June is PTSD Awareness Month

Are you one of the 8 million people in the United States with PTSD (Post Traumatic Stress Disorder)? If not, you easily could be. PTSD will occur in anyone exposed to a significant enough trauma or repeated trauma over time. Fortunately, effective treatments are now available; unfortunately, most victims of PTSD are not aware of this. The U.S. Department of Veterans Affairs operates a National Center for PTSD which has a wealth of information (for everyone, not just vets). You can get more information at

https://content.govdelivery.com/accounts/USVHA/bulletins/2e1935b

Scared of Needles?
You know you need to get the Corona Virus vaccine. Or the tetanus shot. Or the long-acting antipsychotic injection. But you do not, not because you don’t want to, but because the thought of that needle is absolutely terrifying. Yet the little girl in the picture above is smiling! What is going on here?

Feeling cautious about injections and blood draws is relatively normal. There is something being injected in or taken out of your body and there is some pain involved (though usually less than we anticipate). More significant injection fears may be connected to a negative experience, more likely in the preschool years when vaccines are common. Children, in particular, can be influenced by fearful talk from those around them, such as siblings, parents, or clinicians. Imagery in popular media and news reports can also spark fears.

As a result anxieties about getting an injection are not rare, and they can discourage important medical care. One analysis found that 8% of health care workers in hospitals and 18% of workers in long-term care facilities avoid the influenza vaccine due to needle fears (McLenon., J., & Rogers, M. A. M., *Journal of Advanced Nursing*, Vol. 75, No. 1, 2019). A Canadian study, based on a survey of Toronto parents and children, found that 7% of adults and 8% of children reported needle fears as the primary reason for not receiving recommended immunizations (Taddio, A., et al., *Vaccine*, Vol. 30, No. 32, 2012). Some patients with an even higher degree of fear or a diagnosable phobia may experience a vasovagal response. This stems from the patient’s heart rate and blood pressure revving up and then dropping abruptly. The result can be that the patient faints or experiences other symptoms, including dizziness, nausea, or sweating.

If any of this sounds like you, licensed mental health therapists can provide exposure therapy for the most fearful, and pain management strategies, including distraction, positive reframing, and the use of numbing creams, for those with lower-level fears. Usually with strong needle-related fear and anxiety exposure therapy is more effective. Developing a plan ahead of time. Would you be more comfortable knowing in real time what the nurse is doing, including getting a heads-up before the shot is given? Or would you prefer to distract yourself as much as possible by watching a video or listening to music through headphones? Tell the staff those preferences and ask for help from whomever is administering the vaccine. The potential benefit of distraction is that our brain has only so much capacity to pay attention to any one thing. A high level of fear will override that. But in the context of lower levels of fear, distraction is really helpful.”

You can also practice positive self-talk during the procedure itself. “Even saying to yourself during it, ‘I can do this’ or ‘I’m doing this because it’s important to me to get the vaccine’ will help. There are also numbing creams sold over the counter that can lessen the pain of the injection if you apply them 30 minutes to an hour ahead. Deep breathing techniques used during the procedure will reduce the fight-or-flight response as well as the tension in the muscle area where the vaccine will be injected.

FDA Warning on Lamictal®

Patients with heart disease who take lamotrigine (Lamictal®) may be at increased risk for arrhythmias, according to a US Food and Drug Administration (FDA) review. This drug is an anticonvulsant that is also used to treat bipolar disorder. It has been approved and on the market for more than 25 years. “Lamotrigine can increase the risk of serious arrhythmias, which can be life-threatening in patients with clinically important structural or functional heart disorders,” the FDA warned. The FDA promised further information once other medicines in the same drug class are evaluated for similar effects.

The challenge now is to determine whether the potential benefits of lamotrigine outweigh the risk of arrhythmias in each individual patient. **DO NOT DISCONTINUE TAKING THIS DRUG UNTIL YOU HAVE CONSULTED WITH THE PERSON PRESCRIBING IT!!!**

The FDA encourages medical professionals and patients alike to report adverse events and side effects associated with lamotrigine to the FDA’s MedWatch Safety Information and Adverse Event Reporting Program through the [online report](https://www.medwatch.fda.gov/safety/index.html) or by calling 1-800-332-1088 to request a form.


Prescription Drug Misuse by Young

More than one-fifth of American youth reported misuse of their psychoactive prescription, a new study found. The survey divided youth between adolescents (12-17) and young adults (18-25).

In kids ages 12-17 prescribed opioids, stimulants, tranquilizers, or sedatives, 20.9% (about 1.3 million youth) said they used their medication in a way that wasn’t prescribed or directed for them. Of these youth, 3.4% were further classified as having substance use disorder, defined as abuse or dependence on the psychoactive prescription medication. Among kids prescribed two or more psychoactive prescription medications at the same time, nearly half reported misusing said medication.
Alarmingly, between the ages of 12 to 17, it was found that 25% reported using a prescription psychoactive medication within the previous year, while 5.7% had a prescription for two or more of these medications. Opioids were the most commonly prescribed drugs, used by 19% of all teens. This was followed by stimulants (7.2%), tranquilizers (4.3%), and sedatives (2.2%). Tranquilizers were the most commonly misused, with an estimated 40.1% of youth ages 12 to 17 reporting misuse in the prior year. This was followed by 24.2% of those prescribed a stimulant reporting misuse, followed by opioids (17.6%) and sedatives (14.2%). 7% of those prescribed a tranquilizer were estimated to have a substance use disorder, followed by 3.6% prescribed a sedative, 3% of those prescribed stimulants, and 2.6% prescribed opioids.

For the 18-25 age group, 41% (!!) said they were prescribed and used a psychoactive medication, with 13% prescribed two or more agents. Once again, opioids were the most commonly prescribed psychoactive drug, with nearly a third saying they used the substances within the past year. However, similar to the patterns seen in younger teens, stimulants and tranquilizers were more likely to be misused.

Both age groups tended to be more likely to misuse psychoactive medications if using other non-prescription substances like alcohol, tobacco, marijuana, cocaine, and heroin.

The research highlights the importance of addressing psychological distress among youth and integrating social workers, psychologists, psychiatrists, and medical doctors into treatment plans for young people with mental health and substance misuse issues. What not to do? Just give a pill.


Simple Way to Cut Tragedies

A lot has been written in the last year of so on problems that arise when police, often untrained to deal with a person having a mental health crisis, attempt to intervene in a manner that sometimes results in tragedy. De-escalating police encounters with people with severe mental illness is a good thing for both the individual and for law enforcement. One way to do this is, of course, to provide the police with the information and training they need, as we are doing in Kentucky with CIT.

In Illinois, lawmakers are employing a decidedly low-tech method to help prevent such tragedies. Modeled on a similar program in Florida, anyone 16 and older with a diagnosed mental or physical disability can get a free state identification card that will help explain habits that might seem out of the ordinary to a law enforcement or other first responders.

"My medical condition may impair my ability to communicate with others, especially with strangers or in stressful situations," the introduction on the card reads. "Please do not interpret my behavior as refusal to cooperate. To better communicate with me, it can be helpful to speak slowly and clearly, repeat questions, and allow time for responses."
Individuals who have been diagnosed with an intellectual, developmental or mental disability, such as epilepsy, anxiety, bipolar disorder, autism or schizophrenia can get them for free at any driver's license facility in the state. The cards could help not only if someone were to get pulled over or stopped by an officer, but also if a person is unconscious or has been seriously injured. Good for 10 years, as a state-issued photo identification card it also serves as proof of disability when accessing certain services and programs that require it.

While this idea certainly has merit, it would seem police still need the information and training to respond appropriately to the information on the card.


**Botulism for Depression??**

There is a possibility that neurotoxin treatment (specifically botulism) may show promise in relieving depressive symptoms. Looking at more than 40,000 botulinum toxin treatment reports across a variety of medical and cosmetic indications, researchers found a significantly lower number of depression reports when compared with patients undergoing alternative treatments for the same conditions.

Why would this work? Some believe that the muscles involved in facial expression, such as the corrugator muscles that elicit frowning, play a pivotal role in modulating the brain's emotional circuitry and neural activity. In other words, it is postulated that expressive behavior can alter emotional states. Frowning makes you feel unhappy, smiling makes you feel happy.

One of the barriers is training mental health professionals on how to perform freehand injections, particularly those that require dose accuracy at multiple injection sites as with neurotoxin injections. Even with extensive experience, injection dose accuracy is difficult to achieve. The error rate is approximately 10% for highly experienced injectors.

Botulinum toxin does not have regulatory approval for the treatment of depression in the United States, so in the meantime--keep on smiling!


**Doctor, Get Therapy!**
All physicians ought to go to therapy. As healthcare professionals, they often provide advice to patients on how they can optimize their help, and when advice won't cut it, prescribe medications or do procedures. They are exposed to death, suffering, and violence often, sometimes daily depending on their specific job. The COVID-19 pandemic has only worsened these types of experiences. If a doctor had a patient exposed to these societal tragedies, he/she would push them to obtain mental health support. Should not doctors practice what they preach?

So why don't they? There is historical and current precedent that discourages physicians from utilizing mental health resources. For decades, questions regarding physicians' mental health diagnoses have peppered job applications, board licensing, and credentialing. Fear of consequences should a mental health diagnosis be revealed have made physicians fearful of getting treatment. This kind of culture has fed doctors to adopt maladaptive behaviors to cope with the daily trauma of taking care of dying patients and dealing with mountains of paperwork, all while trying to optimize earning potential for their employers. For example, many doctors turn to alcohol, with one 2015 study showing that in the U.S., 12.9% of male physicians and 21.4% of female physicians met diagnostic criteria for alcohol abuse or dependence. In the COVID-19 era, these problems have only worsened.

Fortunately, this is starting to change—a move in the right direction of destigmatizing mental health in the medical field is definitely occurring. At one medical school, for example, there are various small group sessions focused on mindfulness techniques, with some cognitive behavioral therapy techniques slipped in.

Another important reason doctors should seek mental health services is because not addressing trauma and mental illness makes for less effective doctors. Even if doctors are resistant to helping themselves, they should go to therapy in order not to hurt their patients. Physicians need to destigmatize mental health, at least so they can take the best care of their patients.


Stay Younger! Live Longer!

Aging can be measured in different ways. Chronological age, measured by date of birth, is the most common. It is the one we brag about when young, hide when middle-aged, and then start to brag about again when we get very old. And as we know, some people seem old at 50 and others seem young at 90. That would reflect on our biological age—that is, how old our body is physically rather than chronologically.

Scientists have developed a range of measurements to determine our biological age. These include measuring the length of telomeres (little caps on the end of our chromosomes that shorten as we grow older), chemical changes to our DNA, and changes to the proteins and metabolites in our bodies. What did they find as a result? Being male, having a high body mass index (BMI), smoking, and—the most important thing for readers of this newsletter—having depression were linked to more advanced aging.
We can’t control our sex—but everything else is under our control. We can lose weight, stop smoking, and if depressed seek treatment.


Van Gogh: What Happened?

On July 29, 1890 at the age of 37 years, the Dutch painter Vincent van Gogh died from the consequences of a suicide attempt with a gun 2 days earlier. Since then many medical and psychological theories were suggested about what had happened to Van Gogh. Often, he is portrayed as suffering from schizophrenia due to having cut off his ear and the nature of some of his paintings (e.g. The Scream). Apparently that is not the case.

Most likely Van Gogh suffered from comorbid illnesses. Since young adulthood, he likely developed a (probably bipolar) mood disorder in combination with (traits of) a borderline personality disorder as underlying vulnerability. This likely worsened through an alcohol use disorder combined with malnutrition, which then led, in combination with rising psychosocial tensions, to a crisis in which he cut off his ear. Thereafter, he likely developed two deliriums probably related to alcohol withdrawal, followed by a worsening with severe depressive episodes (of which at least one with psychotic features) from which he did not fully recover, finally leading to his suicide. As additional comorbidity, focal (temporal lobe) epilepsy cannot be excluded.


Use Supplements? Beware!

Dietary supplements are used by millions of Americans. Most don’t know that they are almost totally uncontrolled. Now, an illegal drug has been found in many of these…and it can cause great harm, including death.

Tianeptine—which is not approved for use in the US—has effects similar to opioids in dulling pain and, in high doses, euphoria—and abuse potential. Because it is cheap and easy to come by many are using it as a replacement for fentanyl, oxycodone, etc. Tianeptine related calls to poison control centers have skyrocketed—from 9 in 2014 to 251 in 2020. There have been at least four deaths—nobody really knows how many. Interestingly, the drug is actually approved in Europe for use as an antidepressant—but there the dosage, purity, etc. is tightly controlled.
But US manufacturers adding this drug to their supplements (which do not need any government approval to be sold) are deliberately committing an illegal act. Where do you get it? Gas stations and online under names such as Tianaa and Za Za. Many think because it is sold over the counter that it is legal and safe. It is not. One user described it as worse than heroin.


**Importance of Work**

Having a meaningful job gives one a sense of purpose. Regardless of what that job may be, working is something most people want to do. Work, especially work which one finds productive and fulfilling, promotes better well-being and higher quality of life.

While true for all of us, this is especially true for people with serious mental illness. Previous research has shown that work plays a large role in community integration and quality of life and can improve mental illness symptoms. Unfortunately, there is an extremely high unemployment rate in this population. One estimate suggests that as few as 12% of people with schizophrenia in the public mental health system are employed. People with serious mental illness were much less likely to work in any capacity compared to the rest of the population, with more than two-thirds of people not working during 2015-2017, according to their results.

Why is this? There are multiple barriers to obtaining employment for people with serious mental illness that stem from impairments due to the illness itself as well as the way employment is structured in our society. Worse, these barriers may be evolving due to the shift in the labor market in the United States in the past 20 years in a manner hurtful to SMI.

Labor markets are changing at a rapid pace, especially due to new technology. This evolution has shifted the skills necessary for employment opportunities as automations and artificial intelligence have made entire job sectors obsolete. If we look at different types of work--routine cognitive (e.g. filing clerks, bookkeepers), routine manual (e.g. warehouse packing), nonroutine analytical (e.g. computer coding, engineering), nonroutine interpersonal (e.g. nursing), and nonroutine manual (e.g. certified nursing assistant). The routine job classes, which are most prone for automation, will continue to decline, whereas the demand for nonroutine job classes will increase. For individuals with serious mental illness who did work, they were much more likely to be in these declining routine job classes, with 12.1% working in routine cognitive jobs in 2015-2017

Indeed, the proportion of people with serious mental illness who were not working increased 10.4% over the 20-year period. Much of the declines in employment were in job sectors that are in decline overall, with little offset by increases in employment in the other job markets. This suggests a large segment of people with mental health conditions has been and continues to be employed in jobs that have been vanishing and are projected to continue to disappear. Instead of shifting toward job classes that are growing, a larger proportion of people with serious mental illness are not working at all. Supported employment programs need to adapt their programs due to the changing labor market so that people with severe mental illness have the skills necessary for the jobs that are available.
Benzodiazepines and Older Adults: A New Concern

The 2019 American Geriatrics Society Beers Criteria identifies benzodiazepines as potentially inappropriate medications for use among older adults. (These are sometimes called “minor tranquilizers” and include such drugs as Ativan®, Valium®, Xanax®, and Librium®.) Nonetheless, they are commonly used to treat various disorders including anxiety, insomnia, agitation, alcohol withdrawal, and seizures. About 8.7% of older adults in the United States have benzodiazepine prescriptions—and approximately 44% of these prescriptions for benzodiazepine among older adults are inappropriate. Who is most likely to get them in long-term use (which is almost NEVER appropriate)? women, and persons with a diagnosis of Alzheimer disease (AD), schizophrenia, bipolar disorder, depression, coronary artery disease, and asthma/chronic obstructive pulmonary disease. (Incidentally, these drugs are not valid treatments for schizophrenia, bipolar disorder, or especially depression, which they will make worse.)

Why is this still going on??? The use of benzodiazepines is known to be associated with poor outcomes. One study found that benzodiazepine use was associated with greater risk for hospitalizations, emergency department visits, outpatient visits, and higher health care costs. Another study found the overdose death rate increased due to benzodiazepine use from 0.58 to 3.07 per 100,000 adults between 1996 and 2013. Benzodiazepine use is also associated with an increased risk of falls among older adults. Additionally, the use of benzodiazepines is associated with a 60% to 80% increase in the risk of traffic accidents. The co-ingestion of benzodiazepines and alcohol is associated with a 7.7-fold increased risk for traffic accidents.

It gets worse. There is emerging evidence that the use of benzodiazepines may increase the risk for developing dementia among older adults. More than half of the studies done to date showed a positive association between benzodiazepine use and the development of dementia. It is unclear whether there is any significant difference between men and women. The results hold true with higher doses; when the duration of use is shorter; for current users; for shorter-acting drugs. Unfortunately, with these studies, a causality cannot be established due to the type of study designs.

Despite the lack of evidence proving causality, the association between benzodiazepine use and the development of dementia is a major cause for concern given the prevalence benzodiazepine use among older adults. The prescription of benzodiazepines to older adults need to be questioned to see if it is absolutely essential and if the benefits outweigh the risks.


NIMBY
“Not in my back yard!,” otherwise known as NIMBY, refers to the phenomenon of residents of a community opposing a new development or a change of occupancy of an existing site such as new sites for affordable housing, shelters, treatment facilities for mental health or substance abuse, or group homes.

The opposition is usually based on the assumed characteristics of the population that will be living or being treated in the development. Common arguments are that there will be increases in crime, litter, thefts, violence and that property taxes will decrease.

NIMBY-ism is a particular issue in California, where policymakers are grappling with soaring housing prices and the concurrent rise in individuals experiencing homelessness, including those with severe mental illness. A combination of restrictive zoning laws that limit building affordable housing and strong opposition by NIMBY anti-development groups led Calif. Gov. Gavin Newsom to call every Californian a NIMBY in his 2020 state of the union address—which is a bit extreme. Similarly, the mayor of Los Angeles called on each resident to build a small house in their backyard for the homeless (he himself, of course, was exempt).

But we also must realize we need to deal with this problem in an appropriate manner, particularly for those with mental illness. The primary barrier to building community-based housing and services for people with serious mental illness is negative public attitude toward people with mental illness—stigma. We have run into this problem many times in Northern Kentucky with residential facilities for mentally ill and halfway houses for people with substance abuse problems. While negative perceptions about mental illness are still extremely widespread among the general population, new research published in November suggests public attitudes about willingness to live near someone with mental illness can improve. Contacts with people with mental illness can change individuals’ beliefs about the dangerousness of people with mental illness and their willingness to live near a person with mental illness.

Sadly, approximately one-quarter of those having contact still believed that individuals with mental illness pose a danger to others, and were significantly more likely to be unwilling to move nearby someone with a mental illness. One factor in this was that the study occurred at a time when there had been several mass shootings by people with mental illness reported by the media. As we at NAMI well know, the media has a grave responsibility for the way mentally ill are perceived.

https://ps.psychiatryonline.org/doi/10.1176/appi.ps.202000064

Is Psychopathy Treatable?
We now know that the brains of individuals with psychopathy (also referred to as antisocial personality disorder) have identifiable structural and functional differences from the brains of those without the disorder, which appear to account for some of the symptoms seen. Reduced gray matter volumes in the amygdala and multiple areas of the prefrontal cortex have been described. On brain scans psychopathic brains have exhibited dysfunctional activity in the default mode network, including limbic and paralimbic structures. People with psychopathy have also been found to exhibit impaired communication between the visual prefrontal cortex and the amygdala—which is important in the “fight or flight” response. Increased activity in the ventral striatum in the context of reward expectancy has also been described in association with criminal activity among those with psychopathy.

Easily seen in the forensic, or criminal, environment, the impairment may be less conspicuous in high functioning individuals. Deficits in attention and risk-reward assessment may result in harmful financial decisions, poor judgment at work, gambling, and other impulsive behaviors. Calousness, deceitfulness, and grandiosity may lead to brief and combustive relationships. The person might seem unable to maintain employment despite ability and qualification; woodenly engages socially with others and is undisturbed when relationships fall apart; and/or exhibits a pattern of poor decision making accompanied by a lack of personal responsibility. Psychopathic personality traits may also present adaptively in one domain of life, such as a boardroom, and maladaptively in another, such as marriage.

The general belief in the scientific community is that psychopathy is not only untreatable, but that attempting to treat a psychopath was harmful. While incarceration is the definitive “treatment” for some, psychopathy exists on a spectrum like any other mental disorder and more recent research suggests the condition is capable of responding to treatment—at least in some cases. Cognitive behavioral and cognitive remediation techniques have shown some promise. Some have also suggested that the interpersonal and affective symptoms may be amenable to modified dialectical behavioral therapy techniques. Data are limited regarding the use of medication to target psychopathic personality traits.

Given that people with antisocial personality disorder commit 80% of crimes, finding a way to treat this population would be an enormous benefit to all of us.


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**News from the Labs**

**Depression and Heart Disease**

We know that people with clinical level depressive symptoms are significantly more likely to have cardiovascular disease. Now research has found that depressive symptoms, even at levels lower than what is typically indicative of potential clinical depression, are associated with risk of cardiovascular disease. It is important, therefore, to not ignore depressive symptoms but to have them treated.

**Pot & Mood Disorder Dangers**

Cannabis use is common among youths and young adults with mood disorders--but it shouldn’t be.

In this population, the presence of cannabis use disorder was significantly associated with an increased risk of nonfatal self-harm, all-cause mortality, and death by unintentional overdose and homicide. This should be considered as states contemplate legalizing medical and recreational marijuana, both of which are associated with increased cannabis use.


**To Nap, or Not To Nap?**

Several studies have shown that afternoon napping promotes cognitive function in the elderly; on the other hand, some studies have shown opposite results.

Personally, I’m going with this recent study! Significant differences in cognitive function and blood lipids were observed between napping and the non-napping groups. Afternoon napping was associated with better cognitive function including orientation, language, and memory in the present study. Subjects with the habit of afternoon napping also showed a higher level of triglyceride than the non-napping subjects.


**Positive Effects of COVID!**

The negative effects of the COVID 19 pandemic are staggering--about half of us are experiencing negative psychological effects. Particularly hard-hit are young adults, first responders, and some ethnic minorities (primarily Native Americans and Native Alaskans, who have three times the average risk of contracting the virus). But there is a silver lining. Unnecessary consumer consumption has decreased, environmental quality has improved, and a new focus on family togetherness and the value of interpersonal relationships has emerged. It has also highlighted areas where we need to improve. Examples are better training of clinicians in suicide prevention, and improving clinician telehealth skills (both physical and mental health treatment).


**Early Trauma = Poor Health**

Early life experiences such as violence, poverty, and neglect are associated with accelerated biological aging. There are two general types of childhood adversity—threat-related (experiencing or witnessing violence) and deprivation-related (neglect by families or institutions. Children who experienced threat-related adversity but not deprivation-related adversity reached puberty at an earlier age and showed accelerated cellular aging. Threat-related and deprivation-related adversity were both associated with cortical thinning but in different regions of the brain.


https://psycnet.apa.org/record/2020-56119-001?doi=1
**Vitamin D & Depression Prevention**

Although vitamin D deficiencies have been associated with depression in late life, taking vitamin D supplements does not help prevent depression or improve mood. It has, in fact, no effect at all.

What does work? Strengthening social connections may be among the most effective ways to prevent depression. Other things that were helpful were exercise, sleep duration, belonging to a sports team, napping during the day, and media use. However, the clearest evidence of a factor that can causally reduce the incidence of depression was the tendency to confide in others.

Okereke, O.I. et. al. Effect of Long-term Vitamin D₃ Supplementation vs Placebo on Risk of Depression or Clinically Relevant Depressive Symptoms and on Change in Mood Scores. JAMA, 2020, 324(5), 471-480.  
https://jamanetwork.com/journals/jama/article-abstract/2768978


**Power of Placebos**

Use of a placebo—a substance that has no physiological properties, such as water—can be effective in lowering emotional distress. The interesting thing is that this works even when someone knows they are getting a placebo as long as they nonetheless believe it will help. How powerful is this? The study participants showed a pattern of reduced electrical brain activity consistent with lower levels of distress in response to emotional event. The mind is, indeed, a powerful thing!

https://www.nature.com/articles/s41467-020-17654-y

**PTSD-Dementia Link**

People with post-traumatic stress disorder (PTSD) are twice as likely as others to develop dementia later in life. However, veterans with PTSD showed a somewhat lower increase in risk for dementia—about 1.6 times—than veterans without PTSD. As veterans are more likely to receive treatment for PTSD compared with the general population, this lower increase in risk suggests that treating PTSD may help prevent or delay dementia. Thus, if you suffer from PTSD, it is vital you get treatment for it.


**Unipolar/Bipolar Different Depressions**

Unipolar Depression and Bipolar Depression are not at all alike, it turns out. (Unipolar depression is a term used when depressive episodes occur on a regular basis, with bouts of normal mood between. Bipolar depression is when you have regular depressive episodes intermixed with periods of normal mood and periods of mania). Difficulty in distinguishing these two disorders often leads to misdiagnosis.

Brain imaging techniques indicate that unipolar depression and bipolar depression (BD) show different levels of brain functioning in regions supporting emotion processing. Neuroimaging measures might indeed be useful for improving diagnostic accuracy. The correct diagnosis has significant implications for choosing first-line treatment.
Blueberries, Mental Health, and Age

Blueberries are often considered a “super food” meaning they are very good for you. However, do they have effects on our emotional states? Several studies suggest that, indeed, they do—but the effects vary.

In children, teens, and young adults, they seem to elevate mood. Whether they would be effective for a clinical-level depression has not been tested. But if they lift mood, could too much lead to mania? Well, animal studies show just the opposite—they lowered mania. For older people, none of this works. Instead, they show an improvement in cognition!

A cautionary note: None of these studies were conclusive. The populations studied were just too small. But they raise interesting possibilities. In the meantime, continue eating blueberries but don’t overdo it.