

# What's Driving the Sharp Increase of ADHD?

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✓ Fact Checked

February 23, 2023

## STORY AT-A-GLANCE

- › One survey found a 26.5% increase in diagnoses of attention deficit hyperactivity disorder (ADHD) in children and adults during the pandemic lockdown; additionally, 22% of adults and 17% of children took medication for ADHD for the first time
- › Increasing demand for Adderall, a medication used to treat ADHD, has led to shortages. The FDA and DEA limit how much medication can be produced based on historical data, which has led to shortages based on demand and not disruptions in the supply
- › During lockdowns, dietary pattern changes included increases in snack frequency, a preference for sweet and ultraprocessed foods and an increase in alcohol consumption. Yet, the No. 1 dietary rule to reduce symptoms of ADHD is to stop sugar spikes
- › A randomized, double-blind study showed saffron can reduce ADHD symptoms. Reports from social media suggest brown noise can help improve focus and productivity, which should be practiced with safe listening habits to lower the risk of hearing loss
- › Exercise can improve cognitive function and executive control. Dietary modifications can reduce symptoms, such as avoiding sugar and refined carbohydrates, promoting a healthy gut microbiome and avoiding food additives and genetically engineered ingredients

In October 2022,<sup>1</sup> the FDA announced that due to “ongoing intermittent manufacturing delays,” there was a national shortage of Adderall, a drug used to treat attention deficit hyperactivity disorder (ADHD) and narcolepsy.<sup>2</sup> The drug combines amphetamine and dextroamphetamine, which are central nervous system stimulants.

Adderall is known to cause serious side effects, including signs of psychosis, seizures, muscle twitches and cardiovascular problems such as chest pain, loss of circulation in fingers and toes or unexplained wounds.<sup>3</sup> Scientists believe it helps reduce impulsivity and improve focus common with ADHD by increasing norepinephrine and dopamine levels in the brain.

The drug is prescribed to adults and children diagnosed with ADHD, but it's important to note that the stimulation of the central nervous system has the same effect even in people who do not have ADHD. Adderall is a prescription medication, but according to a 2016 National Drug Use and Health survey, nearly two-thirds of young adults have gotten it illegally from their friends or roommates.<sup>4</sup>

For many, the goal of illegal use is to increase productivity and stay awake longer, which students hope will help improve their grades. The department of psychology at the University of Wisconsin-Madison reports<sup>5</sup> that between 5% and 35% of college students may have used Adderall and students are two times more likely to use the drug as non-students.

For some people, problems with controlling impulsive behavior or paying attention are so persistent that it interferes with home, academic, social and work life. According to Children and Adults with Attention Deficit Hyperactivity Disorder (CHADD),<sup>6</sup> symptoms often arise in early childhood but can also present in adults. Symptoms of ADHD are broken into three different categories.

Individuals may be diagnosed with predominantly inattentive symptoms, predominantly hyperactive-impulsive symptoms or a combination of the two. In 1994,<sup>7</sup> the naming dropped the hyperactivity designation in those who had a predominantly inattentive presentation, resulting in attention deficit disorder (ADD) and ADHD. However, according to CHADD, regardless of whether there are symptoms of hyperactivity, the condition is officially ADHD.

## **Sharp Rise in ADHD Diagnosis During Lockdown**

The Adderall shortage has highlighted the increasing number of children and adults who were diagnosed with ADHD during the COVID-19 pandemic lockdowns. The Children's Health Council characterized it as the symptoms being “unmasked by the pandemic.”<sup>8</sup> A survey of ADDitude<sup>9</sup> readers revealed there was a 26.5% increase in the diagnosis of ADHD in children and adults during the pandemic.

Additionally, there were 22% of adults and 17% of children who began taking ADHD medication for the first time. In part, this may have been the result of the removal of external support structures people often use to focus their attention and productivity. These structures include external motivators like school, work, and routines. The numbers were similar in children.

A survey of 1,538 caregivers revealed roughly 26% reported a new diagnosis in their child for ADHD, 15% of children diagnosed with a coexisting condition and roughly 14% either had symptom changes or were currently being evaluated for ADHD. According to ADDitude,<sup>10</sup> some of the most common contributing factors were:

- Work-at-home situations without external motivators
- Stress and anxiety over the lockdown measures
- Longer time with family members
- More time on social media platforms

“After watching several people on TikTok talking about adult ADHD, I was like ‘Holy crap, it’s not just me; this explains so much,’” wrote one mother of three in Michigan in the ADDitude survey.<sup>11</sup> “I realized that my doctor was wrong, and I didn’t just ‘grow out of’ my ADHD. Now I need to get re-evaluated and see what can be done to help.”

Self Magazine characterized the increase in diagnosis as “helping some women realize they have ADHD.”<sup>12</sup> Ellen Littman, Ph.D., is a clinical psychologist, researcher, and co-author of *Understanding Girls With ADHD*. She noted that the pressure on women to juggle work, family and social life can increase stress for those who are struggling with attention, memory, organization and decision-making.

“Anxious about being judged an impostor, they are consumed with shame. They’re demoralized by their inability to conform, they compare themselves harshly to their peers, and they often isolate themselves,” she said.

## **Increasing Demand Contributed to Adderall Shortage**

According to NBC News,<sup>13</sup> the Adderall shortage has been significantly impacted by the rising demand for it. In September 2022, Bloomberg<sup>14</sup> reported supply chain challenges with Adderall, including brand name and generic pills. The report stated it was labor shortages at Teva Pharmaceutical Industries Ltd, which is the top pharmaceutical manufacturer of Adderall in the U.S. Soon afterward, three other companies had their generic Adderall on backorder.

However, it appears as the shortage continues that the issue is not as simple as increasing staff and manufacturing more drugs. According to NBC News,<sup>15</sup> since these medications have a history of addiction and abuse, the FDA and Drug Enforcement Agency (DEA) place limitations on how frequently patients can refill the prescription, how many pills a pharmacy can dispense and calculate how much a pharmaceutical company can produce.

When manufacturers want to scale up production, they must meet DEA calculations. In other words, according to NBC News, the DEA calculates how much is needed to meet the demand and then allocates this amount to the pharmaceutical company.

According to Michael Ganio, senior director of pharmacy practice and quality at the American Society of Health System Pharmacists (ASHP), it is the unexpected demand that is primarily to blame for the shortage since the DEA uses historical data to set the amount the pharmaceutical companies are permitted to manufacture. This mismatch between DEA quotas and real prescriptions has created a shortage based on demand and not supply disruptions.

## **Did Lockdown Dietary Changes Contribute to Rising Diagnoses?**

In February 2021,<sup>16</sup> experts warned that children with symptoms of ADHD should be thoroughly evaluated before receiving medication. Simply passing out a pill based on a list of symptoms can increase the risk of addiction to this Schedule II controlled substance with a high potential for abuse and dependence.<sup>17</sup>

During the COVID-19 lockdowns researchers took advantage of the large number of individuals undergoing similar physical and psychological stressors to do longitudinal studies on how these external factors impact eating behaviors. Lifestyle disruptions are known to affect eating behaviors and researchers found<sup>18</sup> an increase in snack frequency, a preference for sweet and ultraprocessed foods and an increase in alcohol consumption.

These changing dietary habits may have contributed to ADHD symptoms in adults and children. According to ADDitude,<sup>19</sup> following a nutritional plan that's high in protein and vitamins can help control symptoms, while sugar, artificial dyes and preservatives will “turn on” ADHD symptoms.

The No. 1 dietary rule to reduce ADHD symptoms is to stop blood sugar spikes.<sup>20</sup> ADDitude<sup>21</sup> reported a 1980 study concluded that when hyperactive children consumed more sugar, their behavior became more destructive and restless. A 1995 study<sup>22</sup> from Yale University indicated that high-sugar diets could increase inattention in some children.

More recently, a 2020 meta-analysis<sup>23</sup> concluded there was a positive relationship between sugar consumption and symptoms of ADHD and a 2012 study<sup>24</sup> published in Pediatrics suggested more attention should be paid to educating parents and children on healthy dietary patterns that omit preservatives, additives and sugar, which predispose children to symptoms of ADHD.

Not surprisingly, diet plays an important role in managing ADHD symptoms. However, as the data show, dietary choices were negatively impacted by COVID lockdowns and may have also contributed to the rising number of adults and children diagnosed with ADHD.

## **Randomized, Double-Blind Study Shows Saffron Can Help**

Outcomes using approved medications for ADHD are often not satisfactory. It is crucial that adults and children explore alternative options to manage their symptoms and thus reduce their potential for adverse side effects from medications designed to impact the central nervous system. [Saffron](#) is one of those alternative options.

A six-week randomized double-blind study<sup>25</sup> of 54 children between the ages of 6 and 17 years old compared saffron capsules against methylphenidate (Concerta, Ritalin). The researchers use the Teacher and Parent ADHD Rating Scale to evaluate the results of the treatment and found both worked equally well. This suggested methylphenidate and saffron had the same effect on symptoms.

The researchers noted that "Short-term therapy with saffron capsule showed the same efficacy compared with methylphenidate," adding that the frequency of adverse effects was also similar. Traditionally, saffron has been valued for multiple physiological effects, including as an antidepressant, anticonvulsant and anti-spasmodic. It is also known as the world's most expensive spice by weight.

## **Exercise, Diet and Special Noise Help Reduce Symptoms**

If you or your child is struggling with ADHD or ADHD-like symptoms, I recommend consulting a holistic physician experienced in treating ADHD using natural methods. It is essential to address diet and exercise to improve cognitive performance and brain functioning, especially during tasks that require executive function.<sup>26</sup>

Executive control is the ability to maintain focus, working memory and cognitive flexibility (or switching between tasks), which is often impaired in people with symptoms of ADHD.<sup>27</sup> Exercise appears to benefit cognitive and behavioral functions in children and adults with ADHD.<sup>28</sup>

More research is needed to confirm the effect saffron has on ADHD, but so far, the results look promising. If you or your child with ADHD has not responded to other

treatments and lifestyle changes, talk to your holistic practitioner about whether this herbal remedy could be helpful.

Another potential intervention is noise. A 2022 study<sup>29</sup> looked at the impact that white noise had on sleep quality in patients who are critically ill and found that this enhanced quality of sleep in ICU patients. NBC News reported on a growing social media trend of users who say brown noise helps them with their ADHD symptoms.<sup>30</sup>

Brown noise is a classification of noise frequencies that has fewer high frequencies than white or pink noise. An example might be the roar of the ocean, an airplane engine, or thunder. At this time, there is not enough data to support reports from users who say that using brown noise can help focus their concentration and reduce their symptoms of ADHD.

Experts suggest that if you'd like to try brown noise, use safe listening habits, such as keeping the volume low and listening for brief periods.<sup>31</sup> Regularly exposing your ears to loud sounds increases your risk for hearing loss. As for dietary strategies, I recommend addressing the following factors:

- **Too much sugar** – High-sugar foods and refined carbohydrates lead to blood glucose spikes and excessive insulin release. This can cause falling blood sugar levels, which in turn, causes your brain to secrete glutamate in levels that can cause agitation, depression, anger, anxiety and panic attacks. Sugar also promotes chronic inflammation, which many studies have demonstrated worsens mental health.
- **Gluten sensitivity** – The evidence suggesting that gluten sensitivity may be at the root of several neurological and psychiatric conditions, including ADHD, is quite compelling. One study<sup>32</sup> went so far as to suggest celiac disease should be added to the ADHD symptom checklist.
- **An unhealthy gut** – As explained<sup>33</sup> by Dr. Natasha Campbell-McBride, a medical doctor with a postgraduate degree in neurology, toxicity in your gut can flow

throughout your body and into your brain, where it can cause symptoms of autism, ADHD, dyslexia, dyspraxia, depression, schizophrenia and other mental disorders.

Reducing gut inflammation is imperative when addressing mental health issues, so optimizing your gut flora is a critical step. This includes not only avoiding processed, refined foods but also eating traditionally fermented foods, such as fermented vegetables.

If you cannot get your child to eat fermented foods on a regular basis, a high-quality probiotic supplement may be highly beneficial in correcting abnormal gut flora that may contribute to brain dysfunction.

- **Animal-based omega-3 fat deficiency** – People low in omega-3 fats may be significantly more likely to be hyperactive, struggle with learning disorders and display behavioral problems.<sup>34</sup> A 2007 clinical study<sup>35</sup> also examined the effects of krill oil on adults diagnosed with ADHD and reported a 50% improvement in planning skills and a close to 49% improvement in social skills.
- **Food additives and GE ingredients** – Several food additives are thought to worsen ADHD, and many have subsequently been banned in Europe. Potential culprits to avoid include Blue #1 and #2 food coloring; Green #3; Orange B; Red #3 and #40; Yellow #5 and #6; and sodium benzoate, a preservative.

Research also shows that glyphosate, the active ingredient in Monsanto's Roundup herbicide, limits your body's ability to detoxify foreign chemical compounds. As a result, the damaging effects of those chemicals and environmental toxins are magnified, and may result in a wide variety of diseases, including brain disorders that can affect behavior.

## Sources and References

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- [1, 13, 15, 30 NBC News, February 6, 2023](#)
- [2, 3 Drugs.com, Adderall](#)
- [4, 5 University of Wisconsin, Easy Access, Pressure on Students Contributes to Increase in Non-Prescribed Adderall Use](#)



- <sup>6, 7</sup> Children and Adults With Attention Deficit Hyperactivity Disorder, About ADHD - Overview
- <sup>8</sup> Children's Health Council online, ADHD Symptoms Unmasked by the Pandemic: Diagnoses Spike Among Adults, Children
- <sup>9</sup> ADDitude, July 25, 2022, para 2 under bullets
- <sup>10, 11</sup> ADDitude, July 25, 2022
- <sup>12</sup> Self, April 7, 2021
- <sup>14</sup> Bloomberg, September 15th, 2022
- <sup>16</sup> NBC, February 16, 2021
- <sup>17</sup> Drugs.com, November 8, 2022
- <sup>18</sup> International Journal of Environmental Research and Public Health, 2021;18(21) Abstract
- <sup>19, 21</sup> ADDitude, February 8, 2023
- <sup>20</sup> ADDitude, July 11, 2022
- <sup>22</sup> Journal of Pediatrics, 1995;126(2)
- <sup>23</sup> Complementary Therapies in Medicine, 2020;53
- <sup>24</sup> Pediatrics, 2012;129(2)
- <sup>25</sup> Journal of Child and Adolescent Psychopharmacology, 2019;29(3)
- <sup>26</sup> Frontiers in Public Health, 2017;5
- <sup>27</sup> Pediatrics, 2014;134(4)
- <sup>28</sup> Journal of Neural Transmission, 2017;124(Suppl 1)
- <sup>29</sup> Nursing in Critical Care, 2022;27(6)
- <sup>31</sup> US News and World Report, November 18, 2022, What You Should Do
- <sup>32</sup> The Primary Care Companion for CNS Disorders, 2011;13(3)
- <sup>33</sup> FxMedicine. Natasha Campbell-McBride
- <sup>34</sup> FASEB J., 2015(29)6
- <sup>35</sup> Alternative Medicine Review, 2007;12(3)