



# MICRONUTRIENT TESTING

NUTRITION AT THE CORE OF  
PERSONALIZED WELLNESS



## NUTRITIONAL TESTING

Micronutrients are vitamins and minerals required in small quantities that are essential to our health, development, and growth. Each nutrient known today is responsible for specific physiological functions, making them unique and irreplaceable.

Overwhelming evidence suggests that a lack of these vital nutrients has a profound impact on the body's immune system. Thus, adequate intake of these vitamins and minerals could mean the difference between a healthy life and a life fraught with disease.

SpectraCell's exclusive Micronutrient Test is a comprehensive nutritional analysis of the body's intracellular function. It measures 35 selected vitamins, minerals, antioxidants and other essential micronutrients within your white blood cells.

This analysis can reveal a person's functional nutritional status over a much longer period of time than conventional static serum testing, thus, providing you with a more meaningful measurement than all other nutritional testing.

# MICRONUTRIENT TESTING

## BUT I EAT A BALANCED DIET, EXERCISE AND TAKE A MULTIVITAMIN...

Many people lead healthy lifestyles, yet some individuals still have deficiencies. Why?

### BIOCHEMICAL INDIVIDUALITY

Because each of us is metabolically and biochemically unique, the micronutrient requirements for one person may be quite different than the requirements of another.

### ABSORPTION

Although you may eat a balanced diet, if you do not absorb vitamins, minerals, antioxidants and/or other essential micronutrients properly, you can have deficiencies.

### CHRONIC ILLNESS

Health conditions such as arthritis, cancer, cardiovascular disease, diabetes, fatigue and multiple sclerosis, to name a few, can be affected directly or indirectly by micronutrient deficiencies.

### AGING

Our micronutrient requirements at age 30 are quite different from our requirements at age 40, 50 and beyond. Absorption difficulties, especially of vitamin B12, quite commonly occur as we age.

### LIFESTYLE

Excessive physical activity, prescription drugs, smoking, alcohol and sedentary habits all impact micronutrient demands.



SpectraCell's Micronutrient Testing provides the most comprehensive nutritional analysis available by measuring the following components:

#### VITAMINS

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

#### MINERALS

- Calcium
- Magnesium
- Manganese
- Zinc
- Copper

#### AMINO ACIDS

- Asparagine
- Glutamine
- Serine

#### ANTIOXIDANTS

- Alpha Lipoic Acid
- Coenzyme Q10
- Cysteine
- Glutathione
- Selenium
- Vitamin E

#### CARBOHYDRATE METABOLISM

- Chromium
- Fructose Sensitivity
- Glucose-Insulin Metabolism

#### FATTY ACIDS

- Oleic Acid

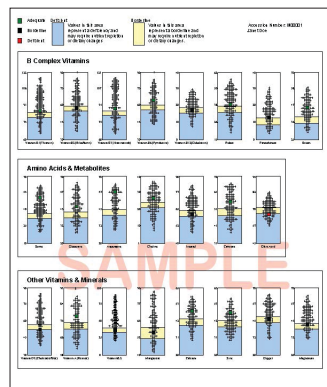
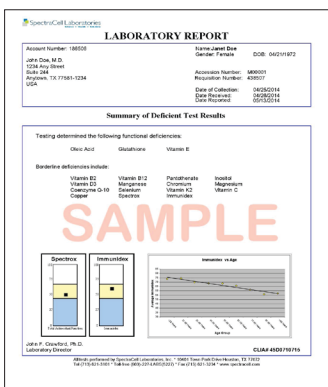
#### METABOLITES

- Choline
- Inositol
- Carnitine

#### SPECTROX™ for TOTAL ANTIOXIDANT FUNCTION

#### IMMUNIDEX™ IMMUNE RESPONSE SCORE

## MICRONUTRIENT SAMPLE TEST RESULTS



EASY-TO-READ GRAPHS IDENTIFY BORDERLINE DEFICIENCIES



# HEALTH SURVEY

If you experience a few or more of the following conditions, you may want to ask your doctor about SpectraCell's advanced diagnostic solutions.

## **SYMPTOMS OF NUTRITIONAL DEFICIENCY:**

- Fatigue
- Anxiety
- Weight loss or weight gain
- Loss of appetite
- Tingling hands
- Muscle cramping
- Vomiting
- Heart flutter
- Skin conditions
- Depression
- Bruising
- Reduced muscle mass
- Muscle weakness
- Diarrhea
- Hair loss
- Digestive problems
- Numbness
- Nausea
- Constipation
- Impaired wound healing
- Low libido

Discover your nutritional status with Micronutrient Testing. It may be the most important decision you make about your health.



# NUTRITIONAL CONSIDERATIONS OF CHRONIC CONDITIONS

Chronic diseases are the most common cause of death in the world and present a great burden for society, particularly diseases such as cancer, obesity, osteoporosis, diabetes and cardiovascular disease. Additionally, the prescriptions used to treat the symptoms of these conditions can further deplete the nutrients most needed for your body.

## HEART DISEASE AND METABOLIC SYNDROME

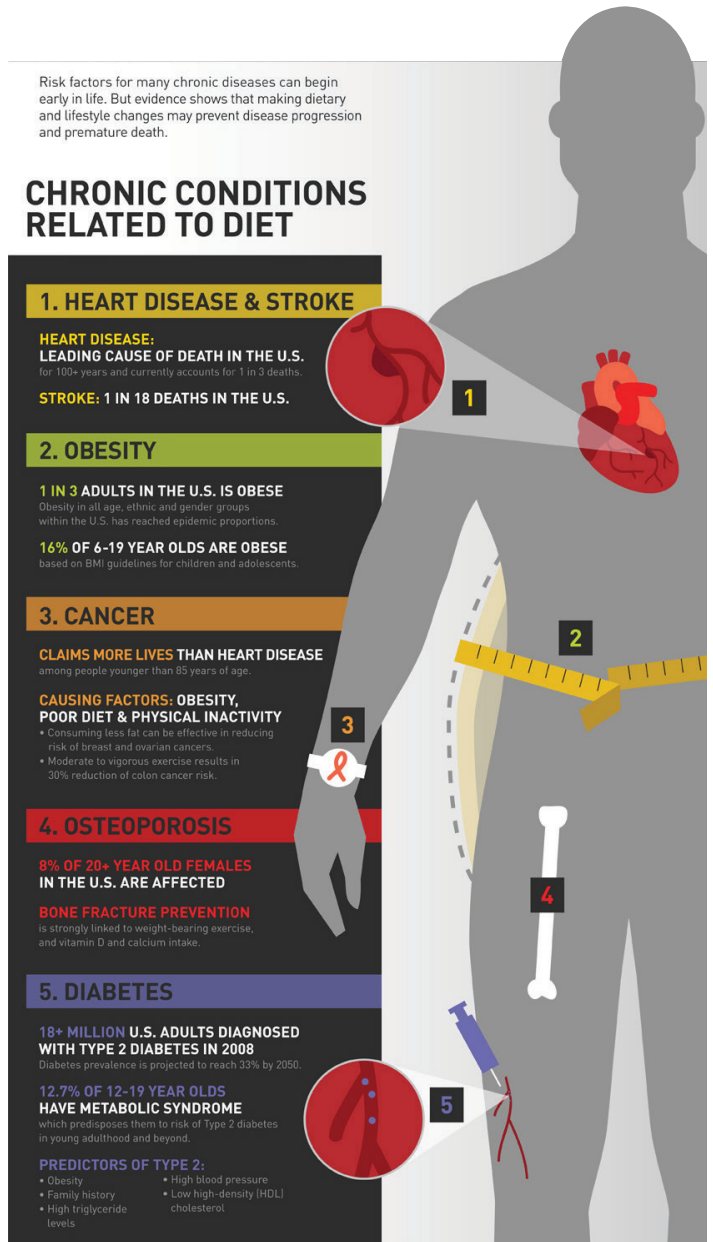
Scientists now emphasize that heart disease is actually an inflammatory condition within the blood vessels. Inflammation and oxidative stress work together damaging arteries and impairing cardiac function. Several antioxidant nutrients minimize this inflammatory process.

Glutathione is the most potent intracellular antioxidant and actually helps to regenerate other antioxidants in the body. Cysteine, glutathione, B2, selenium, vitamin E and vitamin C work together to reduce oxidative stress throughout the entire cardiovascular system. It is essential that balance in the antioxidant system is critical and that use of a single antioxidant may be detrimental.

Metabolic syndrome is a group of health risks that significantly increase your chance of developing cardiovascular disease, stroke and diabetes. According to a national health survey, more than 1 in 5 American adults (47 million) and roughly one million adolescents have a metabolic syndrome and the number is rising. The risk of metabolic syndrome increases with age, affecting more than 40% of people in their 60s and 70s.

## OBESITY AND BARIATRIC SURGERY

Obesity is a complex, multi-faceted, chronic disease involving social, environmental, genetic, physiological, metabolic, behavioral and psychological components. It is the second leading cause of preventable death in America, second only to cigarette smoking. Obesity increases risk of heart disease, diabetes, hypertension and a host of other illnesses including cancer. Weight loss drugs and bariatric surgery may also increase risk of chronic disease. In fact, an astounding 98% of bariatric surgery patients exhibit micronutrient deficiencies within two years of surgery. Neurological complications such as confusion, impaired muscle coordination, even seizures may manifest after bariatric procedures, due to a lack of B vitamins, especially thiamine.



## DIABETIC HEALTH

According to the American Diabetes Association, type 2 diabetes is the most common form of diabetes. With this type of diabetes, cells do not receive enough insulin. As a result, cells starve for energy, and over time, a glucose buildup in the blood stream causes negative effects on a person's eyes, kidneys nerves and/or heart.

Micronutrients such as niacin, magnesium, calcium, zinc, carnitine, inositol alpha-lipoic acid, as well as vitamins E, B6 and D all play an important role in the prevention and treatment of diabetes.

# NUTRITIONAL CONSIDERATIONS OF CHRONIC CONDITIONS

## CANCER

Evidence of nutrition in the prevention or recurrence of cancer is mounting. This evidence based on numerous and remarkably consistent observations suggest that individuals who consume high intakes of fruits and vegetables have reduced risks of most cancers, supporting the concept that micronutrients do in fact play an important role in the prevention of this particular disease.

Antioxidant micronutrients are one of the body's primary defenses against free radicals and reactive oxygen molecules. Low antioxidant status is linked to higher rates of breast and other cancers. In fact, antioxidants such as coenzyme Q10, cysteine and vitamin A have been shown to mitigate DNA damage in cancerous tissue and inhibit hormonal toxicities that can initiate cancerous cells.

## ADHD AND AUTISM

There has been an unprecedented rise in autism and attention deficit hyperactivity disorder (ADHD) over the years with overwhelming evidence suggesting that nutritional deficiencies may be a contributing factor. Low levels of vitamin D have been linked to autism and in some cases of severe deficiency, high-dose vitamin D therapy actually reversed some autistic behaviors. Some research even suggests that the nutritional status of the mother during gestation can affect behavior in children. One study confirmed that low folate status in pregnancy was associated with hyperactivity in children. Other studies show that persons with a mutation of a common gene, MTHFR, which predisposes them to folate and vitamin B12 deficiency, were more likely to suffer from ADHD.

Supplementation with thiamine (vitamin B1) has shown clinical benefit among some autistic children. Specifically, a deficiency in vitamin B1 has been associated with delayed language development in childhood. When deficient, biotin (vitamin B7) can potentially cause neurological problems associated with autism since the brain is quite vulnerable to biotin deficiency.

## CELIAC DISEASE

Comprehensive nutritional testing is extremely important, especially in the case of celiac disease. Whether diagnosed or undiagnosed, celiac patients are notoriously at higher risk for nutrient deficiencies, largely due to malabsorption issues. When it comes to supplements, the "more is better" philosophy does not apply. The key is balance.



## WOMEN'S HEALTH

Overwhelming evidence suggests that infertility issues stem from low antioxidant status. Deficiencies in vitamins C and E, zinc, copper, magnesium, folate as well as the powerful antioxidant cysteine have been linked to infertility. In many cases, targeted repletion is very beneficial with fertility and related issues like endometriosis and polycystic ovary syndrome. Additionally, the demands for specific nutrients during pregnancy and lactation are particularly taxing on a mother, often draining her nutritional reserves. Since nutritional deficiencies can be passed from a mother to her baby, accurate and targeted diagnostic testing is important before, during and post-partum.





# NUTRIENT FUNCTIONS & DEFICIENCY SYMPTOMS

NUTRIENT	POTENTIAL	WHAT IT DOES	WHERE IT'S FOUND	SYMPTOMS AND PROBLEMS
VITAMIN E	VERY COMMON	Antioxidant, regulates oxidation reactions, stabilizes cell membrane, immune function, protects against cardiovascular disease, cataracts, macular degeneration	Wheat germ, liver, eggs, nuts, seeds, cold - pressed vegetable oils, dark leafy greens, sweet potatoes, avocados, asparagus	Skin, hair, rupturing of red blood cells, anemia, bruising, PMS, hot flashes, eczema, psoriasis, cataracts, wound healing, muscle weakness, sterility
CALCIUM	VERY COMMON	Bones, teeth, helps heart, nerves, muscles, body systems work properly, needs other nutrients to function	Dairy, wheat/soy flour, molasses, Brewer's yeast, Brazil nuts, broccoli, cabbage, dark leafy greens, hazelnuts, oysters, sardines, canned salmon	Osteoporosis, osteomalacia, osteoarthritis, muscle cramps, irritability, acute anxiety, colon cancer risk
CHROMIUM	COMMON	Assists insulin function, increases fertility, carbohydrate/fat metabolism, essential for fetal growth/development	Supplementation, Brewer's yeast, whole grains, seafood, green beans, broccoli, prunes, nuts, potatoes, meat	Metabolic syndrome, insulin resistance, decreased fertility
MAGNESIUM	VERY COMMON	300 biochemical reactions, muscle/nerve function, heart rhythm, immune system, strong bones, regulates calcium, copper, zinc, potassium, vitamin D	Green vegetables, beans, peas, nuts, seeds, whole unprocessed grains	Appetite, nausea, vomiting, fatigue cramps, numbness, tingling, seizures, heart spasms, personality changes, heart rhythm
SELENIUM	COMMON	Antioxidant, works with vitamin E, immune function, prostaglandin production	Brewer's yeast, wheat germ, liver, butter, cold water fish, shellfish, garlic, whole grains, sunflower seeds, Brazil nuts	Destruction to heart/pancreas, sore muscles, fragility of red blood cells, immune system
ZINC	MOST COMMON	Supports enzymes, immune system, wound healing, taste/smell, DNA synthesis, normal growth & development during pregnancy, childhood and adolescence	Oysters, red meat, poultry, beans, nuts, seafood, whole grains, fortified breakfast cereals, dairy	Growth retardation, hair loss, diarrhea, impotence, eye & skin lesions, loss of appetite, taste, weight loss, wound healing, mental lethargy
CO Q10	COMMON	Powerful antioxidant, stops oxidation of LDL cholesterol, energy production, important to heart, liver and kidneys	Oily fish, organ meats, whole grains	Congestive heart failure, high blood pressure, angina, mitral valve prolapse, fatigue, gingivitis, immune system stroke, cardiac arrhythmias
CARNITINE	LESS COMMON	Energy, heart function, oxidize amino acids for energy, metabolize ketones	Red meat, dairy, fish, poultry, tempeh (fermented soybeans), wheat, asparagus, avocados, peanut butter	Elevated cholesterol, liver function, muscle weakness, reduced energy, impaired glucose control
N - ACETYL CYSTEINE (NAC) & GLUTATHIONE	MOST COMMON	Glutathione production, lowers homocysteine, lipoprotein (a), heal lungs, inflammation, decrease muscle fatigue, liver detoxification, immune function	Meats, ricotta, cottage cheese, yogurt, wheat germ, granola, oat flakes	Free radical overload, elevated homocysteine, cancer risk, cataracts, macular degeneration, immune function, toxin elimination
ALPHA LIPOIC ACID	COMMON	Energy, blood flow to nerves, glutathione levels in brain, insulin sensitivity, effectiveness of vitamins C, E, antioxidants	Supplementation, spinach, broccoli, beef, Brewer's yeast, some organ meats	Diabetic neuropathy, reduced muscle mass, atherosclerosis, Alzheimer's, failure to thrive, brain atrophy, high lactic acid
COPPER	LESS COMMON	Bone formation, involved in healing process, energy production, hair and skin coloring, taste sensitivity, stimulates iron absorption, helps metabolize several fatty acids	Oysters, seeds, dark leafy vegetables, organ meats, dried legumes, whole grain breads, nuts, shellfish, chocolate, soybeans, oats, blackstrap molasses	Osteoporosis, anemia, baldness, diarrhea, general weakness, impaired respiratory function, myelopathy, decreased skin pigment, reduced resistance to infection

# Micronutrient Testing

NUTRIENT	POTENTIAL	WHAT IT DOES	WHERE IT'S FOUND	SYMPTOMS AND PROBLEMS
VITAMIN B1	VERY COMMON	Carb. conversion, breaks down fats & protein, digestion, nervous system, skin, hair; eyes, mouth, liver; immune system	Pork, organ meats, whole grain and enriched cereals, brown rice, wheat germ, bran, Brewer's yeast, blackstrap molasses	Heart, age-related cognitive decline, Alzheimer's, fatigue
VITAMIN B2	VERY COMMON	Metabolism, carb. conversion, breaks down fats & protein, digestion, nervous system, skin, hair; eyes, mouth, liver	Brewer's yeast, almonds, organ meats, whole grains, wheat germ, mushrooms, soy, dairy, eggs, green vegetables	Anemia, decreased free radical protection, cataracts, poor thyroid function, B6 deficiency, fatigue, elevated homocysteine
VITAMIN B3	LESS COMMON	Energy, digestion, nervous system, skin, hair; eyes, liver; eliminates toxins, sex/stress hormones, improves circulation	Beets, Brewer's yeast, meat, poultry, organ meats, fish, seeds, nuts	Cracking, scaling skin, digestive problems, confusion, anxiety, fatigue
VITAMIN B6	COMMON	Enzyme, protein metabolism, RBC production, reduces homocysteine, nerve & muscle cells, DNA/RNA, B12 absorption, immune function	Poultry, tuna, salmon, shrimp, beef liver; lentils, soybeans, seeds, nuts, avocados, bananas, carrots, brown rice, bran, wheat germ, whole grain flour	Depression, sleep and skin problems, confusion, anxiety, fatigue
VITAMIN B12	VERY COMMON	Healthy nerve cells, DNA/RNA, red blood cell production, iron function	Fish, meat, poultry, eggs, milk, milk products	Anemia, fatigue, constipation, loss of appetite/weight, numbness and tingling in the hands and feet, depression, dementia, poor memory, oral soreness
BIOTIN	LESS COMMON	Carbs, fat, amino acid metabolism (the building blocks of protein)	Salmon, meats, vegetables, grains, legumes, lentils, egg yolks, milk, sweet potatoes, seeds, nuts, wheat germ	Depression, nervous system, premature graying, hair; skin
FOLATE	VERY COMMON	Mental health, infant DNA/RNA, adolescence & pregnancy, with B12 to regulate RBC production, iron function, reduce homocysteine	Supplementation, fortified grains, tomato juice, green vegetables, black-eyed peas, lentils, beans	Anemia, immune fuction, fatigue, insomnia, hair; high homocysteine, cardiovascular disease
PANTOTHENATE	LESS COMMON	RBC production, sex and stress-related hormones, immune function, healthy digestion, helps use other vitamins	Meat, vegetables, whole grains, legumes, lentils, egg yolks, milk, sweet potatoes, seeds, nuts, wheat germ, salmon	Stress tolerance, wound healing, skin problems, fatigue
VITAMIN A	LESS COMMON	Eyes, immune function, skin, essential cell growth and development	Milk, eggs, liver; fortified cereals, orange or green vegetables, fruits	Night blindness, immune function, zinc deficiency, fat malabsorption
VITAMIN C	COMMON	Enzyme activation, second messenger roles (transmitting hormonal information), blood clotting, cell and cell organelle membrane function, nerve impulse transmission and muscular contraction, tone and irritability	Supplementation, broccoli, brussel sprouts, cantaloupe, cauliflower, citrus, guava, kiwi, papaya, parsley, peas, potatoes, peppers, parsley, rose hips, strawberries and tomatoes	Muscular and nervous irritability, muscle spasms, muscle cramps and tetany, tooth decay, periodontal disease, depression, possibly hypertension
VITAMIN D	VERY COMMON	Calcium and phosphorus levels, calcium absorption, bone mineralization	Sunlight, milk, egg yolks, liver; fish	Osteoporosis, calcium absorption, thyroid
VITAMIN K	LESS COMMON	Aids in the formation of clotting factors and bone proteins and the formation of glucose into glycogen for storage in the liver	Kale, green tea, turnip greens, spinach, broccoli, lettuce, cabbage, beef liver; asparagus, watercress, cheese, oats, peas, whole wheat	Excessive bleeding, a history of bruising, appearance of ruptured capillaries or menorrhagia (heavy periods)



# DO THE PRESCRIPTIONS YOU TAKE DEplete YOUR NUTRITIONAL STATUS?

DRUG	NUTRIENT DEFICIENCY	POTENTIAL HEALTH PROBLEMS
<b>ANTACIDS/ULCER MEDICATIONS</b> Pepcid, Tagamet, Zantac, Prevacid, Prilosec, Magnesium & Aluminum antacids	Vitamin B12 Folic Acid Vitamin D Calcium Iron Zinc	Anemia, depression, tiredness, weakness, increased cardiovascular risk Birth defects, cervical dysplasia, anemia, heart disease, cancer risk Osteoporosis, muscle weakness, hearing loss Osteoporosis, heart and blood pressure irregularities, tooth decay Anemia, weakness, fatigue, hair loss, brittle nails Weak immunity, wound healing, sense of smell/taste, sexual dysfunction
<b>ANTIBIOTICS</b> Gentamycin, neomycin, streptomycin, cephalosporins, penicillins  Tetracyclines	B Vitamins Vitamin K  Calcium Magnesium Iron Vitamin B6 Zinc	Short term depletion effects are minimal, but failure to re-inoculate the GI tract with beneficial bacteria (probiotics) often results in dysbiosis which causes gas, bloating, decreases digestion & absorption of nutrients, and may also lead to a variety of other health problems.  Osteoporosis, heart & blood pressure irregularities, tooth decay Cardiovascular problems, asthma, osteoporosis, cramps, PMS Slow wound healing, fatigue, anemia Depression, sleep disturbances, increased cardiovascular disease risk Weak immunity, wound healing, sense of smell/taste, sexual dysfunction
<b>CHOLESTEROL DRUGS</b> Lipitor; Crestor; Zocor and others	Coenzyme Q10	Various cardiovascular problems, weak immune system, low energy
<b>ANTI-DEPRESSANTS</b> Adapin, Aventyl, Elavil, Pamelor; & others  Major Tranquilizers (Thorazine, Mellaril, Prolixin, Serentil & others)	Coenzyme Q10 Vitamin B2	Various cardiovascular problems, weak immune system, low energy Problems with skin, eyes, mucous membranes and nerves
<b>FEMALE HORMONES</b> Estrogen/Hormone Replacement Oral Contraceptives	Vitamin B6 Folic Acid Vitamin B1 Vitamin B2 Vitamin B3 Vitamin B6 Vitamin B12 Vitamin C Magnesium Selenium Zinc	Depression, sleep disturbances, increased cardiovascular disease risk Birth defects, cervical dysplasia, anemia, cardiovascular disease Depression, irritability, memory loss, muscle weakness, edema Problems with skin, eyes, mucous membranes and nerves Cracked, scaly skin, swollen tongue, diarrhea Depression, sleep disturbances, increased cardiovascular disease risk Anemia, depression, tiredness, weakness, increased cardiovascular risk Lowered immune system, easy bruising, poor wound healing Cardiovascular problems, asthma, osteoporosis, cramps, PMS Lower immunity, reduced antioxidant protection Weak immunity, wound healing, sense of smell/taste, sexual dysfunction
<b>ANTICONVULSANTS</b> Phenobarbital & barbituates  Dilatin, Tegretol, Mysoline Depakane/Depacon	Vitamin D Calcium Folic Acid Biotin Carnitine Vitamin B12 Vitamin B1 Vitamin K Copper Selenium Zinc	Osteoporosis, muscle weakness, hearing loss Osteoporosis, heart & blood pressure irregularities, tooth decay Birth defects, cervical dysplasia, anemia, cardiovascular disease Hair loss, depression, cardiac irregularities, dermatitis Various cardiovascular problems, weak immune system, low energy Anemia, depression, tiredness, weakness, increased cardiovascular risk Depression, irritability, memory loss, muscle weakness, edema Blood coagulation, skeletal problems Anemia, fatigue, cardiovascular and connective tissue problems Lower immunity, reduced antioxidant protection Weak immunity, wound healing, sense of smell/taste, sexual dysfunction

SOURCE: DRUG-INDUCED NUTRIENT DEPLETION HANDBOOK, 2nd EDITION

DRUG	NUTRIENT DEFICIENCY	POTENTIAL HEALTH PROBLEMS
<b>ANTI-INFLAMMATORIES</b> Steroids: Prednisone, Medrol, Aristocort, Decadron	Calcium Vitamin D Magnesium Zinc Vitamin C Vitamin B6 Vitamin B12 Folic Acid Selenium Chromium	Osteoporosis, heart and blood pressure irregularities, tooth decay Osteoporosis, muscle weakness, hearing loss Cardiovascular problems, asthma, osteoporosis, cramps, PMS Weak immunity, wound healing, sense of smell/taste, sexual dysfunction Lowered immunity, easy bruising, poor wound healing Depression, sleep disturbances, increased cardiovascular disease risk Anemia, depression, tiredness, weakness, increased cardiovascular risk Birth defects, cervical dysplasia, anemia, cardiovascular disease Lower immunity, reduced antioxidant protection Elevated blood sugar, cholesterol & triglycerides, diabetes risk
NSAIDS (Motrin, Aleve, Advil, Anaprox, Dolobid, Feldene, Naprosyn and others)	Folic Acid	Birth defects, cervical dysplasia, anemia, cardiovascular disease
Aspirin & Salicylates	Vitamin C Calcium Folic Acid Iron Vitamin B5	Lowered immune system, easy bruising, poor wound healing Osteoporosis, heart & blood pressure irregularities, tooth decay Birth defects, cervical dysplasia, anemia, cardiovascular disease Anemia, weakness, fatigue, hair loss, brittle nails Fatigue, listlessness, and possible problems with skin, liver and nerves
<b>DIURETICS</b> Loop Diuretics (Lasix, Bumex, Edecrin) Thiazide Diuretics (HCTZ, Enduron, Diuril, Lozol, Zaroxolyn, Hygroton and others)	Calcium Magnesium Vitamin B1 Vitamin B6 Vitamin C Zinc Coenzyme Q10 Potassium Sodium	Osteoporosis, heart and blood pressure irregularities, tooth decay Cardiovascular problems, asthma, osteoporosis, cramps, PMS Depression, irritability, memory loss, muscle weakness, edema Depression, sleep disturbances, increased heart disease risk Lowered immunity, easy bruising, poor wound healing Weak immunity, wound healing, sense of smell/taste, sexual dysfunction Various cardiovascular problems, weak immune system, low energy Irregular heartbeat, muscle weakness, fatigue, edema Muscle weakness, dehydration, memory problems, loss of appetite
Potassium Sparing Diuretics	Calcium Folic Acid Zinc	Osteoporosis, heart & blood pressure irregularities, tooth decay Birth defects, cervical dysplasia, anemia, cardiovascular disease Weak immunity, wound healing, sense of smell/taste, sexual dysfunction
<b>CARDIOVASCULAR DRUGS</b> Antihypertensives (Catapres, Aldomet)	Coenzyme Q10 Vitamin B6 Zinc Vitamin B1	Various cardiovascular problems, weak immune system, low energy Depression, sleep disturbances, increased cardiovascular disease risk Weak immunity, wound healing, sense of smell/taste, sexual dysfunction Depression, irritability, memory loss, muscle weakness, edema
ACE Inhibitors (Capoten, Vasotec, Monopril & others)	Zinc	Weak immunity, wound healing, sense of smell/taste, sexual dysfunction
Beta Blockers (Inderal, Corgard, Lopressor and others)	Coenzyme Q10	Various cardiovascular problems, weak immune system, low energy
<b>DIABETIC DRUGS</b> Metformin	Coenzyme Q10 Vitamin B12 Folic Acid	Various cardiovascular problems, weak immune system, low energy Anemia, depression, tiredness, weakness, increased cardiovascular risk Birth defects, cervical dysplasia, anemia, heart disease, cancer risk
Sulfonylureas (Tolinase, Micronase/Glynase/DiaBeta)	Coenzyme Q10	Various cardiovascular problems, weak immune system, low energy
<b>ANTIVIRAL AGENTS</b> Zidovudine (Retrovir, AZT & other related drugs)	Carnitine Copper Zinc Vitamin B12	Increased blood lipids, abnormal liver function and glucose control Anemia, fatigue, cardiovascular and connective tissue problems Weak immunity, wound healing, sense of smell/taste, sexual dysfunction
Foscarnet	Calcium Magnesium Potassium	Anemia, depression, tiredness, weakness, increased cardiovascular risk Osteoporosis, heart and blood pressure irregularities, tooth decay Cardiovascular problems, asthma, osteoporosis, cramps, PMS Irregular heartbeat, muscle weakness, fatigue, edem

# THE ANATOMY

## Ocular Health -

Good eyesight and prevention of cataracts and macular degeneration require adequate levels of Vitamin E and Vitamin A.

## Heart Health -

Nutrients that protect the cardiovascular system include Vitamin B6, Vitamin B12, Folic Acid, Vitamin E, CoQ10, Calcium, Magnesium and Carnitine.

## Cardiovascular Support -

Vitamin B2, Vitamin B6, Vitamin B12 and Folic Acid are all required for reducing homocysteine levels in the blood and protecting arteries and nerve fibers.

## Bone Health -

Vitamin D, Vitamin B6, Vitamin B12, Folic Acid, Calcium, Magnesium and Zinc are all nutrients that assist in bone remodeling to ward off osteoporosis and other diseases that weaken the skeletal system.

## Metabolic Health -

Vitamin B3, Vitamin B6, Vitamin B12, Vitamin E, Biotin, CoQ10, Chromium, Magnesium and Zinc all help the body handle daily sugar load, keeping systems responsive to insulin and restoring lost insulin sensitivity.

## Liver Health -

Cysteine and N-Acetylcysteine, Selenium, Vitamin B2 and Vitamin B3 enhance liver function and optimize levels of glutathione which helps cells ward off toxic challenges.

## Antioxidant Status -

Measures the nutrients that help prevent or repair cellular damage caused by oxidation.

## Joint Support -

Vitamin E, Alpha-Lipoic Acid and B Vitamins all contribute to joint support and controlling inflammation.

SPECTROX® measures the total antioxidant function of cells by measuring their ability to withstand oxidative stress.

## Micronutrient Testing

SpectraCell's patented analysis measures levels of selected vitamins, minerals, antioxidants and other essential micronutrients within your white blood cells.

# OF NUTRITION



*Call and Schedule your  
Consultation Today.*

**Dr. Michael Newman**

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