Lifestyle Behaviours and Psychological Health

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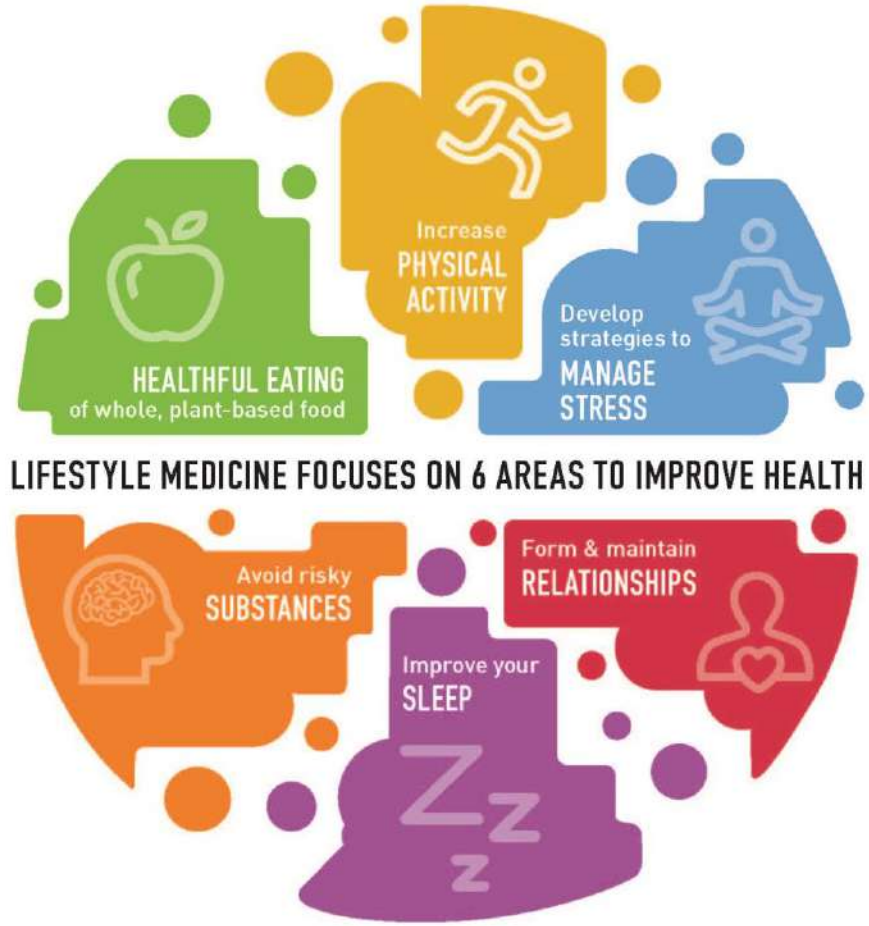
"Lifestyle Medicine is the use of evidence-based lifestyle therapeutic intervention—including a whole-food, plant-predominant eating pattern, regular physical activity, restorative sleep, stress management, avoidance of risky substances, and positive social connection"



Contents:

Physical Activity and Exercise

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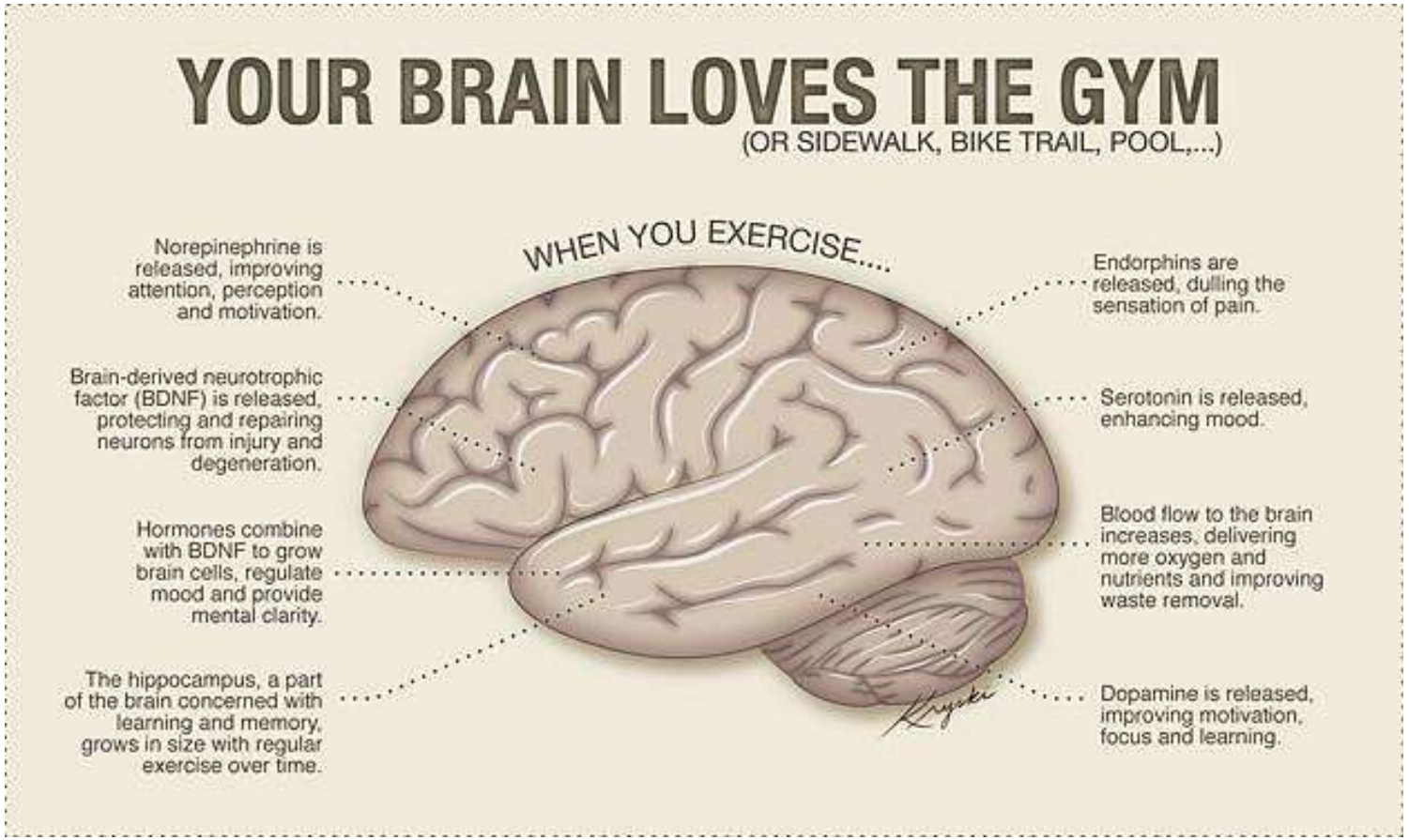
- **Physical activity** is any movement that is carried out by the muscles that require energy. In other words, it is any movement a person does.

- **Exercise** is, by definition, planned, structured, repetitive **and** intentional movement.



Exercise and Depression

- People with depression experience sadness, loss of interest or pleasure and feelings of guilt or low self-worth.

- More than 350 million people worldwide are affected by depression and the condition ranks as a leading cause of disability. (WHO.2014)

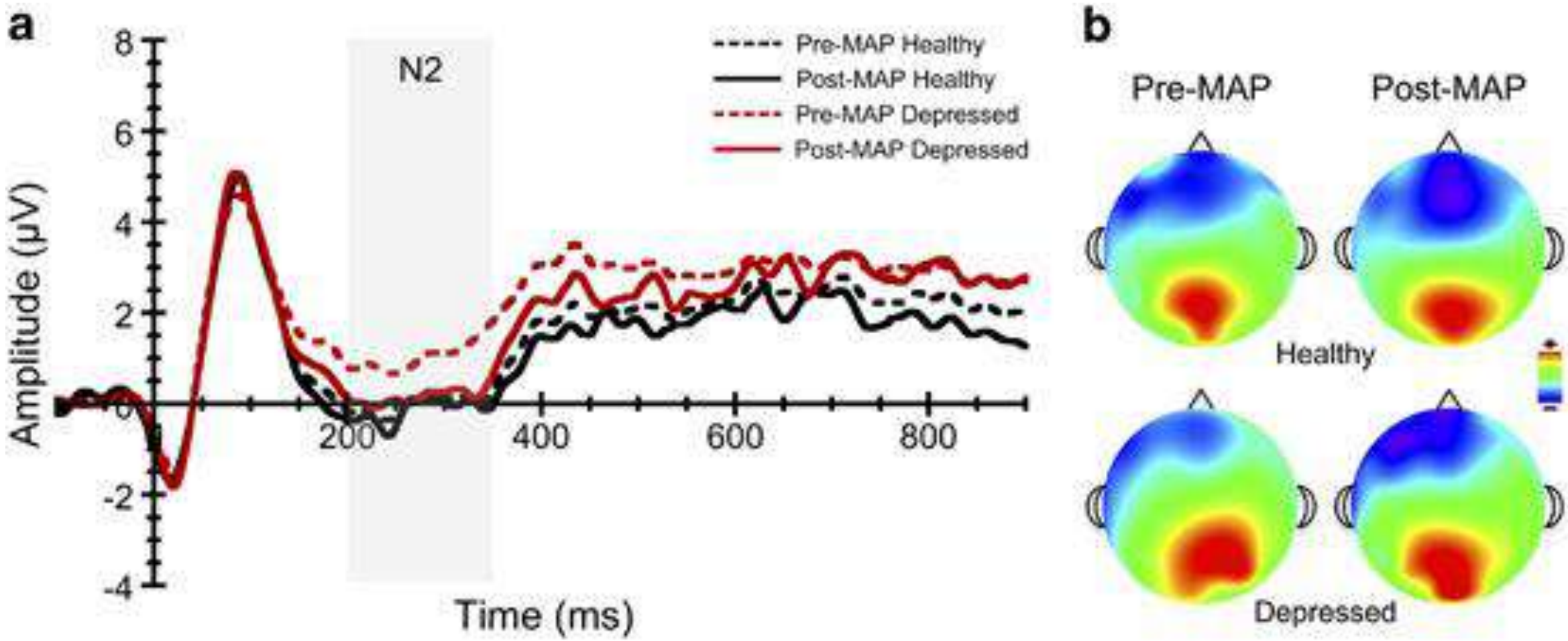
Exercise and Depression

- A study done by the Harvard T.H. found that running for 15 minutes a day or walking for an hour reduces the risk of major depression by 26%.

- Another study indicated that the aerobic training program was associated with a clear reduction in depression compared with the control condition, and the improvements in depression were maintained at 3 months post intervention (*Dimeo et al 2001)*

- Depressed adults who took part in a fitness program displayed significantly greater improvements in depression, anxiety, and self-concept than those in a control group after 12 weeks of training (*DiLorenzo et al 199)*

Exercise and Depression

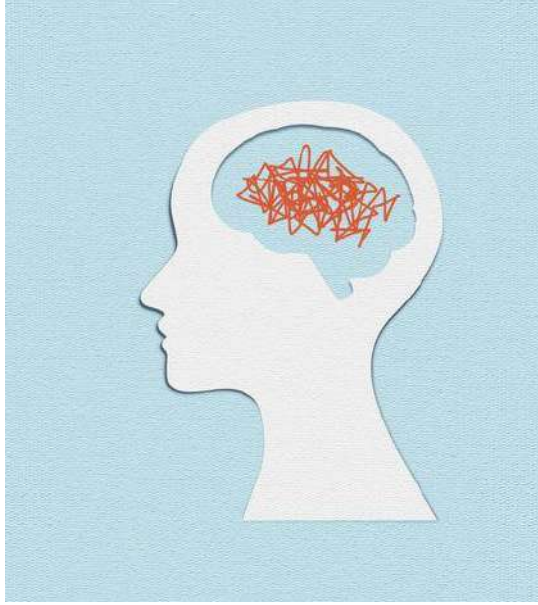


Alderman, B., Olson, R., Brush, C. et al. MAP training: combining meditation and aerobic exercise reduces depression and rumination while enhancing synchronized brain activity. Transl Psychiatry ***6,*** *e726 (2016). https://doi.org/10.1038/tp.2015.225*

Comparative Table of Studies and their Results on Exercise and Depression.

Author	Type of Exercise Program	Results
Craft, 1997	Aerobic exercise program > 9 Ws.	- Exercises produce larger antidepressant effects.
Babyak, Hermana, 2000.	30 mints. of speed walking 3\ w.	- Effective as drug therapy in relieving the symptoms of depression.
Dr. Dimeo, 2001.	Walking on a treadmill for 30 min. / day for 10 days.	- Exercise caused a clinically significant drop of depression symptoms.
Trivvedi, 2005.	Running 30-min. 3-5 time/week	- Depressive symptoms were reduced almost 50 %.

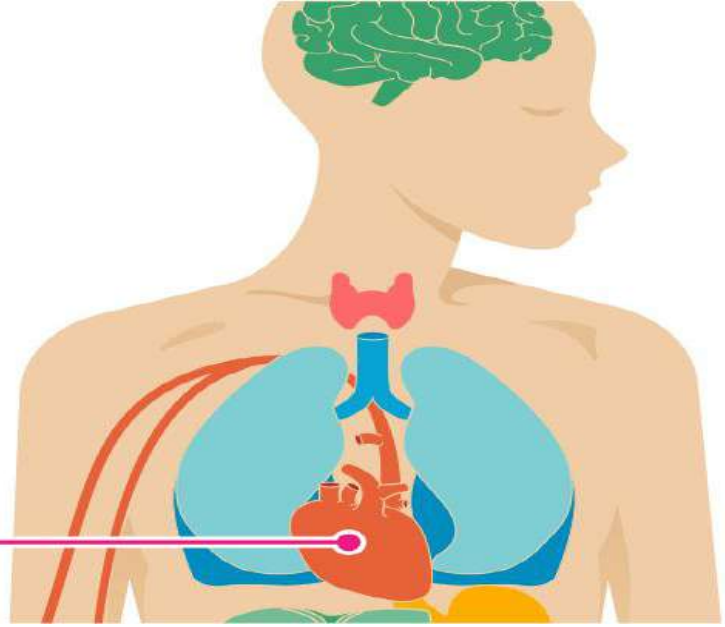
Exercise and Stress & Anxiety



Anxiety is "distress or uneasiness of mind caused by fear of danger or misfortune”

Stress is typically caused by an external trigger. The trigger can be short-term, such as a work deadline or a fight with a loved one or long-term, such as being unable to work, discrimination, or chronic illness.

The Effects of **Stress** ON YOUR BODY



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- 1. Blood pressure irregularity
- 2. Heart circulation problems

3. Weakness and stiffness of muscles

- These can lead to increase of
- Strokes
- Heart attacks

How Exercise Increase the Mood Stabilizers?

1- Sympathetic nervous system is activated.

2- With more strenuous exercise circulating epinephrine and norepinephrine released from the adrenal medulla. (Prentice, 2005)

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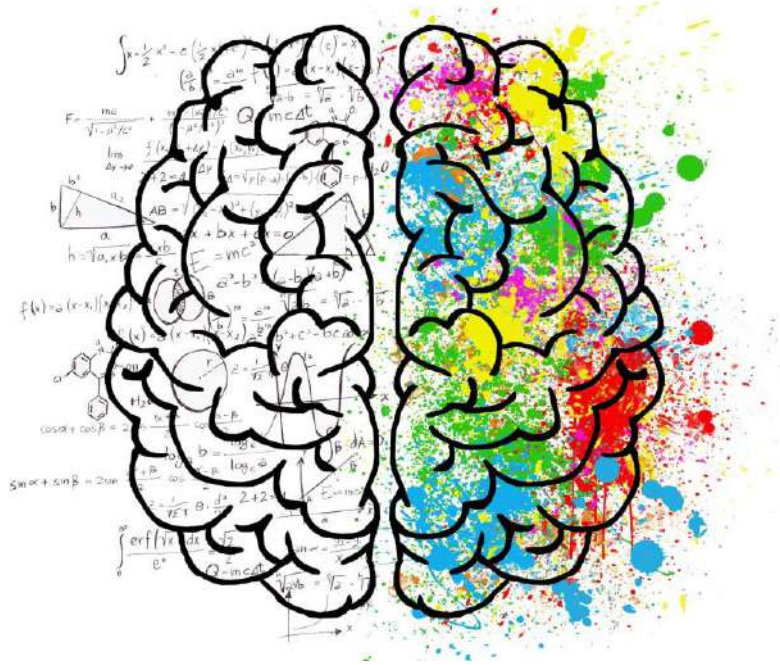
Several credible physiologic and psychological mechanisms have been described, such as

- Thermogenic hypothesis
- Endorphin hypothesis
- Monoamine hypothesis
- Distraction hypothesis
- Enhancement of self-efficacy



How much activity do I need?

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Moderate-intensity aerobic activity

Anything that gets your heart beating faster counts.

at least **150** minutes a week

AND

Muscle-strengthening activity

Do activities that make your muscles work harder than usual.

at least **2** days a week

Tight on time this week? **Start with just 5 minutes.** It all adds up!

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Nutrition and Psychological Health

Nutrient	Effect of deficiency	Food sources
Vitamin B1	Poor concentration and attention	Wholegrains Vegetables
Vitamin B3	Depression	Wholegrains Vegetables
Vitamin B5	Poor memory Stress	Wholegrains Vegetables
Vitamin B6	Irritability Poor memory Stress Depression	Wholegrains Bananas
Vitamin B12	Confusion Poor memory Psychosis	Meat Fish Dairy products Eggs

Vitamin C	Depression	Vegetables Fresh fruit
Folic acid	Anxiety Depression Psychosis	Green leafy vegetables
Magnesium	Irritability Insomnia Depression	Green vegetables Nuts Seeds
Selenium	Irritability Depression	Wheat germ Brewer's yeast Liver Fish Garlic Sunflower seeds Brazil nuts Wholegrains
Zinc	Confusion Blank mind Depression Loss of appetite Lack of motivation	Oysters Nuts Seeds Fish

Nutrition and mental health: Is there a link?

ELSEVIER

Psychiatry Research

Volume 253, July 2017, Pages 373-382

Dietary patterns and depression risk: A meta-analysis

Ye Li [a], Mei-Rong Lv [b], Yan-Jin Wei [c], Ling Sun [b], Ji-Xiang Zhang [d], Huai-Guo Zhang [e], Bin Li [e]

Show more

Conclusions: **The results suggest that high intakes of fruit, vegetables, fish, and whole grains may be associated with a reduced depression** risk. However, more high-quality randomized controlled trials and cohort studies are needed to confirm this finding, specifically the temporal sequence of this association.

Nutrition and mental health: Is there a link?

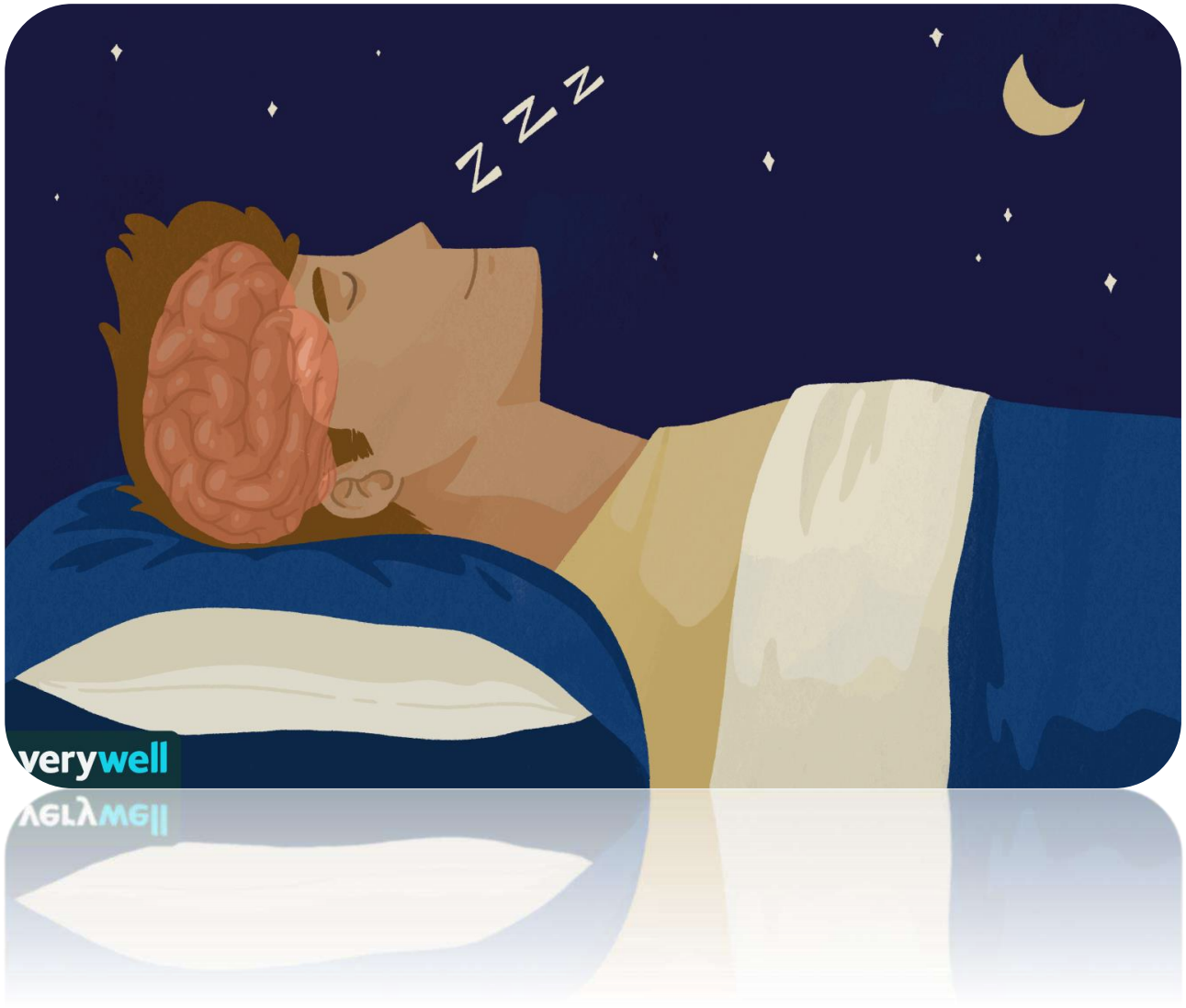
- The high content of antioxidants have beneficial protective effects against depression.
- The potential protective effect of the healthy dietary pattern could also come from folate rich in vegetables and fruits.
- High consumption of fish has been shown to be associated with reduced likelihood of depression (Hibbeln et al., 1998).

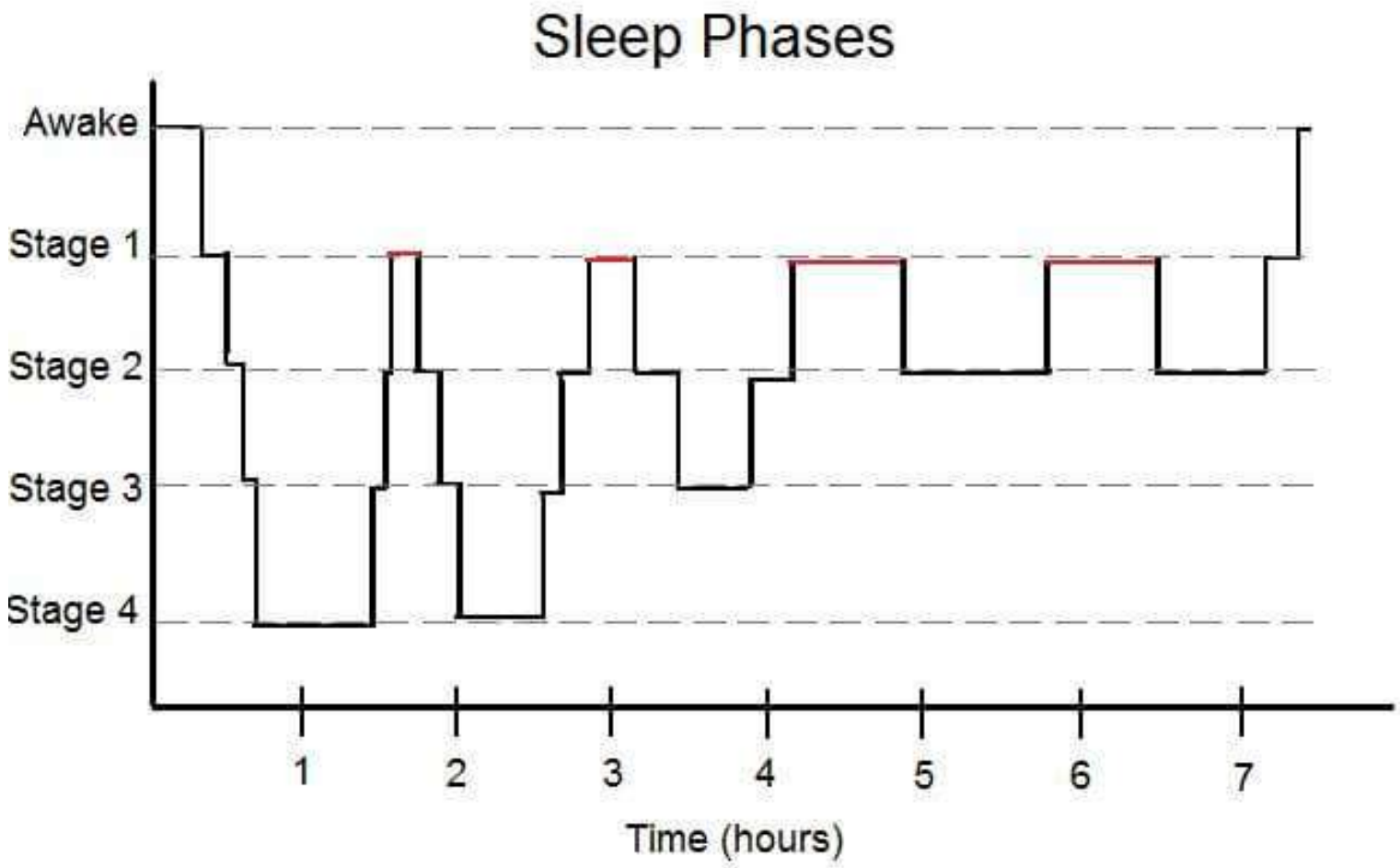
- High consumption of processed food may be related to inflammation and cardiovascular diseases, which are involved in the pathogenesis of depression (Lopez-Garcia et al., 2004, Tiemeier et al., 2003).

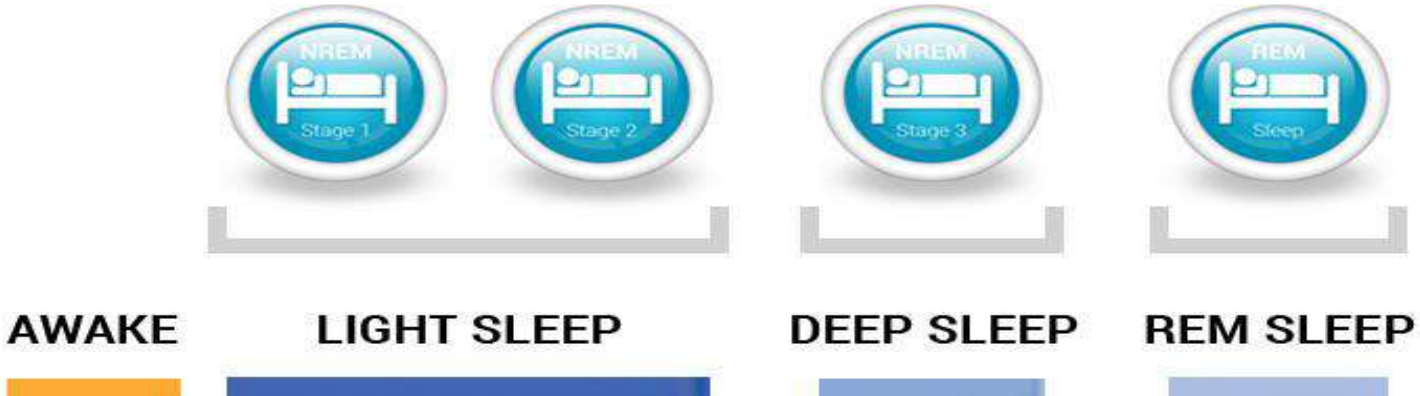
- Western-type diet with a high intake of refined grains, processed meat, foods with high-sugar and high-fat was associated with higher levels of low-grade inflammation (C-reactive protein) and subsequent brain atrophy, which are positively associated with depression (Liu et al., 2002).

- High sugar intake was associated with an increased risk of depression because it altered endorphin levels and oxidative stress (Westover et al., 2002).

Sleep And Mental Health







Insomnia And Depression

- Studies report that depressed patients who continue to experience insomnia are less likely to respond to treatment than those without sleep problems.

- Those who reported a history of insomnia during an interview in 1989 were four times as likely to develop major depression by the time of a second interview three years later

- Doctors in a prospective study who had complained of insomnia during medical school in the 1950s and 1960s were twice as likely to have developed depression at follow-up in 1990s.[37]

Point	Myth or Fact	Reason
Snoring is a common problem, especially among men, but it isn't harmful.	Fact and Myth	It is usually harmless but can be a symptom of sleep apnea, especially if it is accompanied by severe daytime sleepiness. Sleep apnea can be treated; men and women who snore loudly, especially if pauses in the snoring are noted, should consult a physician.
Teens who fall asleep in class have bad habits and/or are lazy.	Myth	According to sleep experts, teens need at least 8 to 10 hours of sleep each night, compared to an average of seven to nine hours each night for most adults. Their internal biological clocks also keep them awake later in the evening and keep them sleeping later in the morning. However, many schools begin classes early in the morning, when a teenager's body wants to be asleep. As a result, many teens come to school too sleepy to learn, through no fault of their own

Point	Myth or Fact	Reason
Do ocean noises help you sleep?	Possibly	People enjoy this, although there is no scientific data supporting it,. However, your deep sleep is a rhythmic pattern and it may mirror this amplifying your deep sleep waves, although they have to be very low in tone (ones that would not wake you up).
Are naps good for you?	Fact and Myth	They can give benefits for learning, memory, the autoimmune and cardiovascular system. But they can also prevent you having good sleep at night by not allowing the build up of adenosine which is the sleepiness chemical which peaks around 16 hours of wakefulness. Naps can dissipate the sleep pressure and make it harder to fall asleep but if you nap regularly, for 20-30 minutes earlier than 3pm in the daytime and are still able to fall asleep, then napping is fine.

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‘’National **Sleep** Foundation guidelines advise that healthy adults need between 7 and 9 **hours** of **sleep** per night. Babies, young children, and teens need even more **sleep** to enable their growth and development. People over 65 should also get 7 to 8 **hours** per nigh’’

Hirshkowitz, M., Whiton, K., Albert, S. M., Alessi, C., Bruni, O., DonCarlos, L., Hazen, N., Herman, J., Katz, E. S., Kheirandish-Gozal, L., Neubauer, D. N., O'Donnell, A. E., Ohayon, M., Peever, J., Rawding, R., Sachdeva, R. C., Setters, B., Vitiello, M. V., Ware, J. C., & Adams Hillard, P. J. (2015). National Sleep Foundation's sleep time duration recommendations: methodology and results summary. Sleep health, 1(1), 40–43.