

Brighter Futures: Tackling Youth Depression in America

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Where our young people are today

In research conducted between 2008 and 2021, it was found that

- 50% of all lifetime mental illness begins by age 14
- The average delay between the onset of mental illness symptoms and treatment is approximately 11 years
- In youth aged 6-17 who have a mental health disorder, only about 51% received treatment
- About 1 in 6 U.S. youth between the ages of 6-17 (approximately 17%) have a mental health disorder
- Among adolescents with a major depressive episode, about 60% did not get treatment
- The suicide rate among youth between the ages of 12-17 increased from 3.7 per 100,000 to 6.3 per 100,000

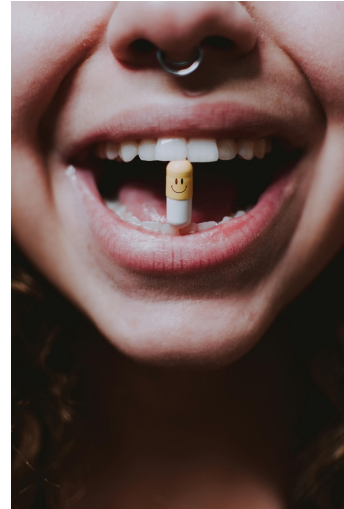
How does this impact the quality of the lives of our kids and young adults?

- **Reduced Academic Performance**: Depression can significantly impair a student's **ability to concentrate, retain information, and maintain motivation**, leading to declining grades and disengagement from school activities.
- **Impaired Social Interactions**: Young individuals with depression often **withdraw from social activities, struggle with forming and maintaining relationships**, and may experience **social isolation**.
- **Increased Suicidal Thoughts**: Depression is a major risk factor for **suicidal ideation and attempts** among young people, making it a critical area of concern.
- **Heightened Risk for Substance Abuse**: Adolescents with depression are at an increased risk for substance abuse as a coping mechanism, which can lead to additional health and legal issues.
- **Disrupted Sleep Patterns**: Depression often affects sleep quality, leading to issues like **insomnia or hypersomnia**, which can exacerbate other symptoms of depression.

What treatments have been available in the past to present day to help treat depression in our younger population?

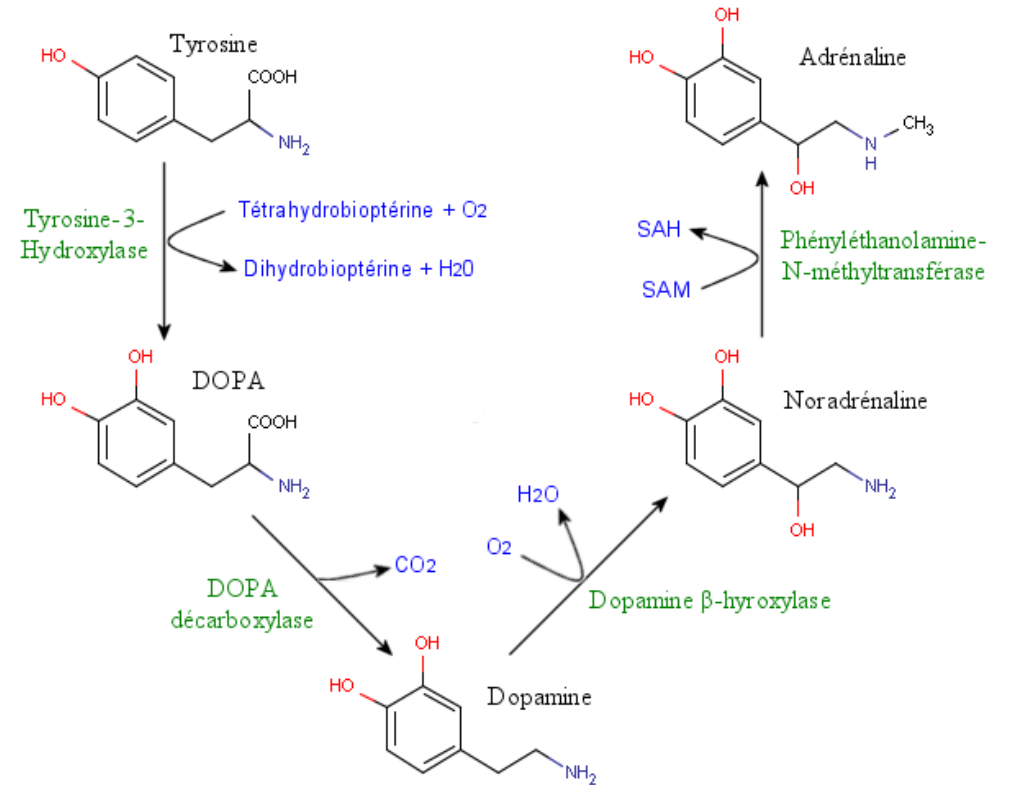


Psychotherapy



Medication

**What if we
looked at
depression as a
series of faulty
biological
processes?**



The esteemed Doctor and Researcher William J. Walsch has come up with 5 biotypes for depression:

- 1. Undermethylation**
- 2. Folate Deficiency**
- 3. Copper Overload**
- 4. Pyrrole Disorder**
- 5. Toxic (heavy metal and chemical exposures)**

Undermethylation

- 38% of Walsh's database consisted of Undermethylated Depressives
- **Low in serotonin**
- Highly sensitive to methyl/ folate ratios in the brain
- Responds well to SAMe, methionine, and other powerful methylating agents
- Responds poorly to folates
- Low methyl/folate ratios are associated with low serotonin, dopamine, norepinephrine
- Usually do well on SSRIs such as Celexa, Prozac, Paxil, and Lexapro
- Exhibit classic low serotonin symptoms
- Low stores of calcium, vitamin D, magnesium
- Thrive on tryptophan, 5- HTP, vitamin B-6, vitamins A, C, and E
- Must avoid - folate, choline, DMAE, and pantothenic acid
- Some patients have high or low homocysteine (serine, vitamin B-6, SAMe, and methionine lower homocysteine)

Undermethylation Signs and Symptoms

- Respond well to SSRIs
- Poor reaction to folic acid or folate
- Obsessive compulsive tendencies
- Self motivated
- Good response to anti-histamines
- Low pain tolerance
- Very strong willed
- High suicidal tendency
- Sparse chest, leg, and arm hair
- 50% deny presence of depression
- Family history of high achievers
- Rumination about past events
- Good response to SAMe and methionine
- High inner tension
- History of perfectionism
- Seasonal environmental allergies
- High libido
- High fluidity (tears, saliva, etc...)
- Competitive
- Addictiveness
- Calm demeanor
- Frequent headaches
- Non-compliance with therapies
- Oppositional defiance as child

Undermethylation Treatment

- 5-HTP
- B-6
- Vitamin A
- Vitamin C
- Vitamin D
- Vitamin E
- Magnesium
- Methonine
- SAmE

Folate Deficiency

- 20% of database were determined to be folate deficient depressives
- Most report having symptoms of anxiety and depression
- Of those - 20% have panic and anxiety disorder
- Usually **normal to high levels of serotonin, high dopamine, and low GABA**
- Cannot tolerate SSRI anti-depressants and anti-histamines
- Non-competitive in nature
- Food and chemical intolerances
- Claim to not be affected by seasonal allergies
- ADHD is 3x higher than those observed in the undermethylated category

Folate Deficiency Signs and Symptoms

- Improvement after folate therapy
- Adverse reaction to SSRIs
- Food and chemical sensitivities
- Dry eyes and mouth
- High artistic abilities and interest
- Nervous legs, pacing
- Noncompetitive in sports, games
- Hyperactivity
- Upper body/head/neck pain
- Estrogen imbalance
- High anxiety and panic tendency
- Improvement after benzodiazepines
- Absence of seasonal allergies
- Low libido
- Hirsutism (males only)
- Sleep disorder
- Underachievement in school
- High pain threshold
- Adverse reaction to SAMe, methionine
- Copper intolerance

Folate Deficiency Treatment

- Folate or folinic acid
- Vitamin B-12
- Niacinamide, choline, DMAE, and manganese that reduce dopamine synaptic activity
- Zinc and vitamin B-6, which tend to increase GABA levels
- Augmenting nutrients, including vitamins C and E

***It is important to avoid supplements of tryptophan, 5-HTP, phenylalanine, tyrosine, copper, and inositol**

Hypercupremic Depression - Copper Overload

- 17% of database were determined to have Hypercupremic Depression which results from toxic levels of copper
- 96% of these individuals were women
- The first episode of depression is normally prompted by a hormone event such as puberty
- High copper levels can alter dopamine and norepinephrine levels
- Most exhibited by women with postpartum depression (PPD)
 - Most of these women reported major improvements following nutrient therapy to normalize copper levels

Copper Overload Signs and Symptoms

- Severe anxiety
- Sleep disorder
- Hormone imbalances
- Hyperactivity in childhood
- Hypersensitivity to metals and rough fabrics
- Ringing in the ears (tinnitus)
- Often intolerant to estrogen as it increases the absorption and retention of copper
- Should avoid shellfish and dark chocolate as they are a source of copper
- Improved depression on SSRIs but worsened anxiety
- High copper females are usually intolerant to birth control pills

Copper Overload Treatment

Decoppering process including the following supplements

- Zinc
- Manganese
- Glutathione
- Vitamins B-6, C, & E

These nutrients increase the activity of the copper shuttle metallothionein (MT) to remove the excess copper from the body.

Pyrrrole Disorder

- 15% of database were determined to have Pyroluric Depression
- Double deficiency of Zinc and Vitamin B-6 that commonly results in **lower levels of serotonin, dopamine, and GABA.**
- Stress disorder often triggered by severe emotional or physical trauma
- Hard to diagnose as most pyrolurics only experience about half of the symptoms
- Indicates high levels of oxidative stress

Pyrrrole Disorder Signs and Symptoms

- Severe mood swings
- Inability to cope with stress
- Rages
- Absence of dream recall
- Poor short-term memory
- Sunburn easily and inability to tan
- Morning nausea
- Sensitivity to bright lights and loud noises
- Slender wrists, ankles and neck while having great amounts of fat at their midsection and upper thighs.
- Female pyrolurics may have irregular periods or amenorrhea (absence of periods)
- Prone to delayed puberty or significant growth after age 16
- Inner tension
- Reading disorders
- Academic underachievement regardless of intelligence
- Tend to be fearful, pessimistic, and isolate themselves from others

Pyrrole Disorder Treatment

- Zinc
- B-6
- Selenium
- Glutathione
- Manganese
- Vitamin C
- Vitamin E

Toxic Metal Poisoning

- 5% of database were determined to have depression caused from toxic metal poisoning including **lead, mercury, cadmium or arsenic**.
- Estimated to affect 1 in every 500 persons, corresponding to more than 600,000 cases in the USA
- Difficult to diagnose due to low concentrations levels in the blood & symptoms vary from different toxic metals
- Young children are especially sensitive to toxic metals since their blood-brain barriers are still immature
- Toxic Metal Poisoning can cause the following
 - Weakening of the blood-brain barrier
 - Altered neurotransmitter levels
 - Increased oxidative stress
 - Destruction of glutathione and other protective proteins

Toxic Metal Poisoning Signs and Symptoms

- Depression arises suddenly during a time of relative calm and wellness
- Abdominal pain and cramping
- Increased irritability
- Headaches and muscle weakness
- Low energy
- Failure to respond to counseling or psychiatric medications

Toxic Metal Poisoning Treatment

- Herbs
- Infrared Sauna Therapy
- Colonics
- Fasting
- Calcium
- Zinc

Dietary Considerations

The body wants genuine replacement parts! As much as possible, get the lion's share of your nutrition through the consumption of high-quality foods.

- Organic or beyond organic foods
- Eat with the seasons
- Diversity the food you eat
 - Fruits
 - Vegetables
 - Herbs
 - Raw seeds & nuts
 - Animal proteins
 - Raw dairy products (if available)

Nutrient Rich Foods

Foods High in Niacinamide

- Chicken
- Turkey
- Peanuts
- Mushrooms
- Tuna

Foods High in Vitamin C

- Guava
- Bell Peppers (contains folate)
- Kiwi
- Strawberries
- Citrus Fruits

Foods High in Vitamin B6

- Chickpeas
- Beef Liver
- Tuna
- Salmon
- Chicken

Foods High in Vitamin D

- Fatty Fish (such as tuna and salmon)
- Cod Liver Oil
- Egg Yolks
- Mushrooms
- Beef Liver

Nutrient Rich Foods

Foods High in Vitamin B12

- Clams
- Beef Liver
- Sardines
- Beef
- Nutritional yeast

Foods High in Folate

- Legumes
- Leafy Greens
- Asparagus
- Eggs
- Beets

Functional Lab Tests

- Whole Blood Histamine
- Plasma Zinc
- Serum Copper
- Urine Pyrroles
- Serum Ceruloplasmin
- Thyroid panel
- Liver Enzymes
- Organic Acids Test - Great Plains Laboratory
- Neurotransmitters Test - ZRT Laboratory