

NUTRITION AND INTEGRATIVE STRATEGIES FOR MENTAL HEALTH

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FUNDAMENTAL GOALS:

- ✿ Learn a new way of approaching the concepts of health, disease, diagnosis, and treatment: understand where and what the imbalance really is, what caused it, and what factors are perpetuating it
- ✿ Identify the nutritional and environmental factors essential for optimal mental and emotional functioning, and the best ways to correct deficiencies
- ✿ Explore non-pharmaceutical treatment options that can integrate into your current practice to further benefit your patients and improve their response to your therapies
- ✿ Integrate nutritional and non-pharmaceutical strategies with conventional therapies and pharmaceuticals
- ✿ Gain experience applying this new approach to real cases
- ✿ Transform your work from fixing problems to building healthier people
- ✿ Achieve faster, deeper, and more long lasting success with the therapies you already use

**A NEW MODEL OF
INTEGRATED MENTAL
HEALTH CARE**

INTEGRATING RESEARCH WITH CLINICAL PRACTICE

- ✿ Knowledge gained from research is the critical foundation, but not the whole story
- ✿ No research study will ever tell you what is going to help the patient sitting across from you right now
- ✿ The art of medicine is applying all our scientific knowledge to a new, unique, and uncontrolled environment: your patient
- ✿ As we gain more and more information, it becomes more and more important to discern the nuances of information learned, and not learned, by different studies, and apply it to complex real world scenarios

TRANSFORMING “MEDICAL” CARE TO “HEALTH” CARE

- ✿ We have a “medical system” - places and people who will “fix” us when we get sick
- ✿ What we all want is a *HEALTH*-care system, a network of people and places that build health, prevent some illness, and fix us when needed
- ✿ The transformation requires teaching people how to be healthier, by integrating a variety of different strategies, not just learning new techniques for fixing, or far more often-managing, disease

TRANSCENDING MIND BODY SEPARATION

- ✿ First step of building health is understanding that health is not simply a physical process
- ✿ Both mental illness and physical illness are combinations of psychosocial and physical influences
- ✿ Even therapy is not just about delving into those psychosocial processes, it is also about improving the interaction between the psychosocial and physical realities - and this should include basic lifestyle and nutrition factors

BENEFITS OF THE CURRENT MODEL OF “CHEMICAL IMBALANCE”

- ✻ Provides a framework for understanding mind-body interactions
- ✻ Lessens the stigma of mental illness as a “character flaw”
- ✻ Has yielded many drugs that can improve quality of life

NEGATIVE EFFECTS OF THE CURRENT MODEL OF CHEMICAL IMBALANCE

- ✿ Over-reliance on drug therapy
- ✿ Drugs being prescribed to people who don't actually need them, and often causing side effects
- ✿ Drugs being prescribed instead of changing the factors that cause and perpetuate the problem
- ✿ When misinterpreted, can create a sense of biological inevitability and hopelessness about recovery or improvement

DIG DEEPER: WHAT IS THE REAL CAUSE OF THE CHEMICAL IMBALANCE?

- ✿ Chemical imbalance may be the cause of the symptoms, but it is always the *RESULT* of other factors
- ✿ Does anyone really have a prozac deficiency?
- ✿ Analyzing and understanding the factors that cause the chemical imbalance shows us the path to potentially cure, not just manage, the symptoms

BEYOND “COMPLEMENTARY AND ALTERNATIVE:” INTEGRATIVE MEDICINE

- ✿ CAM implies a separation of different forms of medicine: pharmaceutical vs. natural treatments, or physical versus cognitive treatments
- ✿ The best medicine digs deeper, analyzes the factors involved and diagnoses based on an understanding of those factors, and *INTEGRATES* the most effective combination of treatments, including nutrition, non-pharmaceutical interventions, pharmaceuticals, and cognitive therapies
- ✿ True integrative medicine also considers how these different therapies interact with each other and build on each other, and requires developing a customized strategy for each unique situation

INTEGRATIVE MEDICINE: BETTER OUTCOMES

- ✿ Often, more than one kind of treatment is necessary to overcome a problem
- ✿ Combining drug therapy and nutritional therapy often improves outcomes
- ✿ Many of these nutritional therapies are the foundation upon which talk therapy and drug therapy work. Without addressing these core underlying problems, the improvements from talk therapy and drug therapy will be limited, requiring more and more intervention simply to maintain

**THE PHYSICAL
BASIS OF MENTAL
HEALTH:**

SLEEP
ACTIVITY
FOOD

FOOD

“It’s better to pay the grocer than the doctor”

Start debunking the myth that “eating healthy” is more expensive - a processed food diet is FAR more expensive than a whole foods diet

FOOD IS MORE THAN THE SUM OF ITS NUTRIENTS

- ✿ Nutritional supplements are never the full answer: they are *supplements* to a healthy diet
- ✿ For supplements to work, you first have to build a strong foundation of diet
- ✿ Foods are more than the sum of their component nutrients - taking the RDA of required nutrients, even if we could agree what that is, is not the route to optimal health

WHAT IS A HEALTHY DIET?

Eat food,
not too much,
mostly plants

MICHAEL POLLAN

- ✻ Journalist and Author

- ✻ The Omnivore's Dilemma

- ✻ In Defense of Food: An Eater's Manifesto

- ✻ https://www.youtube.com/watch?v=sBr_i1mH_08

- ✻ Examines how we came to have so much confusion about what to eat, and why we are constantly bombarded with contradictory health directives around food

“REAL” FOOD

- ✿ If something is advertised as healthy, it's probably not
- ✿ Foods you can grow yourself are preferable (even if you didn't)
- ✿ Shop the outside of the grocery store
- ✿ Start by eating vegetables
- ✿ Next: Eat more vegetables, with EVERY meal, ideally half of every meal - start with dinner plate half veggies
- ✿ Snack well: raw nuts, veggies, fruit, or smaller servings of balanced meals

RESOURCES FOR MEAL PLANNING

- ✿ All changes take attention, decide on strategy:
 - ✿ Meal plans: “just tell me what to eat”
 - ✿ Guided tracking: food journal, counting fat, carbs, calories, or points, or avoiding sugar, gluten, etc
- ✿ Cookbooks / Internet recipes
- ✿ Cleanses: “Lean and Green” can be a physically and emotionally effective jump start

VALUE FOOD, ENJOY EATING

- ✻ The environment and context in which we eat is as important as the food itself: experience the value of time spent preparing and eating food
- ✻ Take a break:
Eat regular meals and snacks, every 3-4 hours, in a relaxed comfortable environment
- ✻ Simple habits: take 7 deep breaths before starting to eat, focus on chewing each bite

**THE ESSENTIAL
NUTRIENTS FOR
MENTAL HEALTH**

ESSENTIAL NUTRIENTS FOR MENTAL HEALTH

☼ Fats

☼ Proteins

☼ Vitamins

☼ Minerals

EPA AND DHA: WHY THEY ARE SO IMPORTANT

- ✿ EPA and DHA are critical for cell membrane functioning, which controls what gets in and out of cells, and how neurotransmitters and hormones bind to their receptors, both in the brain and throughout the body
- ✿ Has anti-inflammatory effects, which also changes the ratios of different cell signals, leading to better functioning
- ✿ Proven to be beneficial in ADHD, bipolar, depression, cardiovascular disease, arthritis

OMEGA-3 CAN PREVENT PSYCHOSIS

- ✿ Placebo controlled study of 81 adolescents at ultra-high risk of psychosis
- ✿ Given 12 weeks of supplemental EPA 700mg and DHA 480mg
- ✿ At 1 year follow-up, the treatment group showed significantly reduced numbers transitioned to psychotic disorder
- ✿ At 6.7 years: 9.8% of treatment group vs. 40% of placebo group had converted to psychotic disorder
- ✿ 53% of treatment group had met the criteria for an Axis-1 disorder during the 6.7 years, vs. 83% of placebo group
- ✿ Of treatment group, only 6.7% showed severe impairment, and 70% were employed full-time

✿ Amminger, G. P. *et al.* Longer-term outcome in the prevention of psychotic disorders by the Vienna omega-3 study. *Nat. Commun.* 6:7934 doi: 10.1038/ncomms8934 (2015).

SOURCES OF EPA AND DHA

- ✿ Salmon, halibut, mackerel, krill, herring
- ✿ Farm-raised salmon has less, because the Omega-3 fatty acids are not in the fish food
- ✿ Eating flax seeds, flax oil, raw walnuts and pecans are a good sources of omega-3, but if supplements are going to be used, fish oil is more effective
- ✿ The average american diet is extremely deficient in fish oil and omega 3 fatty acids.
- ✿ Even people who eat fish, flax, and nuts could still have an omega 3 deficiency

HOW TO GET OMEGA-3 FROM FOOD

- ✿ Salmon: 4-6 oz serving, twice per week
canned Alaskan salmon is a convenient, affordable way to eat salmon: anything you would use tuna for, use salmon
- ✿ Nuts and seeds: 2-4 Tbsp per day
- ✿ Walnuts are richest source, peanuts are have NONE
- ✿ Ground flax seeds
- ✿ Chia seeds

FISH OIL SUPPLEMENTATION

- ✿ Quality of the supplement is CRITICAL!
- ✿ Must be mercury and pesticide free
- ✿ Molecular distillation is the best process to achieve purity
- ✿ Must be properly packaged to avoid going rancid
- ✿ Total fish oil amount is not useful; any supplement that does not break down EPA and DHA amounts should be avoided
- ✿ EPA 500-1000 mg for maintenance, 1000-2000 mg therapeutic
- ✿ DHA 300-700mg for maintenance, 500-1500 mg therapeutic

FISH OIL: CONTRAINDICATIONS

- ✿ Most surgeons recommend stopping supplementation, but not eating fish, prior to surgeries
- ✿ Do not use if patient is on coumadin/warfarin, or other blood thinning agents (using with aspirin is ok)
- ✿ If the patient has poor digestion, may not be able to get full benefit because of failure to absorb it
- ✿ Can “repeat:” make sure fish oil is high quality, and taken at the beginning of a meal

FATS: SUMMARY

- ✿ Cook with coconut oil and olive oil
- ✿ Avoid trans fats / hydrogenated fats
- ✿ EPA and DHA are critical nutrients that almost everyone is deficient in
- ✿ Fish oil is a first line treatment in ADHD and bipolar at therapeutic doses if no contraindications
- ✿ Quality is CRITICAL!

PROTEIN

- ✿ Protein is constructed of amino acids
- ✿ Digestion breaks down protein into amino acids
- ✿ Amino Acids are the building blocks of the body, including neurotransmitters - without adequate protein, deficiencies in neurotransmitters will occur

AMINO ACID PRECURSORS

- ✿ Tryptophan is required for serotonin production
- ✿ Lack of serotonin or irregular production leads to mood issues
- ✿ Tyrosine is required for dopamine production
- ✿ Dopamine is necessary for regulating impulse control, and deficient dopamine is associated with ADHD, (and parkinson's and RLS) while excess dopamine is associated with psychotic states

SOY: GOOD OR BAD?

- ✻ The kind of soy matters:

- ✻ soy protein isolate, the most common form of soy, in protein bars, protein drinks, fake meat products, and most packaged food is a by-product of the margarine industry, and is poorly digested and chemical laden

- ✻ fermented tofu and tempeh, the traditionally eaten forms of fermented soy, are excellent sources of protein and other nutrients

QUESTION DIGESTION

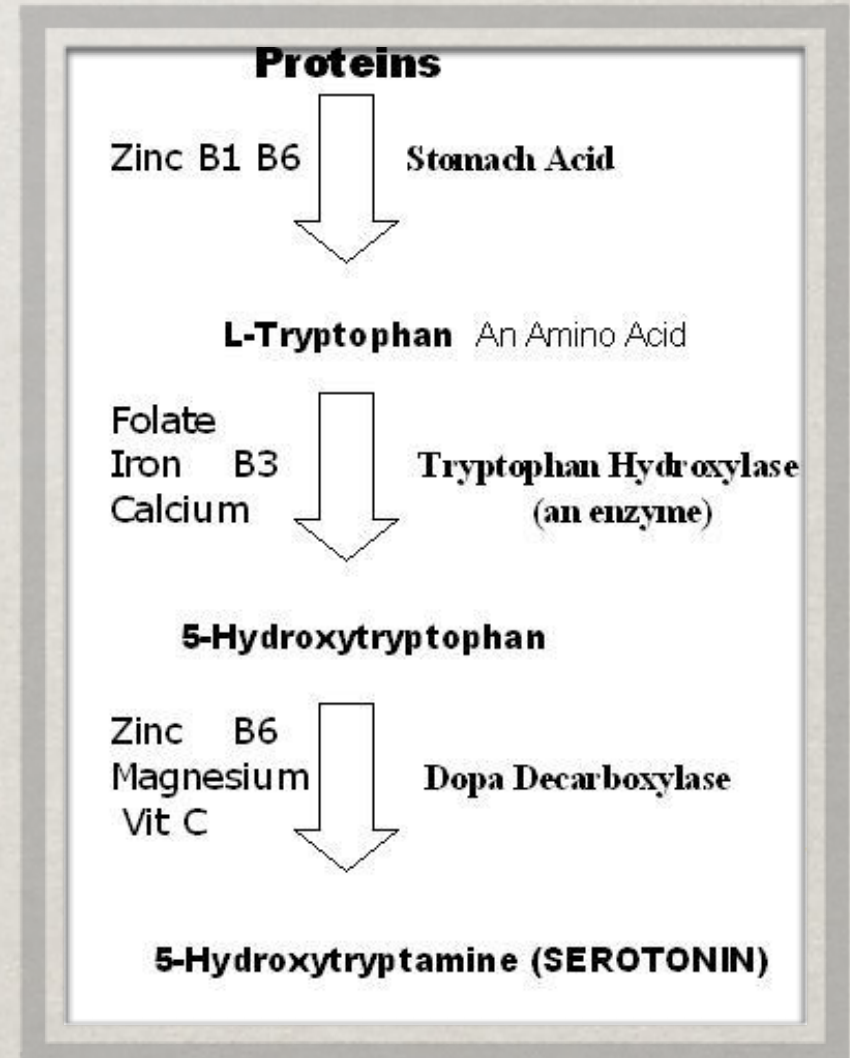
- ✿ Even when eating the right foods, some people can still be protein and amino acids deficient if they are not adequately digesting the protein
- ✿ Ask your patients if they take antacids or acid blockers, prescription or otc - these medications interfere with protein digestion (and mineral absorption) and should not be taken long term (prevacid, prilosec, zantac, nexium, acifex, dexilant)
- ✿ If your patient takes has symptoms of or takes medication for heartburn, gas, bloating, or IBS, refer them for evaluation with someone who practices functional medicine

TYROSINE

- ✿ Supplemental tyrosine can be beneficial in ADHD when there is protein deficient diet (or digestive compromise) and impulse control is the main symptoms
- ✿ Also helpful in addictions, including binge eating, although always requires other treatments also
- ✿ Avoid in any cases of psychosis
- ✿ Can potentiate wellbutrin, and all parkinson's meds, do not use with these medications
- ✿ Dose: 500mg 1-3x/day for kids, 1000mg 2-3x/day for adults

TRYPTOPHAN AND 5-HTP

☀ 5-HTP is the
activated form of
tryptophan



5-HTP

- ☼ Beneficial in depression, anxiety, bipolar, hormonal mood swings
- ☼ NEVER use 5-HTP when people are taking a full dose of and SSRI medication
- ☼ Extremely useful in reducing withdrawal symptoms while weaning off SSRI's
- ☼ 50-200 mg per day, usually at bedtime

B-VITAMINS

☼ B-Complex

☼ B12

B-COMPLEX

- ✿ Each have their own specific functions, but “B-complex” includes all the B vitamins
- ✿ Used in countless biochemical reactions in the body related to energy production
- ✿ Necessary for optimal adrenal function (handling stress)
- ✿ Necessary for optimal neurotransmitter production

WHAT IS “WHOLE GRAIN?”

FIGHTING ADVERTISED DISINFORMATION IS ESSENTIAL!

- ✿ A “whole” grain means the grain kernel is still intact, not pulverized into flour
- ✿ Products made from whole grain flours, such as whole wheat flour in whole grain bread, pasta, and crackers are NOT whole grains

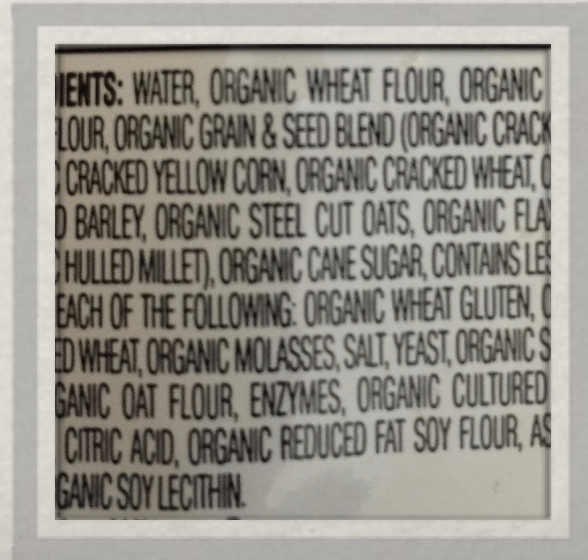
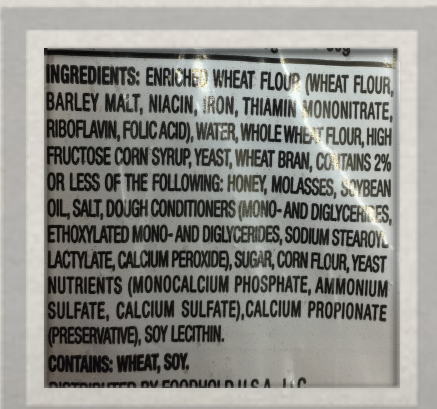
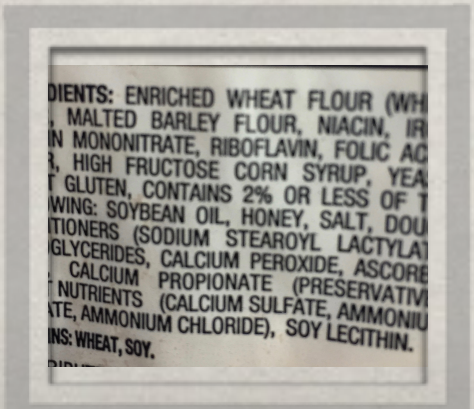
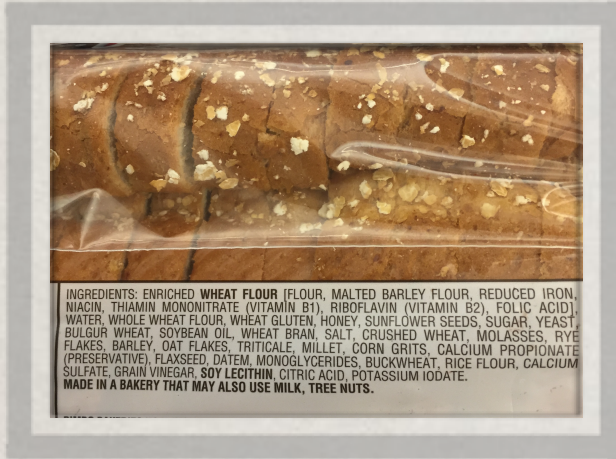
READING LABELS IS TRICKY:

EDUCATE, EDUCATE, EDUCATE!

- ✿ Whole grain flour does have benefits over refined flour: has more B-vitamins as well as other nutrients, enzymes, and fiber
- ✿ Reading labels is tricky: people **MUST** read the ingredients: only “whole-wheat flour” is truly whole wheat flour
- ✿ wheat flour, enriched wheat flour, unbleached wheat flour, multi-grain flour, durum semolina, are are **ALL WHITE FLOUR**

FAKE

YES, EVEN THIS IS FAKE



YES, EVEN THESE ARE FAKE TOO



*Fabled Foods Artisan Bakery
Deep River, CT
Multigrain*

\$4.25

Ingredients: Stone Ground Wheat Flour, Sourdough Levain, Whole Wheat, Rye Sour, Mixed Grains, Sunflower Seeds, Wheat Berries, Pumpkin Seeds, Sesame Seeds, Salt, Yeast

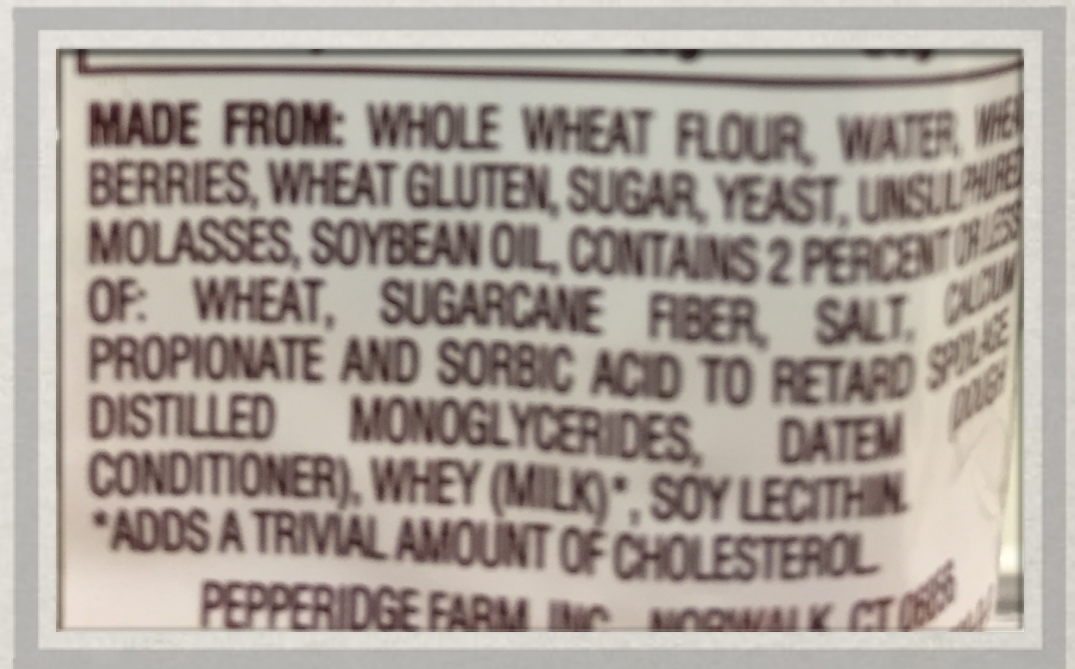


*Fabled Foods Artisan Bakery
Deep River, CT
Multigrain Sandwich Rolls*

\$1.00

Ingredients: Stone Ground Wheat Flour, Sourdough Levain, Whole Wheat, Rye Sour, Mixed Grains, Sunflower Seeds, Wheat Berries, Pumpkin Seeds, Sesame Seeds, Salt, Yeast

WHOLE WHEAT BREAD



CAUSES OF B-VITAMIN DEFICIENCY

- ✿ The standard american diet is largely deficient in B-vitamins (even when “enriched,” flour does not contain sufficient B-vitamins)
- ✿ RDA is just enough to prevent deficiency diseases, and much lower than many people need to function optimally
- ✿ Stress increases the body’s and the brain’s demand for B-vitamins
- ✿ Insufficient B-vitamins compromises ability to cope with stress
- ✿ Even people eating a healthy, B-vitamin rich diet may need supplementation: especially if there is excessive stress or a family history of depression or other mental illness

SUPPLEMENT B-COMPLEX

- ✻ For anyone with stress, especially if it is leading to fatigue and/or depression
- ✻ Improves energy and mood, sometimes dramatically, sometimes subtly, within a couple weeks, often within just a few days
- ✻ Reduces caffeine dependence

WHAT TO LOOK FOR IN B-COMPLEX

☼ “B-50” dose: 1 per day (up to 2 twice a day)

☼ “B-50” means there is 50 mg of B1, B2, B3, and B6 (look at the label on the back)

Supplement Facts		
Serving Size: 1 capsule		
Servings Per Container: 250		
Ingredient	Amount	% Daily Value**
Thiamin (Vitamin B-1)	50mg	3333
Riboflavin (Vitamin B-2)	50mg	2941
Ciacin (Vitamin B-3)	50mg	250
Vitamin B-6 (from Pyridoxine HCl)	50mg	2500
Folic Acid	400mcg	100
Vitamin B-12 (as Cyanocobalamin)	50mcg	833
Biotin	50mcg	17
Pantothenic Acid (from Calcium Pantothenate)	40mg	400
PABA	50mg	†
Choline	50mg	†
Inositol	40mg	†

B-COMPLEX FOR DEPRESSION

- ✻ Foundational support for all cases of depression; occasionally is the only therapy necessary in both situational and clinical depression: “this must be what normal people feel like”
- ✻ Case: 43 year old social worker first hospitalized for depression and suicidal ideation as a young teenager

CAUTIONS WHEN SUPPLEMENTING B-COMPLEX

- ✿ Take with food, can cause nausea on empty stomach
- ✿ Niacin flush reactions: rare and harmless, but can scare the patient
- ✿ Excess doses of B6 can cause neuropathy - do not dose B6 alone
- ✿ Always start first dose in the morning; occasionally it is so effective that people will have trouble sleeping if taking B vitamins in the evening

B-COMPLEX AND B-12

- ✿ B-12 is part of B-complex, but people often confuse one with the other
- ✿ Pernicious anemia is the inability to absorb B-12 due to autoimmune destruction of the cells that release intrinsic factor, and requires B-12 injections
- ✿ Bariatric surgery also causes B12 deficiency
- ✿ Other digestive issues can also cause B12 deficiency

SIGNS OF POSSIBLE B-12 DEFICIENCY

☼ fatigue

☼ depression

☼ neuropathy

☼ numbness / tingling in the hands or feet,
especially upon waking or while driving

HOW TO ASSESS FOR B12 DEFICIENCY

- ✿ All cases of depression that do not respond to therapy/medication should be tested for B12
- ✿ Ask clients if they have a family history of someone who needed B-12 injections
- ✿ Make sure all these cases, even in teenagers and 20-somethings are tested for B12, and ask for the actual number result
- ✿ Anybody who has B12 <450 and suffers any of the symptoms should be treated and monitored by their PCP or psychiatrist

MINERALS

☀ Magnesium

☀ Calcium

MAGNESIUM

- ✿ Essential nutrient for mental health that is VERY commonly deficient
- ✿ Critical for the relaxation of nerve cells and muscle cells
- ✿ Most useful in anxiety, ADHD, bipolar, anger/irritability, and associated pain syndromes such as headaches, migraines, fibromyalgia, back pain, and sciatica

MENTAL EMOTIONAL SIGNS OF POSSIBLE MAGNESIUM DEFICIENCY

- ✻ Anxiety
- ✻ Panic attacks
- ✻ Irritability and Anger
- ✻ Difficulty focusing
- ✻ Poor sleep
- ✻ Heightened sensitivity to pain

PHYSICAL SIGNS OF POSSIBLE MAGNESIUM DEFICIENCY

- ✿ Restless leg syndrome, muscle cramps:
are almost always magnesium deficiency
- ✿ High blood pressure
- ✿ Heart palpitations
- ✿ Constipation
- ✿ Headaches: migraines and tension headaches
- ✿ Muscle achiness, fibromyalgia, trigger point tenderness,
sometimes back pain and sciatica

WHY MAGNESIUM DEFICIENCY IS SO COMMON

- ✿ 1) We consume too much of the foods that do not contain magnesium, and not enough of the foods that do (too much processed food, not enough vegetables and beans/legumes)
- ✿ 2) Food sources of Magnesium contain less magnesium than they used to because of modern farming practices
- ✿ 3) Over consumption of Calcium induces a relative Magnesium deficiency

BEST SOURCES OF MAGNESIUM

- ☼ Yet another reason to eat lots of green vegetables, which are the richest sources of magnesium
- ☼ Beans and Legumes
- ☼ Nuts
- ☼ Whole grains

SUPPLEMENTING MAGNESIUM

- ✿ RDA 300-400mg per day
- ✿ Many people need more to function optimally
- ✿ Magnesium supplements can stimulate bowel function, a positive benefit when constipation is an issue, but sometimes a problem when people who need more magnesium reach “bowel tolerance”
- ✿ Use Mag glycinate (most absorbable form) when bowels are oversensitive (colitis, IBS-D)
- ✿ When constipation an issue Use Mag citrate (most effective) or Mag oxide (will require higher doses but is cheapest)

CALCIUM

- ✿ Most famous nutrient, particularly for bones
- ✿ Important in a most of the same neurological and muscular functions as magnesium
- ✿ Not as commonly deficient as Magnesium:
For every 1 case of Calcium deficiency - I see at least 20 cases of *Calcium Excess* creating Magnesium deficiency

PROBLEMS OF TOO MUCH CALCIUM: MORE IS NOT BETTER

- ✿ Consumption of high amounts of Calcium without adequate amounts of Magnesium, Zinc, and other trace minerals leads to imbalance
- ✿ Signs are similar to Mag deficiency - often Magnesium deficiency is relative to Calcium consumption
- ✿ Building evidence that supplementation over 500mg per day increases risk of heart disease

HOW MUCH CALCIUM IS ENOUGH, AND TOO MUCH?

- ✿ RDA is 1000-1200mg per day
- ✿ The RDA includes dietary Calcium, is NOT a supplement recommendation
- ✿ Calcium citrate more absorbable than Calcium carbonate, so requires a smaller amount

CALCIUM SUMMARY

- ✿ Generally limit Calcium supplementation to 500mg per day, unless diet is extremely deficient, or the patient has been told otherwise by her doctor, AND clearly understands doctor's instructions
- ✿ Remember to count Tums as a supplement
- ✿ Never exceed 1200mg per day in total Calcium
- ✿ Never supplement Calcium alone - the other minerals are equally important

BALANCING MINERALS

- ✿ The best way is a whole foods diet rich in vegetables, particularly leafy greens, nuts, beans and legumes, with small amounts of organic dairy and soy
- ✿ IF supplementing Calcium, supplement other minerals as well - Magnesium supplementation generally should be equal to Calcium (occasionally a 2:1 Cal:Mag ratio is better tolerated)
- ✿ Remember the other minerals too:
Potassium, Zinc, Chromium, Boron

CASE

- ✿ 64 year old woman with headaches, severe constipation, anxiety, extremely rigid thinking and ritual behaviors bordering on OCD, worsening over the past several years
- ✿ Had been told she had “severe osteoporosis” and put on 1200mg of Calcium per day.
- ✿ Magnesium 500mg per day, along with Calcium 200mg, vitamin D 5000iu, and B-complex 50 1 per day resolved constipation, headaches, and 50-75% improvement in mental/emotional symptoms

**WRAP-UP:
WHERE TO START
WITH YOUR PATIENTS
TOMORROW**

WHOLE-FOODS DIET: SHOP THE OUTSIDE OF THE GROCERY STORE

- ✿ Dinner plate is half vegetables
- ✿ Prepare healthy snacks
- ✿ Balanced Breakfast: protein, fiber, good fats
- ✿ Salad for lunch
- ✿ Drink Water, Avoid sugar and chemical sweeteners
- ✿ Cook with olive oil and coconut oil
- ✿ Switch to breads made with whole grain flour or sprouted grains
- ✿ Read labels: Minimize preservatives and food colorings
- ✿ Organic when possible
- ✿ Eat regularly, in a relaxed and comfortable environment, with small snacks before getting overly hungry



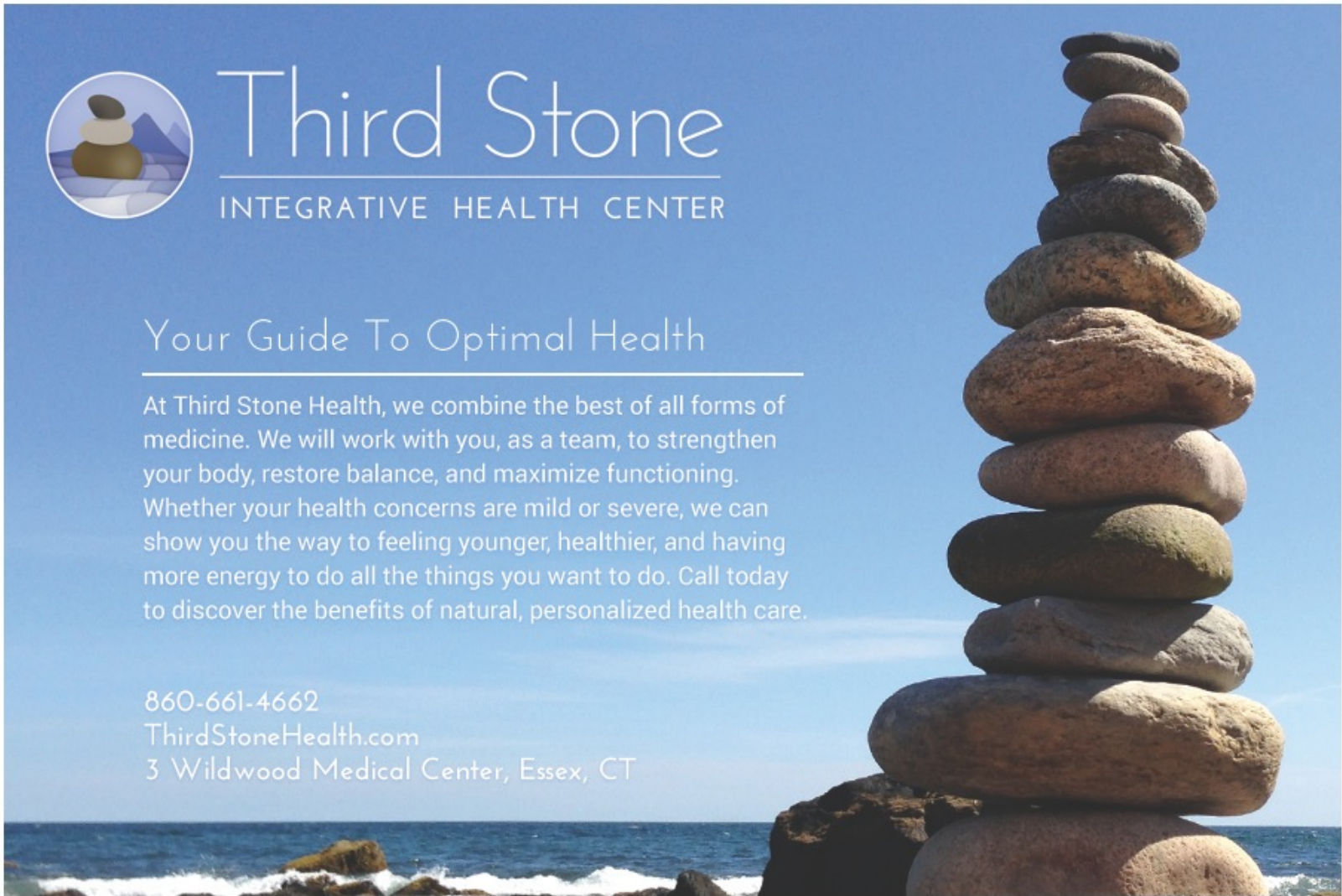
Third Stone

INTEGRATIVE HEALTH CENTER

Your Guide To Optimal Health

At Third Stone Health, we combine the best of all forms of medicine. We will work with you, as a team, to strengthen your body, restore balance, and maximize functioning. Whether your health concerns are mild or severe, we can show you the way to feeling younger, healthier, and having more energy to do all the things you want to do. Call today to discover the benefits of natural, personalized health care.

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