

Food and Mood

by Dr. Lindsey Berkson



GOOD = GOOD
FOOD = MOOD

Food is necessary for life. It's tasty. It's nourishing. It's fun.

But food can also be dangerous.

Food can make or break your mood. It can contribute to calm or anxiety. It can create a filter, good or bad, through which you perceive your world.

Food is that powerful.

This connection between food and mood has been known for decades, but rarely embraced by typical medical clinicians. But statistics don't lie. Published research shows beyond a doubt that food intolerances and allergies are on the rise, especially in children, and with it, more anxiety, depression, and emotional distress.

Once, however, you realize the influence of food on your brain, mood, and quality of life, you can choose to make improved food choices. And have improved emotional management.

Food choices.

You make about 200 “fork-in-the-road” decisions a day. That sounds like a lot, and it is. Each choice of what to put inside your body can lift or dampen your mood, and your interpretation of reality.

There is a new field of psychology surrounding this growing understanding of the link between food and mood. It's called *nutritional psychology*.

Nutritional psychologists, and those who understand the power of food, consider that nutritional interventions should be the “first” line of defense before going to pharmaceuticals for mood issues, unless the patient is desperately ill and/or suicidal.

Food choices are now so well proven to influence depression, anxiety, insomnia, social issues, anger issues, and even memory and cognition, that to not look at dietary, nutritional, and herbal interventions before meds is doing a disservice to the patient. And to the members of their family.

Food is so powerful it can rightly be called a medicine.

But it's a medical tool with a lot less side effects than many pharmaceutical medicines. Take antidepressants for example. A huge study from McMaster University published in 2017 has shown that both *tricyclic* and *SSRI* forms of antidepressants are linked to increased risk of premature death from all causes except heart disease.

Antidepressants are not as effective in many persons as their use intended, they often cause dangerous rebound when trying to get off them, and they also increase the risk for earlier death from multiple causes by 33%.

You have to think twice before getting hooked on these meds.

And often improving food choices, and using nutraceuticals and herbs can boost mood, but without these serious complications.

The “Food Sensitivity Syndrome”

The link between food and emotional issues has been known and proven by research for about five decades. This link is often referred to as “food sensitivity syndromes”—cases in which consuming certain foods are directly linked to increased sensations of anxiety, depression, brain fog and variations on a theme of emotional distress

There is a famous study, now long forgotten, that is one of my favorite examples of the food sensitivity syndrome. It was published in the prestigious journal, *The Lancet*, a while back. But knowledge and facts don’t age over time. They hold their veracity.

This was a report about six patients with longstanding physical and mental symptoms who had not been helped by many years of conventional medical investigation and treatment. These people had severe life-disabling phobias, hallucinations, and chronic skin conditions. They couldn’t leave their homes, or interact in the world in normal ways, or hold down jobs. But their “cure” had eluded many well-intentioned and reputable doctors for years.

In this study, the patients were blindfolded. Foods were administered through a tube into their stomachs. The patients were monitored for their response.

All six patients had reproducible fears, phobias, hallucinations, dermatologic welts and rashes, and emotional distress when their unique trigger foods were put down into the stomach tube and thus entered their bloodstream.

What were the most common trigger foods? Black tea and coffee.

When these patients completely (emphasis on *completely*) removed the trigger foods from their diet, all their serious debilitating life-long issues stopped. They were no longer captives in their homes or by their phobias.

The authors of this clinical study said this small pilot trial supports the view that some foods may cause widespread and disabling symptoms in people who are sensitive to them. This article, remember, was published in *The Lancet* in the 1970s.

Food is powerful. It affects your brain. It can affect how you see your world. It can promote calm or fear. It can help you sleep or ruin it. It may be more the cause of your insomnia than a benzodiazepine deficiency.

Digestion.

The act of digestion takes food and breaks it down into nourishment. If your digestion is robust and all is going well.

When food is adequately digested, it enters your body as nourishment. It could be called your “food friend,” meaning it nourishes and supports you. If food is not adequately digested, it can actually become a “food foe,” meaning it can act against you and be harmful to your tissues, especially your brain. Food foes can adversely effect your physiology, your neuronal tissue, and your mood.

Almost 20 years ago, I wrote the first nutrition, mind, and gut book, called *Healthy Digestion the Natural Way* (Wiley). It was the first book to link the gut, the mind, and food. In it I mentioned a fascinating study that linked food issues—food foes—with anxiety and depression. This study was published in a peer review journal, *Haptogastroenterology*.

This study compared mental health scores in patients with irritable bowel syndrome and lactose intolerances to healthy patients without gut issues or food sensitivities. All participants were tested for anxiety and depression. The results showed that people with “gut issues” and “food intolerant issues” (in this case, a milk sugar or lactose insufficiency), suffered with significantly higher levels of anxiety and depression.

The authors suggested that part of the mechanism of food allergy influence on mood is mediated by mast cells. Mast cells are white blood cells that are part of our immune system. When these circular cells excessively break open, called *degranulation*, irritating granular like substances are liberated into your blood stream. These promote inflammation. They can travel throughout the highways of your blood stream, affecting far away and diverse tissues, such as your brain and nervous system. De-granulating mast cells can contribute to on-going mental and mood anguish.

How often have you heard someone complain to a practitioner that they had disabling anxiety and their practitioner recommended looking at their diet? Not often.

In today's pharmacalized world, we look toward scripts, not food, to save us.

The human race is paying a huge price for the downstream adverse issues linked to taking these meds. When the answer might be what you put into your mouth.

Diet equals how you feel and think.

Your doctor doesn't usually look at it this way. But you need to. Why? Because no one will ever care about your health as much as you do. And every drug has a shadow side, while cleaning up your diet doesn't.

Food problems on the rise

From my alma mater, the University of Michigan, a review was published in Oct. 2017 that informed psychiatrists about the food allergy/mental health link, especially in children and teens. The authors say, hey, mood docs, consider food as part of the problem, because then the fix might be food, not meds.

The Michigan authors concluded, "The prevalence of food allergy is increasing. The burden of day-to-day management of food allergy is significant and can have a negative impact on quality of life for both parents of those with food allergy, and the children themselves. This can impact social functioning, academic functioning, and mental health."

Food allergies really affect mood. Kids with food allergy experience more bullying than peers. They have greater issues identifying their emotions, in transiting from adolescence to adulthood, and in academic abilities.

Food allergies are on the rise and with them are also rising levels of *alexithymia* (difficulty in recognizing and expressing emotions).

This is significant. It means that when children ingest "foe" foods, they may be less in touch with their emotions, less likely to do well in school, and more likely to have issues maturing.

Also, "friend" or "foe" foods can play a role in obesity. Certain foe foods act similarly to morphine-like molecules within the brain. They promote

addictive eating. Thus, personal foe foods can lead to overeating. Overeating can lead to more belly fat. Increased belly fat can make it more difficult to be mindful, to regulate one's behavior, including appetite, and to feel confident within one's own body suit.

See Berkson's blog below on mindfulness and belly fat.

How are the ways foe food dings mood?

- Food that is not properly broken down can "leak" across the gut wall and travel via the blood into the brain, where it can cause inflammation, malfunction, and mood changes.
- Food can release or inhibit morphine-like molecules that promote food addiction.
- Junk food choices can decrease nutrient reserves, which block enzymatic action and hormone signals, so brain and mood function is altered.
- Food containing tryptophan increases serotonin levels in the brain and can improve mood and sleep infrastructure. Food and/or chemical reactivity's can cause mast cell release that can "stress" the autonomic nervous system and promote anxiety, mood issues, and a rainbow set of emotional distress symptoms.

Dartmouth researchers wrote a review on the increase of food allergies in children being significantly linked to increased risk of anxiety and depression, in the children as well as their family members.

Research clearly links foe foods to mental health issues.

But this has not yet trickled down into most clinical trenches.

Despite all the research, there is still not much recognition that food is a powerful mood modulator.

The Department of Psychiatry at the University of Arizona was tired of this debate, so they designed a unique study. They looked at 500 college students and tested their reactivity to foods, but also added their reactivity to scents and chemicals.

The Arizona scientists found that young adults, who are more "reactive"—either to food and/or chemicals—are more apt to have psychological patterns that include anxiety and depression. They also exhibit increases indigestion, headaches, memory problems, and overall

emotional distress. This can affect academic performance as well as social behaviors.

In other words, those with unidentified foe foods in their diet often don't feel so well physically or mentally. A huge part of their healing is identifying these unfriendly foods, removing them from their diet, improving their overall dietary choices, and boosting their overall digestive capabilities. All that is best done with practitioners that focus on nutrition, the gut, and natural answers.

What if your child suffers with anxiety, fatigue, and/or depression? Wouldn't it be better if identifying their foe foods and improving their digestion could help them, instead of giving their young and still developing brains and bodies potentially dangerous medications? Medications that are often linked to adverse brain and longevity effects?

And the benefits of improving food choices and natural answers often occur rapidly and with no complications, as can occur with pharmaceutical agents.

The big take away.

- Part of treating anxiety and depression should be identification and treatment of food and chemical reactivity's.
- Food improvement should be considered before drug intervention.
- Boosting gut, microbiome and digestive health is part of making food more your friend than your foe.
- Food choices have enormous influence over mental health and mood.
- Even if your doctors don't realize this, you can take action with food as medicine, today!

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Belly Fat & Mindfulness

by Berkson

Life often manifests as circles. One thing leading to another. Who would have thought that there might be a circle surrounding mindfulness, brain size, appetite regulation, and belly fat? But there is.

Let me present a web of scientific evidence that shows that “mindfulness” plays a significant role in being able to control the portion size of what you choose to eat. More mindfulness, less belly fat. The opposite also holds true. More fat, less mindfulness (not in all, but in many).

The bigger the belly fat, the smaller the brain volume (even in children); less mindful awareness, due to the smaller higher executive brain functioning, leads to more out-of-control appetite, and thus... more belly fat.

A vicious cycle of adiposity.

Fact #1: Mindfulness and appetite control.

Brown University researchers ran a study on nearly 400 people. They assessed people’s mindfulness with standardized awareness tests. They also tracked brain volume by MRI, waist size, and belly fat.

These researchers found that people who practiced “everyday mindfulness” —referred to as “dispositional mindfulness”—had, on the average, about one pound less belly fat compared to people who were less aware.

What is dispositional mindfulness? The authors of this study said it means being more present with your thoughts and feelings. Not being cut off from your neck down.

Of note is that these more mindful people weren’t meditators. Rather, they had personalities that tended toward more awareness. Or they had trained themselves, through various exercises, to have more intention toward awareness within the present moment. As Ram Dass might say about being in touch with yourself, “Be right here, right now.”

People with more awareness of their own feelings in the present moment were less fat.

Awareness tunes us in. We are aware of our body. We are aware when our bellies are getting full. We can stop because we can feel the stretch and discomfort. Our awareness gives us more information so we make better choices.

- Awareness tunes us into satiety.
- We stop when we've had enough to eat.
- We get less fat.

This study then begs the question, the authors say, as to which came first: “unawareness” or “belly fat?”

Are some born with less awareness and then they overeat and get more fat? Or does a bigger belly, as it grows, play a role into turning “off” your awareness and control of your appetite?

Fact #2: *Plenty of research shows that increased levels of belly fat actually cause shrinkage of the human brain, especially the gray matter, where appetite control lives.*

A brain with less volume has less appetite control. Numerous replicated studies demonstrate this. The hallmark of science is that independent labs from prestigious institutions come up with similar conclusions.

This is the case with bigger bellies being linked to smaller brain volume.

French researchers investigated the relationship between markers of obesity with MRI imaging of the brain. They looked at almost 2,000 individuals—their brain size, body mass, and waist size. They found the bigger the waist, the smaller the brain.

This inverse association between abdominal obesity and brain volume is particularly prominent for *brain gray matter volume*. Gray matter contains most of the brain's nerve cell bodies. It's called “gray matter” because nerve cells have a grayish tone. Nerve cells that are coated with insulation, called myelination, are whitish. This is because myelin is whitish in color. Myelinated nerves make up a lot of white brain matter, not gray.

Gray matter controls more executive functions. The more gray matter you have, the better your ability to evaluate rewards and consequences.

Gray matter controls muscle movement, sensory perceptions such as seeing and hearing, memory, emotions, speech, decision-making, and especially *self-control*.

Your gray matter is where appetite control has its seat of power... or falters as gray matter shrinks.

Dr. S. DeBette was the lead researcher on many of these brain/waist/weight studies. He tackled the chicken-or-egg issue of appetite control and belly fat.

Dr. DeBette's research shows it isn't brain atrophy (smaller size) that first causes dysregulation of food intake and overeating. Rather, it's the other way around. The bigger your belly fat, the more your gray matter is reduced, and this promotes your appetite controlling you, not you controlling your appetite.

Fact #3: Mechanisms of how belly fat shrinks your brain.

Central obesity, or increased *intra-abdominal fat* (fat inside the peritoneal cavity packed between organs, not fat under the skin known as *subcutaneous fat*) is unique fat. It acts like a separate organ. A nasty one.

Why? Intra-abdominal fat is different than the benign subcutaneous fat under your skin. Or protective fat around our organs, like around your kidneys or eyeballs.

Belly fat cells release *pro-inflammatory* molecules. These trouble-causing molecules "travel" from the belly fat to your brain, where they initiate and promote brain inflammation. This causes brain shrinkage. Especially in your gray matter, the home to your appetite control center. Less gray matter then alters your ability to control your appetite. With less, yet more inflamed gray matter, it's more challenging to feel more "mindful" or in touch with yourself from the neck downward.

Intra-abdominal nasty fat is also known as *visceral fat*, or a *pot belly* or *beer belly*.

Belly fat, capable of releasing pro-inflammatory molecules, is being linked to an increased risk of heart disease, type-2 diabetes, abnormal and elevated blood fats, smaller brain volume, and poorer appetite

regulation. And perhaps even to less ability to live mindfully (at least as much as one might intend).

This does not mean that all obese people are dumb. But their physiology is potentially working against their portion control will power. Research shows that for every additional inch on the human waist, there is a significant reduction in gray matter volume. Studies also suggest that if you do a lot of other things right, like exercise and food choices, you can minimize this damage.

These same French researchers report that abdominal fat distribution may be a more powerful predictor of structural brain aging than global body mass. Many cultures throughout the world today are seeing more and more obese young children. Belly fat even in children is being linked to adversely altered brain structure changes.

Fact #4: There are antidotes to having more belly fat.

Through fitness and cardiovascular exercise, these adverse brain changes in children can be minimized if not reversed. This screams that you must get your child away from the computer once in a while. Encourage them to go outside and run and play. Cardiovascular fitness that comes from regular bursts of exertion protects both your child's brain and their ability to be in touch with their appetite.

Fact #5: Abdominal obesity is not the only risk factor for abnormal brain shrinkage.

Excess sugar intake, excessive alcoholic beverages, sedentary lifestyles, and waning sex steroid hormones are all linked to smaller brain volumes. McGill University won the coveted Kurt Richter award in 2008 by showing that seniors have smaller brain hippocampal volumes. Demonstrated by MRI imaging, this shrinkage could be healthfully reversed when the women were given estrogen replacement and males were given testosterone replacement. This brain shrinkage reversal happened rapidly, within weeks.

What promotes healthier brain volume?

- Cardiovascular fitness and exercise

- Hormonal balance
- Intermittent fasting and/or caloric restriction (this has been shown in bariatric surgery patients as well as without surgery)
- It's now proven that caloric restriction and successful dieting/weight loss revolumize the brain, especially the gray matter. And promote better appetite control.

A cycle emerges:

- Less intention and mindfulness makes us more prone to overeat.
- Regular overeating results in fatter bellies.
- Fatter bellies increase your risk of smaller brain volume.
- Less gray matter makes it harder to control your appetite.

This cycle can be broken:

Caloric restriction, exercise, hormone balancing, improved cardiovascular fitness, and even some nutrients like lithium and zinc, but that's for another blog. Then:

- Your brain volume improves.
- With intention and mindfulness it becomes easier to eat more appropriate portions.
- You lose weight.
- Your brain size can improve.

The enemies of healthy brain size and appetite are:

- Lack of intention surrounding mindfulness
- Overeating
- Sedentary lifestyle
- Eating bad stuff (sugars, too much alcohol, processed and pesticide-laden foods)
- Hormone insufficiencies and imbalances
- Nutrient insufficiencies
- Which all lead to inflammation, insulin resistance, resistance to satiety hormones, and a body that doesn't respond to signals, so it becomes harder to be more mindful as our resistant physiology drives us to have less awareness.
- Severe sleep apnea appears to worsen much of the above.
- Obesogens: specific pollutants and pesticides turn fat cells more nasty and harder to lose. Foods and environments

that contain obesogens when moms are pregnant make a huge difference. Moral of this story: eat as organic as you can, avoid plastics, filter your home air and water, especially if you are pregnant or planning to have a baby in the near future.

Fact #6: We tend to let our waist go as we get older.

Most people start to gain a bit around their waist each year in middle age. And around the holidays. Even a few tenths of an inch adds up as a danger to your brain volume and portion control mechanisms. When your love handles grow, ponder that your brain is becoming a smaller more inflamed mass, more in control of you than you are in control of it. Knowledge is power. Get your brain and waistline buffed!

15 Sophisticated & Effective Steps to break the fat cycle:

1. Have an intention to live a more mindful life. All unconscious behavior is exposed by greater consciousness, with the first step being to “intend” to become more aware.
2. Be mindful when you eat. Don’t multi-task; focus on eating, chewing, and experiencing yourself from the waist down.
3. When done, get up, wash your plate, start your other tasks, don’t linger and continue to nibble.
4. Eating three meals a day, or two meals, without snacks so you give your digestive tract a rest, is optimal. Some need to snack for medical reasons, but most of us eat way too often and our gut does not get a chance to feel comfortable when more empty.
5. Avoid inorganic, pesticide-ridden food in plastics. Try to buy food from farmers’ markets, not in plastic. Plastic adds to the fat issue, and contains obesogens. When you microwave plastic or consume food in plastic containers that were washed in the dishwasher, the food takes on these nasty fat foes.
6. Reduce simple carbs, eat more diverse and colorful plant foods; sprouts are food probiotics on rhoids.
7. Get your hormones tested and balanced by an expert. (There are not a lot around. I am available as a consultant to work with your

- team. Go to drlindseyberkson.com, and listen to my radio show with Dr. Jack Monaco at Dr. Berkson's Best Health Radio.)
8. Make sure all your nutrients are sufficient; get tested, as your hormone balance depends on healthy nutrient balance.
 9. Intermittent fasting a few times a week. There are lots of variations on this theme, so experiment with them and see which you enjoy.
 10. Move. Exercise is as non-negotiable as brushing your teeth.
 11. If and when you have to sit for prolonged periods, recruit (tighten) your quads to break the cycle that creates more insulin resistance.
 12. Do daily gentle detoxes (listen to my radio shows with Wendy Meyers at Dr. Berkson's Best Health Radio)
 13. Do several in-depth detoxes a year (SEXY BRAIN has a perfect sex hormone receptor detox) in the book. You can do this detox or just do the intestinal sweep, but it's important to gently "houseclean" now and then.
 14. Rule out sleep apnea.
 15. Get your digestive tract and/or stool assessed by an expert.

May the mindfulness force be with you!

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