

# **Nutrition: Gut/Brain Connection**

Have you ever had a gut feeling about something that was so strong that neither logic nor reason could change your mind? Or how about seeing something so upsetting or shocking that it felt like your gut was literally wrenching? What about the last time you felt incredibly anxious, nervous or excited? Did you happen to feel "butterflies in your stomach?"

# The Enteric Nervous System and Gut-Brain Axis

These familiar sensations originate from a fascinating source — your "second brain" tucked away in your intestinal walls. This intricate web of neurons and neurotransmitters, scientifically termed the enteric nervous system (ENS), lines nearly every nook and cranny of our digestive tracts.

The millions of nerves in your intestinal walls communicate directly with the brain, forming a critical pathway known as the gut-brain axis (GBA). The GBA is responsible for the communication between the emotional centers in the brain and the gut sensations and functionality in your stomach. So, when something goes wrong in your gastrointestinal system, your brain knows right away. Conversely, when you're experiencing different states of stress in your brain, you can feel it in your gut!

#### **How the Microbiome Affects Our Mood and Health**

The microbiome is a community of organisms, such as bacteria, fungi and viruses that inhabit a particular environment, such as the human body. Research over the last decade has made it clear that the microbiota in the gut both directly and indirectly affects our brains' emotional and cognitive centers. Mood disorders like depression and anxiety disorders have established links to gastrointestinal (GI) disruptions, while GI diseases like irritable bowel syndrome are typically accompanied by psychological comorbidities associated with changes in the gut biome.

Research further shows that what we eat substantially impacts the composition and activity of these gut microbes, giving perhaps a new perspective on the phrase, "You are what you eat."

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#### **Food as Medicine**

Diets high in processed foods, sugar and saturated fats have been associated with decreased microbiome diversity and overgrowth of undesirable bacteria. This can trigger inflammation and intestinal permeability and disrupt key structures throughout the body. Alternatively, eating plenty of plant fiber and micronutrients found in fruits, vegetables, legumes, herbs and spices appears to nourish beneficial gut bacteria. This helps the good gut bugs make feel-good chemicals and swelling-stopping substances. These keep the connections between the gut and brain working well.

As nutrition clearly provides the fuel that can either optimize our gut microbes to help mental health or starve them to undermine cognitive and emotional function, mindfully supporting our microbiome diversity through dietary choices becomes an impactful way we can tend to our own physical and mental well-being. Focusing on whole, fiber-rich plant foods, fermented items, probiotic and prebiotic foods while limiting processed fare will nourish communities of healthy bacteria. In turn, these microbes can stabilize mood, sharpen focus and build resilience against Gl and neurological disorders.

While research continues to illuminate the ongoing conversations between our guts and our brains, taking a food-as-medicine approach can give us practical, tangible ways to nourish this relationship, starting with our next meal. Remember that what we feed ourselves feeds trillions of digestive helpers as well and can enable our minds and microbiomes to thrive as one interconnected system.

References:

translational-medicine.biomedcentral.com

ncbi.nlm.nih.gov (microbiota on mood and mental health)

ncbi.nlm.nih.gov (enteric microbiota, central and enteric nervous systems)

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# **Additional Resources**

Upcoming Wise & Well Webinar — Register Now!

# Fueling Well-Being: Optimizing Your Life through Performance Nutrition

When: Tuesday, March 12 | Noon - 1:00 p.m. ET

Welcome to our exclusive webinar, "Fueling Well-Being: Optimizing Your Life through Performance Nutrition," where we unlock the secrets behind enhancing overall health and vitality. Executive performance chef for the New York Jets, Jessica Giglia, will reveal how similar strategies employed by elite athletes can be adapted to optimize the well-being of everyone. Whether you're a busy professional, fitness enthusiast or someone on a journey toward a healthier lifestyle, this webinar will provide practical tips and valuable knowledge to maximize your potential through the power of nutrition. Get ready to embark on a transformative journey towards optimizing your overall well-being, guided by the same principles that fuel the success of professional athletes.

# In this session, you will gain valuable insights into:

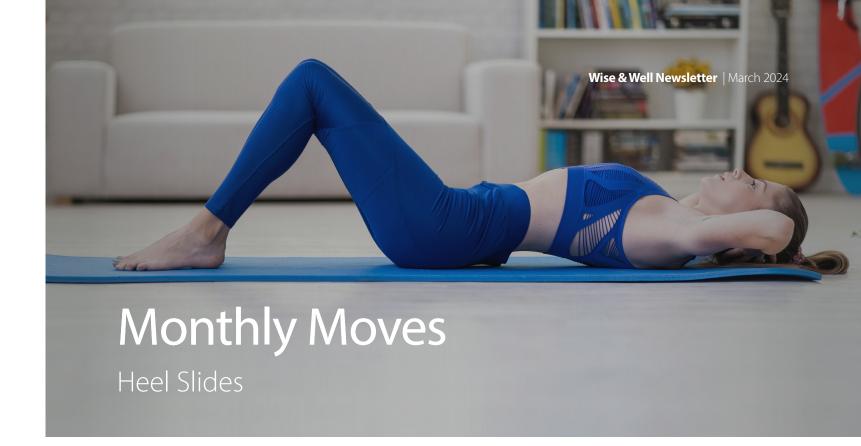
- · Optimal food and nutrient choices that empower you to excel in various activities.
- · Easy and healthy substitutions that elevate your culinary experience and delight your taste buds.
- The pivotal role of certain foods in fostering a strong connection between the gut and brain.
- · Strategies for navigating the intricacies of dining out, coupled with a mindful approach to celebratory occasions.
- $\cdot$  Exploration of how seasonality impacts the nutritional profile of the foods we enjoy.

### And more!

To register, **click here** or scan the QR code below. For more information about the webinar, view the **Employee Flyer**.







Gentle exercises focused on gut health can reduce bloating, improve motility and prevent complications. Paired with healthy, well-tolerated foods, simple daily movement and conscientious eating provide the foundation for feeling your best inside and out.

These heel slides encourage pelvic floor contractions while targeting the deep abdominal muscles.

## To perform the exercise:

Begin by lying on the floor with your knees bent and pelvis in a neutral position.

04

Find the bottom position, then inhale and bring your leg back to the starting position.

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Inhale into the rib cage, then exhale through the mouth, letting your ribs naturally compress.

05

Repeat.

03

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Draw your pelvic floor up, lock in your core, and slide your right heel away from you.

Only go as far as possible without losing your connection to your deep core.

06

Do 10 slides up and back, then repeat with the other leg.

Tap here for a video demo.
Source: healthline.com

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# Kimchi Pancakes

Try these homemade, Korean-style pancakes packed with superfood power! Kimchi contains probiotics that are good for digestion, flavonoids that promote immune system function and vitamin C and antioxidants that can both help prevent premature aging.

# Ingredients

- 2 eggs
- 1 cup brown rice flour
- 1 cup pale beer (if you are avoiding gluten, use a gluten-free variety)
- 1 tablespoon tamari
- 1 cup kimchi, plus a good splash of the juice
- 2 tablespoons toasted sesame oil
- 2 bunches scallions, white and green parts roughly chopped pinch of sea salt
- 4 to 5 tablespoons coconut oil

# Dressing

- Juice of 1 lime
- 2 tablespoons fish sauce
- 2 tablespoons chopped cilantro
- 1 tablespoon sambal
- Sambal Oelek or a different chili paste
- Splash of kimchi juice

# Directions

- 1. Beat the eggs lightly in a large bowl. Slowly whisk in the rice flour, beer, tamari, kimchi juice and sesame oil. Fold in the scallions and kimchi. Season with salt.
- 2. Warm 1 tablespoon of the coconut oil in a large frying pan over medium heat. Pour 1/2 cup of the batter into the pan. Let the pancake fry for two to three minutes per side. Repeat until all of your pancakes are made. Add more coconut oil when necessary.
- 3. Whisk together the dressing ingredients and dip your pancakes generously!

Source: cleaneatingmag.com





- Your Wise & Well Team

We all have a unique combination of gut microbes, so there is no one-size-fits-all approach to improving gut health. However, by following these tips throughout the month of March, you can try several things that your gut will thank you for.

March 1

# Try to Eat 30 Different Plants.

The wider the diversity of fiber-packed plants you eat, the happier and more diverse your gut microbiome will be. This week, increase the variety and amount of plants in your diet, focusing on nuts, seeds, whole grains, fruits and veggies. If you get stuck, count new spices or herbs as plants and see what happens.

March 8

## Add Color to Your Plate.

Not only are colorful plant foods rich in fiber. They also contain loads of polyphenols, which "good" gut microbes love. In particular, nuts, berries, seeds, brightly colored fruits, extra virgin olive oil, vegetables and dark chocolate are rich in these beneficial antioxidants and anti-inflammatory compounds.

March 15

# **Experiment with Fermented Foods.**

Take things to the next level this week by including fermented foods like live yogurt, artisanal cheeses, kimchi, kombucha, kefir and sauerkraut. These foods, known as probiotics, contain living microbes that can increase the number and diversity of bacteria that make up your microbiome.

March 22

# Give Your Gut Bugs a Break.

Try to avoid or limit snacking and aim to give your gut bugs time to rest overnight. At night, there is a whole team of gut microbes that work to clean up your gut lining and keep it healthy. This regular cleaning is important for supporting a healthy gut and immune system. Giving your gut bugs a break gives them time to recover to do their job well.

March 29

# **Limit Ultra-Processed Foods.**

A high intake of ultra-processed foods is known to be associated with unfavorable health outcomes, including conditions like heart disease, type 2 diabetes, and obesity. They also aren't great for our gut microbes, as they don't provide much fiber and other nutrients for "good" gut microbes to munch on. They're often high in sugar, unhealthy fats and artificial sweeteners that don't support a healthy gut microbiome.

Source: zoe.com



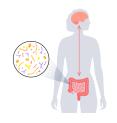




March Is Nutrition: The Gut/Brain Connection Month

# How Well Do You Know Your Microbiome?

Think bacteria are bad? Think again! The microbiome is a community of organisms, such as bacteria, fungi and viruses that inhabit a particular environment, such as the human body. Bacteria and other microbes are often thought of as sources of disease, but in fact, many play an essential role in keeping you healthy. Your body contains trillions of microbes, most of which are beneficial.



The bacteria in a human gut can weigh over 4lbs.



Probiotic foods, such as live yogurt, encourages more microbes to grow.



An analysis of gut bacteria can predict obesity with more than 90% accuracy.



Bacteria can influence our behavior via the 100 million neurons in our gut. There is a reason we call it the "second brain."

Source: **bbc.co.uk**