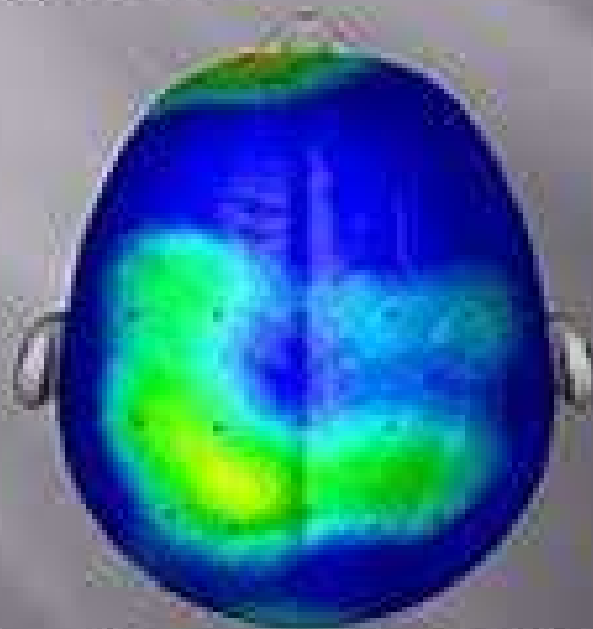
Blood flow to the brain increases, delivering more oxygen and nutrients and improving waste removal.

The hippocampus, a part of the brain concerned with learning and memory, grows in size with regular exercise over time.

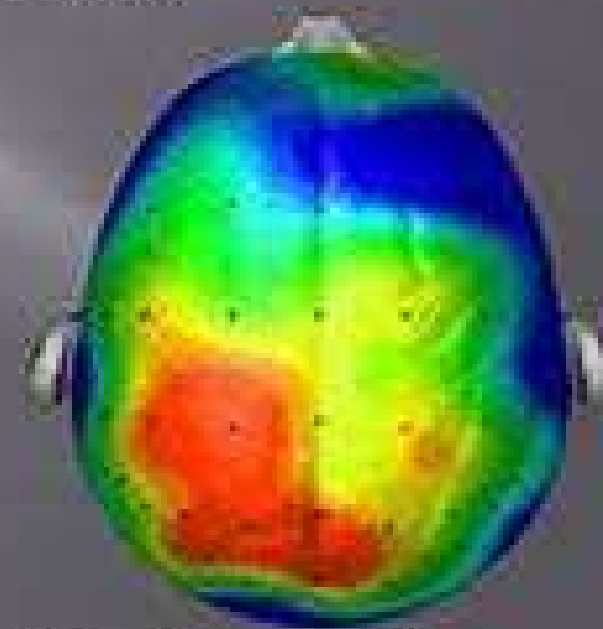
Dopamine is released, improving motivation, focus and learning.



BRAIN AFTER SITTING QUIETLY



BRAIN AFTER 20 MINUTE WALK



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





# Nutrition and the Brain











- Like exercise, nutrition plays a role in increasing or decreasing symptoms of anxiety and depression, depending on what the food contains.
- A nutritious diet can produce amino acids and neurotransmitters such as tryptophan and serotonin.

**12x HAPPY {Increase Serotonin}**  
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 Green Smoothie energy boost	 Walnuts Omega 3 brain nutrients	 Cayenne Peppers Relieves depression	 Banana boost serotonin
 Almond Magnesium brain food	 Water Hydration more energy less stress	 Smiling Releases happy hormones	 Leafy Greens boost energy
 Nature Relaxes your body and mind	 Walking Clear mind and boost serotonin	 Oats Eases Depression	 Epsom Salt calming

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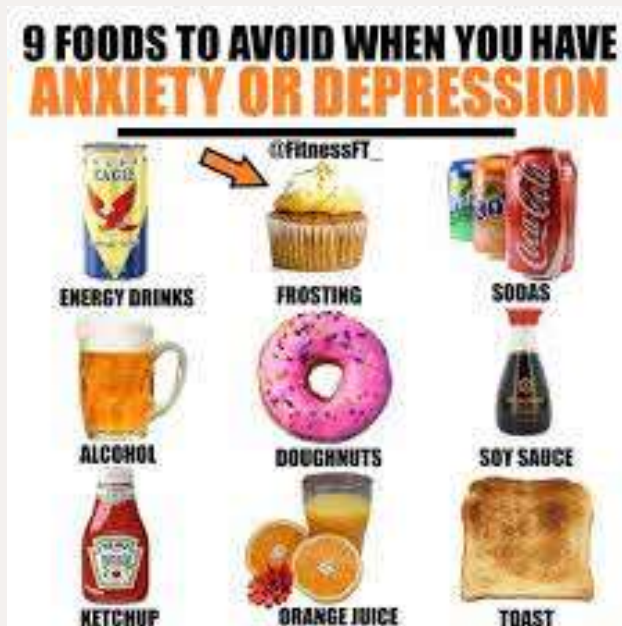
## FOODS TO IMPROVE YOUR MOOD

	Eggs are a good source of the amino acid tryptophan, a precursor to the neurotransmitter serotonin		Salmon is an excellent source of omega-3 fatty acids, which play an important role in brain and behavioral function
	Cashews are a good source of zinc, low levels of zinc have been associated with major depression		Pumpkin seeds are a good source of magnesium, and a deficiency is associated with symptoms of mood disorders
	Pistachios are a good source of vitamin B6, which is essential for the transformation of tryptophan into serotonin		Yogurt is a good source of calcium, and low calcium levels are associated with symptoms of depression
	Broccoli is a good source of chromium, which plays an important role in the synthesis of neurotransmitters		Chickpeas are a good source of folate, and a deficiency in folate can contribute to irritability and depression
	Mackerel is a good source of vitamin D, and vitamin D deficiency is associated with symptoms of anxiety and depression		Free range beef is a good source of iron, and iron deficiency is associated with fatigue and mood changes

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# Nutrition and the Brain

- While it is important to know what foods to utilize, it is also important to know what common foods to avoid.



## AVOID THESE ANXIETY TRIGGERS LURKING IN YOUR FRIDGE



Too much caffeine can increase anxiety since caffeine stimulates the body's "fight or flight" response.

These symptoms typically occur when people consume **four or more cups of coffee**.



Sugar can create changes in the body by destabilizing brain activity—which heightens **symptoms of anxiety** and can even **trigger anxiety attacks**.



Alcohol changes levels of **serotonin** in the brain.

Serotonin is a **feel-good chemical** for the body.



Eating foods with too much salt **increases blood pressure**, which makes the heart need to **pump harder**.

When that happens, the body releases the stress hormone **adrenaline**—which paves the way for **anxious feelings**.



Studies show a **connection** between processed food and an increase in **anxiety levels**.

Another study showed a link between a diet of **processed and fatty foods** and depression.

# Implications for Practice

- While regular exercise and nutrition have been shown to improve depression and anxiety symptoms, studies show that approximately 50% of those diagnosed with these disorders do not exercise regularly (at least once a week) or focus on nutrition (Pelletier et al., 2017).
- Even though exercise is usually considered an adjunct therapy to conventional clinical treatment (medication and/or psychotherapy) in most clinical guidelines, it could also be used as a first-line, low-intensity intervention for mild-to-moderate mood and anxiety disorders, along with other self-management strategies (Pelletier et al., 2017).
- There are even studies suggesting that physical activity may have a comparable therapeutic effect on mental wellbeing, as to that of psychotherapy (Grasdalsmoen et al., (2020).
- While some experts may not recommend exercise and nutrition as the sole method of intervention with clients who suffer from anxiety, depression, or other mental illnesses, it could be beneficial to educate clients on the mental health benefits of exercise and nutrition.
- Beaulac suggests using the 5-A model (assess, advise, agree, assist, arrange) of behavior change and counseling as it has been effective in helping patients modify their exercise and nutrition habits. This approach emphasizes patient choice and autonomy (Beaulac, 2011).



# Practice what you Preach

- In the social work profession, it is important to intervene with clients and promote successful outcomes. It is equally important for social workers to be mindful of their own mental health. Utilizing physical activity and nutrition can reduce stress and increase cognitive functioning. This may prevent or reduce effects of vicarious trauma (results from empathic engagement with traumatized clients and their reports of traumatic experiences).





# Before we End: Trial and Error

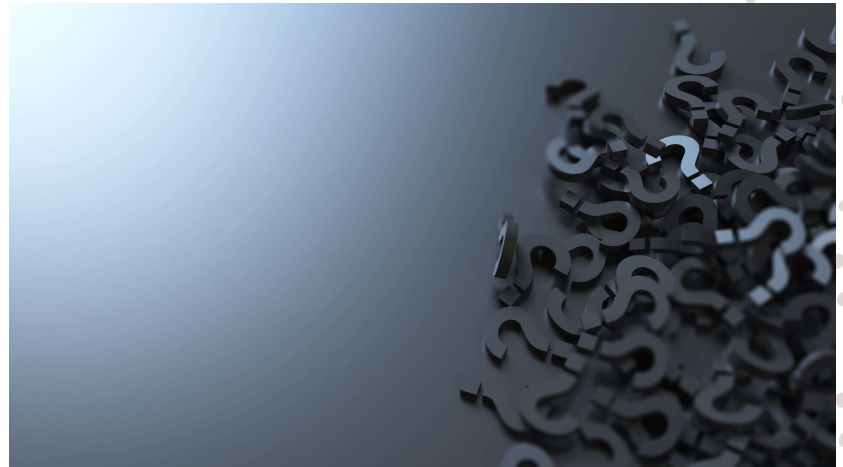
- I encourage you to start small and find what works for you. Try asking...
  - What do you like to do for fun?
  - What snacks/food do you enjoy? Can they be modified to be healthier (sugar-free)
  - What are you willing to try?
  - What are your non-negotiables (coffee)
- You can also encourage clients to start small to find what works for them.
- Its all about trial and error.

DONT LOOK AT EXERCISE AS EXERCISE INSTEAD PLAY GAMES AND SPORTS AND HAVE A TON OF FUN

1. Aerobics
2. Ballet
3. Baseball
4. Basketball
5. Biking
6. Boating
7. Bowling
8. Boxing
9. Canoeing
10. Dance Revolution
11. Dancing
12. Double Dutch
13. Field Hockey
14. Football
15. Frisbee
16. Golf
17. Gymnastics
18. Hiking
19. Hockey
20. Hopscotch
21. Horseback Riding
22. Hula hooping
23. Ice Skating
24. Jogging
25. Juggling
26. Jump rope
27. Laser tag
28. Paintball
29. Ping-Pong
30. Playing catch
31. Rock Climbing
32. Roller Blading
33. Roller Skating
34. Running
35. Skateboarding
36. Skiing
37. Soccer
38. Softball
39. Swimming
40. Tae Kwon Do
41. Tennis
42. Trampoline
43. Treadmill
44. Unicycling
45. Volleyball
46. Walking
47. Weightlifting
48. Wii sports games

MOTIVEWEIGHT BLOGSPOT.COM

*Questions?*



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