



SPECTRACELL LABORATORIES
ADVANCED CLINICAL TESTING



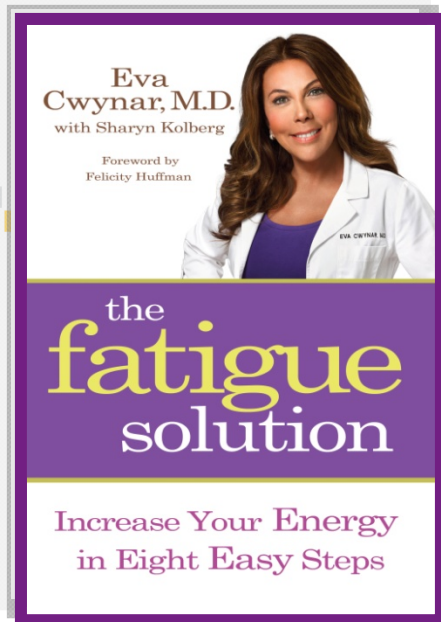
THE FATIGUE SOLUTION: Increasing Energy in 8 Easy Steps

Eva Cwynar, MD

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Eva Cwynar, MD

Eva Cwynar, M.D., is a practicing Endocrinologist, Metabolic Medicine Specialist, and Internist in Beverly Hills, CA. Dr. Cwynar provides medical care that includes state-of-the-art testing for fatigue, metabolism, weight loss and anti-aging. Her clients include both high-profile celebrities and everyday people. She has appeared on such shows as The Doctors, Dr. Phil, Celebrity Fit Club, The Rachel Zoe Project, On-Air with Ryan Seacrest and Jimmy Kimmel Live!

Dr. Cwynar is on faculty at Cedars-Sinai Medical Center, serves as an Assistant Clinical Professor of Medicine at UCLA, and is world-renowned for her expertise in bio-identical hormone replacement, menopause, male menopause, thyroid function, weight loss and overcoming fatigue. She is a member of The Endocrine Society, and has received numerous honors and awards, including California's Doctor of the Year and Top Thyroid Doctor of Beverly Hills. She is also the author of *The Fatigue Solution*.



8 Steps to Fight Fatigue



Step 1 – Feed your energy furnace

Step 2 – Get you gut in shape

Step 3 – Improve sleep & reduce stress

Step 4 – Supercharge your sexuality

Step 5 – Move your body

Step 6 – Check your thyroid

Step 7 – Hormonal balance

Step 8 – Have yourself tested



Energy Influencers



Neurotransmitters

- Relay signals from brain to body
- More than 100 in just the brain
- Inhibitory (serotonin)
- Excitatory (dopamine, adrenaline, endorphins)

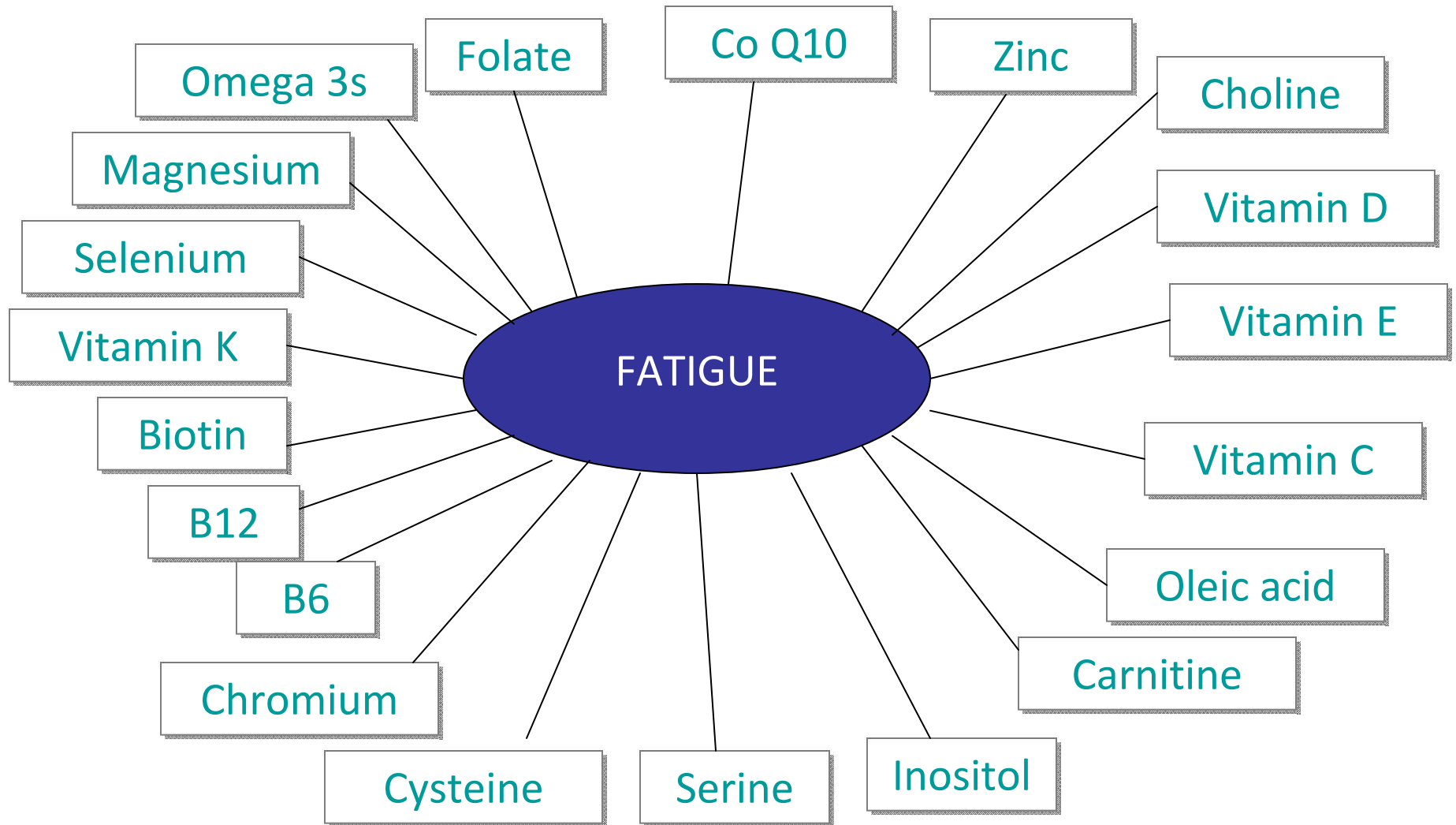
Hormones

- Cellular receptors activate hormones
- Feedback systems
- Hormone levels affect other hormones

Balance is key.



Nutrients Linked to Fatigue



Neurotransmitter – Nutrient Connection



Magnesium

- (>300 metabolic reactions, including serotonin & norepinephrine)

Calcium

- (indirectly enhances synthesis of serotonin)

Zinc

- (enzymatic cofactor to make serotonin, norepinephrine, GABA)

Inositol

- (required for serotonin and acetylcholine function)

Folic Acid

- (involved in serotonin, norepinephrine & histamine synthesis)

Serine

- (vital to cell membrane and nerve transmission)



Neurotransmitter – Nutrient Connection



Vitamin B1 (Thiamine)

- (deficiency can cause depression & irritability)

Vitamin B2 (Riboflavin)

- (involved in norepinephrine synthesis)

Vitamin B3 (Niacin)

- (involved in serotonin & norepinephrine synthesis)

Vitamin B5 (Pantothenate)

- (hormone formation, amino acid & acetylcholine uptake)

Vitamin B6 (Pyridoxine)

- (serotonin, melatonin, dopamine, norepinephrine, GABA synthesis)

Vitamin B12 (Cobalamin)

- (crucial to central nervous system, myelin sheath, SAME)



Step 1 – Feed Your Energy Furnace



Insulin

- Regulates how body utilizes fuel
- Insulin = Stored energy
- Glucagon = Released energy

Cortisol

- Produced by adrenals
- Excess cortisol = premature aging and fatigue

*“Let food be thy medicine and
medicine be thy food.” Hippocrates*



Step 1 – Feed Your Energy Furnace



ACTH (adrenocorticotrophic hormone)

- Low blood sugar triggers pituitary to release ACTH
- ACTH raises cortisol levels
- Elevated cortisol raises blood sugar
- Result = adrenal stress

Hypothalamus

- Regulates metabolism & energy
- “Confused” by starving/ binging cycle
- “Retrain” hypothalamus (more frequent meals, steady energy supply)

CCK (cholecystokinin)

- Turns on satiety signals
- Proteins (not carbs) release CCK



Step 1 – Feed Your Energy Furnace



Mitochondrial metabolism

- Every cell (except red blood cells)
- Krebs cycle to produce ATP (adenosine triphosphate)

Nutritional cofactors for ATP production

- Vitamins: B1, B2, B3, C
- Minerals: Iron, Magnesium, Manganese, Phosphorus
- Amino Acids: Arginine, Glutamine, Carnitine, Tyrosine
- Antioxidants: Cysteine



Step 1 – Feed Your Energy Furnace



Protein, protein, protein

- Don't be afraid of red meat
- Quinoa, Eggs, Nuts, Whole milk

Cut down on soy

- Powerful influence on hormone production (estrogen)
- Babies on soy milk have 22,000 times the estrogen as breast fed babies (equivalent to 5 birth control pills a day!)

Food habits

- Breakfast
- Slow down
- Food aesthetics
- Watch gluten and “controversial” carbs (corn, wheat)



Step 2 – Get Your Gut in Shape



75% of people have gastrointestinal issues

- Food sensitivities
- Low enzyme activity

Culture discourages open discussion

Symbiosis vs. Dysbiosis

- Bacterial balance: good vs. bad
- Candida overgrowth (linked with mercury toxicity)
- Virus, parasites



Step 2 – Get Your Gut in Shape



Symptoms of dysbiosis

- Fatigue
- Leaky gut syndrome
- Bad breath, gum disease
- Skin problems
- Yeast overgrowth
- Acid reflux
- Frequent colds, flu and infections
- Irritable bowel syndrome



Step 2 – Get Your Gut in Shape



Irritable Bowel Syndrome

- Higher incidence of gallbladder removal
- Less GABA (gamma-aminobutyric acid) in IBS
- GABA is “nature’s valium” (reduces excitatory neurotransmitters)
- Glutamic acid not converted to GABA when gut is inflamed

Detoxify – eliminate sweeteners

- 2008, EJCN study: Aspartame inhibits enzyme activity in brain
- Stevia, xylitol

Detoxify – add probiotics

- 2009, Nutr J study: Chronic fatigue patients improved with probiotics
- Prescribe with antibiotics



Step 3 – Improve Sleep

Poor sleep = adrenal fatigue

- ACTH (adrenocorticotrophic hormone) tells adrenals to release cortisol
- During sleep, ACTH “signal” is turned off so adrenals don’t release cortisol
- When cortisol is low (during sleep), cells can repair and recover
- Lack of sleep = excess cortisol = insufficient cellular repair time
- Adrenals become overworked with too much cortisol
- Result = FATIGUE

Adrenal complex

- Schizandra
- Rhodiola
- Siberian ginseng
- Licorice root

HGH (human growth hormone)



Step 3 – Improve Sleep



Magnesium

- Regulates circadian rhythms

Inositol

- Promotes relaxation and female hormones levels
- Maintains serotonin levels
- Has been used to treat anxiety and panic attacks

B vitamins

5HTP (amino acid)

- Precursor to serotonin
- Serotonin produces melatonin
- Lengthens REM stage and deep sleep stage



Step 3 – Improve Sleep



Tryptophan

- Main function is to make serotonin

Melatonin

- Secreted by pineal gland
- Regulates circadian rhythms
- Light turns off melatonin trigger
- Side effects
- Prescription interactions:
 - Anticoagulants – Melatonin increases risk of bleeding
 - Immunosuppressants – Melatonin reduces their effectiveness
 - Diabetes meds – Melatonin reduces their effectiveness
 - Birth control pills – Potential for too much melatonin in body



Step 3 – Reduce Stress



CCK (cholecystokinin)

- Signals brain that you are full after eating
- Stress eating disturbs CCK

Alopecia (hair loss)

- Folic acid builds keratin in hair
- Biotin
- Zinc



Step 3 – Reduce Stress



Herbal stress relievers

- Ashwaganda
 - Traditionally used in Ayurvedic medicine
 - Antioxidant properties
 - Promotes calmness and satisfaction
- L-theanine
 - Found in tea
 - Increases dopamine & serotonin production
 - Increases alpha brain wave activity (a sign of relaxation)
 - Positively influences satiety signals in brain



Step 3 – Reduce Stress



Herbal stress relievers

– Rhodiola

- Common in Eastern Europe & Russia
- Adaptogen (helps body adapt to stress)
- Stimulates nervous system, decreases depression
- Enhances work performance
- Helps stress-induced “burnout”

– Licorice root

- Supports adrenals
- Blocks the breakdown of cortisol, making more bioavailable
- Good for physical or emotional stress
- Good for surgical and illness recovery



Step 3 – Reduce Stress

Telomere/ stress link

- Stress shortens telomeres!
- Study on mothers of chronically ill children (*PNAS, 2004*)
 - Telomeres measured on 58 moms (19 healthy, 39 chronically ill kids)
 - CONCLUSION: “Women with the highest levels of perceived stress have telomeres shorter on average by the equivalent of **at least one decade of additional aging** compared to low stress women.”

Slow stress-related telomere attrition

- Growth hormone
- Estrogen
- Testosterone
- Antioxidants
- Correcting nutrient deficiencies



Step 4 – Supercharge Sexuality

Benefits of healthy sex life

- Burns calories
- Increases oxygenation
- Promotes heart health
- Boosts immunity
- Relieves stress and depression
- Optimizes fertility and vaginal youth
- Relieves menstrual cramps
- May prevent endometriosis

Hormonal balance

- Estrogen
- Progesterone
- Testosterone (*total testosterone vs. free testosterone*)



Step 4 – Supercharge Sexuality



Maca

- (reduces debilitating symptoms of menstruation; increase core energy)

Tribulus

- (increases testosterone in women)

Ginseng

- (effects are cumulative, improves endurance)

Arginine

- (improves blood circulation)

DHEA

- (improves mood, decreases evening cortisol)

5-HTP

- (converted to serotonin)

Green juice products

(contains enzymes, amino acids & chlorophyll; helps nutrients)



Step 5 – Exercise



Reduces telomere attrition

- Improves mitochondrial respiration
- Improves antioxidant status
- CASE STUDY REVIEW

Beneficial hormonal cascade

- Increases glucose uptake
- Feel-good hormones
- Benefits lipid profile

Nutrients that help muscle recovery

- Carnitine
- Asparagine
- Antioxidants (CoQ10, Lipoic Acid, Cysteine, Vitamins C & E)



Step 6 – Check Your Thyroid



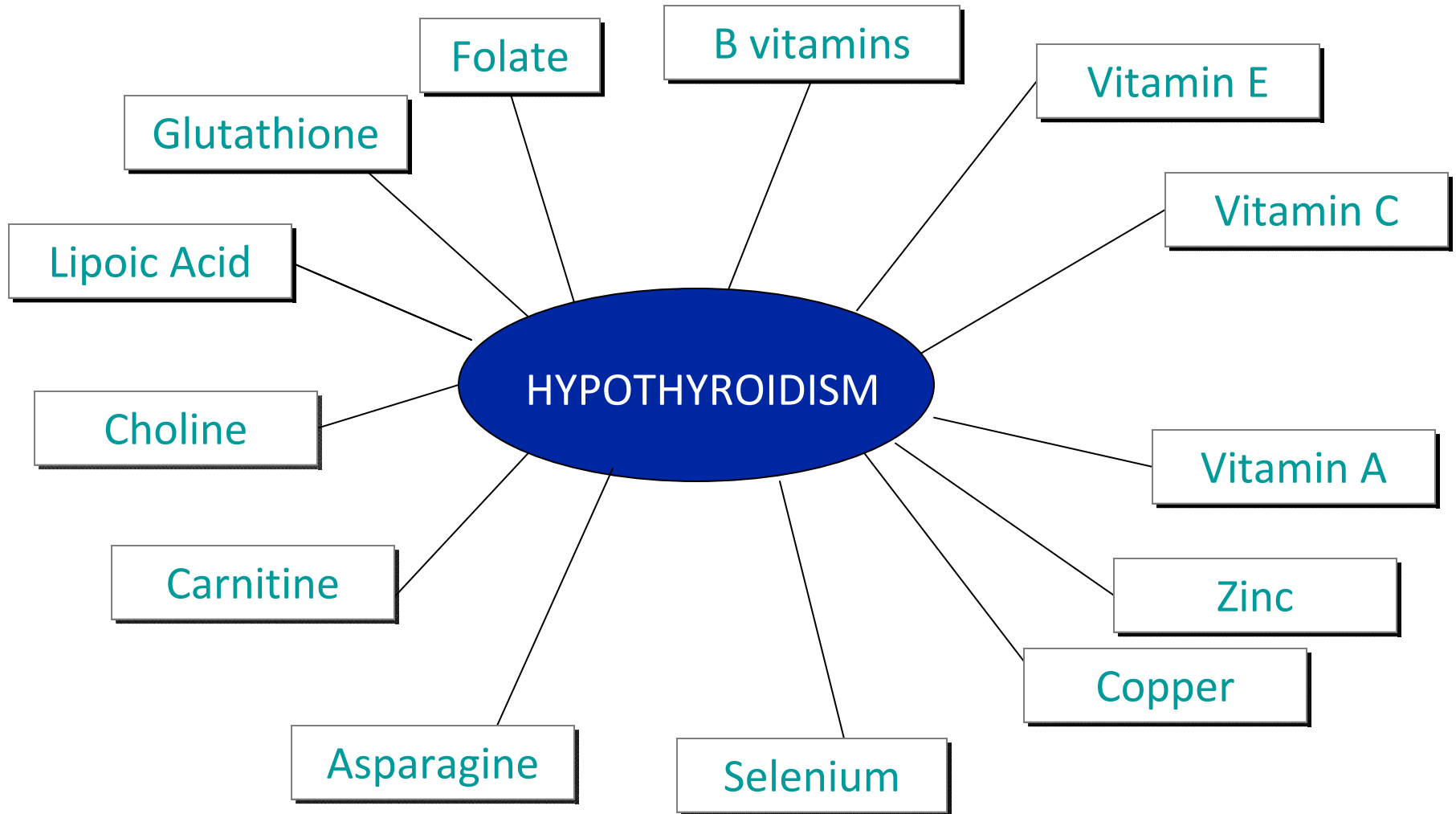
Thyroid Hormones

- T4
- T3 (Four times more potent than T4)
- TSH (thyroid stimulating hormone)
- Free T3/Free T4
- TSH new parameters

Hypo vs Hyperthyroidism



Nutrients Linked to Thyroid



Step 7 – Hormonal Balance



Progesterone

- Regulates thyroid
- Benefits immune system
- Reduces inflammation
- Assists in proper blood clotting
- Produces collagen
- Stabilizes nerve function
- Low progesterone = higher ratio of estrogen to progesterone

Testosterone

- Increase in libido, well-being and energy levels
- Low testosterone can cause bone loss & muscle weakness



Step 7 – Hormonal Balance

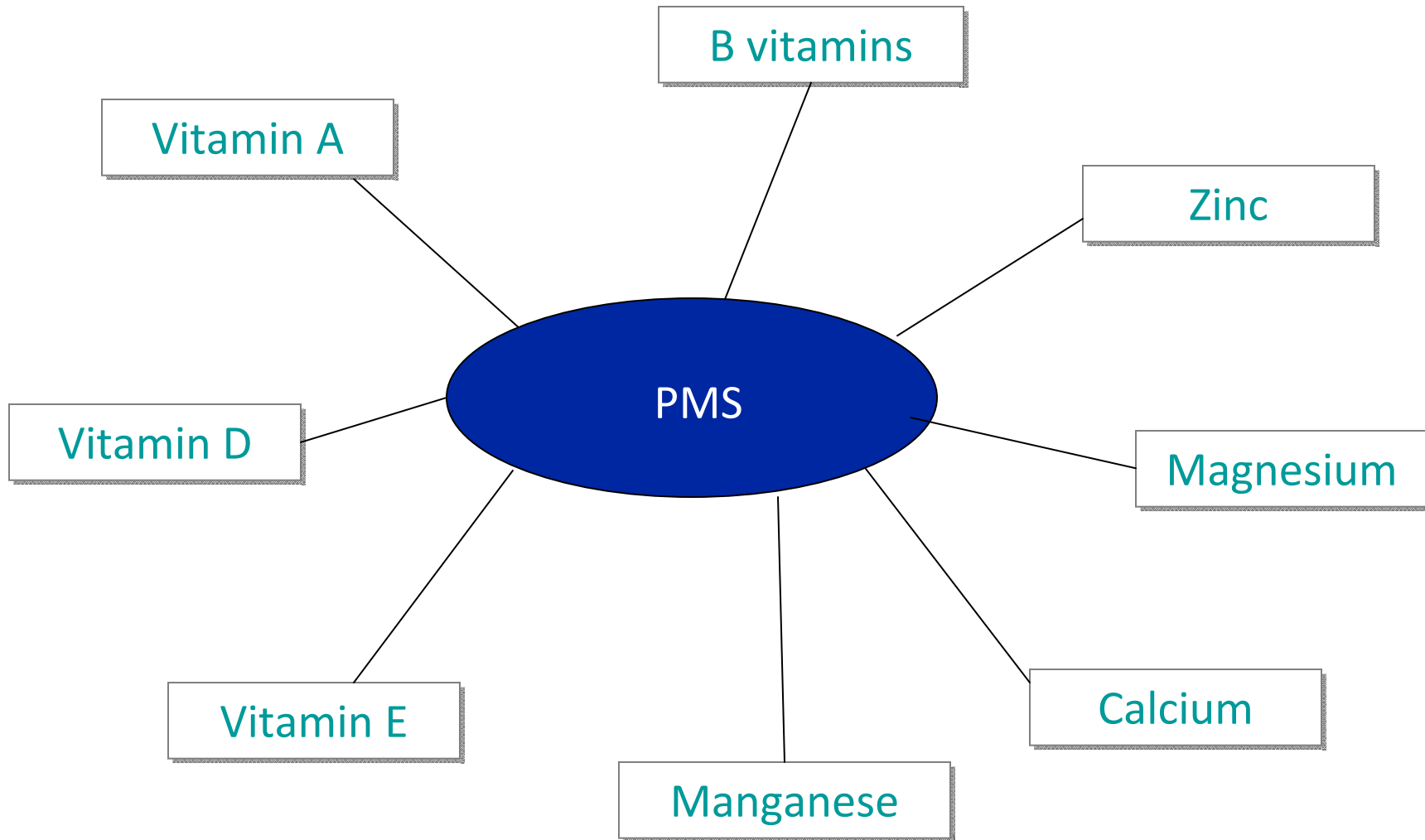


Premenstrual Syndrome

- Decline in progesterone levels
- Decline in serotonin and GABA activity
- Changes in norepinephrine and epinephrine
- Herbal therapies
 - Milk thistle
 - Dandelion
 - Burdock root
- Exacerbated by nutrient deficiencies



Nutrients Linked to PMS



Step 7 – Hormonal Balance

Perimenopause

- Brain less sensitive to estrogen
- FSH (follicle stimulating hormone) is higher
- Progesterone decreases
- Estrogen dominance
- Hormonal surges
- Decrease in feel-good neurochemicals
 - Serotonin
 - Norepinephrine
 - Dopamine

Menopause

- Bioidentical hormones (vs. synthetic)
- Transdermal cream: bypasses liver, directly into bloodstream



Step 8 – Get Tested



- Food allergies profile
- Gastrointestinal function (stool test)
- Adrenal stress test
- HPA profile (hypothalamic-pituitary-adrenal axis)
- FIT genetics
- Comprehensive metabolic test
- 30-day female hormone test
- Micronutrient Test



Micronutrient Test

35 Components

VITAMINS

Biotin
Folate
Pantothenate
Vitamin A
Vitamin B1
Vitamin B2
Vitamin B3
Vitamin B6
Vitamin B12
Vitamin C
Vitamin D
Vitamin K2

MINERALS

Calcium
Copper
Manganese
Magnesium
Selenium
Zinc

AMINO ACIDS

Asparagine
Glutamine
Serine

ANTIOXIDANTS

Coenzyme Q10
Cysteine
Glutathione
Lipoic Acid
Vitamin E

CARBOHYDRATE METABOLISM

Chromium
Fructose sensitivity
Glucose – Insulin Interaction

SPECTROX™

Total Antioxidant Function

METABOLITES

Carnitine
Choline
Inositol

FATTY ACIDS

Oleic Acid

IMMUNIDEX

Immune Response Score



Case Study

Patient

- 45 year old male
- Intense anxiety and panic attacks for 5 years

Prescriptions

- Xanax, Pravachol (statin)

Deficiencies

- Magnesium, Chromium, Zinc, CoQ10, B6, Inositol

Repletion

- 400 mg magnesium glycinate, 200 mcg chromium picolinate, 25 mg zinc gluconate, 200 mg CoQ10, 100 mg B6, 12 g inositol

Results

- At 6 months, all deficiencies resolved except CoQ10 and chromium (dosages of these nutrients increased). Less anxiety, fewer panic attacks and improved energy levels.

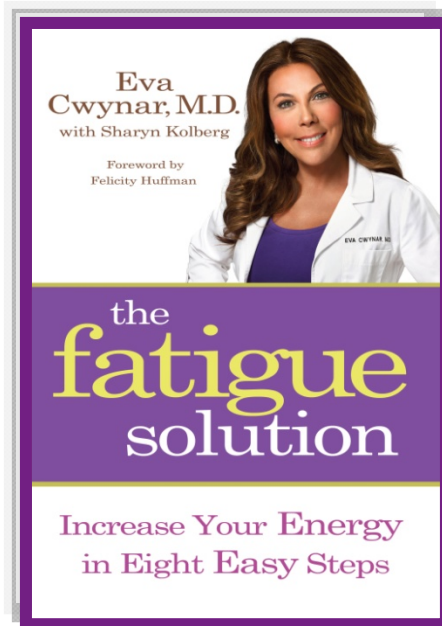
Discussion

- Statins are known to deplete CoQ10. The deficiency of zinc and chromium implied that this patient probably had some level of reactive hypoglycemia.

This case illustrates how deficiencies may take a few months of consistent repletion to be corrected.



Get Your Copy Today!



The Fatigue Solution will show you how you can go from fatigued to fabulous by following eight simple steps that can help you identify and understand the potential source of these vexing health conditions. It is a 21st century woman's health guide for generating physical as well as emotional strength, balancing hormones, reclaiming sexual vitality, and restoring energy. **Dr. Eva Cwynar**, premier Beverly Hills Endocrinologist and Metabolic Medicine Specialist, who has treated prime ministers, A-list actors, and professional athletes, shares her program for rejuvenating and reinvigorating your life.

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