

A silhouette of a human head in profile, facing right, filled with a variety of fresh fruits and vegetables. The produce includes red bell peppers, blueberries, cherry tomatoes, a head of lettuce, and a stalk of broccoli. The entire composition is set against a dark background.

Nutrition Therapy for Mental Health

Lisa Hyatt, M.S., CHC

My Story of Recovery from Anxiety Panic Disorder

An unexpected path

Functional Medicine addresses the underlying causes of disease

It is an evolution in the practice of medicine that better addresses the healthcare needs of the 21st century.

By shifting the traditional disease-centered focus of medical practice to a more patient-centered approach, Functional Medicine **addresses the whole person, not just an isolated set of symptoms**

Functional Medicine supports the unique expression of health and vitality for each individual.

Functional Medicine **enables physicians and other health professionals to practice proactive, predictive, personalized medicine and empowers patients to take an active role in their own health**

Insomnia

Bipolar

Depression

Diabetes

**High
Cholesterol**

IBS

Arthritis



All isolated set of symptoms
or are they interconnected?

Epigenetics

Behavior and environment- influence which of our genes are turned on or off. This has been one of the biggest breakthroughs in medicine.

“What you eat, how you move, how you restore your system, along with your thoughts, feelings and social connections regulate your genes. And those genes end up creating the expression of who you are and how you are. You can turn on genes that create health or disease, weight gain or weight loss. “

-Mark Hyman, M.D.

“For centuries scientists have debated whether mental illness results from inborn or environmental factors. These arguments are now fading away as most experts now agree that both factors are highly important. Gene expression can go awry from toxic chemicals, emotional trauma, oxidative stress, medication side effects, abnormal nutrient levels.”

-William J. Walsh, PhD.

Nutrition: A Necessary Science

- Complex biochemical system of pathways running 24/7
- Vitamins, minerals, nutrients all needed for these pathways to run correctly and optimally
- Role of nutrients in the cause, treatment, and prevention of disease.

“
Let food be thy medicine
and medicine be thy food

Hippocrates



Farmacy



One should eat to live, not live to eat. -Molière

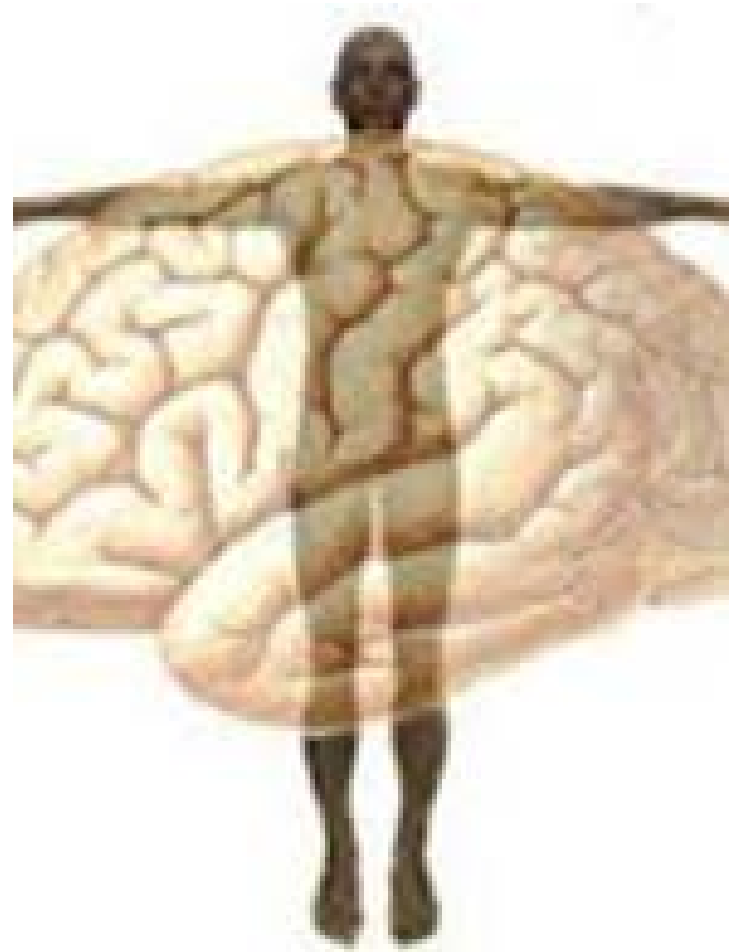


**what we eat and how
we take care of our
bodies directly
affects brain
function**

Mind-Body Connection

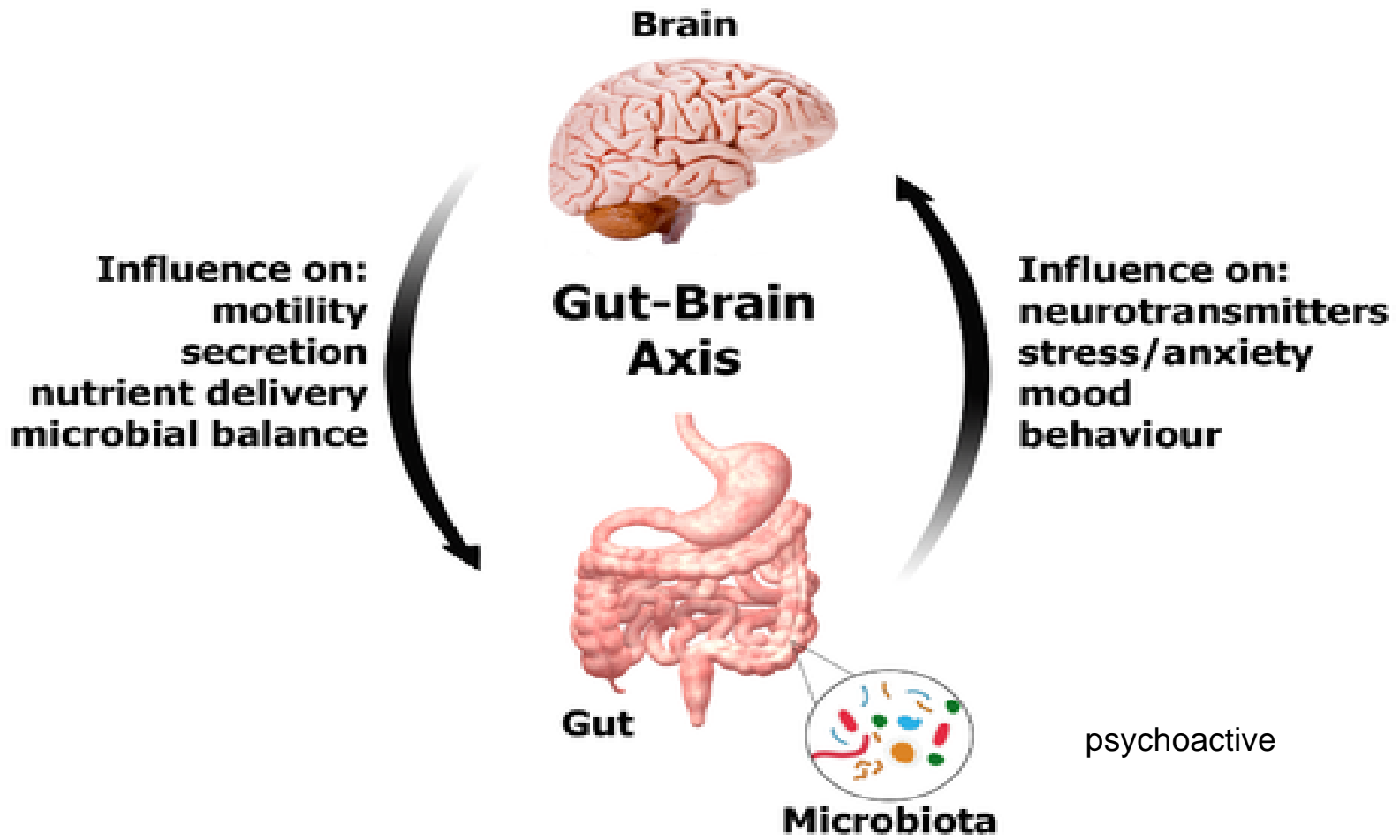
“This is the law of malnutrition: When your food quality or quantity deteriorates, your mood is the first casualty, even before your physical health begins to deteriorate.”

-Julia Ross



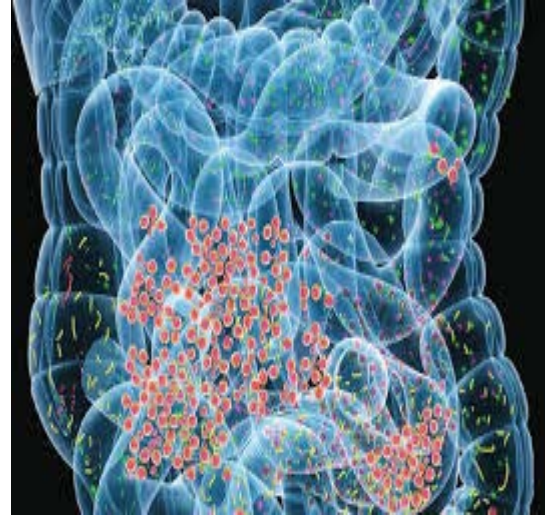
“In a very real sense, you have two brains — one in your head, and one in your gut. Both are created from the same tissue during fetal development, and they’re connected via your vagus nerve, the tenth cranial nerve that runs from your brain stem to your abdomen.”

-Dr. Mercola, M.D.



Intestinal Microbiome

- protect the lining of your intestines
- provide a strong barrier against toxins and “bad” bacteria
- limit inflammation
- improve how well you absorb nutrients from your food
- activate neural pathways that travel directly between the gut and the brain.




In 2014, the U.S. National Institute of Mental Health spent more than \$1 million on a new research program zeroing in on the microbiome brain connection.

Can changing the bacteria in our gut improve brain function?

2016- 1st human trial to prove that changing the gut microbiota by increasing good bacteria improves brain function



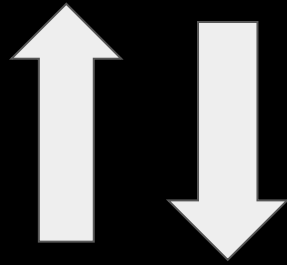


95% of serotonin receptors
found in the lining of the gut

Neurotransmitter

Sleep, Appetite, Mediates moods, Inhibits
pain.

Serotonin, Gaba,
Dopamine, Endorphins



Through the gut brain axis-
gut bacteria deliver neuroactive substances that
influence the brain

GABA: the calming brain chemical



**Low = high anxiety, panic, stress,
inability to relax**

**Depleted from: Stress, Trauma,
Pain, Fear, Anxiety, Anger, Grief
Panic**



**Sufficient = Relaxed, good stress
tolerance**

Good Bacteria
secretes GABA



Happy Gut
= Happy
Brain

- Specific types of probiotics (lactobacillus, and bifobacterium) produce GABA abundance
- Multiple studies- already shown promise in reducing anxiety

-Journal of applied microbiology

Mice engaged in obsessive-compulsive repetitive behaviors were pacified when given a strain of the bacterium *Bacteroides fragilis*.

-New York Times June 23, 2015

GABA is used by inhibitory synapses more than any other neurotransmitter in the human brain and plays a large role in inhibiting over excitation to control anxiety and stress.

-Weeks, B., 2009

Treatment with Synthetic GABA agonists

Synthetic drugs that agonize GABA receptors-
used to control stress, anxiety, and mood.

Reduce anxiety, depression, pain,
schizophrenia, and drug and alcohol addiction.

Xanax, Valium, and Ambien are
GABAergic in nature and have been
found to improve GABA signaling and
have positive results in helping with
anxiety, depression, and insomnia.

An Integrative Approach

“due to the potential side-effects and risks associated with the use of these drugs, there is a great deal of popular and medical interest in the use of dietary supplements and nutraceuticals in order to manage stress and anxiety”

How we feel both physically and mentally is highly influenced by the state of our microbiome.

The balance of good and bad bacteria is critical.

First evidence that friendly bacteria from food can affect brain function in humans by rebalancing microbiome.



High vegetable, fiber = healthier gut and brain

Western diet (high fat, carbs)= physical and mental health problems

Leafy Greens



Mental Health Benefits

#1 mood enhancing veggie

Reduce stress, anxiety,
depression

B vitamins- support brain against
stress, anxiety,
depression

Magnesium- calming mineral

Vitamin K- Preserves good mood
omega 3's



Healthy Fats

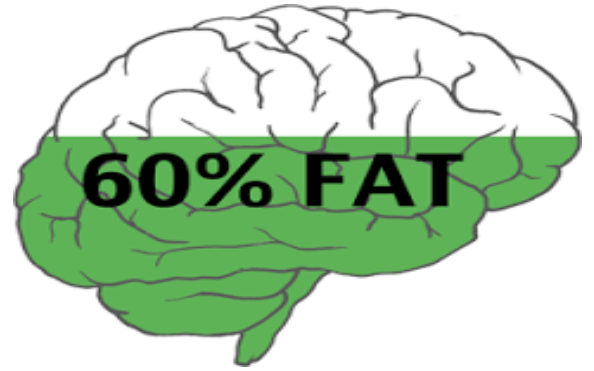


When society became fat phobic...



As we shifted from eating a high-fat, high-fiber, low-carb diet to a low fat, low fiber, high-carb diet we began to suffer from chronic conditions linked to the brain.

- David Perlmutter, M.D



Good fat in brain creates all cell membranes in the body

With Bad fats- the brain can only make low-quality nerve cell membranes that don't function well. (trans fats, some sat fats)

A diet high in essential good fats- brain cells can manufacture higher-quality nerve cell membranes and influence nerve cells' ability to function at their peak capacity.

Omega 3's : More than just heart healthy...

Omega 3 Fatty acids go to our brains first then the body

More omega 3's we eat the better our moods

Dopamine can be raised by 40%. (enhances motivation, drive)

Used to treat severe and manic depression

Protect brain from damage caused from chronic stress

Enhances sensitivity of serotonin receptor- reduces depression, anxiety, violence, suicide

May disrupt the brain signals that trigger the characteristic mood swings seen with bipolar disorder. (Harvard University)

May have implications for successfully treating other psychiatric disorders such as depression and schizophrenia



wiseGEEK

Protein



A must for mental health: building blocks for amino acids

Precursors for neurotransmitters
(emotion generators) -

dopamine, serotonin, GABA, endorphins



Feel good neurotransmitters only made
from high protein foods



Most concentrated- beef,
chicken, fish, eggs, cheese

Contain all 9 essential
amino acids

Not Enough

vs

Enough

Anxiety

Depression

Insomnia

ADD

Alcohol/drug addiction

Energy

Focus

Blood Sugar Balance

Probiotic-rich Fermented Foods



FOODS RICH IN PROBIOTICS



Yogurt



Kimchi



Sauerkraut



Kombucha



Tempeh



Kefir

OREIDU WATSON

#SONNYGUT

“Fermented foods helped curb social anxiety disorder in young adults.”

**-Psychiatry Research 2015 -
Psych Central 2015**

Increase good bacteria in the gut

Bad Mood Foods:

A Processed Problem





Standard American Diet (SAD)

High in sugar, refined carbohydrates, trans fat, sodium and processed food

“Americans spend about 90 percent of their food budget on processed foods which contain a staggering number of artificial food additives, preservatives, colors and flavor enhancers. It’s virtually impossible to identify them all and ascertain their true impact on your health.”

- Dr. Mercola, M.D.



Sugar and White Flour



- Nutrients depleted just to break it down
- Inflammation
- Blood sugar changes

Feed pathogens in the gut \Rightarrow overtake more beneficial bacteria

Suppresses the activity of a key growth hormone in the brain (brain-derived neurotrophic factor). BDNF levels are critically low in both depression and schizophrenia.

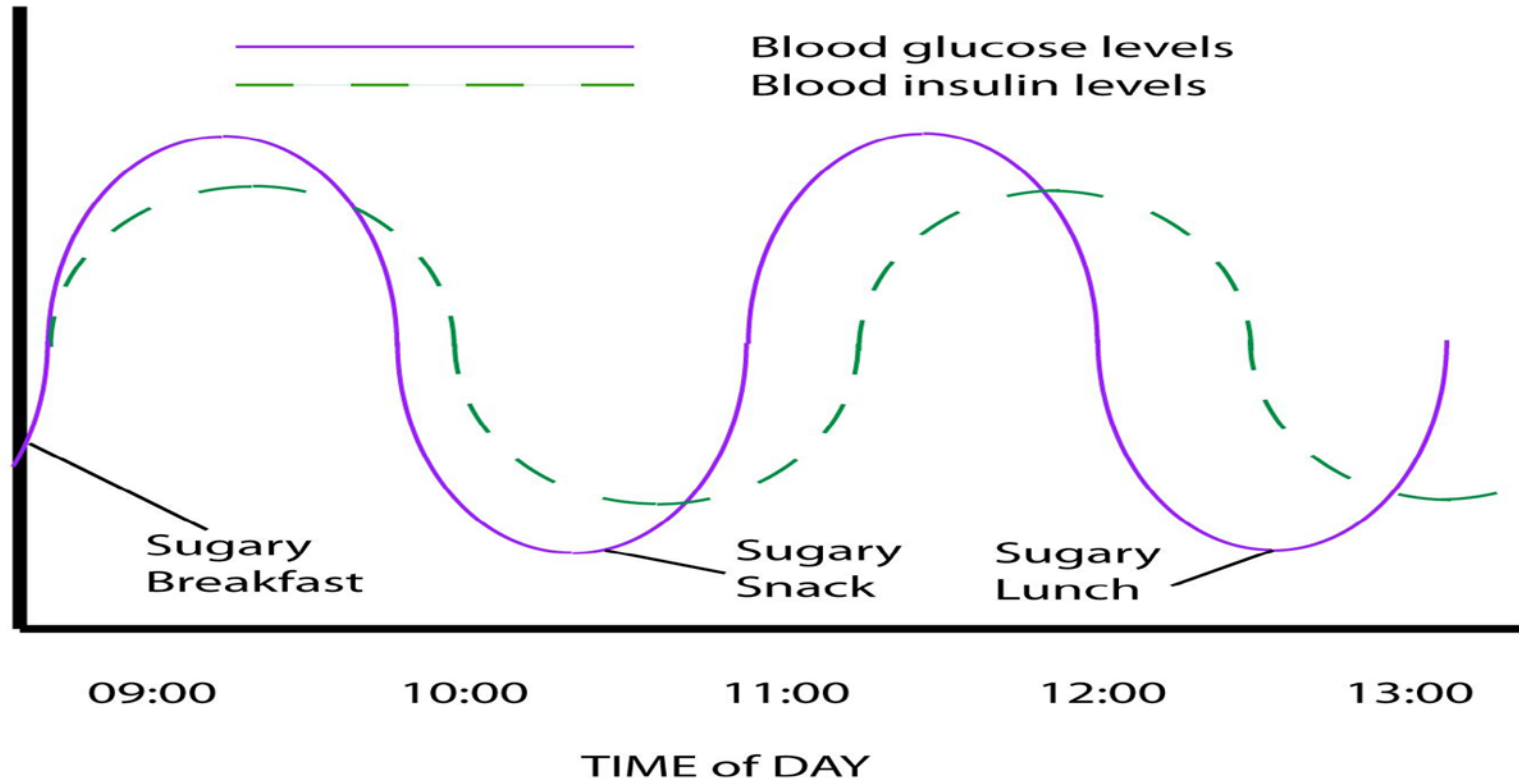
Trigger a cascade of chemical reactions in the body- promote chronic inflammation, which over the long term disrupts the normal functioning of your immune system and wreaks havoc on your brain.

Key contributors to insulin and leptin resistance, which also plays a significant role in your mental health.

- David Perlmutter, M.D



**Sugar molecules + brain proteins =
degeneration of brain and functioning**



Blood Sugar Imbalances



**Spike: Euphoria,
excited, happy, calm**



**Crash: Anxiety,
nervousness,
headaches, depression,
irritability**

“Blood sugar increase leads to depletion of serotonin, GABA, dopamine, epinephrine, norepinephrine.”

-David Perlmutter

“Hypoglycemia causes the brain to secrete glutamate in levels that can cause agitation, depression, anger, anxiety, panic attacks and an increase in suicide risk.”

-Russell Blaylock. M.D.

Food allergies can affect the CNS:

Fatigue, slowed thought processes, irritability, agitation, aggressive behavior, nervousness, anxiety, depression, schizophrenia, hyperactivity, learning disabilities



Food Allergies



“Emotional and behavioral problems, particularly symptoms of depression, anxiety, and ADHD, are common among adolescents with food allergy in the general population and, in the case of elevated levels of depressive symptoms, persist into young adulthood”

-European Journal of Allergy and
Clinical Immunology, 2016

Breaking down the
barriers to eating
healthier



\$\$\$\$ Is Eating Healthy too Expensive?? \$\$\$\$\$

"I can't afford to buy healthy food."

"Fruits and vegetables are too expensive."

"Grocery store prices are astronomical."

"It's cheaper to eat fast food."

junk food cost twice as much as whole foods....

For under \$10, you could buy...

X



\$7.50

* 1 case (24 cans) of Coke

Total: \$5.19

OR

✓

- * 1 cucumber (68 cents)
- * 1 Green Giant Valley Fresh Steamer (\$1.25)
- * 1 pound of grapes (88 cents)
- * 1 pound of bananas (47 cents)
- * 1 pound bag of brown rice (72 cents)
- * 1 box of whole-wheat spaghetti (88 cents)

Total: \$4.88



\$6.98

SPARKPEOPLE

For under \$10, you could buy...

X



- * 1 tub (4.25 pounds) Country Rich Neapolitan ice cream

Total: \$5.98

OR

✓

- * 4 pack of Dannon Activia lowfat yogurt (\$1.83)
- * 64 ounces of Silk soy or almond milk (\$2.88)
- * 1 pound bag of brown rice (72 cents)

Total: \$5.43



SPARKPEOPLE

**We can teach people
simple steps to help
stabilize moods**



Key steps:

Increase nutrient intake

Balance blood sugar

Remove Food Sensitivities

Decrease processed foods

Eat real whole foods

Cook more



Reduce systemic
inflammation

Help repair/heal gut
function

Improve neurotransmitter
function

So what can we do?

Treat the whole person and not just each symptom

Recognize that we are unique physiological beings

Teach people what to eat

Teach people how to cook and prepare meals

Teach people how to achieve this on a budget

Help make whole foods more accessible

"THE FOOD YOU EAT
CAN BE EITHER
THE SAFEST
&
MOST POWERFUL
FORM OF MEDICINE
or
THE SLOWEST
FORM OF POISON."

Ann Wigmore