

Webinar Will Begin Momentarily

TODAY'S AGENDA:

- Welcome
- Speaker Introduction
- Presentation
- Q&A
- Closing



Professional Education Series

Support. Inform. Educate. Empower.

Food & Mood: How Nutrition Impacts Mental Well-Being



WEBINAR HOST:

Keith Hine, MS, RD

VP of Healthcare, Sports & Professional Education
Orgain, LLC



WEBINAR PRESENTER:

Vicki Shanta Retelny, RDN, LDN

Lifestyle Nutrition Expert

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Disclosure

I have no relevant financial relationships or conflicts of interest to disclose related to the content of this presentation.



Today's Objectives

- Understand the role of what we eat and how we feel
- Discuss how food can help with mental health
- Identify stress-relieving, calming foods



***Disclaimer: Nutrition is an evidence-based adjunctive therapy that can be used along with talk therapy and medications to treat mental illness. This information does not take the place of medical advice.**

Poll Question

On which pathway do the gut and brain communicate?

- a) the microbiome and vagus nerve
- b) the gut-brain axis
- c) the enteric nervous system
- d) the neuroendocrine system

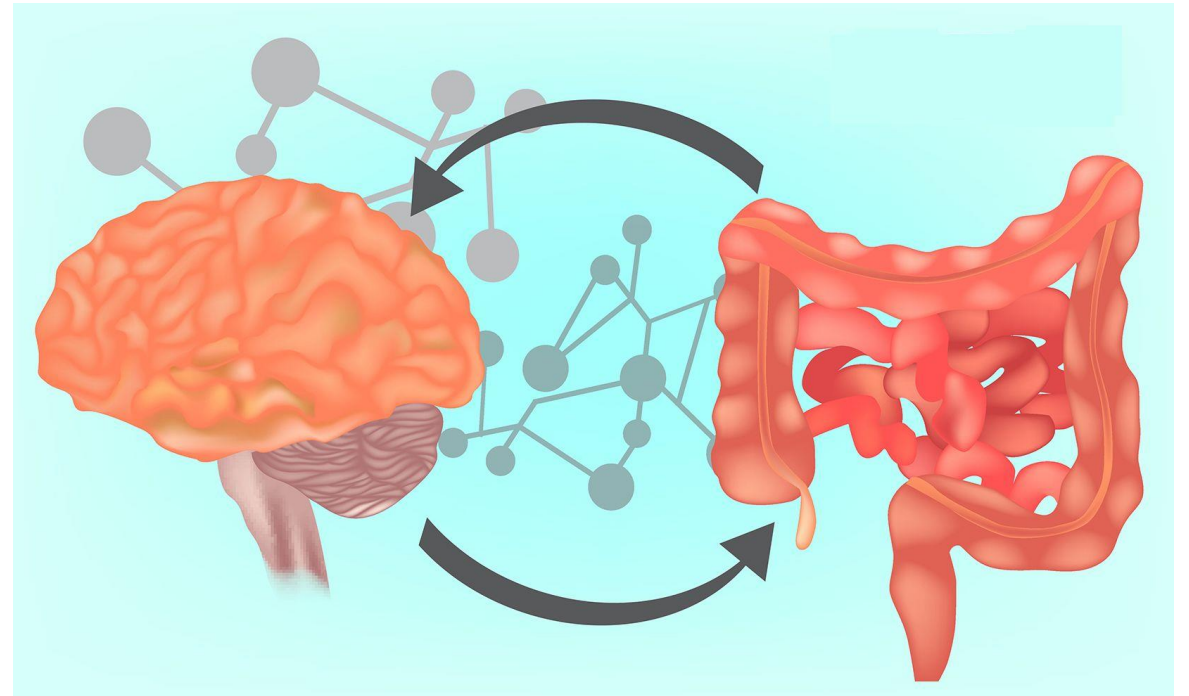


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Poll Answer

On which pathway do the gut and brain communicate?

- a) the microbiome and vagus nerve
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The Gut - Brain Axis

Central nervous system of the brain and spinal cord



Vagus nerve (two-way neural highway)



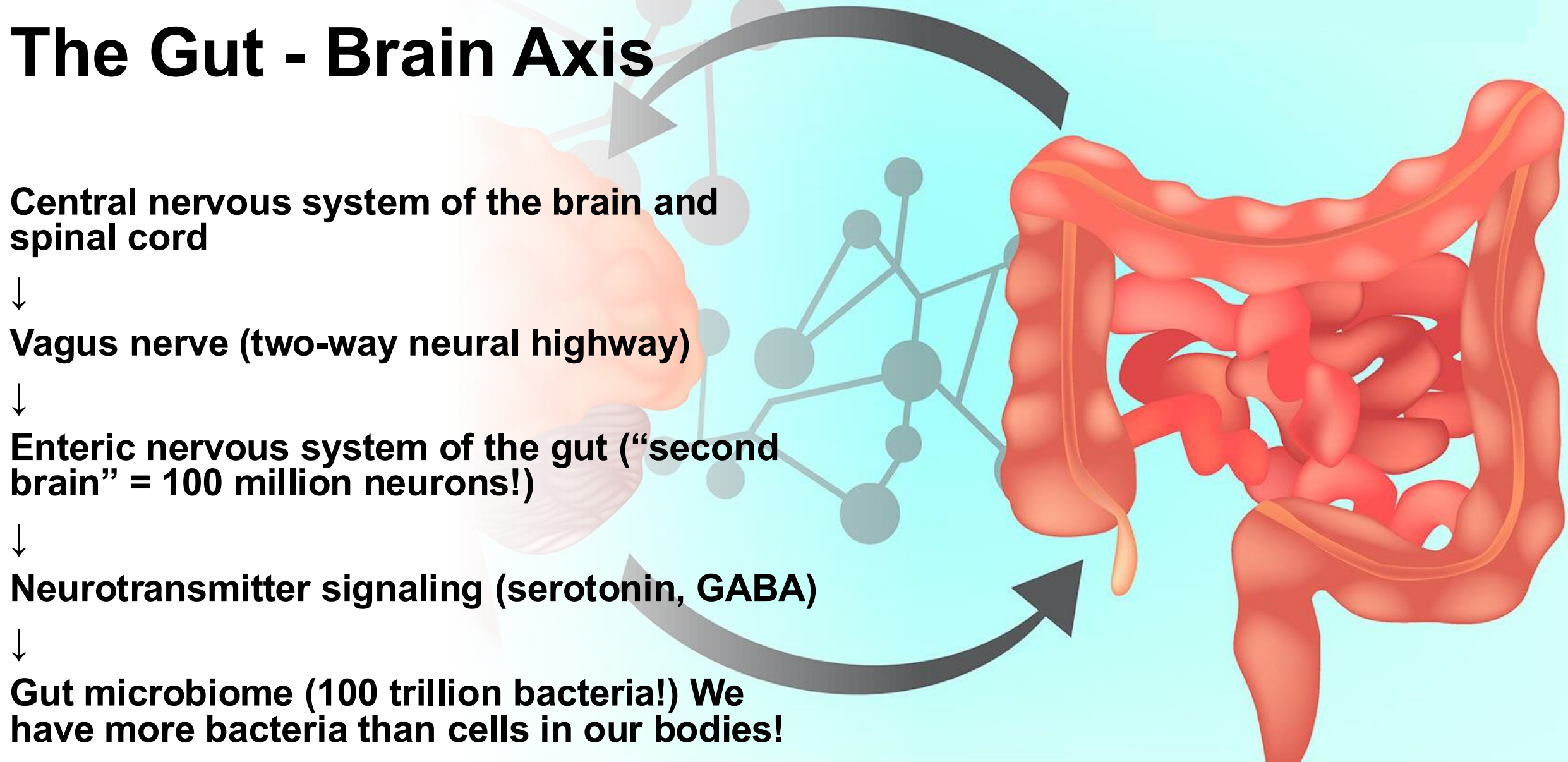
Enteric nervous system of the gut (“second brain” = 100 million neurons!)



Neurotransmitter signaling (serotonin, GABA)



Gut microbiome (100 trillion bacteria!) We have more bacteria than cells in our bodies!



The gut microbes - small, but mighty!

Imbalance of the gut
bacteria or “dysbiosis”
has been linked to
mood disorders,
including depression
and anxiety.

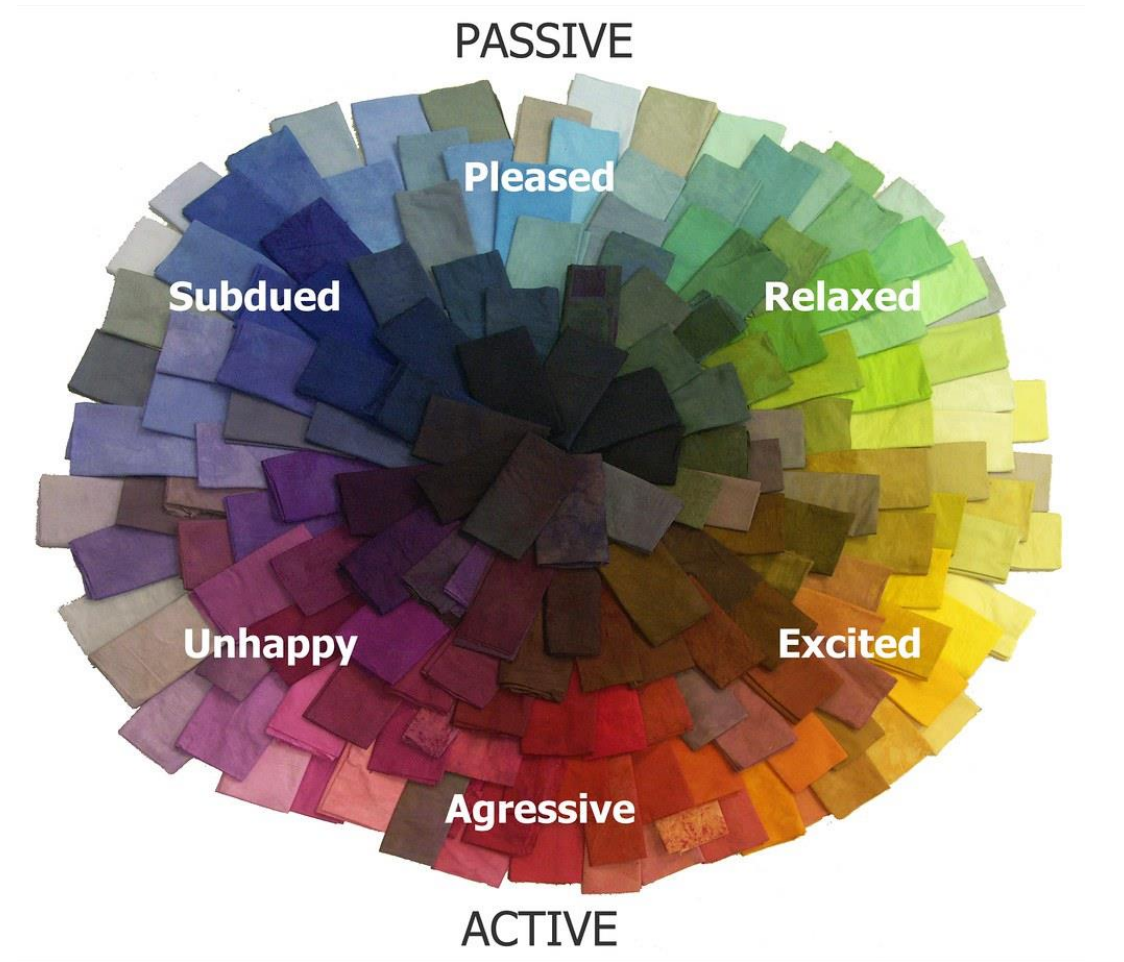
What is Mood?

Mood is defined as “a state of mind the lasts for an extended period of time.” Moods tend to mirror emotions but are less intense and more persistent.

Emotions are more temporary and fleeting:

Happy
Sad
Bored
Excited
Anxious

Mood disorders (or mental health disorders) are extreme emotional states - extreme periods of highs and lows.



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A close-up photograph of a glass bowl filled with cooked quinoa. The quinoa grains are light brown and have a slightly translucent, fluffy texture. The bowl is dark and has a subtle pattern. The background is a soft, out-of-focus green.

Food and Mood is a Hot Topic!

In PubMed over the last 25 years the research on “Food and Mood” has exploded!

In 2000 – 831 research articles

In 2025 – 6,380 research articles

Why? Food is one of the foundations of mental health.

Food **nourishes our bodies** and provides **information to our cells**, but eating behavior and cravings are regulated by the **neuroendocrine system** (gut-brain axis).

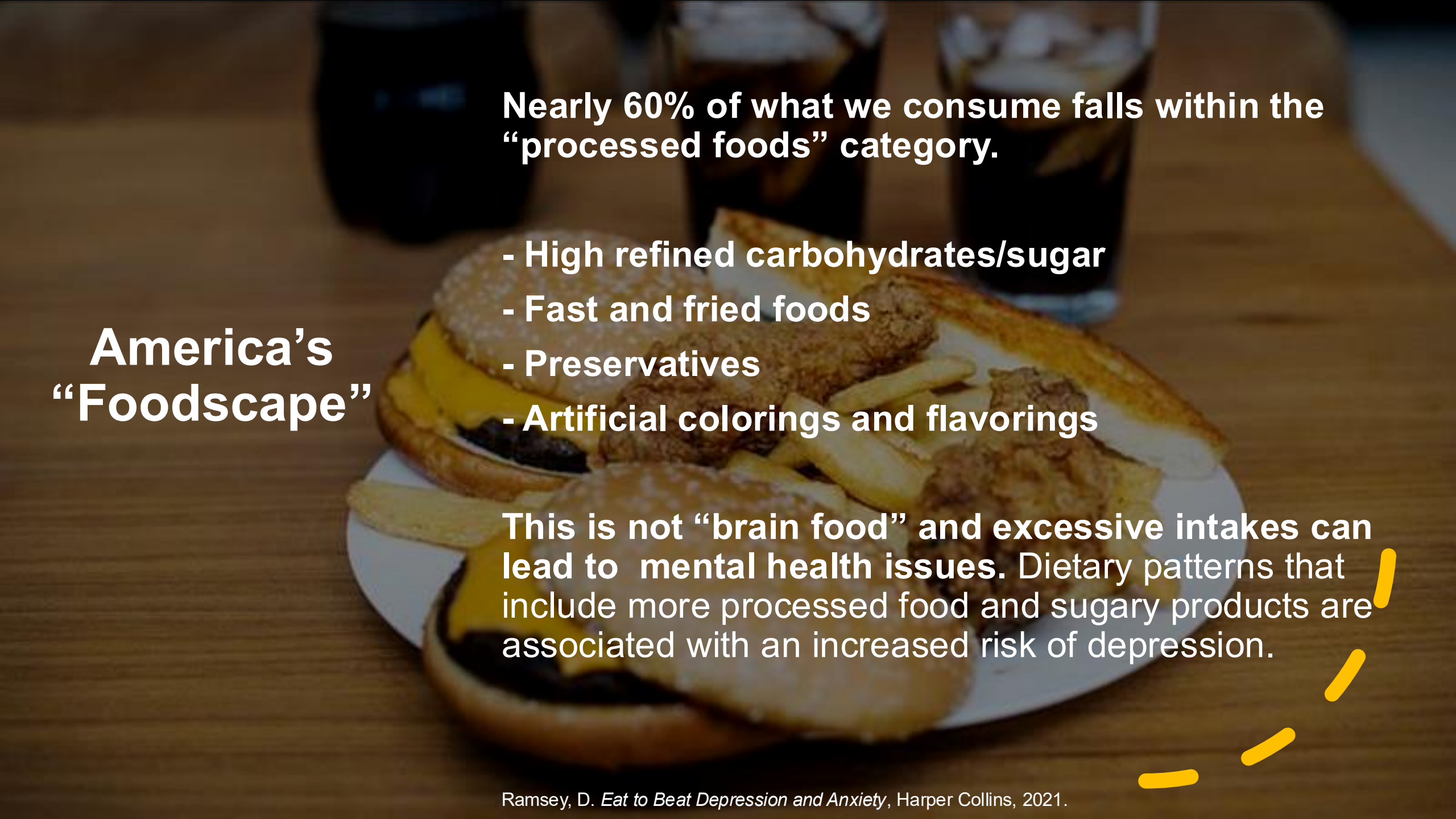
Food has feels.

What we choose to eat is a result of mood
and dictates our mood, too.

**It's an emotional
part of life.**

Think about the language around food:

- What are you in the “mood to eat”?
- What do you “feel like eating”?
- This meal makes me “happy”.
- When I am “sad” I love comfort food.
- When I am “tired” I need a latte.



Nearly 60% of what we consume falls within the “processed foods” category.

America’s “Foodscape”

- High refined carbohydrates/sugar
- Fast and fried foods
- Preservatives
- Artificial colorings and flavorings

This is not “brain food” and excessive intakes can lead to mental health issues. Dietary patterns that include more processed food and sugary products are associated with an increased risk of depression.

Americans Are Falling Short

- **1 out of 10** adults eat enough fruits and vegetables every day!
- As a result, American adults only eat about **15 – 18 grams** of fiber a day.
- Whole grain and dairy consumption are low, too.
- Overconsumption of added sugar, saturated fat and sodium.

<http://safefruitsandveggies.com/press-releases/despite-low-consumption-rates-studies-showing-negative-impact-consumers-ewg-continues>

https://www.ars.usda.gov/ARSUserFiles/80400530/pdf/DBrief/12_fiber_intake_0910.pdf

Missing Nutrients Among Americans

- Americans fall short on many key nutrients, such as **potassium, dietary fiber, choline, magnesium, calcium, and vitamins A, D, E and C.**
- **Iron** also is under consumed by adolescent girls and women (ages 19 to 50 years).

Why? Poor eating behaviors.

So many are touched by Mental Illness



<https://www.nami.org/mental-health-by-the-numbers/>

Depression & Anxiety: Common Mental Health Disorders

Depression:

- #1 cause of disability in the world
(Depression is risk factor for developing CVD, too.)
- Affects the well-being and functioning of a large percentage of the population
- **Poor dietary quality** is well established as a potentially modifiable risk factor for mental health disorders.



Nutritional Psychiatry (Food + Mood)

The evidence-based field of how food/nutrients influence mental health, mood and brain function. Food in conjunction with medications and therapy.

Key areas of focus:

- **The gut-brain connection**

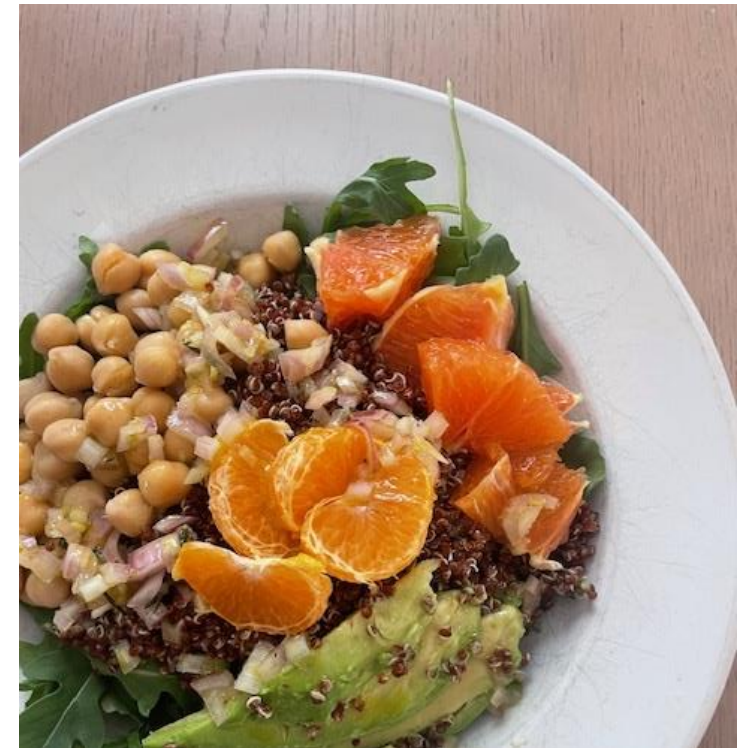
Gut produces neurotransmitters (i.e., serotonin), which influences mood and brain function

- **Encouraging nutrient dense dietary patterns with whole foods**

Mediterranean, Japanese and Scandinavian diets = more plant foods, lean proteins + unsaturated fats

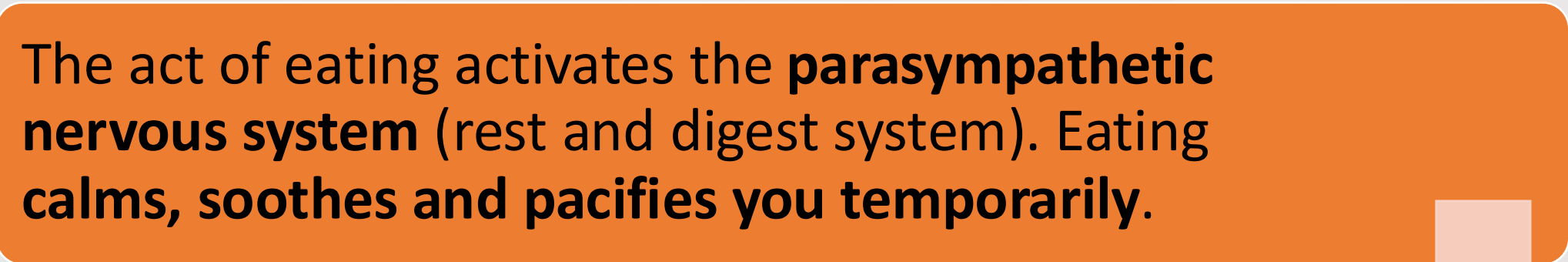
- **Reducing inflammation in gut and brain**

Limiting highly processed foods sugary and high fat foods

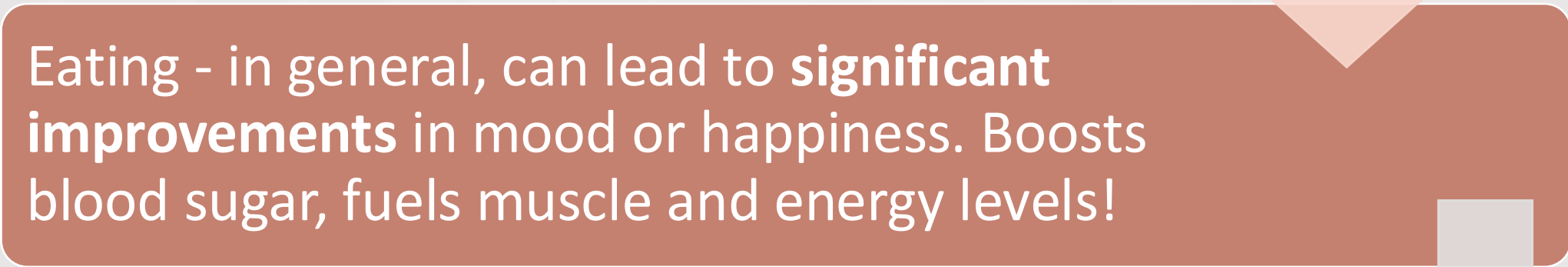


The relationship between food and mood

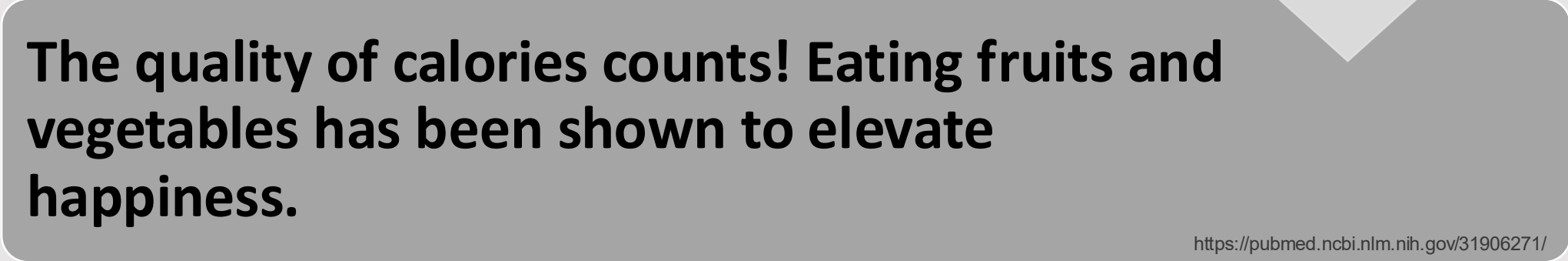
The act of eating activates the **parasympathetic nervous system** (rest and digest system). Eating **calms, soothes and pacifies you temporarily.**



Eating - in general, can lead to **significant improvements** in mood or happiness. Boosts blood sugar, fuels muscle and energy levels!



The quality of calories counts! Eating fruits and vegetables has been shown to elevate happiness.



International Lifestyle Guidelines for Mental Health Care

- **Physical activity**
- **Smoking cessation**
- **Work-Direction Interventions**
- **Mindfulness-Based Therapies and Stress Management**
- **Diet**
- **Sleep**
- **Loneliness and Social Support**
- **Green Space Interaction**



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Diet & Depression

Food and Mood is complex!

Potential biological mechanisms of action:

Diet helps in the modulation of pathways involved in:

- inflammation
- oxidative stress
- mitochondrial dysfunction
- the gut microbiota
- the HPA axis and neurogenesis
- epigenetics
- obesity

The SMILES Study

(Supporting the Modification of
lifestyle In Lowered Emotional
States)

What is the SMILES study?

A groundbreaking study in 2017! A 12-week **RCT** in Australia conducted by the Food and Mood Center looked at 67 moderately to severely depressed participants assigned to two groups: Mediterranean diet group + control group.

Findings: The dietary intervention group had a 32% remission rate of depression (1/3 of the participants remitted from depression).

Mediterranean-style diet higher in **plant foods, such as vegetables, fruits, legumes and whole grains, and lean proteins, including fish, are associated with a reduced risk for depression.**

Source: <https://pmc.ncbi.nlm.nih.gov/articles/PMC5282719/>

Stress is normal, but chronic stress can be debilitating.

How Stress Acts In Your Body

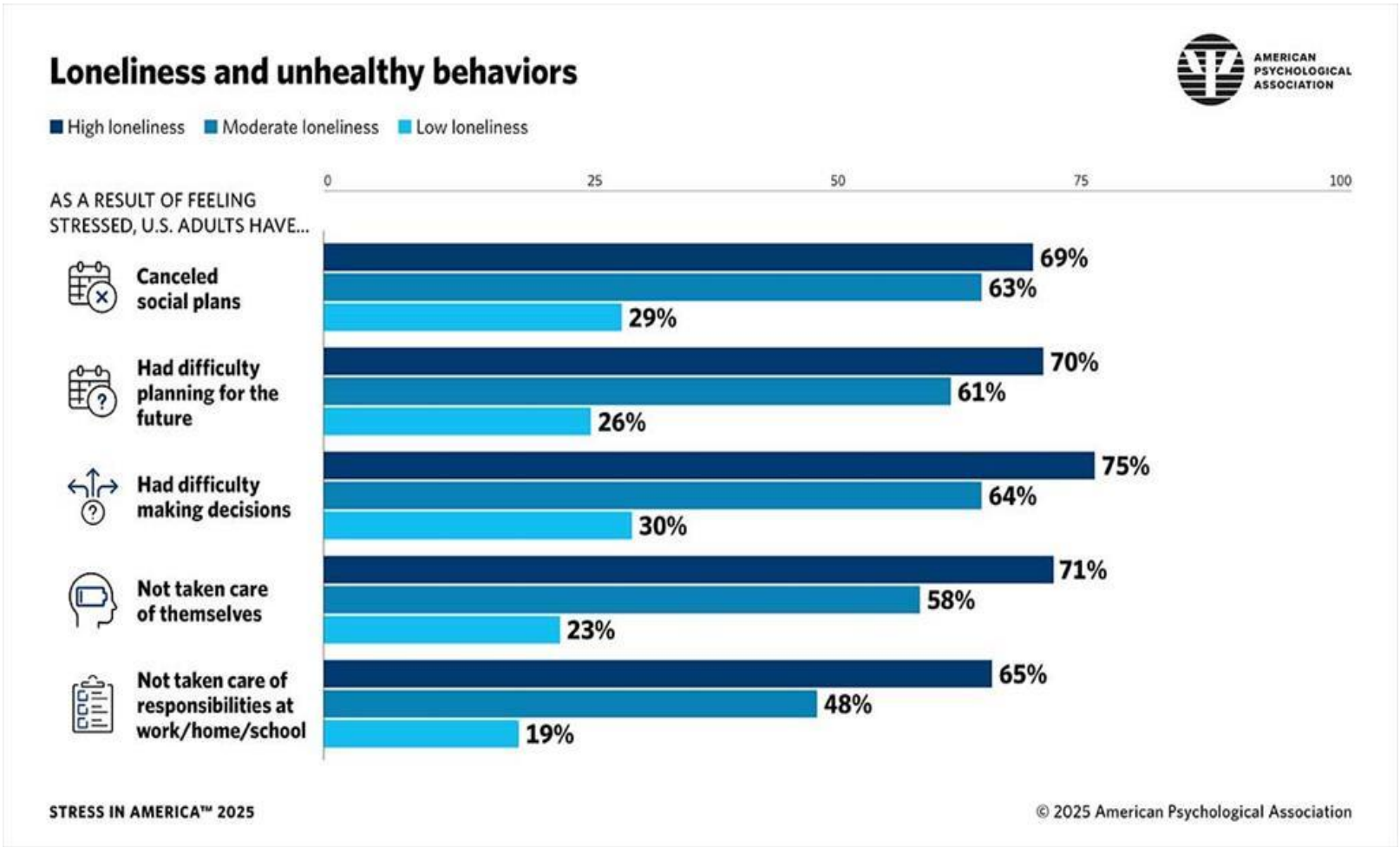
↑ in the hormone cortisol decreases sensitivity to leptin, the hormone that make you feel full.

↑ in hunger signals making you want to eat more.

→ The act of eating stops or slows the production of cortisol in the body making stress eating a reinforcing behavior.

→ Stress causes your body to store more fat.

Stress and mental well-being



Source: American Psychological Association's 2025 Stress in America survey

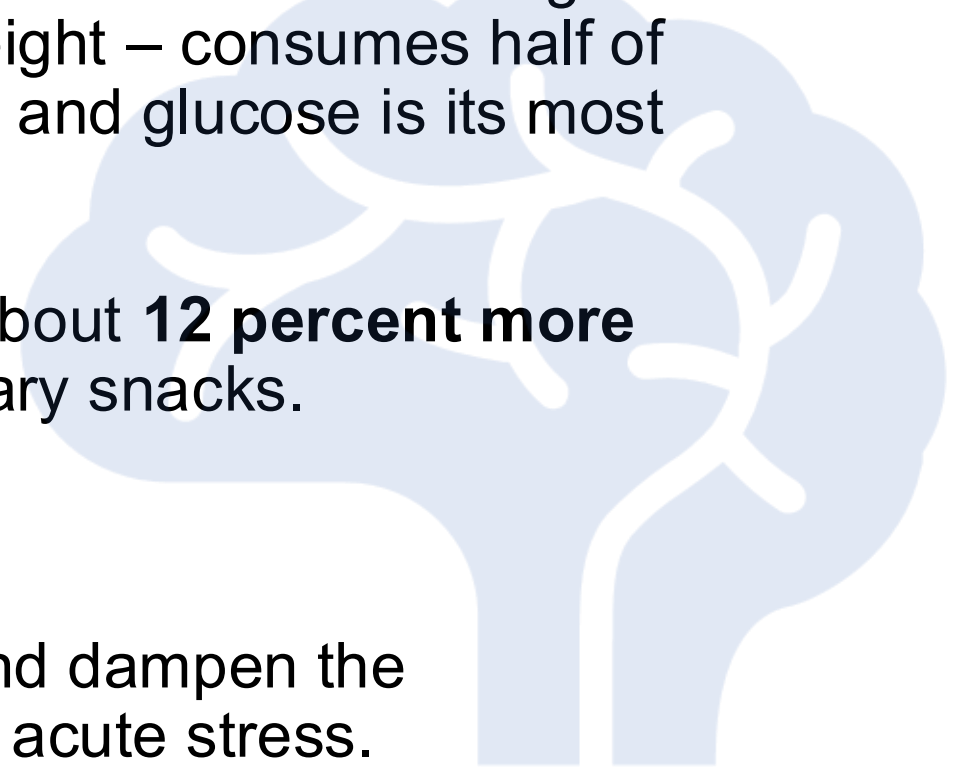
Sugar Cravings & Stress

Our brains need glucose and when we are stressed this organ – that it just 2 percent of our body weight – consumes half of our daily carbohydrate requirements — and glucose is its most important fuel.

Under acute stress the brain requires about **12 percent more energy**, leading many to reach for sugary snacks.

Why?

Eating may calm us down short term and dampen the physiological stress response following acute stress.



Why do we stress eat?

Stress eating is complex and there are multiple reasons that it happens.

Potential reasons:

- helps in coping with emotions
- disconnect in the moment
- alleviates boredom and loneliness
- fatigue from travel, tight schedules and no downtime
- sleep deprivation
- calorie restriction (“dieting”)
- dissatisfaction with things going in life



How to manage stress eating

- **Don't get too hungry.** Plan in balancing, nourishing meals and snacks throughout the day.
- **Put time between the thought of eating and the behavior** by calling a friend, taking a walk, take a shower, tune into your favorite podcast or show.
- **Calm your body** with deep breathing or cup of tea.
- **Avoid alcohol** at least 3 hours before bed.
- **Decrease scheduled activities** for more downtime.
- **Get good quality sleep** at least 7 – 9 hour per night.
- **Keep food out of your wind down routine.**

A vibrant collage of various healthy foods including fruits, vegetables, grains, and nuts, arranged in a circular pattern around a central text area. The foods include lemons, tomatoes, almonds, quinoa, garlic, avocado, cranberries, blueberries, kiwi, and various grains. The text is overlaid on the right side of the image.

Eating happiness is more than about food

Nourishing your body well is about ...

- how much you eat
- when you eat
- where you eat
- how long you eat
- with whom you eat

- how much you eat
- when you eat
- where you eat
- how long you eat
- with whom you eat

Mental Health Meal Planning



Nourishing your mind and body well is the foundation of physical and mental health.

- **Color your plate** = ↑ vegetables, fruits, pulses (beans, peas, lentils)
- **Fill up on fiber** = vegetables, fruits, whole grains, pulses
- **Healthy fats** = avocado, nuts, seeds, olive oil, fish
- **Lean proteins** = less red, processed meats and more lean proteins
- **Limit added sugars and sodium** = downsize, don't deprive. Use fruit to sweeten foods; herbs and spices to flavor without salt

The Antidepressant Food Scale

(12 Brain Boosting Nutrients)

1. **Folate (B9)** – needed to think clearly and experience pleasure (leafy greens, colorful veggies and beans)
2. **Iron** – needed to make dopamine and serotonin (seafood, nuts, beans, seeds, leafy greens, meat)
3. **Omega-3 Fats** – reduces inflammation in the brain and stimulates growth of nerve growth factors (seafood, seaweed, algae; seeds)
4. **Magnesium** – stimulates brain growth and calms the central nervous system, control blood sugar (leafy greens, nuts, beans, seeds and colorful fruits and veggies)
5. **Potassium** – helps cells remain in health balance by pumping in nutrients and pumping out waste. (colorful fruits and vegetables, leafy greens)
6. **Selenium** – antioxidant and aids in production of glutathione, DNA synthesis, thyroid function and metabolism (seafood, nuts and colorful fruits and veggies)
7. **Thiamine (B1)** – needed to turn glucose into energy (seafood, leafy greens, colorful fruits and veggies)
8. **Vitamin A** - antioxidant, regulates cell growth and division. (colorful veggies, lean meat and eggs)
9. **Pyridoxine (B6)** – converts foods we eat into energy; required to make neurotransmitters like serotonin and the hormone, melatonin. (seafood, beans, meats, colorful produce)
10. **B12** – helps produce neurotransmitters and enhances mood. (Seafood (bivalves), meat, eggs and dairy)
11. **Vitamin C** – antioxidant, aids in iron absorption (citrus, colorful produce, leafy greens)
12. **Zinc** – protective nutrient and support neuroplasticity (meats, nuts, seeds)

Mood Boosting Meal Ideas

Balance: Whole grains + Lean Protein + Vegetables/Fruit + Dairy

Breakfast

- scrambled egg wrap with leafy greens, tomatoes and mushrooms
- oatmeal made with milk and frozen berries on top with a dash of cinnamon
- whole grain waffles topped with strawberries + chopped nuts + drizzle of maple syrup

Lunch

- bean and quinoa bowl + side salad
- whole grain sandwich thin with tuna fish salad made with a dollop of plain Greek yogurt + arugula
- chickpea and veggie salad **or** black bean burger + whole grain bun + side salad or fruit salad

Dinner

- tofu, cubed and baked + farro + leafy greens salad
- veggie lasagna + side salad + whole grain garlic bread
- cheese ravioli + broccoli with tomato sauce + grilled chicken breast



Think Before You Drink



One drink = 12 oz. beer, 5 oz. wine, 1.5 oz. 40-proof liquor

- **Alcohol is a central nervous system depressant**
- **Negates the effects of antidepressants**
- **Alcohol use disorder often occurs with depression**
- **Treatment of both at the same time with behavioral therapy, medication and support groups is recommended**

Hydrate Well for Mental Health

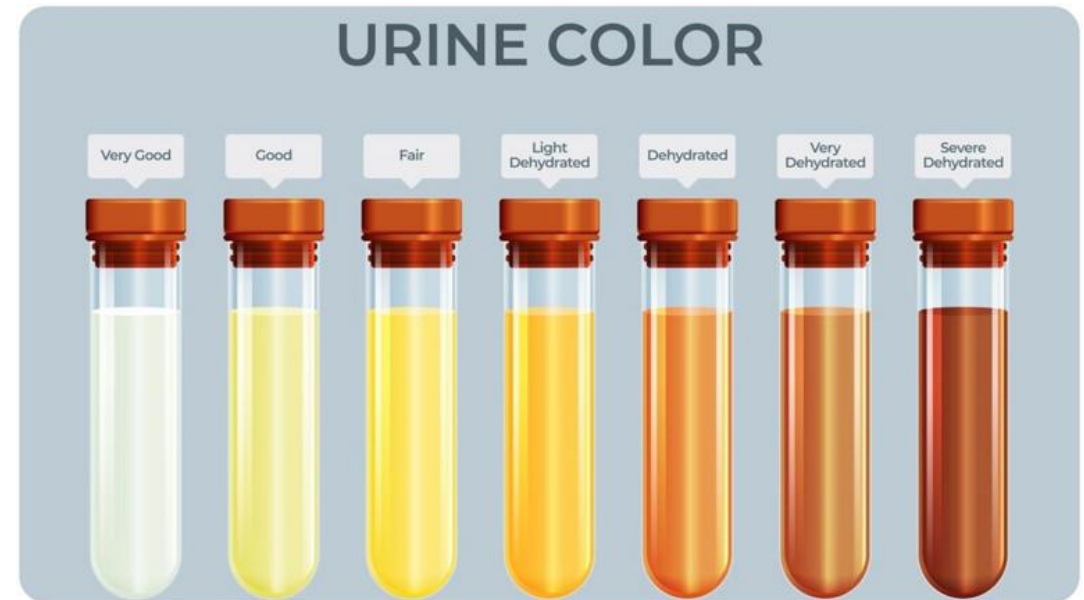
Water keeps your mind and body functioning well.

Dehydration leads to:

- increase in the stress hormone, cortisol, and decrease in serotonin, dopamine and oxytocin.
- anxious feelings, low mood, depression
- brain fog
- fatigue, muscle cramps, constipation
- electrolyte imbalances

How much water do you recommend?

- Aim for half of your body weight in ounces from fluids, primarily water. The real answer: it depends.
- Food contains fluid, too.
- Check the color of your urine for proper hydration.



Move to Boost Mood!

Physical activity does wonders for emotional well-being. Research shows that it can boost feel-good endorphins, cannabinoids and growth factors.

- The ACSM guidelines for physical activity are at least **150 minutes per week** (at least 30 minutes 5 times per week)
- Any activity counts: walking, running, biking, taking the stairs, house cleaning, stretching, yoga, Pilates



Food Mood Journal



Tracking helps!



Identify potential triggers and your eating environment



You can change your behavior and take control



Monitor in real time to gain the most insights



Record everything you eat and drink + a brief comment about feelings that influenced your eating

Key Take Aways

- The gut and brain are in constant communication.
- Nutrients act in the body as chemical messengers to boost mood, enhance serotonin - feel-good chemicals, and have a calming effect.
- The Mediterranean Diet offers a pattern of eating that has been proven to be beneficial to boost mood and fend off depression.
- Improving overall lifestyle and keeping a food-mood journal can help enhance overall mood.

Food and Mood Centre <https://foodandmoodcentre.com.au>

The Food and Mood Project <https://www.samhsa.gov/about/regional-offices/food-and-mood>

Eat to Beat Depression and Anxiety by Drew Ramsey, MD

This Is Your Brain on Food: An Indispensable Guide to the Surprising Foods That Fight Depression, Anxiety, PTSD, OCD, ADHD, and More by Uma Naidoo, MD

Mediterranean Mood Food: What to Eat to Help Beat Depression and Anxiety and Live a Longer, Healthier Life by Paula Mee, Msc, RD

Resources

Notable Food & Mood Research

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“People will forget what you said, people will forget what you did, but people will never forget how you made them feel.”

– Maya Angelou

It’s the same with food. You will remember how a good meal makes you feel. Food affects mental states for better and for worse. Our job as dietitians is to guide our patients and clients toward foods that can help foster good mental health.



Q & A

**Thank you! I am happy to answer
any questions.**



Thank you for joining us today.

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Keith Hine, MS, RD

VP of Healthcare, Sports & Professional Education
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keith.hine@orgain.com



WEBINAR PRESENTER:

Vicki Shanta Retelny, RDN, LDN

Lifestyle Nutrition Expert

victoria@victoriashantaretelny.com



ORGAIN INQUIRIES:

medinfo@orgain.com

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