GUT-BRAIN LINK – FOOD FOR A BETTER MOOD

NOTE: Please consult with health professionals before following a specific dieet.

Eating healthy reduce symptoms of depression and anxiety. It also improves cognitive functioning.
Our food intake and habits impact greatly on our mental health. Setting a goal to improve mental health will help us to live a happier and independent life into old age.

Our goal must be to keep our body, gut and brain healthy.

The brain needs a steady supply of **nutrients** to function properly.

Certain foods can help:

- Improve **mood and focus**
- Reduce **anxiety and depression**
- Support **memory and brain health**

1. THE GUT

"All disease begins in the gut." — Hippocrates

How your digestive system influences your brain and emotions

- The human body contains two brains — one in your head, and one in your gut.
- The gut-brain axis is the two-way communication system between the digestive tract and the central nervous system.
- Scientists now know that gut health plays a key role in mental well-being, mood, and cognition.

Gut-Brain Axis

- A bi-directional communication system between the enteric nervous system (ENS) and the central nervous system (CNS).
- Communicates through:
    - Neural pathways (vagus nerve)
    - Immune system
    - Endocrine system (hormones)
    - Microbial metabolites (short-chain fatty acids, neurotransmitters)

Role of the gut microbiome

- Trillions of bacteria, fungi, and other microbes live in the intestines.
- These microbes:
    - Produce **neurotransmitters** like serotonin, dopamine, and GABA.
    - Help regulate **inflammation** and **stress response**.
    - Influence **mood, anxiety, and cognition**.

How the Gut Affects the Brain

- Gut bacteria can:
    - Send signals via the **vagus nerve**.
    - Affect **serotonin levels** (90% made in the gut).
    - Influence the **hypothalamic-pituitary-adrenal (HPA) axis**, which controls stress.
- Disruption (dysbiosis) linked to:
    - Depression

- Anxiety
- Autism spectrum disorders
- Parkinson’s disease

How the Brain Affects the Gut

- Stress, anxiety, and emotions can alter:
  - Gut motility (leading to IBS or discomfort)
  - Microbial composition
  - Digestive secretions
- Example: "Butterflies in your stomach" = real nervous system effect

2. TOP RECOMMENDED FOOD

Blueberries: The anthocyanins aren’t just antioxidants. They are direct fuel for beneficial gut flora. Studies shows they increase microbial diversity, the single best marker of gut health. Wash them thoroughly regardless of whether they are organic.

Organic rolled oats: Good source of beta-glucan. It’s a soluble fibre for your gut bacteria ferment into butyrate, the short-chain fatty acid that fuels the cells lining into your colon. Feeds Bifidobacterium and Lactobacillus directly.

Extra virgin olive oil: cold-pressed, early harvest. The polyphenol count is the highest when olives are picked early. That’s where the real anti-inflammatory benefit lives. It protects your gut lining. Use on everything.

Grass-fed organic steak: Cow's diet matters and changes your fatty acid profile entirely. Higher omega-3s, higher conjugated linoleic acid, lower omega-6. That matters because omega-6 drives inflammation, and inflammation drives gut damage. The cow's diet becomes your gut health.

Organic onions: packed with inulin and fructose oligosaccharides, two of the most powerful prebiotics that exists. Also, loaded with quercetin, an anti-inflammatory that supports your gut barrier. Buy organic as onions absorb pesticides easily and pesticides disrupt your microbiome.

Dark chocolate: 80% minimum. The polyphenols are fermented by your gut bacteria into anti-inflammatory compounds

Avocado (lower on pesticide sprays): Packed with other nutrients as well, avocados ultimately help the brain by:

- Increasing blood supply
- Improving oxygenation in the blood
- Enhancing brain signals to the muscles
- Lowering blood pressure
- Preventing stroke
- Reducing seizure activity

Through its healthy fatty acids and other nutrients, avocados prove to be one of the best superfruits for the brain overall.

Pistachios are the world's most concentrated natural source of melatonin. Just two ounces provide a substantial, highly bioavailable dose of melatonin along with vitamin B6 and magnesium, which support the conversion of tryptophan into serotonin. Eating them about 60 minutes before bed delivers a gentle, timed-release effect that helps you fall asleep faster and stay asleep longer.

3. BRAIN-BOOSTING FOOD

Eat for your **microbiome**:

- **Prebiotic foods:** garlic, onions, bananas, asparagus
- **Probiotic foods:** yogurt, miso, kombucha

Fatty Fish

- Rich in **EPA and DHA omega-3s**
- Supports memory, learning, and emotional regulation
- Examples: salmon, mackerel, sardines, trout

Leafy Greens & Vegetables

- High in **folate, magnesium, and antioxidants**
- Linked to slower cognitive decline
- Examples: spinach, kale, broccoli

Berries & Colorful Fruits

- Rich in **flavonoids** and antioxidants
- Improve memory and protect against stress
- Examples: blueberries, blackberries, oranges, apples

Nuts & Seeds

- Provide **healthy fats**, **magnesium**, and **tryptophan**
- Support serotonin production
- Examples: walnuts, almonds, pumpkin seeds, chia seeds

Fermented Foods

- Contain **probiotics** that improve gut microbiome balance
- Support mood via the **gut–brain axis**
- Examples: yogurt, kefir, kimchi, sauerkraut

Water & Tea

- Dehydration can impair concentration and mood

4. EAT MAGNESIUM ENRISHED FOOD

Magnesium is super important since it's involved in 600+ enzymatic reactions in our body, helping with muscle and nerve function, energy, heart health, and more. This is one of the biggest reasons people don't feel good.

Without enough magnesium you might feel muscle cramps, low energy, mood swings, poor sleep, or even an irregular heartbeat.

For blood pressure and most magnesium deficient issues, our Magnesium supplement is amazing because it's the most complete Magnesium supplement available out there. Our Magnesium will support blood vessel relaxation, potentially helping to reduce blood pressure if taken consistent along with all the other benefits like relaxing muscles, lowering stress/anxiety, stopping heart palpitations and stopping irregular

heartbeat.
Last but not least it can act as a natural Calcium channel blocker which can lower blood pressure.

Soak in a bath with Epson salt. The magnesium and sulfate in the Epsom salt will draw toxins out of the body and magnesium will be absorbed which will help relaxing the muscles. Adding baking soda will help with detoxing pours, remove fungus and help with eczema.

5. GET CORTISOL STABILISED

High cortisol levels will cause sleep disturbances, ear noises, eye spasm and fat around the belly. Stress causes high cortisol levels. Take Moringa, drink earl grey tea, use bergamot and rosemary essential oils.

6. SALT

Salt is made up of sodium chloride. The body needs salt to regulate fluid and muscle function.

Studies suggest high salt intake can lead to high blood pressure, which in turn increases the risk of heart attack, stroke, and kidney disease.

Consuming too little salt may lead to low blood pressure resulting in dizziness, muscle twitches and seizures.

The common symptoms of too low salt-intake include:

- Loss of energy or fatigue
- Nausea and vomiting
- Headache
- Confusion
- Muscle spasms
- Low blood pressure
- Dark scanty urine
- Irritability, disorientation and neurological manifestations
- Convulsions

7. VEGETABLES (Resource: https://youtu.be/IuEXCyRqeWU?si=dv_-SdIyH_9pUVfX)

Lettuce – high in fiber and nutrients
Bellpepper – high in Vit C, low carbs.
Broccoli (lower on pesticide sprays). Lots of nutrients. Low carbs.
Cauliflower (lower on pesticide sprays). Lots of vitamins and minerals. High in Potassium. Low carbs.
Mushrooms (lower on pesticide sprays)
Cabbage (lower on pesticide sprays and cheaper). High in Vit C and fiber.
Asparagus (lower on pesticide sprays)

Celery (high on pesticide sprays – buy organic)
Spinach (high on pesticide sprays – buy organic)
Kale (high on pesticide sprays – buy organic)
Brussels sprouts
Green Beans
Parsley
Radishes
Garlic and Onions (prior-soaked)

8. **Top Fruits (Resource:** https://www.beefreegf.com)

Blueberries

Blueberries are loaded with vitamins and nutrients, including antioxidants. The blueberry has a particular combination of nutrients known for helping the memory in particular. It boosts memory and protect the brain from future memory lapses.

Raspberries

The raspberry has a particular blend of nutrients that help keep the brain healthy and high-functioning. Raspberries fight inflammation of the neurons, protecting against neurological damage in the brain.

Strawberries

The antioxidants in strawberries, like those in other berry super-fruits, have a unique and important role in brain health. These antioxidants tend to fight off free radicals, which damage cells and can lead to memory loss and other brain difficulties.

Blackcurrants

Blackcurrants have the capacity for boosting brain health. This simple fruit actually helps in ways similar to drugs used to treat brain-relate conditions like Parkinson's disease. The powerful fruit is known in particular for reducing mental fatigue, energizing the brain to think more clearly and faster.

Grapes

The blood and the brain have a very close relationship. Grapes, by improving certain types of cardiovascular function, can also help improve brain function. Scientists are finding that grapes can contribute to greater vascular flexibility, less clotting, and better blood flow. All of these can increase the blood (and subsequent oxygen supply) to the brain. With more to power it, the brain tends to be healthier.

Cherries

Free radicals are damaging to cells, causing plenty of deterioration in the body, including in the brain, over time. Cherries help reduce inflammation, including in and around the brain. As a result, cherries are sort of like anti-aging powerhouses for the brain.

Bananas

Bananas are rich in potassium and magnesium, it gives the brain energy and help sharpen the brain's focus, increasing the ability to pay attention and learn. Bananas also offer vitamins and nutrients that improve cognitive function overall. Truly a super-fruit for the brain, bananas also help improve and regulate mood, which is controlled centrally in the brain.

Kiwi

Helps the brain regulate and improve mood. This can have a significant impact on a person's outlook and perspective on life as well as their overall quality of life. It can be particularly helpful in those with mood disorders.

Kiwi is also thought to help prevent some brain disorders. The risk of Alzheimer's Disease can be reduced by kiwi consumption, for instance. Since it also offers health benefits like fighting infections, kiwi helps keep the whole body healthy, too.

Improves bone density and sleep.

9. Meats

Fish and poultry
Salmon, mackerel, tuna, herring, chicken, turkey, lamp, lean beef – buy meats and poultry that are grass-fed, free range, hormone free and antibiotic free.

10. Eggs: Buy organic.

11. Other good foods:

- Non-gluten whole grains - Oats, buckwheat and millet
- Cinnamon
- Walnuts
- Adaptogenic herbs (helps with stress, pain, fibromyalagia, sleep problems) and foods like Ashwagandha, Schisandra fruit, Tumeric, Rhodiola, Moringa

- Resveratrol (antioxidant and anti-inflammatory properties, lowers cholesterol, helps against multiple sclerosis, dementia and Alzheimer) – grapes, blueberries, cranberries, peanuts.
- Chia seeds
- Flax seeds
- Pumpkin seeds
- Coconut products
- Condiments for dipping (hummus, guacamole, salsa)
- Health oils (coconut oil, almond oil, macadamia-nut oil)
- Nut butters and spreads (almond and coconut butter)
- Pure wrap coconut wraps

12. Sample "Mood-Boosting Plate"

Meal	**Example**
Breakfast	Oatmeal topped with berries and walnuts
Lunch	Grilled salmon with quinoa and leafy greens
Snack	Yogurt with chia seeds and dark chocolate
Dinner	Lentil soup with veggies and olive oil
Drink	Tea or water with lemon

13. SAFFRON

Saffron's bioactive carotenoids and volatile oils confer strong anti-inflammatory and antioxidant effects.
These mechanisms overlap with its mood-enhancing and neuroprotective benefits.
Saffron is a spice derived from the *Crocus sativus* flower.
Known for its vibrant red color and high cost, it's traditionally used in cooking and medicine.

Mental Health Benefits

- **Depression:** Multiple studies suggest saffron may be as effective as conventional antidepressants for mild to moderate depression.
- **Anxiety:** Saffron has shown anxiolytic (anti-anxiety) effects, helping reduce symptoms in clinical trials.
- **Premenstrual Disorders:** It may alleviate symptoms of PMS and PMDD, offering a natural alternative to pharmaceutical treatments.
- **Cognitive Health:** Early research indicates saffron could support memory and cognitive function, with potential applications in mild cognitive impairment and Alzheimer's disease.

Mechanisms of Anti-Inflammatory Action

- **NF-κB inhibition:** suppresses transcription of pro-inflammatory genes.
- **Cytokine modulation:** decreases IL-1β, lL-6, TNF-α levels.
- **COX and LOX enzyme inhibition:** reduces prostaglandin and leukotriene synthesis.
- **Oxidative stress reduction:** increases total antioxidant capacity and glutathione.
- **Microglial regulation:** limits neuroinflammation in brain tissue (animal and cell studies).

Saffron and Systemic Inflammation

- **Human evidence:**
    - Supplementation (20–100 mg/day) can reduce serum CRP and malondialdehyde (MDA) in metabolic syndrome and diabetic patients.

- Improved endothelial function and decreased oxidative stress biomarkers.

Saffron, Inflammation, and Mental Health

- Chronic inflammation contributes to **depression, anxiety, and neurodegeneration**.
- Saffron targets this pathway via:
  - **Anti-inflammatory signaling** (lowering cytokine activity in the CNS).
  - **Monoamine modulation** – increases serotonin, dopamine, and norepinephrine.
  - **Neuroprotective actions** – prevents oxidative neuronal injury and hippocampal damage.

Research Evidence – Mood and Cognition

- **Meta-analysis (Lopresti & Drummond, 2014, *Hum Psychopharmacol*)** – Saffron extracts (30 mg/day) comparable to fluoxetine and imipramine in mild-to-moderate depression.
- **Clinical trials (2016–2022)**: Saffron reduces depressive and anxiety symptoms in adults, with improvements in sleep and stress biomarkers.
- **Inflammatory biomarkers**: Several trials show reductions in IL-6 and CRP after saffron supplementation in patients with depression and metabolic conditions

Dosage and Safety

- **Typical dose:** 20–100 mg/day of standardized saffron extract (2% safranal, 3% crocin).
- **Safety:** Well tolerated; mild dizziness or GI upset in rare cases.

- **Cautions:** Pregnancy (uterotonic in high doses), and potential interactions with serotonergic drugs.

How It Works

- Saffron's active compounds, such as crocin and safranal, are believed to influence serotonin levels in the brain—similar to how many antidepressants work.
- It also exhibits antioxidant and anti-inflammatory properties, which may contribute to its mental health benefits.

Considerations and Side Effects

- Generally well-tolerated in doses used for supplementation.
- Possible side effects include nausea, dizziness, or dry mouth, especially at high doses.
- Always consult a healthcare provider before starting any supplement, especially if you're on medication.

Research Outlook

- Saffron is gaining traction in integrative and functional psychiatry as a complementary treatment.

14. FLUSHING TOXINS OUT WITH CASTOR OIL

Castor Oil

Castor oil is a natural vegetable oil extracted from the seeds of the *Ricinus communis* plant.
Known for its thick texture and unique fatty acid composition, especially ricinoleic acid.

It has been used for thousands of years as a natural remedy for digestion, skin, and overall wellness.
Castor oil remains one of nature's most powerful remedies for gut cleansing and beyond.
From relieving constipation and supporting digestion to boosting skin and hair health, it's a true multi-purpose oil.
Used wisely and safely, castor oil can be an essential part of your natural wellness toolkit.

Castor Oil and Gut Cleansing

One of the most powerful and well-known uses of castor oil is for gut cleansing. When consumed, the ricinoleic acid in castor oil stimulates the intestines, causing natural contractions that help move waste and impurities out of the digestive system.
This makes it an effective natural method to relieve occasional constipation and support overall digestive health.

Why Castor Oil is the Best for Gut Cleansing

- Natural and effective: Unlike harsh chemical laxatives, castor oil comes from a plant source.
- Fast-acting: Results are often noticeable within 2–6 hours of consumption.
- Deep cleanse: Helps empty the intestines, giving a "reset" feeling to the gut.
- Versatile use: Can be taken internally or applied externally (as packs) for digestive support.

How to Use Castor Oil for Gut Cleansing

Here's a traditional method for using castor oil as a gut cleanse.
Always consult your healthcare provider before use, especially if pregnant, nursing, or on medication.

1. Take 1–2 tablespoons of cold-pressed castor oil on an empty stomach.

2. Mix with a small amount of warm water, juice, or ginger tea to mask the strong taste.
3. Stay hydrated by drinking water throughout the day.
4. Expect results within a few hours. Stay near a restroom as it works quickly.

Note: Castor oil should not be used as a daily laxative. It is best for occasional cleanses or relief of temporary constipation.

Other Powerful Uses of Castor Oil
Beyond gut cleansing, castor oil is a multi-purpose natural remedy with a wide range of benefits for the body, skin, and hair.

- Skin care: Moisturizes dry skin, soothes irritation, and may help with acne scars.
- Hair growth: Popular as a scalp treatment to strengthen hair and promote thickness.
- Joint and muscle relief: Used in massage or packs to ease soreness and stiffness.
- Immune support: Castor oil packs applied to the abdomen are believed to stimulate lymphatic flow.
- Wound healing: Its antimicrobial properties help protect cuts and abrasions.

Precautions and Safety
While castor oil is natural, it is also very potent.
Overuse may cause cramping, diarrhea, or dehydration.
Pregnant women should avoid internal use as it can stimulate uterine contractions.
Always start with a small dose and monitor how your body responds.

15. RESTORING THE GUT WITH L. reuteri yogurt:
https://emea01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.facebook.com%2Fshare%2Fr%2F167Qxs9GYP%2F%3Fmibextid%3DwwXIfr&data=05%7C02%7C%7C09218c22b0a649f0a38d08dd4dbcf428%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C638752196126860149%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIsIlAiOiJXaW4zMiIsIkFOIjoiTWFpbCIsIldUIjoyfQ%3D%3D%7C0%7C%7C%7C&sdata=S2ZkfopTwGD5%2FYfBx%2By2B7q1E%2B%2FRr6KhTLU0W0t%2BWR8%3D&reserved=0

A leaking gut leads to diabetes, autoimmune deceases, high blood pressure and other diseases. To heal a leaking gut cut out grains, lectins and the night shade family (eggplant, tomatoes, potato and tomatillos).

Ginger: Brew a cup of ginger tea. Ginger is known for its anti-inflammatory properties. It reduces bloating and helps with digestion.
Cinnamon: Balance sugar levels and has antimicrobial properties.
Turmeric: Turmeric has potent anti-inflammatory and antioxidant effects.

How to make L. reuteri yogurt: A step-by-step guide
https://drdavisinfinitehealth.com/2019/07/how-to-make-l-reuteri-yogurt-step-by-step/

This “yogurt” fermented with two unconventional strains of *Lactobacillus reuteri* achieve effects that include:

- Smoothing of skin wrinkles due to an explosion of dermal collagen
- Accelerated healing, cutting healing time in almost half
- Reduced appetite, the so-called “anorexigenic” effect—food still tastes good, but you are almost completely indifferent to temptation

- Increased testosterone in men
- Increased libido
- Preservation of bone density—Obtaining *L. reuteri* is one of the most important steps you can take to prevent osteoporosis
- Deeper sleep—though this benefit is enjoyed by less than 20% of people
- Increased empathy and desire for connectedness with other people
- Probiotic effects that may include prevention of small intestinal bacterial overgrowth,
- The majority of benefits are a result of *L. reuteri*'s ability to provoke hypothalamic release of oxytocin, a hormone that is proving to be the key to substantial age-reversal and health effects.

You will need:

–Glass or ceramic bowl or other vessel large enough to hold at least one quart of liquid

–2 tablespoons of prebiotic fiber such as inulin or raw potato starch

–Starter: Either 10 tablets BioGaia Gastrus or 2 tablespoons previous batch of *L. reuteri* yogurt (whey or curds or mixture of both)

–1 quart of half-and-half or other liquid (to make with coconut milk, several additional steps and ingredients are required)

–Some method of maintaining at 100 degrees F (37.8).

Yields: Around 8 one-half-cup servings

Method:

Make sure your bowl or other vessel is clean after washing with hot soap and water.

Add 2 level tablespoons of prebiotic fiber (inulin)

Add 10 crushed tablets of Gastrus (that provide 200 million CFUs of *L. reuteri*, a relatively small number). Crush the tablets with a mortar and pestle or by putting into a plastic bag and crushing with a rolling pin or heavy bottle/glass until reduced to a coarse powder. (The tablets are

flavored with mint and mandarin, but the taste does not show in the final product, nor in subsequent batches.) Once you have made your first batch, make subsequent batches with two tablespoons of the prior batch, rather than crushed tablets; it can be any mixture of whey or solid curds, as both contain *L. reuteri*.

Mix either crushed tablets or 2 tablespoons prior yogurt with prebiotic fiber.

Add a little, e.g., 2 tablespoons, of your choice of dairy; I used organic half-and-half, as this yields the best texture. Make a slurry by stirring; this prevents clumping of the prebiotic fiber.

Stir in remainder of half-and-half or other liquid.

Cover lightly with plastic wrap or other means. Ferment by maintaining at 100 degrees F (37.8) for 36 hours. Prolonged fermentation—far longer than the 6 or so hours of commercial yogurts that explain why the bacterial counts are so low–in the presence of prebiotic fibers yields far higher bacterial counts in the tens to hundreds of billions per serving.

I used a basin-type sous vide device, but you can use a stick sous vide, yogurt maker with adjustable temperature control, or Instant Pot. (Just be careful with the Instant Pot or yogurt makers without adjustable temperature, as they are set to be compatible with conventional yogurt microorganisms and are often too hot and kill *L. reuteri;* if your device heats to 110 degrees F or higher, it will likely kill L. reuteri and you should find an alternative means of heating. If in doubt, turn on your device and measure the temperature reached with a thermometer first before you ruin a batch.) Keep your materials out of the way of fans, heating/cooling vents, or other sources of air contamination.

The end-result for me is rich, thick, and delicious, better tasting—and with far higher probiotic bacterial counts—than anything you can buy in a store. Once refrigerated, the “yogurt” is so thick that it can stand upright on a plate.

Serve with fresh or frozen berries.

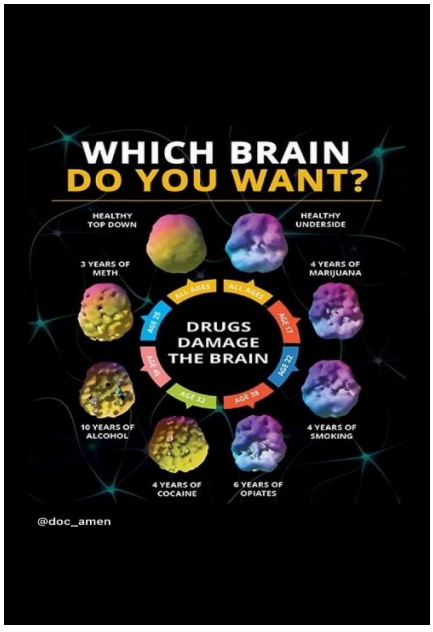
16. WHAT TO AVOID

Ultra-processed foods → inflammation and gut imbalance

Trans fats → impair cell function and mood (microwave popcorn, frozen pizza, fries, doughnuts, fried chicken..

17. STOP THE SUGAR

Sugar causes metabolic deceases such as cancer, Alzheimer, kidney disease and heart problems.
Sugar depletes B1 reserve which leads nerve damage (feet burning), anxiety, insomnia, overthinking and memory problems.
Zink gets depleted which causes hair loss, skin problems, eye problems, infections, wounds take long to heal and loss of taste or smell.
Mitochondria need to be improved to resist the forming of metabolic deceases.



18. Risk factors to brain health

- Alcohol
- Drugs
- Smoking
- Marijuana – it stays 30 days in your system
- Concussions (sport injuries)
- Head injuries
- Exposure to solvents, pesticides, ..
- Mold
- Viruses
- Electromagnetic fields (power lines, cellphone use)
- Sleep apnea
- Noise can damage the delicate nerve endings that transfer the electrical information from the hair cells inside your ear to your brain, potentially causing inflammatory reactions within the brain itself.
- Cholesterol – food to combat it: Almonds, Olive Oil, Asparagus, Oatmeal, Pinto Beans, Blueberries, tomatoes, Avocados, Dark chocolate, Barley and Eggplant.

19. THE EFFECT OF ALCOHOL ON THE GUT

Alcohol doesn't only affect the brain and liver — it also has **major impacts on the gastrointestinal (GI) tract**.

The gut is home to the **microbiome**, a community of microbes essential for digestion, immunity, and mental health.

Alcohol disrupts this balance, leading to inflammation, poor nutrient absorption, and disease risk.

Alcohol disrupts gut health at every level — structural, microbial, and immune.

Protecting your gut means protecting your **overall health and mental well-being**.

Effect Area	Alcohol's Impact
Gut lining	Damages barrier → leaky gut
Microbiome	Reduces good bacteria, increases harmful ones
Digestion	Impairs nutrient absorption, causes gastritis
Immunity	Increases inflammation
Brain	Affects mood and cognition via gut–brain axis

Alcohol and the Gut Lining

- The gut lining acts as a **protective barrier** between the intestines and the bloodstream.
- Alcohol:
  - **Damages intestinal cells** and weakens tight junctions.
  - Causes **"leaky gut"**, allowing toxins (like endotoxins) to pass into the blood.
  - Triggers **systemic inflammation** and can stress the liver (via the gut–liver axis).

Alcohol and Gut Microbiota

- Alcohol disrupts the **microbial balance**:
  - Decreases beneficial bacteria (like *Lactobacillus* and *Bifidobacterium*).
  - Increases harmful bacteria (like *Proteobacteria*).
  - Reduces microbial diversity overall.
- These changes can contribute to:
  - Digestive problems
  - Inflammation
  - Mood and cognitive disorders (via the gut–brain axis)

Alcohol and Digestion

- Alcohol interferes with **digestive enzyme secretion**, leading to:
    - **Poor nutrient absorption** (especially vitamins B1, B12, folate, and zinc).
    - **Gastritis** (inflammation of the stomach lining).
    - **Acid reflux** and **ulcer formation**.
- Chronic alcohol use can damage the **pancreas**, further impairing digestion.

Immune and Inflammatory Effects

- Alcohol activates immune cells in the gut, increasing **cytokine release** (inflammatory molecules).
- This chronic inflammation contributes to:
    - **Irritable bowel syndrome (IBS)**
    - **Liver inflammation (alcoholic hepatitis)**
    - **Increased infection risk**

Gut–Brain Consequences of alcohol

Disruption of the gut microbiome can alter neurotransmitter production (e.g., serotonin, GABA).

This may lead to:

- **Anxiety or depression**
- **Sleep disturbances**
- **Cognitive decline**

The result: Alcohol affects both the **gut and the brain**, forming a harmful feedback loop.

Recovery and Protection

To reduce or reverse alcohol-related gut damage:

- **Stop alcohol consumption.**
- Eat a **fiber-rich, probiotic diet** (yogurt, kefir, sauerkraut).
- **Stay hydrated**.
- Include **antioxidant-rich foods** (fruits, vegetables, green tea).
- Consult healthcare professionals if chronic digestive symptoms persist.

20. GLUTEN

Gluten-related inflammation may contribute to mental health issues such as anxiety, depression, and cognitive dysfunction—even in people without celiac disease.

What Is Gluten and Why It Matters

- **Gluten** is a protein found in wheat, barley, and rye.
- In people with **celiac disease**, gluten triggers an autoimmune response that damages the small intestine and can lead to systemic inflammation.
- Even those without celiac disease may experience **non-celiac gluten sensitivity**, which can cause symptoms including fatigue, brain fog, and mood disturbances.

Inflammation and the Brain

- Gluten-induced inflammation can release **cytokines**, inflammatory chemicals that enter the bloodstream and may cross the **blood-brain barrier**, affecting brain function.
- This inflammation is linked to:
    - **Mood disorders** like depression and anxiety

- **Cognitive issues** such as memory problems and brain fog
- **Behavioral changes** including irritability and fatigue

Mental Health Impacts

- Studies suggest gluten may influence **neurotransmitter activity**, particularly serotonin, which plays a key role in mood regulation.
- People with gluten sensitivity often report:
  - Increased **anxiety and depression**
  - Difficulty concentrating or **mental fatigue**
  - **Sleep disturbances** and emotional instability

21. SLEEP

- Between 22:00 and 2:00 we produce the highest amount of melatonin. Melatonin influence HGH secretion which helps with your body burning fat, repair collagen, regenerate body tissue, improve bone density, enhance immunity, and repair cells.
- Sleep is essential for many cognitive functions such as memory consolidation, neuroplasticity, toxin removal and emotional health.
- Lack of sleep may also affect our psychomotor performance (slow reaction time) and put as at risk of Alzeimer's.
- Lack of sleep can also be associated with diabetes, obesity, cardiovascular diseases and impaired immunity. Sleep will affect your brain health.

Improving sleep

- No bright light or screentime between 23:00 and 4:00.
- No caffeine, alcohol and nicotine.
- Alcohol use leads to non-healthy sleep patterns.
- Eat 2 kiwifruits 1 hour before bedtime.
- Turn your bedroom into a sleep-inducing environment.
- Establish a soothing pre-sleep routine.
- Keep your internal clock set with a consistent sleep schedule.
- Lighten up on evening meals.
- Balance fluid Intake
- Exercise early
- Before going to bed reflect on everything that went well that day.

22. INSULIN AND LIFESTYLE

Insulin is a hormone acting as “body messengers” that communicate and respond to everything from hunger signals to emotions and more. Its major responsibility is to help regulate blood sugar.

Insulin is produced in the pancreas. When you eat foods that contain any form of sugar, that sugar gets broken down into glucose.

Examples of foods that will get broken down into glucose: ice cream, cookies, cakes, sweets, pies, dried fruit, soda, juices, bread, pasta, crackers, cereals…

Those foods, once simplified into glucose molecules (blood sugar) are then escorted *by* insulin to the liver and muscle cells where they are stored for later use as a form of energy (down the line). This stored form of glucose is called glycogen. Provided everything on the inside is functioning the way it was designed to function, that is how this works. However, if you overly consume

those foods that break down into glucose (whether they be “healthy” or not) you can accidentally put yourself into a state of **insulin resistance.** Insulin resistance isn’t a disease; it’s more a state of being in which insulin and glucose no longer maintain that working relationship.

How does this happen? When you frequently eat too much sugar or too many carbs for *your* unique body to handle, your body in a sense becomes desensitized to it.

The cycle that creates insulin resistances aka “The Dopamine Trap” goes something like this:

Eat too Much Sugar/Carbs → leads to → Chronically elevated levels of insulin → leads to → Elevated levels of serotonin → leads to → Elevated levels of dopamine *(creating a sensation of temporary pleasure)* → leads to → Sugar cravings + carb cravings + wild blood sugar highs and lows.

You repeat this cycle over and over and over again.

But it doesn’t end there. As you continually seek to fulfill those cravings and receive peaks of temporary pleasure, the amount of sugar and carbohydrate you need in order to fulfill those demands increases.

Your body will eventually reach its threshold for dealing with all of this, which is the point at which insulin resists working as it’s normally supposed to and insulin resistance follows.

Insulin resistance can lead to diabetes, heart disease**,** mental health problems and other health problems if left untreated.

Changes to improve your insulin sensitivity:
Cut down on: carbs, trans fat foods (pies, fries, doughnuts and foods with added sugars.
Add to your diet: turmeric, garlic, ginger, cinnamon and green tea.

23. HYPERTENSION (Resource: https://www.aavante.com/)

Hypertension or high blood pressure is a condition in which the pressure of your blood against the walls of arteries is so high that it gives rise to various health problems.

Furthermore, there are multiple stages of high blood pressure. A blood pressure reading of 120 over 80 (120/80) is studied as normal BP.

Moreover, the other ranges of hypertension are:

#1. Elevated HBP: 120-129 / less than 80

#2. Stage 1 HBP: 130 over 80 / 139 over 89

#3. Stage 2 HBP: 140 and above / 90 and above

#4. Hypertension Crisis: 180 and above /120 and above

It is ordinarily known that a consistent rise in blood pressure damages your blood vessels over time.

However, many don't know that the same can influence your mental health as well.

Connections between high blood pressure and mental health and how it puts your emotional health at risk:

- If left untreated, hypertension can increase the discharge of stress-related hormones in the blood.

  And what's worse is high stress eventually leads to hypertension. There exist a two-way relationship between elevated stress and hypertension affects your mental health severely.

- By interfering with your mood-regulating chemicals, the chronic inflammatory chemicals can cause an imbalance in your mental health.

- It's a widely known fact that hypertension gives rise to frequent and acute aggressive behaviour.
- It has been found that people who were oblivious of their condition of hypertension have shown signs of anxiety and restlessness.
- As per a study, the condition of high blood pressure in mid-life (40-64 years) can lead to dementia later on in life. To clarify, high blood pressure leads to narrower arteries affecting the flow of blood in the brain. Low blood flow to the brain causes a lack of nutrients and oxygen which eventually damages the brain cells. Vascular dementia has been found in people who have had hypertension in their mid-life. This condition is the consequence of low blood flow in the brain.

Changes one can make to improve blood pressure

- Reduce stressors
- Stress management
- Eat more fruits, vegetables, and low-fat dairy foods
- Cut back on foods that are High in saturated fat, cholesterol, and trans fats
- Eat more fish, poultry, and nuts.
- Foods to cut down on:
- Salty and sugary foods
    - Caffeine and alcohol
    - Red meats

Exercise increases blood flow and tends to counter some of the natural reduction in brain connections that occur during aging, in effect reversing some of the problems.

Stay mentally active

Relaxation and meditation offer a bunch of benefits for the entire body: It improves brain function and boost mood, combats stress and anxiety, lowers cortisol levels, increase blood flow to the brain and activates the brain's prefontal cortex (the part that is associated with judgment and impulse control).

24. PAIN MANAGEMENT

Minimize pain medication by practicing alternative ways of pain management such as:

- Body posture
- Exercises to strengthen muscles and relieve pain
- Avoid unnecessary pressure on joints
- Avoid food and drinks which increase pain or inflammation
- Monitor pain
- Use alternative creams, supplements and food to assist with pain management
- Heat and cold packs

25. MY FOCUS

- What I am thinking, conversations with myself and others as well as my everyday habits and attitude can determine the quality of my life and my peace.
- What we choose to focus upon, can do more than change your brain. **You can damage it**, especially if you choose to focus on something that makes you frightened or angry. In psychology, this is called "rumination," and it is clearly hazardous to your health. In a Stanford brain-scan study, people who focused on negative aspects of themselves, or on a negative interpretation of life, had increased activity in their amygdala. This generated waves of fear, releasing a torrent of destructive neurochemicals into the brain.

- Meditation can delay aging according to research studies. “Meditation doesn’t just improve mental and physical health in the present; it also slows the aging process and can help meditators stay mentally sharp into old age. Once people reach their mid- to late 20s, their brains begin to lose volume and weight, which can eventually result in the loss of some functional ability. But when researchers from UCLA compared brain scans of 50 people who meditated for at least four years with scans of 50 people who didn’t, they found that those who engaged in the practice had smaller reductions in gray matter—the neuron-containing tissue responsible for processing information. “What we expected was to see this in just a few small regions,” Dr. Florian Kuth, the study’s co-author, tells HuffingtonPost.com. “But what we saw was almost the entire brain. That was a big surprise.” Meditation would appear to be a powerful tool for reducing the risks for age-related cognitive decline and neurodegenerative disorders, such as Alzheimer’s disease.
- The renewing of our mind a concept neuroscience now knows as neuroplasticity.
- This is why we believe that meditation will help maintain dendrite function: It lowers the overall levels of stress while simultaneously stimulating cognitive alertness. In fact, evidence now suggests the more you exercise your brain, the more you can slow dendrite deterioration, and thus preserve your memory and cognitive skills.

Questions to ask yourself everyday

- What am I feeling right now?
- What is taking up the majority of my mental space right now?
- How will I move my body today for at least 20 min?
- Who can I socialize with to lift my mood?

- What will I do today to feed my soul?
- What time do I need to sleep so I can get 8 hours of sleep?
- How is the food I am eating helping me?

List your 10 day challenge by naming the changes in terms of food, drinks, attitude and habits:

FOOD		**DRINKS**		**HABITS**	
YES	**NO**	**YES**	**NO**	**YES**	**NO**

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WORKSHEET: GUT–BRAIN LINK – FOOD FOR A BETTER MOOD

Note: Always consult a healthcare professional before making major dietary changes.

1. WHY THIS MATTERS

Eating well supports:

☐ Mood

☐ Focus

☐ Memory

☐ Stress regulation

Reflection:

How does my current diet affect my mood and energy?

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2. UNDERSTANDING THE GUT–BRAIN LINK

Key Idea: Your gut and brain constantly communicate.

✓ The gut produces neurotransmitters (like serotonin)

✓ 90% of serotonin is made in the gut

✓ Gut health affects emotions, stress, and thinking

Reflection:

What signs do I notice when my gut is not healthy?

☐ Bloating

☐ Fatigue

☐ Mood swings

☐ Anxiety

☐ Other: _____

3. FOODS THAT SUPPORT A HEALTHY MOOD

Top Mood-Supporting Foods

Tick the ones you already eat:

☐ Blueberries
☐ Oats
☐ Olive oil
☐ Avocado
☐ Dark chocolate (80%+)
☐ Onions & garlic
☐ Nuts & seeds

4. MAGNESIUM & YOUR MOOD

Low magnesium may cause:
☐ Anxiety
☐ Poor sleep
☐ Fatigue
☐ Muscle cramps

Magnesium-rich foods I will add:

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5. STRESS & CORTISOL CHECK

High stress can lead to:
☐ Poor sleep
☐ Weight gain
☐ Anxiety
☐ Irritability

My stress-reducing plan:
☐ Exercise
☐ Tea / relaxation
☐ Breathing / meditation
☐ Other: _____

6. WHAT TO LIMIT OR AVOID

☐ Ultra-processed foods
☐ Excess sugar
☐ Trans fats
☐ Alcohol

☐ Gluten

Reflection:
Which of these affects me the most?

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7. SLEEP & MENTAL HEALTH

Healthy sleep helps:
✓ Memory
✓ Emotional balance
✓ Brain repair

My sleep habits:
Bedtime: _____
Wake time: _____

One improvement I will make:

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8. DAILY HABITS CHECK-IN

Answer daily:

• What am I feeling right now?

• What is taking most of my mental energy?

• How will I move my body today?

• What will I eat to support my brain?

9. 10-DAY GUT–BRAIN CHALLENGE

Fill in your goals:

	YES (I will do this)	NO (I will avoid this)
FOOD		
DRINKS		
HABITS		

10. MY PERSONAL GOAL

What is ONE realistic change I will commit to this week?

11. FINAL REFLECTION

After improving my gut health, I want to feel:

☐ Happier

☐ Calmer

☐ More focused

☐ More energetic

My motivation: