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Anxiety May Be an Inherited Trait

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STORY AT-A-GLANCE

- An estimated 40 million Americans, about 18% of the population over the age of 18, struggle with anxiety, including more than half of all American college students
- While several factors can contribute to anxiety, including diet, toxic exposures and sociological conditions, research suggests you may also inherit a predisposition to anxiety from your parents
- Animal research shows connectivity between two brain regions involved in the processing of fear and anxiety can be passed from parents to offspring
- Paralleling the rise in anxiety is the chronic exposure to microwave radiation from wireless technologies, and research shows this exposure can have a direct influence on your mental health
- The way you breathe is intricately connected to your mental state; improper breathing triggers anxiety by causing an imbalance in your bodily gases. Breathing techniques and other drug-free treatment strategies are addressed

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Anxiety has exponentially risen in recent years. Not only do more than half of all American college students report anxiety,[1,2] research[3] also shows anxiety — characterized by constant and overwhelming worry and fear — is now 800% more prevalent than all forms of cancer.

Data from the National Institute of Mental Health (NIMH) suggests the prevalence of anxiety disorders in the U.S. may be as high as 40 million, or about 18% of the population over the age of 18, making it the most common mental illness in the nation.[4,5]

Fortunately, there are many treatment options available, and some of the most effective treatments are also among the safest and least expensive, and don't involve drugs. This is well worth remembering, as doctors are far more likely to prescribe opioids to patients who complain of anxiety than those who do not have any mental health issues.

Anxious and/or depressed patients also receive higher dosages. Remarkably, nearly 19% of Americans diagnosed with a mental health disorder use narcotic painkillers, compared to just 5% of those without a mental health disorder.[6]

Opioids are extremely addictive, and if you're already struggling with anxiety, you may be at even greater risk of addiction and its potentially lethal consequences. What's more, if you're concurrently taking benzodiazepines such as Valium, Ativan, Klonopin or Xanax, which are widely prescribed for anxiety, your risk of lethal overdose increases fivefold.[7,8,9]

Anxiety May Be Inherited From Your Parents

While any number of issues can contribute to anxiety, from diet[10] and toxic exposures to sociological conditions,[11] research suggests you may also inherit a predisposition to anxiety from your parents.

According to this research,[12,13] conducted on rhesus monkeys, connectivity between the central nucleus of the amygdala and the bed nucleus of the stria terminalis — two brain regions involved in the processing of fear — can be passed from parents to their offspring.

Lead author Dr. Ned Kalin, professor of psychiatry at the University of Wisconsin School of Medicine and Public Health, told Newsweek:[14]

> *"We are continuing to discover the brain circuits that underlie human anxiety, especially the alterations in circuit function that underlie the early childhood risk to develop anxiety and depressive disorders.*
>
> *In data from a species closely related to humans, these findings strongly point to alterations in human brain function that contribute to the level of an individual's anxiety. Most importantly, these findings are highly relevant to children with pathological anxiety, and hold the promise to guide the development of new treatment approaches."*

This inherited brain connectivity is nowhere near the complete story, though. The researchers stress that its contribution to the variance in anxiety measurements is small — probably around 4% or so. Still, it's another part of the puzzle, and researchers hope the findings will eventually lead to better intervention strategies in high-risk children.

A Little-Known Contributor to Anxiety and Depression

Paralleling the rise in anxiety and other mental health disorders such as depression is the chronic exposure to electromagnetic fields (EMFs) from cellphones and cordless phones, Wi-Fi routers, baby monitors, smart meters and other Bluetooth devices, and research shows this exposure can have a direct influence on your mental health.

Thanks to the **pioneering work of biochemist Martin Pall**, Ph.D., we now know that voltage gated calcium channels (VGCCs) are over 7 million times more sensitive to microwave radiation than the charged particles inside and outside our cells. This means that the safety standards for this exposure are off by a factor of 7 million.

When EMFs hit your VGCCs, nearly 1 million calcium ions per second are released into the cell, which then causes the cell to release excessive nitric oxide (NO). When NO is combined with superoxide, peroxynitrites are created, which in turn form dangerous hydroxyl free radicals that causes massive mitochondrial dysfunction.

The reason your mental health is so easily influenced by EMFs is because one of the organs with the greatest density of VGCCs is your brain. When the channels in the brain

are activated, it causes a major disruption in neurotransmitter and hormonal balance that can radically increase the risk for not only anxiety and depression, but also autism and Alzheimer's.

This research reveals the fatal flaw in the argument that microwave radiation is harmless because it cannot cause thermal damage. The way EMF exposure causes biological damage is by activating VGCCs in your cells, especially nerve cells that have a higher density of VGCCs, triggering a cascade effect that results in peroxynitrite being produced and causing oxidative damage. So, the lack of thermal influence is inconsequential.

Failure to realize this and take steps to minimize your exposure will not only damage your DNA and increase your risk of most chronic illness; it will also seriously impair your body's ability to detoxify, and significantly impair your immune response to address the large variety of pathogenic infectious assaults.

The take-home message is this: If you or someone you love struggles with anxiety or depression, it would be wise to take whatever steps necessary to minimize your exposure to cellphones, portable phones, Wi-Fi routers, smart meters, wireless computers and tablets, especially exposures at night while you are sleeping. It would also be wise to address other sources of dirty electricity in your home.

How Stress Influences Anxiety

While genetics, brain chemistry, personality and life events play a role in the development of anxiety disorders, stress is one of the most common triggers. Anxiety is a normal response to stress, but in some people the anxiety becomes overwhelming and difficult to cope with. The National Institute of Mental Health explains how your brain reacts to stress, and how the anxiety response is triggered:[15]

> *"Several parts of the brain are key actors in the production of fear and anxiety … scientists have discovered that the amygdala and the hippocampus play significant roles in most anxiety disorders.*

> *The amygdala … is believed to be a communications hub between the parts of the brain that process incoming sensory signals and the parts that interpret these signals. It can alert the rest of the brain that a threat is present and trigger a fear or anxiety response.*
>
> *The emotional memories stored in the central part of the amygdala may play a role in anxiety disorders involving very distinct fears, such as fears of dogs, spiders or flying. The hippocampus is the part of the brain that encodes threatening events into memories."*

Aside from the hippocampus and amygdala, the thalamus is also involved in anxiety. The stria terminalis is a fibrous band that runs along the lateral margin of the thalamus, and all of these brain areas are involved in the generation and processing of fear and are well-established parts of the "anxiety circuitry" in your brain.[16]

As noted in the featured monkey study, connectivity between your amygdala and stria terminalis may be inherited from your parents, and if you have this predisposition, then stress may be the proverbial straw that breaks the camel's back.

Your Breathing Also Has Direct Influence on Anxiety

Your breathing is part of the stress response, and the way you breathe is intricately connected to your mental state. I've previously published interviews with Patrick McKeown, a leading expert on the Buteyko Breathing Method, where he explains how breathing affects your mind, body and health.

Here, I've chosen a video featuring Robert Litman, where he specifically addresses the relationship between breathing and anxiety. According to Buteyko, the founder of the method, anxiety is triggered by an imbalance between gases in your body, specifically the ratio between carbon dioxide (CO_2) and oxygen.

In this video, Litman explains how your breathing affects the ratio of these gases, and demonstrates how you can literally breathe your way into a calmer state of mind.

A Buteyko breathing exercise that can help quell anxiety is summarized below. This sequence helps retain and gently accumulate CO2, leading to calmer breathing and reduced anxiety. In other words, the urge to breathe will decline as you go into a more relaxed state.

- Take a small breath into your nose; a small breath out; hold your nose for five seconds in order to hold your breath; and then release to resume breathing.
- Breathe normally for 10 seconds.
- Repeat the sequence several more times: small breath in through your nose, small breath out; hold your breath for five seconds, then let go and breathe normally for 10 seconds.

McKeown has also written a book specifically aimed at the treatment of anxiety through optimal breathing, called "Anxiety Free: Stop Worrying and Quieten Your Mind — Featuring the Buteyko Breathing Method and Mindfulness," which can be found on Amazon.com.[17] In addition to the book, ButeykoClinic.com also offers a one-hour online course and an audio version of the book, along with several free chapters[18] and accompanying videos.[19]

Belisa Vranich, a clinical psychologist, has also written an excellent book called "Breathe." In it, she details a program that can help improve your physical and mental health.

Other Common Contributing Factors

Aside from stress, improper breathing and excessive exposure to microwave radiation from wireless technology, a number of other situations and underlying issues can also contribute to anxiety. This includes but is not limited to the following, and addressing these issues may be what's needed to resolve your anxiety disorder:

- Food additives, food dyes, artificial sweeteners, GMOs and glyphosate. Food dyes of particular concern include Blue #1 and #2 food coloring; Green #3; Orange B; Red #3 and #40; Yellow #5 and #6; and the preservative sodium benzoate

- Gut dysfunction caused by imbalanced microflora. This is often a result of eating too much sugar and junk food
- Lack of magnesium, vitamin D,[20] B vitamins and/or animal-based omega-3. Research has shown a 20% reduction in anxiety among medical students taking omega-3s[21]
- Exposure to toxic mold and other toxins. Ask yourself if there's any kind of pattern; do your symptoms improve when you spend time away from your home or office, for example?

EFT — A Potent Nondrug Treatment Alternative

In addition to learning proper breathing, another potent treatment alternative that does not involve drugs is the **Emotional Freedom Techniques** (EFT), one of the most well-established forms of energy psychology. Akin to acupuncture, EFT is based on the concept that a vital energy flows through your body along invisible pathways known as meridians.

By gently tapping on specific energy meridian points in your body and using verbal affirmations, you can reprogram how your body responds to stress, thereby lowering your anxiety.

Research confirms EFT can be a powerful intervention for stress and anxiety,[22,23] in part because it specifically targets your amygdala and hippocampus, which are the parts of your brain that help you decide whether or not something is a threat.[24]

In the video above, EFT therapist Julie Schiffman demonstrates how to tap for panic attacks and anxiety relief. For serious or complex issues, you may need a qualified EFT therapist to guide you through the process. That said, the more you tap, the more skilled you'll become. You can also try acupuncture,[25] which like EFT bridges the gap between your mind and body.

Other Nondrug Treatment Options

Considering the risks of psychiatric drugs, I would urge you to view them as a last resort rather than a first-line of treatment. In addition to the breathing exercises and EFT already mentioned, other far safer strategies to explore include:

Regular exercise and daily movement — In addition to the creation of new neurons, including those that release the calming neurotransmitter GABA, exercise boosts levels of potent brain chemicals like serotonin, dopamine and norepinephrine, which may help buffer some of the effects of stress.

Many avid exercisers also feel a sense of euphoria after a workout, sometimes known as the "runner's high." It can be quite addictive, in a good way, once you experience just how good it feels to get your heart rate up and your body moving.

Mindfulness training and/or a spiritual practice — Research suggests psilocybin, also known as magic mushrooms, may be a game changer in the treatment for severe depression and anxiety, and the spiritual intensity of the experience appears to be a key component of the healing.

Magic mushrooms are illegal, so this is not a viable treatment as of yet, but it highlights the importance and relationship between having a spiritual foundation that can provide hope and meaning to your life.

Optimizing your gut microbiome — Gastrointestinal abnormalities have been linked to a variety of psychological problems, including anxiety and depression. It is now well established that the vagus nerve is the primary route your gut bacteria use to transmit information to your brain,[26] which helps explain why mental health can be so intricately connected to your gut microbiome.[27]

For example, fermented foods have been shown to curb social anxiety disorder in young adults.[28,29]

Lowering your sugar and processed food intake — Research shows your diet can have a profound effect on your mental health.[30,31] Pay particular attention to nutritional imbalances known to contribute to mental health problems, such as lack of

magnesium, vitamin D, B vitamins and animal-based omega-3 such as anchovies, sardines, wild-caught Alaskan salmon and/or krill oil.

Studies[32] have demonstrated that diets high in fresh produce and healthy fats significantly reduce and can help prevent depression. Conversely, diets high in refined carbs and processed foods are associated with and increased risk.[33]

Getting plenty of restorative sleep — Poor sleep is strongly associated with an increased risk of depression and anxiety (including post-traumatic stress disorder). In fact, researchers have been unable to find a single psychiatric condition in which the subject's sleep is normal.

Being mindful of your exposure to EMFs and use of wireless technologies — At bare minimum, avoid keeping any of these gadgets next to you while sleeping.

Cognitive behavioral therapy (CBT) — They even offer CBT for young children these days.[34] A number of universities offer Tao Connect[35] to their students, but even if you're not a student, there are free online programs available that you can use. Some examples include MoodGYM,[36] e-couch,[37] Learn to Live[38] and CBT Online.[39]

Nature therapy and listening to nature sounds — Spending more time in natural environments has been shown to lower anxiety. Nature sounds also have a distinct and powerful effect on your brain, lowering fight-or-flight instincts and activating your rest-and-digest autonomic nervous system.[40,41,42]

Nature sounds also produce higher rest-digest nervous system activity, which occurs when your body is in a relaxed state. Listening to nature sounds can also help you recover faster after a stressful event.

So, seek out parks, or create a natural sanctuary on your balcony, or indoors using plants and an environmental sound machine. YouTube also has a number of very long videos of natural sounds, such as the one featured above. You could simply turn it on and leave it on while you're indoors.

Overcoming Anxiety

Anxiety can take a significant toll on your quality of life, so it's well worth it to keep going until you find an effective long-term solution. You may need a combination of several interventions. As a general rule, you'd be wise to begin by addressing your diet, and then experiment with a variety of stress reduction techniques, several of which have been mentioned above.

Last but not least, don't underestimate the value of social interactions — face-to-face, that is, not via social media, as the latter has actually been shown to trigger and worsen anxiety. In fact, "social media anxiety disorder" is now a recognized mental health condition similar to social anxiety disorder.[43]

According to Sarah Fader, CEO and founder of Stigma Fighters, about 30% of social media users spend more than 15 hours a week online, which significantly diminishes your ability to enjoy real life and can worsen feelings of loneliness and inferiority. So, if you're in the habit of checking your phone several times an hour, consider a smartphone detox. This will also lessen your exposure to damaging microwaves, as discussed earlier.

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