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Gut Feeling: Good Food, Good Mood

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In 2016, after a frightening – yet somewhat liberating – episode of mania and delusions, I was hospitalized and diagnosed with Bipolar 1 Disorder. I was immediately prescribed a cocktail of mood-altering medications and advised to seek counseling. At first, this was difficult news to deal with. As a child, I had the suspicion that I was different from the other children; my feelings just seemed to be more intense and overwhelming. I struggled for more than a year to accept that pharmaceutical drugs might be more helpful to me than my own previous forms of self-medicating. Prior to seeing a therapist, I used marijuana multiple times a day to escape my problems and responsibilities. I also found that fast food and alcohol could be very comforting. None of these methods of numbing were long-term solutions, though—not even the medicine prescribed by the psychiatrist. The best thing I learned to do for myself was to leave my addictions behind, meditate, find new hobbies, and eat mindfully. It was not an easy task. Learning to live a healthy responsible life as a child with bipolar disorder would have made life much simpler as an adult. Now, a few years later, I am happy to have found such a fascinating field of study—Nutritional Psychiatry. As an aspiring Pediatric Nutritional Psychiatrist, I want to spread the news to parents that healthy diet is essential for optimizing the brain functions of children with varying types of mental disorders.

Symptoms of mental disorders such as depression, anxiety disorder, attention deficit disorder (ADD), and attention deficit/hyperactivity disorder (ADHD) are commonly known, as their names sum them up for the most part. Those of bipolar disorder, autism, and Asperger's may need further explanation. Many think bipolar disorder is simply an affliction involving having quick alternations between intense moods like elatedness, anger, and depression. While this does happen—a lot—this is a general overall diagnosis of one symptom. There are four types of bipolar: BP-I, BP-II, BPNOS (Not

Otherwise Specified), and Cyclothymia. Those living with Bipolar I experience and display the most extreme traits of this brain disorder. For example, The National Institute of Mental Health (NIMH) website states that the episodes last longer—a week or more for manic episodes and two or more weeks for depressive (“Bipolar Disorder,” par. 3). A person in the midst of a manic episode will display a decrease in appetite and need for sleep. They will be energetic, with an elevated mood, whether it be anger, euphoria, or hopelessness; as a result, they will have trouble focusing and make rash or risky decisions, sometimes thinking of themselves as godlike. NIMH goes on to mention, “Sometimes, a person with severe episodes of mania or depression also has psychotic symptoms, such as hallucinations or delusions” (“Bipolar Disorder,” par. 13). Depressive episodes are, well, depressing. One can experience symptoms of both at the same time. BP-II, BPNOS, and Cyclothymia are less severe cases in which “hypomania” is a symptom. They are not characterized by “full-blown manic episodes” or psychosis (par. 4). Even when treated with medication, bipolar episodes, like all psychological disorders, can hinder one’s, especially a child’s, ability to participate in the everyday activities of life.

Another increasingly frequent and potentially debilitating psychological disorder found in children around the world is autism. Autism Speaks, an organization that raises awareness and funds research for the disorder, defines autism as “a broad range of conditions characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication” (“What is Autism”, par. 1). Asperger’s is on the autism spectrum, characterized by trouble socializing and understanding social cues such as body language or picking up on subtleties, such as “reading the room.” Children on the spectrum usually share the identity factor of sticking to repetitive routines of behaviors—including eating habits—and being fascinated by things that may seem odd to those who are not on the spectrum.

All these conditions go hand in hand, involving similar traits like serious mood swings, difficulty focusing, coping with change or stress, oversleeping or sleep deprivation, poor diet, low self-esteem, difficulty socializing, and difficulty carrying out basic day to day tasks. A person enduring one of these

disorders is commonly enduring or likely to develop two or more; this comorbidity (the term used to describe the experiencing of two or more disorders) can result from psychotropic treatment or from self-medication in the form of substance abuse. Some medications have the side effects of increased risk of depression, suicide, or schizophrenia. Street drugs can induce mental illness or make symptoms of a mental illness even worse, increasing risks of self-harm, harm to others, suicide, schizophrenia, delusions, and more. On the website of the National Alliance on Mental Illness (NAMI), Psychiatrist and Medical Director of The Ross Center, Dr. Beth Salcedo explains that nearly 60% of those with depression also have anxiety and vice versa (par. 2). A considerable amount of research shows a link between pediatric Bipolar disorder and ADHD, as well as pediatric bipolar disorder and autism. It is frequently contended that numerous comorbid diagnoses are just misdiagnoses of similar symptoms. This implies individuals could be getting treatment for something they might not have. This is concerning, considering countless physicians' first response to a child displaying mood and/or behavioral issues is to diagnose and administer a regimen of mood stabilizers or psychotropic medications.

Around the world, the usage of psychiatric drugs is rapidly rising, along with the number of children to whom they are being prescribed. In the *Tedx Talks* video "The Surprisingly Dramatic Role of Nutrition in Mental Health," psychologist Dr. Julia Rucklidge asserts,

According to the 2013 New Zealand Health Survey, the rates of psychiatric illnesses in children doubled over the last five years. Internationally, there's been a three-fold increase in ADHD, a 20-fold increase in autism, and a 40-fold increase in bipolar disorder in children...there's been a four-fold increase in the rates of the number of people who are on disability as a direct consequence of an underlying psychiatric illness. The rates of mental illness are on the rise.

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Psychiatric drugs are not meant to eradicate a disorder, nor should they be expected to. That being said, a proper form of treatment also should not put the patient at risk of more illnesses and cyclical psychiatric side effects.

The medications most commonly prescribed present their own set of problems for the patient and their environment (family, friends, teachers). While they do help lull most of the symptoms they are prescribed for, the medications prescribed almost always have adverse side effects—a long list of them, just like the ones heard on all pharmaceutical advertisements: rigidity, tremor, dystonia, insomnia, drowsiness, weight gain, high-cholesterol, seizures, vivid nightmares, increased thoughts of self-harm and/or suicide, just to name a few. Several patients report no longer feeling like themselves when receiving treatment, feeling extremely subdued or sedated. Finding the right medication mix for a patient, especially a child, takes a frustrating period of trial and error. A medication that works for one person might not work for another. Making it through this phase can take months, even years. There is still the possibility that down the line, the current prescription is no longer helpful, and the process has to start all over again. There are long-term side effects to consider and the possibility of pushing the child into the grips of another illness later in life. It is enough to wonder if the medications are even worth administering to children, not to mention that the costs of these provisions can put a strain on the family budget. The Centers for Disease Control and Prevention website (CDC) states, “an estimated \$247 billion is spent each year on childhood mental disorders” (“Children's Mental Health Report”, par. 4). That is an astonishing number for a treatment that may or may not take.

This is not to say that psychotropic provisions should be completely taken off the table. But they should perhaps be made to be more of a side dish when it comes to treating mental illness, instead of the main course of action. After all, medication is not a long-term solution. Once the patient stops taking it, which happens often (whether it be because they are misinformed, embarrassed, or just intolerant of the drugs and their side effects), their symptoms will come back full force. This can be scary and leave

one feeling like they are in an inescapable predicament. With proper therapy, an adult can normally come to manage their life. Managing a psychological disorder is not so simple for a toddler or adolescent, or their parents, who may not fully understand what their child is going through.

Not all parents or caregivers are prepared to deal with the symptoms of their child's disorder or the side effects of the drugs prescribed. It can be exhausting, frustrating, and heartbreaking to see their child unhappy or throwing fits of rage. Most would give anything to ease the suffering of their child, eager for immediate satisfaction. Some parents appease their upset child in multiple ways. Many resort to comfort food, rewarding their child with treats when they have been good. In moderation, this can serve as positive reinforcement with little apparent detrimental effect. Moderation is the key word. Unfortunately, as with psychotropic medications, comfort foods can do more harm than good. New studies suggest, in addition to therapy and psychiatry, initiating a more healthful diet—eating the right foods—can be essential (and too often overlooked) medicine.

The wrong foods add more stress to—possibly, even are a cause of—already stressful psychological disorders. An adolescent brain with characteristics of a psychological disorder suffers greater than the average brain when subjected to an everyday dosage of the modern Western diet. Harvard Health Publishing (HHP), a media outlet of Harvard Medical School, shares an abundance of health news and wisdom from medical experts. On this site, Dr. Eva Selhub published the article “Nutritional Psychiatry: Your Brain on Food,” in which she points out that there is plentiful evidence linking a Western diet and negative consequences for those with mood disorders (HHP, par. 3). Food with low nutritional value, “processed and refined foods,” fail to shield the brain from “oxidative stress,” which is always trying to permeate the body (par. 2-3). According to Medical News Today, Oxidative stress is the result of a glut of free radicals in the body, along with a deficiency of antioxidants and micronutrients, which help keep the quantity of free radicals under control and protect the brain. Free radicals are a result of the metabolic process and breathing in any harmful toxins in the air. They are

molecules with too many unpaired electrons. In attempt to even themselves out, they go around stealing electrons from other molecules, causing a cycle that results in a depletion of water in the body, as well as cellular damage. The body needs free radicals to breath oxygen and kill bacteria; however, an excess buildup of free radicals can destroy cells and tissues. The disproportion between free radicals and antioxidants lead to health problems like cancer, diabetes, cardiovascular disease, and so on (Medical News Today).

When the time comes to make the choice between candy and chips or fruits and vegetables, most American children are going to pick the former. They are foods that actually contain many of the toxins that cause oxidative stress. They do not help rid the body of other toxins or free radicals. The western diet is the addictive comforting diet consisting of mostly low-quality meat, highly processed foods, saturated fats, salt, and sugar—that is, fast-food and convenient foods, such as instant meals, snack foods, soda, juice, energy drinks, and flavored waters. Westernized foods are full of ingredients that stimulate the dopamine reward system in the brain just like drugs, alcohol, and sex, which children with mental health struggles frequently graduate to later in life. When this type of food is introduced to young children or, commonly, constitute a major portion of their diets, those with a predilection for mental illness (who, again, are creatures of habit and do not usually take change lightly), become accustomed to these foods. Relying on these foods for comfort, convenience, or gratification can quickly evolve into a very early form of self-medicating. When one feeds a kid this type of food daily, then tries to take it away, one easily loses the will to keep fighting against the desires of one’s three-year-old. It is difficult to change the mindset of a child who now thinks food is only something to benefit the taste buds and has little to do with the rest of the body. Selhub asserts, “Today, fortunately, the burgeoning field of nutritional psychiatry is finding there are many consequences and correlations between not only what you eat, how you feel, and how you ultimately behave, but also the kinds of bacteria that live in your gut” (par. 5).

The gut, or the gastrointestinal tract, happens to be where “about 95% of your serotonin is produced” (par. 6). Serotonin is what sends messages to the brain, governing how a person feels, sleeps, and processes pain. Neurons that also reside in the gastrointestinal tract need “‘good’ bacteria” to fight off the bad, make the most of nutritional intake, and allow serotonin to pass through the gut all the way to the brain (par. 6). It is true that eating better results in feeling better. Selhub goes on to mention, “Studies have shown that when people take probiotics (supplements containing the good bacteria), their anxiety levels, perception of stress, and mental outlook improve, compared with people who did not take probiotics” (par. 5). Probiotics are a great way to get the nutrients the body craves. While taking them will certainly make a person feel better, they will not cancel out the effects that a unhealthy diet has on the body.

A diet conducive to treating a child’s psychologically-impaired brain consists of plenty of omega-3 fatty acids and is rich with vitamins and minerals, also called micronutrients. A diet similar to what is known today as the traditional Mediterranean or Japanese diet consists mostly of fresh natural fruits, vegetables, nuts, and fish. Fermented foods, such as pickles, sauerkraut, kimchi and yogurt, are also full of good bacteria, also called probiotics. Dairy and highly processed grains are typically less of a staple in these diets. This nature of sustenance nourishes the body, allowing the gut to perform its job, exceptionally. Selhub illustrates that when adhering to this diet, more serotonin is produced and can make its way to the brain with ease (par. 6). The risk of oxidative stress is decreased and naturally, one begins to feel better. One’s body is then running on clean energy. We might imagine a body as a planet, just like Earth. If the Earth were to run almost completely on clean energy, everything in and around its atmosphere, down to the core, would benefit from this positive revolution.

Now, while it is true that making this drastic transition for humanity, particularly in convenience-food cultures like the U.S., is a far fetch, it is nowhere near impossible. Making the right changes in a family’s eating habits can be a grueling challenge, but it is, by no means, unachievable. For the sake of

the children's long-term mental and physical well-being, ease of the parents' minds—and their wallets—the effort is well worth it. The lesson just about everyone who has ever went on a diet has learned is that putting all their efforts into trying to make big changes overnight does not work. It almost never lasts. So, a word of advice is to ease into it. Mindset is huge. We should not think of it as a punishment and must not enable our children to see it as such. We can think of it as an opportunity to grow and to develop new dimensions in our lives; one can start an herb and vegetable garden, learning a new skill or re-visiting an old hobby, and save money. At very least, we should be getting back into the habit of making home-cooked meals. This change largely involves learning to do for oneself, instead of buying most of one's food through a drive-thru window or whipping up a quick box meal. While there are plenty of convenient ways to eat healthy (just grab a piece of fruit or stop by a salad bar), finding time to cook and prepare fresh nutritious meals is essential. This can be time consuming and seem unreasonable in a world where it seems there are never enough hours in a day. When learning to eat mindfully, time management is another skill to strive for. Gathering and preparing fresh food is time to bond with the kids and teach them these valuable life skills. Life is too short to not make time for that. A poor diet can make it even shorter. Normally, when refining one area of life, a chain of positive changes in other areas commence. Less time on social media, phones, computers, and in front of the tv can open up a lot of time to stop by the farmer's market or the co-op, where fresh local items are available. Both usually offer cooking workshops and are great resources for support, education, new recipes, meal planning, and tips on how to shop for organic foods on a budget and make this shift easier. We can have fun with it, be adventurous, expand our palates and learn to be unafraid of trying new foods.

If a child is uncomfortable with being introduced to something unfamiliar, we should not force it. Children with autism may form strong attachments to food based on colors and textures. Maybe the child only wants to eat orange foods or wants the same meal for lunch every day. This child may not be terribly happy about being asked to try new and unfamiliar tastes. This will not be an overnight process.

We should try to introduce new healthy foods before phasing out old favorites. Over time they will come around to some new foods; perhaps not everything put in front of them, but once the favorable effects of a healthier diet set in, they may be more open-minded. We might try to get them on board by offering nourishing foods of colors they already like, or if they like crunchy foods, maybe raw vegetables are a good compromise. We should include them in the preparation process, let them play with their food, choose from a variety of ingredients, and make fun shapes and design their plate with applicable foods like fruit, vegetables, or unprocessed cold cuts. And, of course, we should try not to pacify them with their normal regimen of junk food. It is a matter of balancing patience and persistence. Sometimes an ultimatum is necessary. A child with bipolar disorder might enjoy the therapeutic impacts of gardening, cooking, and grocery shopping when experiencing manic, rather than depressive, symptoms. Those with Anxiety, ADD, and ADHD could also potentially find solace in using their hands to grow something that will nurture their bodies and brains. Being mindful about mealtime can help tame the symptoms of these disorders and the adverse side effects that come along with psychotropic intervention.

Psychological illness can create extremely stressful environments, but it does not always have to remain this way. Although medication can help, a child does not need to be pumped full of them, nor do they need to be the first method of treatment. The side effects that often come along with prescription drugs are too troublesome not to give another, more promising type of treatment a chance. The up and coming field of Nutritional Psychiatry is finding an abundance of evidence that foods rich with micronutrients and antioxidants are the best medicine for the human mind, body, and soul. Though it may be difficult, there are many ways to get a child with a mental disorder on board with breaking old unhealthy habits. Trying new foods and activities will improve their lives and environments immensely. It simply takes time, patience, a little education and a lot of support. Healthy foods are the key to a healthy mind. Unhealthy foods are just the opposite, keeping the body and mind in a lethargic decline.

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