DRUG-FREE NUTRIENT THERAPY TO HEAL BRAIN IMBALANCES

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Walsh Research Institute

- Nonprofit organization
- Expertise in autism, ADHD, depression, behavior disorders, schizophrenia, bipolar disorder, and Alzheimers
- International physician training
- Research

Clinical Experience

William J. Walsh, Ph.D.

- **10,000 Behavior & ADHD**
- **3,500 Schizophrenia & Bipolar**
- **3,200 Depression**
- **6,500 Autism**

Massive Chemistry Database

- Laboratory testing of 30,000 mental health patients and controls.
- More than 3 million chemical test results for patients diagnosed with schizophrenia, depression, ADHD, depression, autism, etc.
- An additional 2 million blood/urine/tissue chemistries from research experiments.

Database Findings

1. Striking blood/urine chemistry differences between these patient populations and the rest of society.

2. Most severe chemical imbalances in autism-spectrum patients.

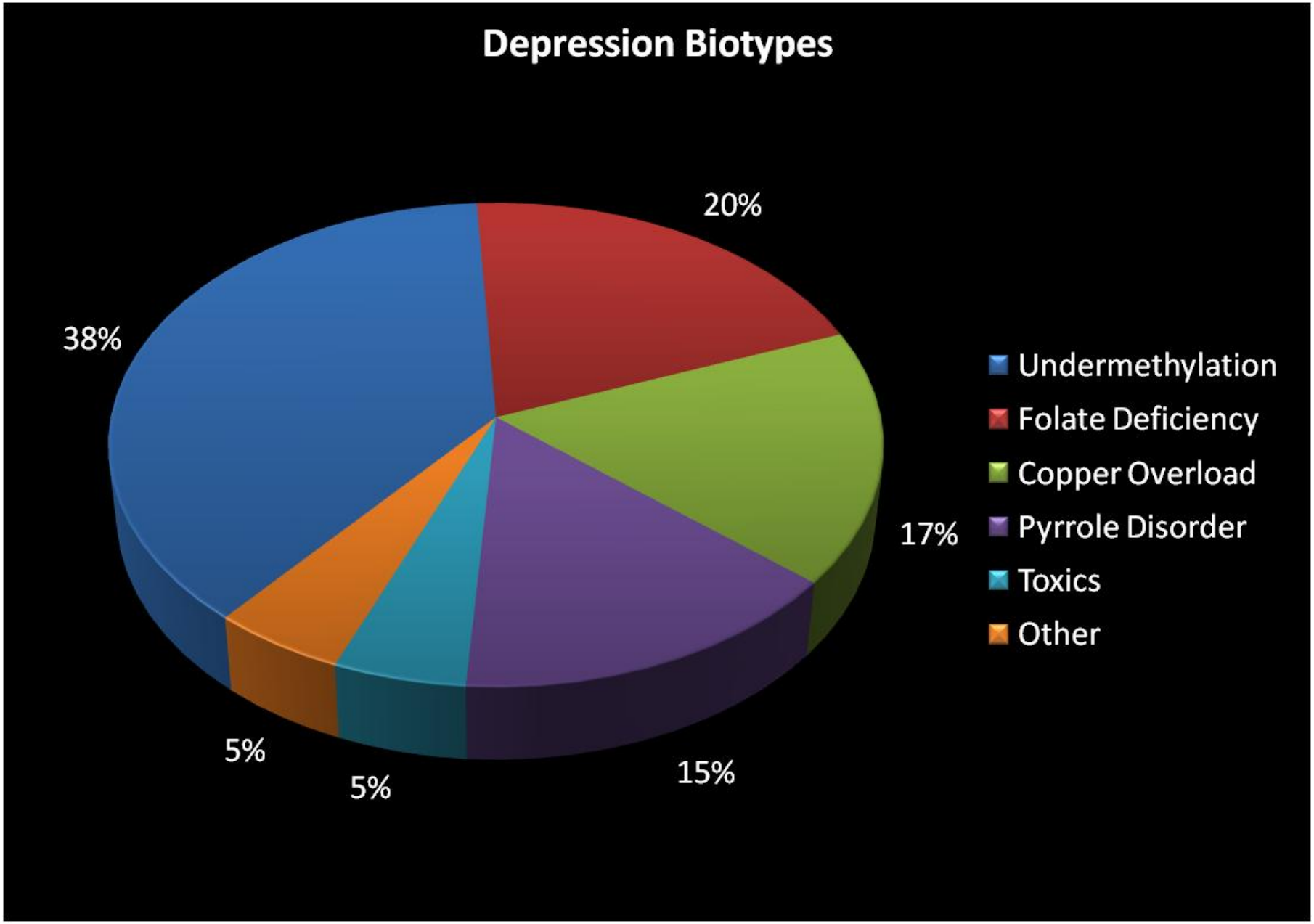
Mainstream Psychiatry Misconceptions

- Depression regarded as a single entity with variations along a central theme. Treatment of choice -- SSRI antidepressants to elevate serotonin activity at synapses.

- Schizophrenia also regarded as a single entity, with variations along a central theme. Treatment of choice-- Atypical antipsychotic medications.

Chemical Classification of Depression

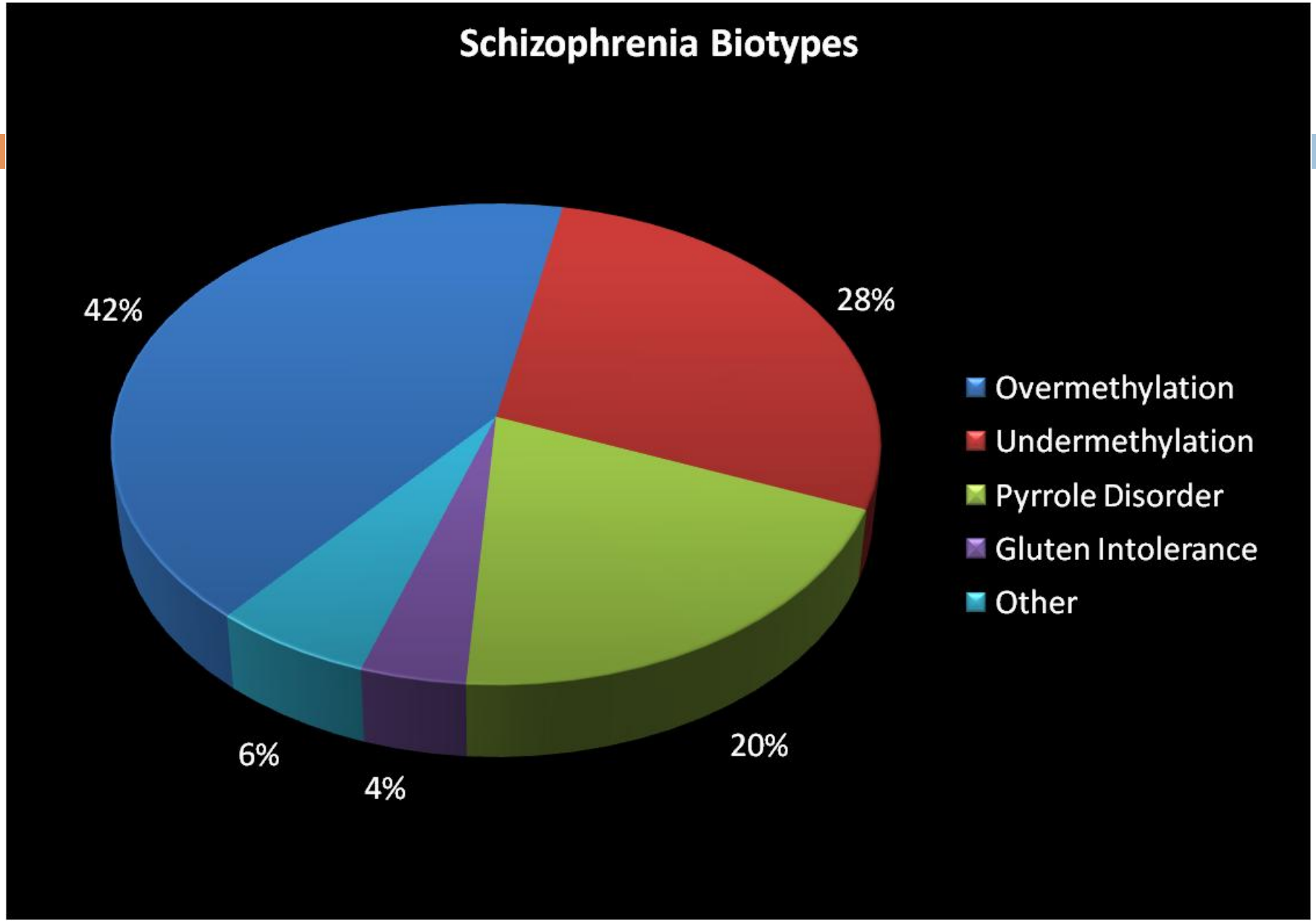
- My database studies have identified five high-incidence depression biotypes,
- The biotypes represent completely different disorders, each with unique neurotransmitter imbalances and symptoms,
- Separate treatment approach needed for each biotype.


Depression Biotypes
20%
38%
17%
5%
5%
15%
Undermethylation
Folate Deficiency
Copper Overload
Pyrrole Disorder
Toxics
Other

Nutrient Therapy

- Separate nutrient therapies developed for each depression biotype,

- Outcome studies reveal 80% of patients report treatment effectiveness & ability to reduce or eliminate medication.


Schizophrenia Biotypes
42%
28%
20%
4%
6%
Overmethylation
Undermethylation
Pyrrole Disorder
Gluten Intolerance
Other

Biochemical Treatment of Schizophrenia

- Therapy using vitamins, minerals, amino acids, and other chemicals that are natural to the body (drug-free),
- Separate biochemical therapies have been developed for each schizophrenia biotype.
- 85% of families report major improvements, reduced dependence on medication, and lessened side effects.

Frequent Questions From Mainstream Doctors

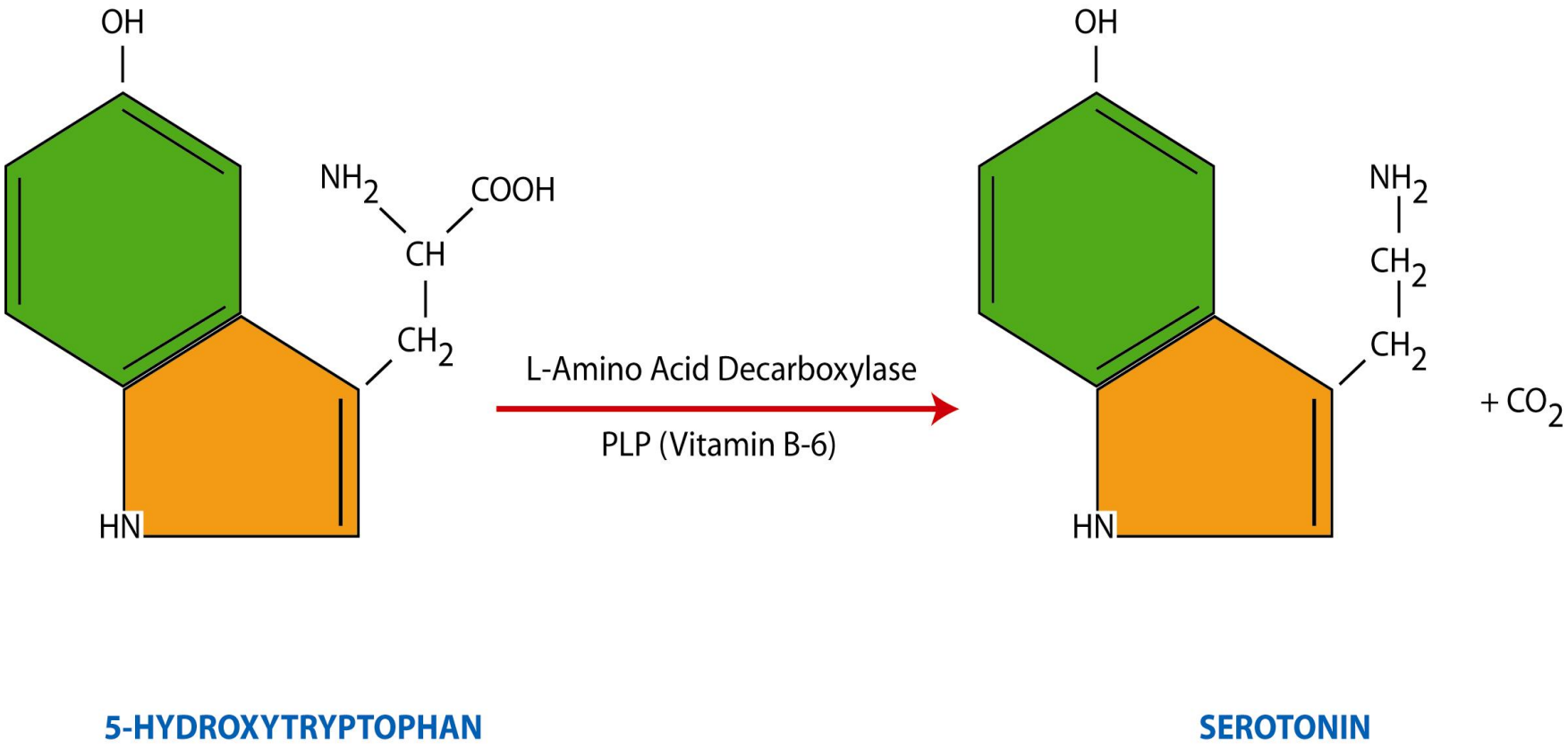
1. How could vitamins & minerals possibly help a person with a serious mental illness?

2. Don't you really need a powerful drug medication to get the job done?

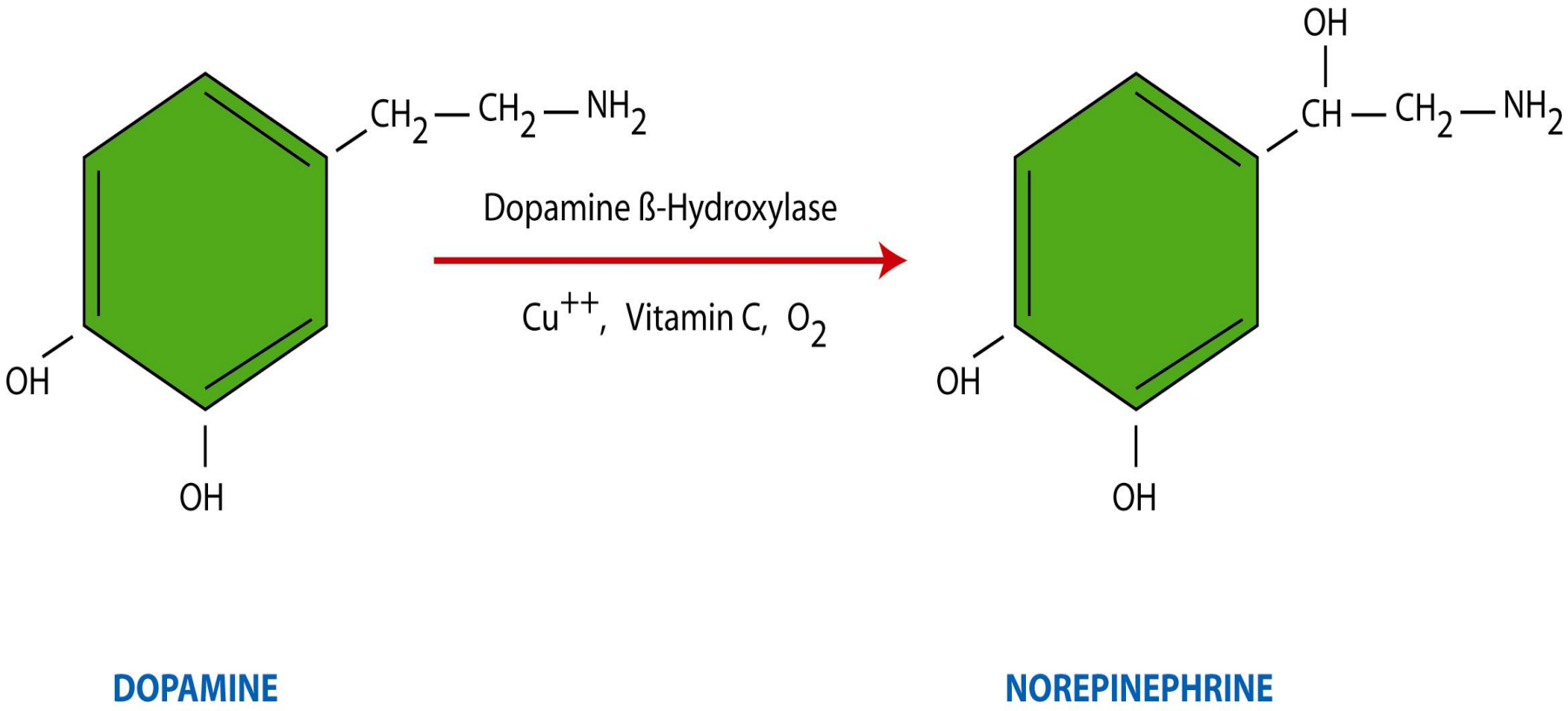
The Brain Is a Chemical Factory

- **Serotonin, dopamine, and other NT's are synthesized in the brain.**
- **The raw materials for NT synthesis are nutrients: vitamins, minerals, and amino acids.**
- **A genetic or epigenetic imbalance in a nutrient needed for NT synthesis or regulation can result in serious mental problems.**

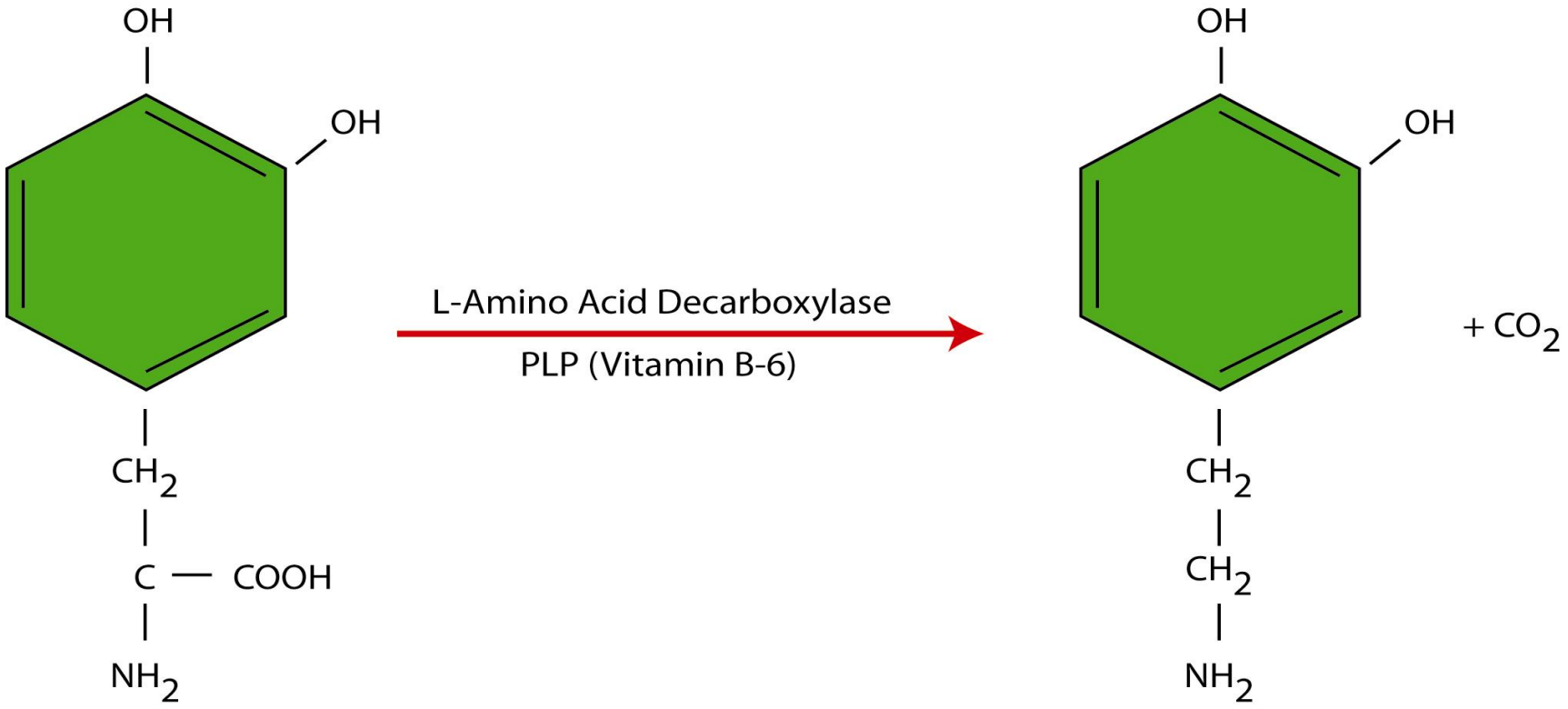
Serotonin Synthesis



Norepinephrine Synthesis



Dopamine Synthesis



L-DOPA **DOPAMINE**

The Power of Nutrients

- Neurotransmitter synthesis
- Reuptake processes at synapses
- Epigenetic regulation of gene expression
- Protection against oxidative stress

Nutrient Imbalances that Alter Neurotransmitter Activity

- Zinc Deficiency
- Copper Overload
- Methylation Disorder
- Folate Imbalances
- Pyrrole Disorder
- Toxic metal Overload
- Severe Oxidative Stress

Biochemical Individuality

- Humans are genetically & epigenetically diverse.
- Because of genetics and epigenetics, most people are deficient in several nutrients and overloaded in others.

Nutrient Deficiencies that Impair Brain Function

- Zinc
- Methionine
- Folic Acid
- Vitamins B-6 and B-12
- Niacin/Niacinamide
- DHA, EPA, AA (essential fatty acids)
- Antioxidants: Se, GSH, Vitamins C & E, etc.
- Chromium

Nutrient Overloads that Impair Brain Function

1. Copper
2. Folic Acid
3. Iron
4. Methyl groups
5. Toxics: Lead, Mercury, Cadmium, etc.

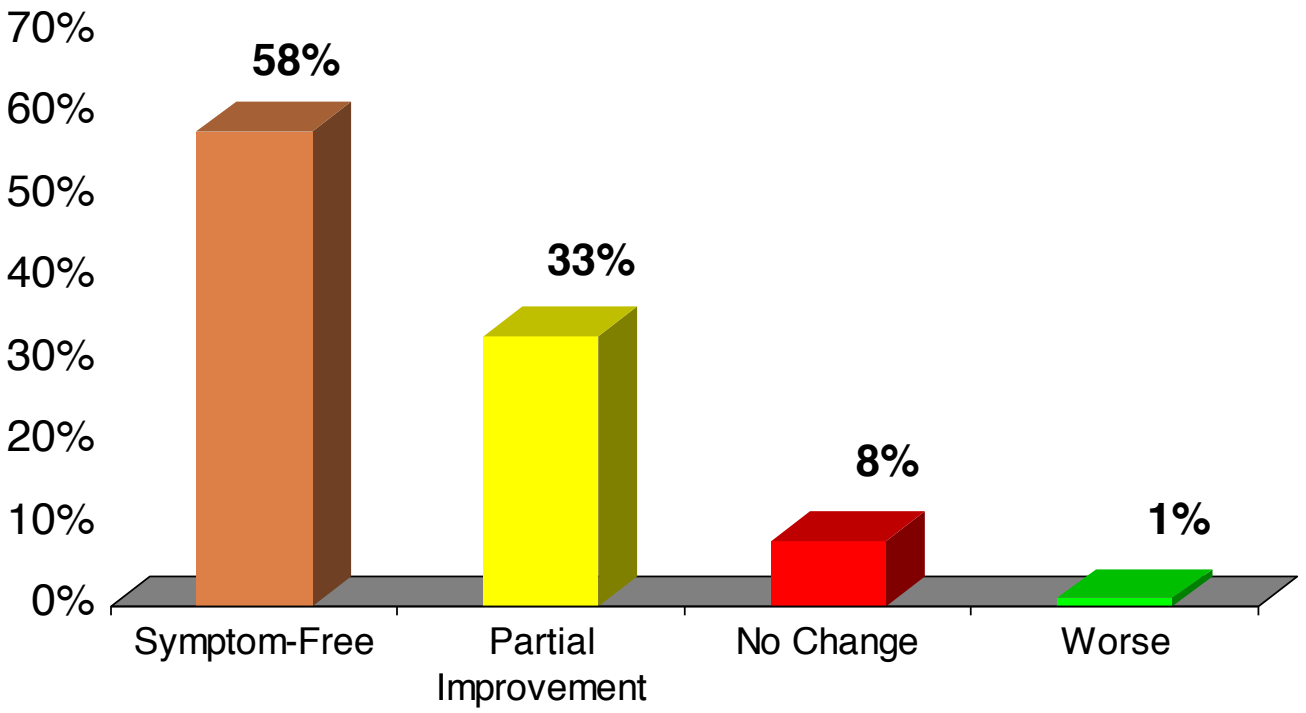
Individualized Nutrient Therapy

- Medical history and review of symptoms,
- Special blood/urine lab tests,
- Diagnosis of chemical imbalances,
- Prescribed nutrient program aimed at normalizing brain chemistry.

Positive Outcomes -- Nutrient Therapy

- Behavior Disorders
- ADHD
- Autism
- Depression
- Bipolar Disorder
- Schizophrenia
- Alzheimer's Disease

Treatment Outcomes: Compliant Assaultive Subjects



Epigenetics & Mental Health

Many heritable brain disorders appear to be epigenetic, rather than genetic:

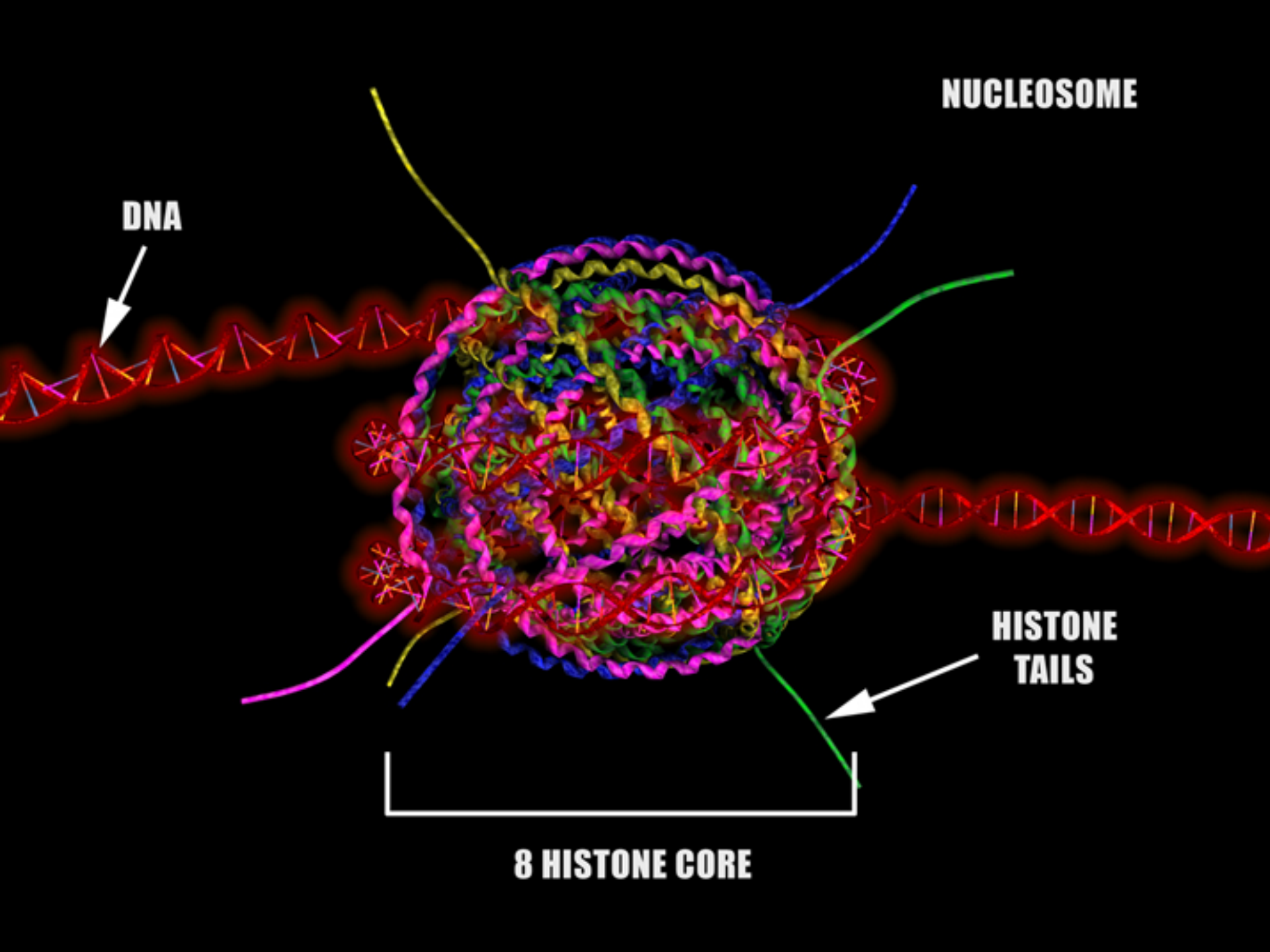
- Schizoaffective disorder
- Antisocial personality disorder
- Paranoid schizophrenia
- Obsessive compulsive disorder
- Autism
- Anorexia

Epigenetics

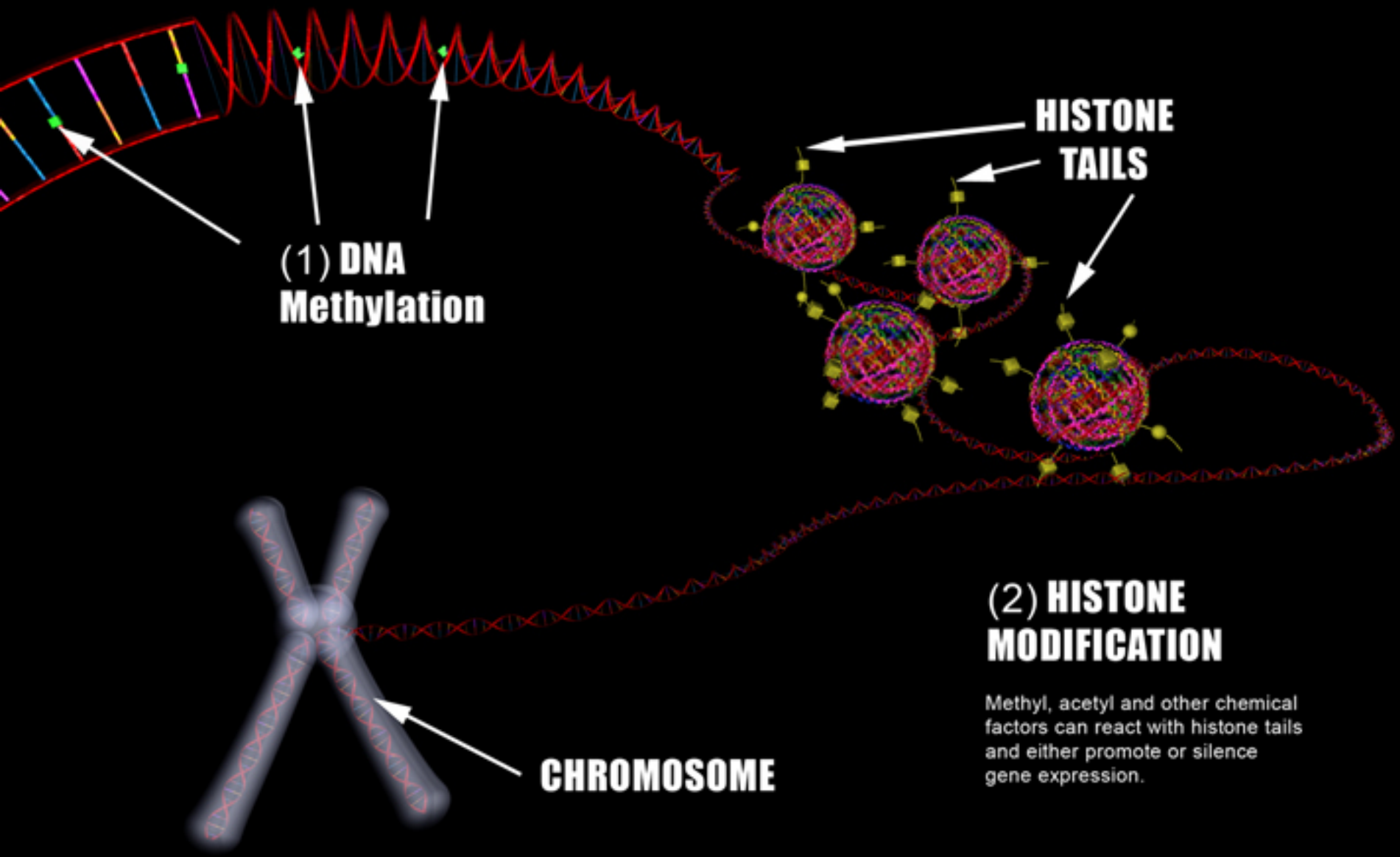
- >20,000 genes in every cell's DNA, each capable of producing a specific protein,
- Liver, skin, brain, and other tissues require a unique combination of proteins,
- For each tissue, in-utero chemical environment can determine which genes will be expressed throughout life (bookmarking),
- Environmental insults can alter gene marks and produce mental disorders and disease conditions.

Histones

- Composed of 8 linear proteins twisted together like a ball of yarn,
- Originally believed to serve only as structural support for DNA packaging,
- Later found to inhibit/promote gene expression depending on chemical reactions at histone tails.


NUCLEOSOME
DNA
HISTONE
TAILS
8 HISTONE CORE

The Two Main Components of the Epigenetic Code



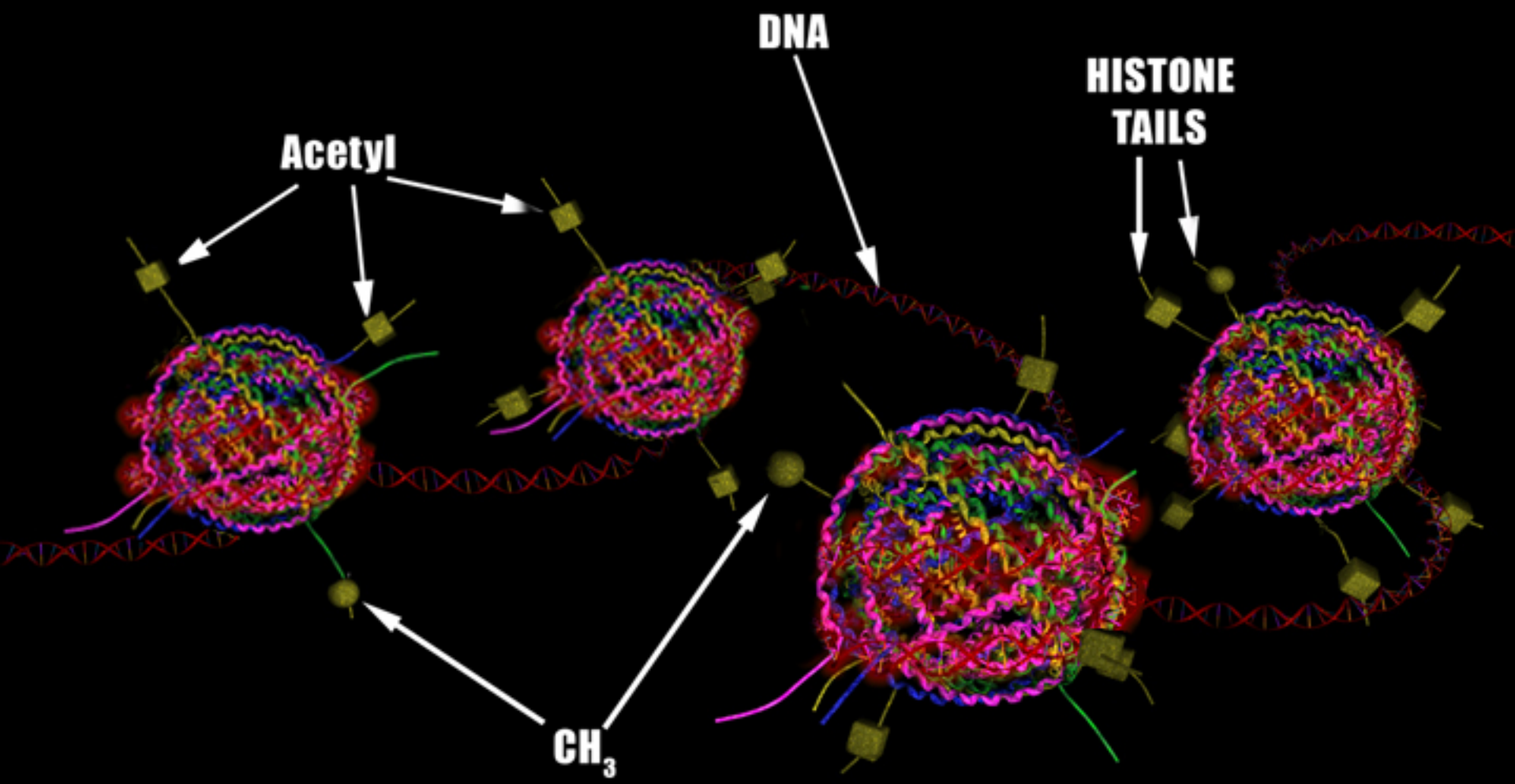
(2) HISTONE MODIFICATION

Methyl, acetyl and other chemical factors can react with histone tails and either promote or silence gene expression.

Methyl-Acetyl Competition

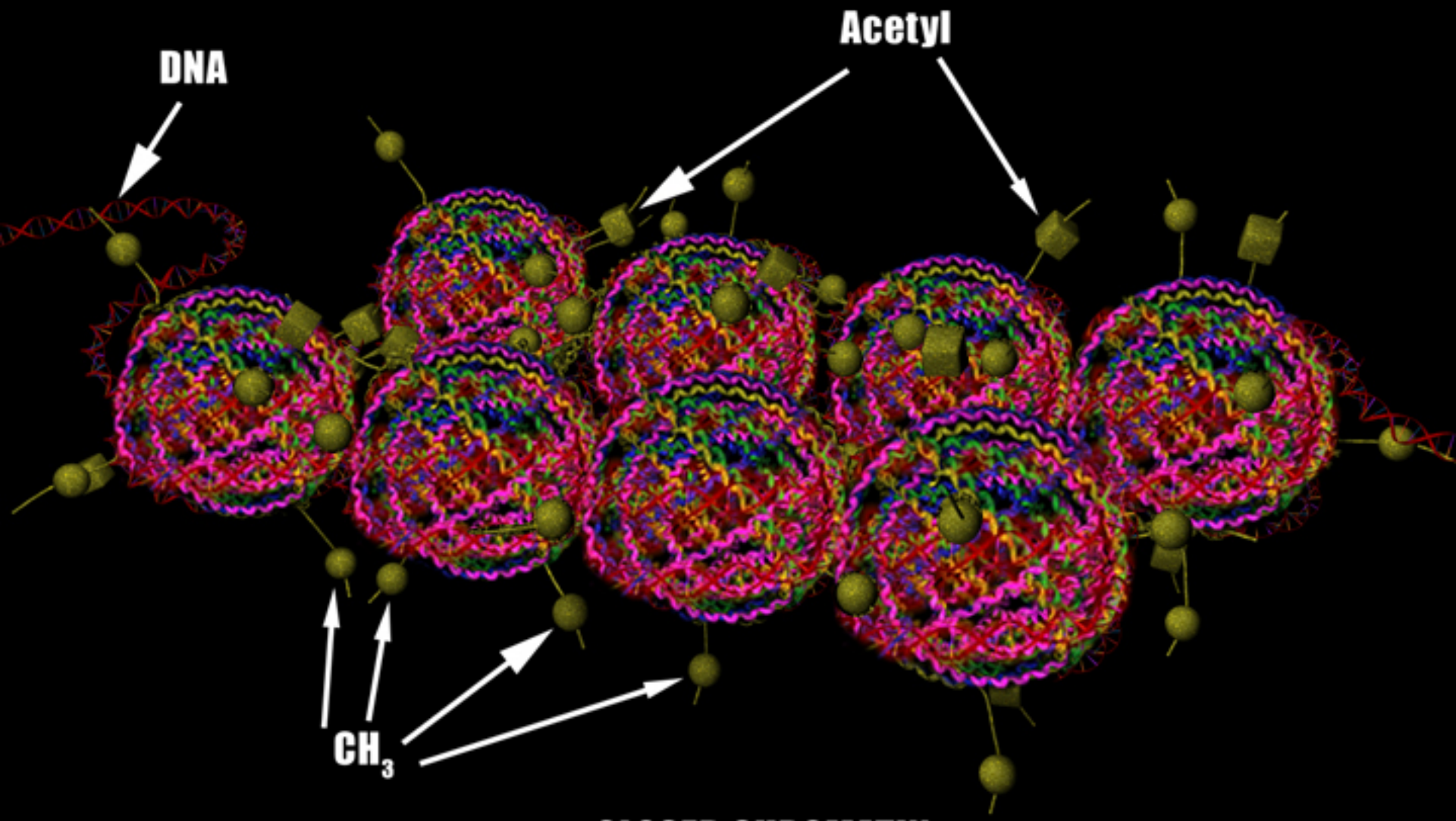
- Competition between acetyl and methyl groups often determines whether genes are expressed or silenced,
- Acetylation tends to promote gene expression;
  Methylation generally inhibits expression,
- Nutrient therapy can change methyl/acetyl levels and adjust neurotransmitter activity.

LOW METHYLATION PROMOTES GENE EXPRESSION



OPEN CHROMATIN

HIGH METHYLATION INHIBITS GENE EXPRESSION



CLOSED CHROMATIN

Epigenetic Insights Into Nutrient Therapy

- Niacin & niacinamide act as dopamine reuptake promoters,
- SAMe is a serotonin reuptake inhibitor,
- Folates reduce synaptic activity at serotonin, dopamine, and norepinephrine receptors,
- Undermethylated mental illness patients are intolerant to folic acid,
- Many nutrients influence neurotransmitter activity and brain function.

The Bermuda Triangle of Autism

- Hypomethylation
- Epigenetic errors, triggered by environmental insults,
- Oxidative Stress

Characteristics of an Epigenetic Disorder

- Abnormal methylation,
- Cases of sudden onset after normalcy,
- Persistence of condition after onset,
- A multitude of characteristic symptoms,
- Heritable condition that violates laws of genetics.

Epigenetic Model of Autism

- Undermethylated in-utero environment results in life-long vulnerability to oxidative stresses,
- Sometime after conception, cumulative oxidative insults reach a threshold that produces deviant epigenetic marks and onset of autism,
- Since deviant marks survive cell divisions, the autism condition can persist a lifetime,
- Epigenetic nature of autism explains violation of classical laws of genetics.

The Promise of Epigenetic Therapies for Autism

- Deviant epigenetic marks appear to be reversible.
- Future epigenetic therapies may represent the best therapies for children and adults diagnosed with autism.
- Early epigenetic testing and treatment may enable autism prevention.

Summary

- Biochemical imbalances are exhibited by most persons with mental disorders.
- These imbalances can adversely impact neurotransmitter synthesis & regulation.
- Most families report improvement, following nutrient therapy to normalize chemistry.
- The emerging science of epigenetics will lead to vastly improved natural therapies.

Pfeiffer's Law

"For every drug that benefits a patient, there are natural substances that can produce the same effect".

Carl C. Pfeiffer, MD, PhD

Over his impressive career, Dr. Walsh has worked with 30,000 patients with conditions ranging from autism to schizophrenia to Alzheimer's. His book is an essential tool for anyone who would prefer to heal the brain with nutrients rather than drugs.

Teri Arranga, editor-in-chief, *Autism Science Digest*

NUTRIENT POWER

HEAL YOUR BIOCHEMISTRY AND HEAL YOUR BRAIN

WILLIAM J. WALSH, PhD

THANK YOU!

Bill Walsh, PhD

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