



# ADHD

## A NEW PERSPECTIVE

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# Credentialing

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- BOARD CERTIFIED DNP (DOCTOR OF NURSING PRACTICE) BY AANP
- MASTER HERBALIST CERTIFIED WITH SCHOOL OF NATURAL HEALING
- SEVERAL NUTRITION CERTIFICATIONS
- CERTIFIED WITH THE INSTITUTE FOR FUNCTIONAL MEDICINE
- OVER 10 YEARS OF PEDIATRIC PRACTICE
- EXTENSIVE EXPERIENCE TO MANAGE BEHAVIORAL, PSYCHOLOGICAL AND DEVELOPMENTAL CONCERNS WITH A FOCUS IN NUTRITION, NUTRIGENOMICS, GENETICS, AND HOLISTIC PRACTICES



# STATISTICS

## CDC

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- **-Six million or over 9% of U.S. children ages 3-17yrs old are diagnosed with ADHD**
- **-Thirteen percent of adolescents 12-17 years old are diagnosed with ADHD**
- **-In the last 10 -15 years, there has been over 4-5% increase in ADHD incidence**
- **-Boys are twice as likely (13%) to be diagnosed with ADHD than Girls (6%)**
- **-Over 64% of children with ADHD have a mental, emotional or behavioral co-morbid condition**
- **-Medications work well to manage ADHD symptoms for only 1/3<sup>rd</sup> of children who try them**
- **-Around 30 percent of children with ADHD do not tolerate the medication side effects**

# CAUSES OF ADHD

## TRADITIONAL THEORY

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- Genetics
- Unknown
- Lead/Environment Exposure
- Head/brain trauma
- Low Birth Weight
- Premature Delivery

## FUNCTIONAL THEORY

- Epigenetics-environmental exposure-heavy metals, POC's, VOC's, Glyphosate, Agriculture Sprays, Silver fillings, vertical transmission
- Nutrient Deficiencies-Copper, Iron, B-complex, pyrrole disorder, zinc, vitamin D
- Genetics-Methylation, detoxification, SNP's, Family hx
- Gut Health-Dysbiosis, intestinal permeability
- Sleep disorder

# DEFINITION OF ADHD

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- Outlined in the DSM-5 criteria
- Originally called Hyperkinetic Reaction of Childhood
- American Psychiatric Association formally recognized as mental disorder 1960's
- Recognized as “attention deficit disorder with/without hyperactivity” 1980's
- Criteria since then have changed multiple times
- DSM-5 no longer recognizes Criteria for ADD
- WHAT DOES THIS MEAN?
  - EVOLUTION IN UNDERSTANDING
  - EVOLUTION IN SCIENTIFIC KNOWLEDGE
  - EVOLUTION IN RESEARCH ABILITY
  - SOMETHING ELSE??

# TRADITIONAL TREATMENT OPTIONS

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- Stimulants-Ritalin, Methylphenidate, Dexmethylphenidate, Vyvanse
- Non-Stimulant- Strattera, TCA's, clonidine, guanfacine
- Cognitive Behavioral Therapy
- IEP or 504 plans
- Working on Sleep
- Working on eating more fruits and veggies



# FUNCTIONAL TREATMENT APPROACHES

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- Discovering imbalances through labs-Genetic testing, nutritional testing, allergies, OAT, CSA
- Correcting nutritional imbalances
- Optimization of nutrition and epigenetic potential
- Optimizing gut health and Vagal Nerve Function
- Optimizing detoxification-Stooling, eliminating heavy metals, environmental pollutants
- Optimizing sleep
- Herbs, nutraceuticals, homeopathies, Nootropics
- CBT, Neurofeedback, biofeedback, Mind-Body practices
- Optimizing genetics-SNP's, methylation

# Functional Medicine

Cost Effective

Systems Oriented

Patient Centered

Health Focused

Root Cause Resolution

Long Term Restoration of Health

Recognizes Biological Uniqueness

Synergistic Approach

Preventive

**VS**

# Conventional Medicine

Expensive

Symptoms Oriented

Doctor Centered

Disease Focused

Symptom Suppression

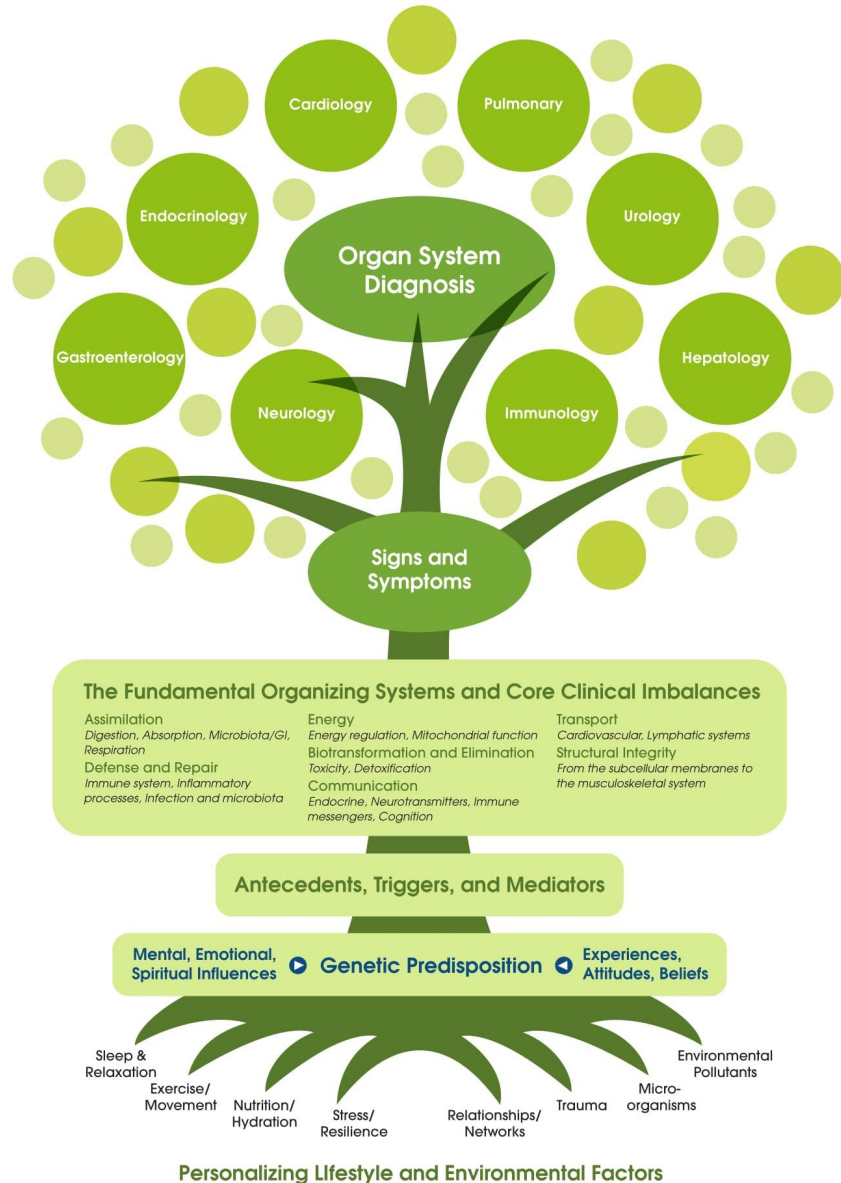
Long Term Reliance on Medication

Everyone Is Treated the Same Way

Disjointed Approach

Reactive





## HOW WE DEFINE DISEASE

- Looking at a systems approach
- Connecting symptoms to systems
- Understanding the bodies ability to heal
- Understanding the bodies defenses
- Understanding individual uniqueness
- Using a multi-modal approach to health

# COMMON TOXIN EXPOSURE

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- Up to 30% of vertical transmission from mom
- Fillers, artificial scents, stabilizers, colors in makeup, shampoo, home and personal products
- Some vaccines can increase levels of aluminum as can deodorant
- Heavy metals in pollution, water, contaminated dirt, lead in old homes (before 1970's), some toys from China, old house pipes, pesticides/herbicides, combustion by-products
- Plastics/PCB's, Flame retardants in clothing, carpets, beds and bedding, plastics in all packaged foods, or foods cooked in plastic.
- Mycotoxins-water damage in home, foods, environmental exposure
- Pesticides/Herbicides/Insecticides-Home use, neighborhood use, agriculture use, consumed in GMO/Non organic foods- (1 billion lbs, 2,000 new, 280 million lbs. glyphosate)
- Hormones/Antibiotics-Traditional farm raised meats, dairy products

# NUTRITIONAL IMBALANCES

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- Most commercial vegetables and fruits 10-40% fewer minerals
- Zinc- Low
- Copper-Low or too high
- Omegas-Low
- Vitamin D-Low
- B12 and Folate-Low
- Magnesium –Low
- Iron-Low



# ZINC/COPPER

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- Essential for protein, DNA synthesis
- Essential to help heal damaged tissues
- Essential for normal thyroid function
- Essential for normal growth, signaling and support of immune cells
- Serves as a neurotransmitter, and promotes learning and memory, and neuronal survival.
- Helps to preserve normal taste and smell
- Around 38% of children are zinc deficient
- Between 60-73 % of children with ADHD found to be zinc deficient.
- Essential for normal Copper balance
- Rich in –Some seafood, Meat, seeds/nuts, chocolate, whole grains, legums

# OMEGA OILS (3,6,7,9)

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- EPA/DHA- Key essential fatty acids in the body
- Our brain is 60% fat, so high quality fat is essential for good brain function.
- Omega stabilize unhealthy fat, reduce inflammation, improve cell integrity
- Deficiency causes breakdown of our neurons, reduces synapses, and modifies dopamine and Serotonin receptors
  - This increase low-frequency delta and theta brain waves in place of high-frequency Alpha and Beta
- Omega 3,6 ratio of 2-3/1, currently most kids currently get 1/15 ratio
- Omega 3 fats- Fish (Salmon, Mackerel, sardine, anchovy, herring), cold pressed oils (olive, coconut, avocado), avocados, nuts and seeds and organic pasture raised animal products
- Omega 6 oils-Vegetable oils, seed oils, fried foods, packaged and processed foods
- High correlation amongst children with ADHD symptoms and low DHA/EPA and high Omega 6
- Research supports DHA or Omega oils (2-5 grams daily) with improved focus, hyperactivity and mood

# MAGNESIUM

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- Required as a cofactor in over 300 known biochemical functions
- Required by mitochondria for energy production
- Required for normal bowel motility
- Required for healthy bone mineralization
- Required for DNA, RNA and Glutathione
- Key to reduce and control oxidative stress, especially in the nervous system
- Harmonizes the nerve signal transmission in the brain
- Preserves integrity of the blood brain barrier
- Mg deficiency is found in almost 75% of children with ADHD
- Multiple meta analysis in PubMed agree on an inverse relationship between magnesium level and ADHD symptoms



# VITAMIN D

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- Essential fat soluble vitamin
- Critical for absorbing and retaining calcium and phosphorus
- Modulates the innate and adaptive Immune function
- Promotes proper cell proliferation and differentiation
- Helps to regulate the stress response
- Key in intracellular signaling, anti-inflammatory actions
- Large role in expression of genes/proteins
- Source-Sunshine during months-May-September, farm raised eggs, wild caught fish, raw/organic milk, omega oils.
- 50% of kids 1-5yrs old and 70% 6-11yrs old are D deficient
- On average children with ADHD had 33% lower vitamin D levels
- Research shows inverse relationship to vitamin D levels and higher incidence of ADHD, mood and behavioral symptoms

# IRON

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- Required for Hemoglobin production ( protein that carries oxygen in cells)
- Required for mitochondria respiration-to create energy/ATP
- Boosts the immune system
- Required for healthy tissues including hair, skin, nails, bones etc
- Optimizes motor and cognitive development
  - Iron is key to support critical brain growth regions-pre-frontal cortex, amygdala, cerebellum.
- NIH reports that over 2.4 million US children are iron deficient
- JAMA reported serum ferritin levels low in 84% of children with ADHD compared to controls 18%.
- Sources-Cooking in Cast iron, red meat, eggs, liver, some whole grains, dark green leafy veggies, legumes, nuts/seeds, dried fruit

# B-COMPLEX

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- Critical for proper methylation
- Critical for proper glutathione production
- Critical for proper neurotransmitter production (serotonin, dopamine, norepinephrine)
- Major Coenzymes to regulate nervous system activity
- Critical for conversion of food to energy
- Critical in the mitochondria for ATP production
- Sources-Liver, peas, some fresh fruits, whole grains, nuts, nutritional yeast, leafy greens, seafood, poultry, eggs, organic dairy
- CDC estimates that up to 27.5 % of US children have some B deficiency
- Statistics show that children with ADHD significantly more likely to have B vitamin deficiencies, especially folate or B12



# FEELING THE PRESSURE YET?

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# WAYS TO IMPROVE ADHD SYMPTOMS

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- Optimize nutrition
- Optimize hydration
- Optimize sleep
- Reduce EMF exposure
- Reduce Toxins
- Optimize nutrient deficiencies
- Nutraceuticals

# OPTIMIZE NUTRITION

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- Organic Foods-Meats, dairy-look at dirty dozen by the EPA
- Remove GMO foods-Grains, cereals etc
- Balance meals-Always mixing carbs with fats/proteins
- Being careful with high glycemic index foods
- Use Natural Sweeteners-Raw local honey, 100% Maple, stevia, monk fruit sweetener, black strap molasses, erythritol, organic coconut sugar
- Stop food colorings, artificial flavorings like MSG and other additives (read your labels)



# OPTIMIZE HYDRATION

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- Filter your water-consider Berkey or reverse osmosis system
- Get away from plastic bottles, cups-use ceramic, glass, stainless steel or use only BPA free
- Make sure you child is drinking  $\frac{1}{2}$  their body weight in oz daily
- Stop use of juices, sodas, or other beverages with added sugars
- Consider Ultima Replenisher, Dr. Berg electrolyte powder, Feel Goods Hydration Hero powder, LMNT Recharge- be cautious because it does have a lot of sodium per serving, Primal Hydration, coconut water

# OPTIMIZE SLEEP/EMF EXPOSURE

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- Best sleep is sleep BEFORE MIDNIGHT
- Stop TV and other Electronics use 2hrs before bed, limit daytime use
- Make sure that your child is exercising daily\* 45min daily
- Avoid caffeine
- Keep routine bedtime –Bedtime same time
- Start night with warm shower or Epsom salt bath
- Keep electronics and EMF devices out of the room (Wifi/Bluetooth)
- If possible at night turn off the router

# REDUCE TOXIN EXPOSURE

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- Cook in Cast Iron, Stainless Steel, Glass, Ceramic
- Avoid cooking, heating or using plastic, aluminum, Teflon or other non-stick materials
- Avoid using standard cleaning products with artificial scents, perfumes, fillers and other chemicals (Soaps, detergents, deodorants, lotions/creams, shampoos etc)
- Use organic and natural fertilizers and lawn products-Zamzows
- Avoid GMO foods and limit fast foods, frozen prepared meals
- Filter your Home Drinking water, if possible shower water too.
- Clean air filters in home regularly, consider home air purifier
- Stick to grass fed, free range, wild caught fish and meats
- Avoid silver fillings-by weight they are 50% mercury!!!
- Read and be cautious of fluoride and other dental and oral hygiene products



# NUTRITIONAL DEFICIENCIES

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- Zinc- 15-30mg/day
- Magnesium
  - Malate, citrate, carbonate-for stooling- To bowel tolerance
  - Glycinate or L-threonate for only focus/concentration-200mg/day to start
- Omegas-Nordic Naturals, Barleans, Mary Ruth, Dr. Mercola-2-3 grams a day
- Vitamin D3/k2-See hanout for dosing
  - Try for 5-10mcg of k2/1000 iu/d3
- Iron/B-Complex-Consider Beef Organ Meat Capsules (Ancestral Supplements, Heart and Soil)
  - 1yr-2yr-1 capsule
  - 3-5yrs -2 capsules
  - 6-10yrs-3 capsules
  - 11-13yrs-3-4 capsules
  - 15+ 5-6 capsules

# NUTRACEUTICALS

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- L-theanine
- Holy Basil
- Passion Flower
- Lemon Balm
- Ashwaghanda
- Rhodiola
- OPC's –pine bark extract
- Mucuna Pruriens
- Ginko Biloba
- Ginseng
- Lion's Mane
- Saffron
- Brillia-homeopathic-for Anxiety, ADHD, and hyperactivity

# A MOMENT OF RELAXATION

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- [guided deep breathing exercise - Google Search](#)



# GLUTEN FREE GRAIN SOURCES

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- **Gluten Free Grains**

- Oat
- Quinoa
- Brown Rice
- Teff
- Tartary/traditional buckwheat
- Amaranth
- Corn
- Flax
- Millet
- Sorghum

## **Gluten Free Bulk Grains**

- Azure Standard

# GLUTEN FREE FLOUR BLEND

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- **Gluten Free Flour Blend**

- 1.5 cup Oat flour
- 1.5 cup brown rice flour
- ½ cup quinoa trio flour
- ½ cup millet flour
- 3 tablespoons of flax/chia meal
- 2 heaping tablespoons Costco's gluten free flour mix
- **\*\*Mix all together well, and store in fridge or freezer\*\*** This is the base for your recipes for pancakes, waffles, muffins, cake, cookies and other pastries\*\* Don't use for bread as it needs some modification.

# RAW/ORGANIC DAIRY SOURCES

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- **Raw Milk Sources**
- Provider Farms-Raw Cow's Milk
- Rocky Ridge Ranch. Raw Goat Milk
- Infinity Farm. Raw Cow/Goat Milk
- Sweet Cream Pastures. Raw Goat Milk
- Sunnydale Farms. Raw Cow Milk
- Food Land Market. Raw Cow Milk
- Boise Co-Op. Raw Cow/Goat Milk
- Saint John's Organic Farm. Raw Cow Milk. ...
- Quiet Man Farm. Raw Cow Milk.
- Raw Life Farms Reko-Raw Cows milk

- Steele Legacy-Raw cow's milk



# RESOURCES

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## Books

- Kids In The Syndrome Mix of ADHD, LD, Autism....And More-Martin L. Kutscher MD
- Disconnected Kids-Dr. Robert Melillo
- Reconnected Kids-Dr. Robert Melillo
- The Holistic RX for Kids-Madiha Saeed, MD
- Non-Drug Treatments for ADHD-Richard P. Brown, MD
- Finally Focused. James Greenblatt, MD
- The explosive child By Ross. W. Greene
- EMF\*D-Joseph Mercola
- What the EMF-Risa Suzuki
- Nutrient Power—William Walsh
- Children and Environmental Toxins-Karen white
- Dirty Genes-Ben Lynch
- The Toxin Solution-Joseph Pizzorno
- Toxic-Neil Nathan

## Podcasts

- The Sensory Project

# OATMEAL RAISIN CHOCOLATE CHIP COOKIE RECIPE

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- 2 cups gluten free flour mix
- 2 tablespoons chia/flax/hemp meal
- 1 tsp baking soda
- 1 tablespoon apple cider vinegar
- 3/4 cup oil (coconut, ghee, olive) I usually do half and half
- 1/2 cup apple sauce
- 1 tsp sea salt
- 2 tsp cinnamon (Can add more for flavor if wanting)
- 1/2 tsp nutmeg
- 1/2 cup Monk Fruit Sweetener
- 1/2 cup local honey
- 3/4 cup organic coconut sugar
- 2 tsp stevia
- 2 tsp vanilla extract
- 3 large eggs
- 3 cups organic rolled oats
- 1/2 cup raisins
- 1/4 cup stevia sweetened chocolate chips

Combine everything in a bowl except for the oats, raisins, and chocolate chips with a hand mixer. Hand mix in oats, raisins, and chocolate chips. Chill batter in fridge or freezer until firm. Place a rounded golf ball size scoop on baking tray and bake at 375 for 10-12 minutes or until lightly golden brown on top. Let cool and enjoy.

