

# CLINICAL PROTOCOL GUIDE



# WELCOME TO DAVINCI'S<sup>®</sup> PROTOCOL GUIDE

We've designed this document to help guide you through developing individualized, clinical strength supplement regimens for your patients.

## HERE'S HOW TO APPLY THE PROTOCOLS:

## PRIMARY PROTOCOLS

Are designed to act as a starting point for patient care.

## SECONDARY PROTOCOLS

Can either act as a substitute to specific products in the primary protocol or be added into the primary protocol depending on the needs of the patient.

## **TERTIARY PROTOCOLS**

Are also designed to either substitute or be added into the primary and secondary protocols.

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## THE FOUNDATION OF ALL SUPPLEMENT REGIMENS:

# THE MULTIVITAMIN

Consider the multivitamin the starting point for every protocol. Walk into any vitamin store and you'll likely be approached with the same two questions every time: "Are you on a multi? Are you on an omega supplement?"

These, along with vitamin D and probiotics, are known as the "Big 4" - the basics. Multivitamins support a wide range of bodily processes and functions, and are an easy go-to.\* Choosing one that's ideal for your patient's body requires research, conversation, and most likely, trial.

Omega 3 supplements support a variety of systems as well. From joint support to cardiovascular support to skin health, fatty acids are known for their diverse benefits.\* Many omega supplements are also popular for supporting cognition and stress management.\*

## THE IMPORTANCE OF RESEARCH

Understanding optimal nutrient levels and absorption is important to supplement selection. Some supplements can only be taken at certain times of day. Some have lower levels of the nutrients than the daily value, and are likely to depreciate in quality over time.

Some even come in far-from-perfect delivery forms that don't keep the nutrients inside as high quality or potent as they would ideally remain. The varied delivery systems and potencies of DaVinci's multivitamins create the opportunity for each of your patients to find their perfect formula for their individual nutritional efforts – and the opportunity for you to fit the right multivitamin into your protocol design.

# DAVINCI<sup>®</sup> MULTIVITAMINS









	DELIVERY SYSTEM	AGE	GENDER	CATEGORY
DAILY BEST™ ULTRA	Capsule	Adult	All	Economical One-a-Day
METABOLIC MULTI	Capsule	Adult	All	Healthy Metabolism
OMNI	Tablet	Adult	All	Balanced Nutrition One-a-Day
SPECTRA MULTI AGE	Powder	Children and Adults	All	Nutritional Support
SPECTRA	Tablet	All Ages	All	Nutritional Support
SPECTRA INFINITE NUTRITION	Powder	All Ages	All	High Potency
SPECTRA MAN	Tablet	Adult	Male	Men's Health
SPECTRA WOMAN	Tablet	Adult	Female	Women's Health
SPECTRA SENIOR	Tablet	50+	All	Healthy Aging
SPECTRA W/O COPPER & IRON	Tablet	Adult	All	Energy/Stamina
ULTIMATE PRENATAL	Tablet	Adult	Female	Pregnant & Nursing Mothers

## DAVINCI® PROBIOTICS



	NUMBER OF SPECIES	CFU PER SERVING	NONDAIRY	SERVING SIZE	DELIVERY	COUNT	BENEFITS
MEGA PROBIOTIC-ND™ WITH DIGESTIVE ENZYMES CHEWABLE	6	2.25 BILLION	YES	1	CHEWABLE	90	WITH DIGESTIVE ENZYMES     ALL AGES     ADVANCED DIGESTIVE     HEALTH SUPPORT*
MEGA PROBIOTIC-ND™	8	15 BILLION	YES	3 FOR ADULTS	CAPSULE	120	WITH     FRUCTOOLIGOSACCHARIDE     PREBIOTICS     FOR CHILDREN OVER 4     AND ADULTS     ADVANCED DIGESTIVE     HEALTH SUPPORT*
NONDAIRY PROBIOTIC 50	9	52.5 BILLION	YES	1	CAPSULE	30/60	WITH     FRUCTOOLIGOSACCHARIDE     PREBIOTICS     HIGH CFU COUNT     ADVANCED DIGESTIVE     HEALTH SUPPORT*
FLORA™	1	5 BILLION	NO	1	CAPSULE	60	SUPPORTS HEALTHY     INSTESTINAL FLORA     BALANCE*

The gut is the most biologically active area in the body—more plentiful microorganisms that are more active than other microorganisms reside here. Further, bacteria in the body outnumber cells 10 to 1. Zoom out with your patients—ask them to view the gut as its own living system, an organism that needs specified care. Probiotics, either in food cultures or in supplement form, can provide that support.\*

## DAVINCI<sup>®</sup> EFAs



	TYPE OF FATTY ACID	TYPE OF OMEGA	FROM	WITH	SERVING SIZE	DELVIERY	COUNT	BENEFITS
KRILL+	EPA 314 DHA 92	3	SUPER CRITICAL EXTRACTED FISH OIL AND KRILL	ASTAXANTHIN PHOSPHOLIPIDS	2	SOFTGEL	60	CARDIOVASCULAR, FREE RADICAL SCAVENGING AND IMMUNE SYSTEM FUNCTION SUPPORT*
KRILL OIL	EPA 150 DHA 90	3	ANTARCTIC KRILL	ASTAXANTHIN PHOSPHOLIPIDS	2	SOFTGEL	60	UNIQUE BLEND DIFFERENT FROM OTHER OMEGA 3 SOURCES
OMEGA 3 HP-D	EPA 450 DHA 330	3	MARINE LIPID CONCENTRATE	VITAMIN D3	2	SOFTGEL	60/120	HIGH POTENCY FORMULA SUPPORT FOR JOINT, CARDIOMETABOLIC AND MOOD SUPPORT
TONALIN®-CLA	CONJUGATED LINOLEIC ACID	6	SAFFLOWER OIL		1	SOFTGEL	90	SUPPORTS HEALTHY FAT METABOLISM AND WEIGHT MANAGEMENT*
GAMMA-LIN™ 1300	GAMMA LINOLENIC ACID LINOLEIC ACID	6	EVENING PRIMROSE OIL		1	SOFTGEL	90/180	SKIN AND NERVE HEALTH AND PREMENSTRUAL FUNCTIONAL NEEDS.*
BLACK CURRANT SEED OIL	GAMMA LINOLENIC ACID	6	BLACK CURRANT SEED OIL		2	SOFTGEL	90/180	SUPPORTS SKIN AND NERVE HEALTH AND PREMENSTRUAL FUNCTIONAL NEEDS*
OMEGA-3 1000™	EPA 300 DHA 200	3	FISH OIL CONCENTRATE	VITAMIN E	1	SOFTGEL	45/90	CHOLESTEROL LEVEL SUPPORT*
SUPREME OMEGA	ALPHA LINOLENIC ACID LINOLEIC ACID OLEIC ACID GAMMA LINOLENIC ACID EPA / DHA	3,6 & 9	BORAGE SEED, FLAX SEED AND FISH OILS	VITAMIN E	1	SOFTGEL	90	CARDIOVASCULAR, SKIN AND HAIR HEALTH SUPPORT*
FLAX SEED OIL	ALPHA- LINOLENIC ACID LINOLEIC ACID OLEIC ACID	3 & 6	FLAX SEED OIL		1	SOFTGEL	90	CARDIOVASCULAR AND IMMUNE SYSTEM FUNCTION SUPPORT*
COCOMEGA™	ALPHA- LINOLENIC ACID LINOLEIC ACID OLEIC ACID	3,6 & 9	COCONUT OIL ORGANIC FLAX SEED OIL		1	SOFTGEL	60	VEGETARIAN/GLUTEN FREE, ALTERNATIVE TO FISH OIL, COGNITIVE, SKIN AND JOINT HEALTH SUPPORT*

The IFOS Program is a voluntary, subscription-based third party testing and certification program available to fish oil finished product/brand manufacturers and raw material suppliers.

IFOS provides a way for the fish oil industry to show the world that their products are safe, pure and of the highest quality worldwide.

Active ingredient(s) content (e.g., omega-3s [EPA + DHA]) compared to the label claim

#### **CONTAMINANTS**

- Total PCBs
- Dioxins and furans
- Dioxin-like PCBs
- New IFOS now tests for radiation. As of January 1st, 2015, all fish oils submitted for testing will have radiation added to Consumer Reports.

#### **HEAVY METALS**

- Mercury
- Lead
- Total arsenic
- Cadmium

#### **STABILITY**

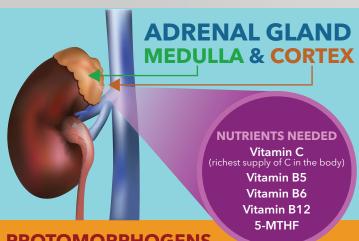
- Peroxide
- Anisidine
- Total oxidation
- Acid value



IFOS™ is a Registered Trademark of Nutrasource Diagnostics Inc.



## ADRENAL/CORTISOL PROTOCOL



#### **PROTOMORPHOGENS**

## .EUTHER(

Supports adrenal function through its turns provides support for endurance, immune function and energy levels.\*



#### 12:00 Midnight 10:30pm 2:00am Deepest sleep secretion start 4:30am Lowest body temperature **CIRCADIAN** 6:00pm 6:00am **CLOCK** 6:45am Sharpest rise in blood pressure 5:00pm Greatest cardiovascular efficiency and 7:30am Melatonin secretion stops 3:30pm Fastest reaction time Bowel movement likely 9:00am Highest testostero<u>ne</u> 10:00am High alertness 12:00 Noon

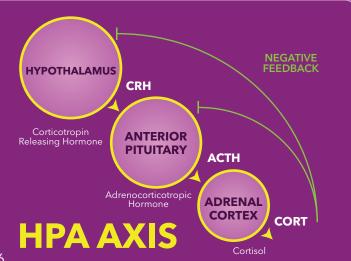
## CORTISOL



#### SUPPORTS CORTISOL LEVELS

Optimizes HSP70 which supports

- Cell integrity\*
- Cytokine activity\*
- Antioxidant activity\*



## **MAGNOLIA**

Supports the inhibitory neurotransmitter effect at the GABA receptor site\*



**GABA** RECEPTOR

THEANINE acts as an excitory neurotrasmitter antagonist\*



GLUTAMATE RECEPTOR

\*These statements have not been evaluated by the Food and Drug Administ<mark>ration.</mark> This product is not intended to diagnose, treat, cure or prevent any disease.

#### SECONDARY SUPPORT

#### **TERTIARY SUPPORT**

Metabolic Multi or Daily Best™ Ultra Adrenal Benefits™ CocOmega™

Liposomal DHEA Spray Omega 3 HP-D Mega Probiotic-ND™

Mito Fuel Spectra Oranges™

Metabolic Multi: 3 cap
Daily Best™ Ultra:
Adrenal Benefits™:

3 capsules twice daily 1 capsule daily 2 capsules daily prior to 2 pm

CocOmega™: 1 softgel daily

**Liposomal DHEA Spray:** 1-2 sprays daily (depending on need as indicated in Adrenal Stress Index)

Omega 3 HP-D: 1-2 capsules daily Mega Probiotic-ND™: 3 capsules daily (for supporting mineral bioavailability)

Mito Fuel: 1 scoop daily
Spectra Oranges™: 1 scoop daily

#### IF CORTISOL IS ELEVATED:

Metabolic Multi or Daily Best™ Ultra Relora® with Bacopa Liposomal DHEA Spray

Metabolic Multi:3 capsules twice dailyDaily Best™ Ultra:1 capsule dailyRelora® with Bacopa:1-2 capsules in the eveningLiposomal DHEA Spray:1-2 sprays daily

(depending on need as indicated in Adrenal Stress Index)

## CONSIDER THESE TESTS TO PROVIDE THE BEST SUPPORT FOR ADRENAL HEALTH:



- Adrenal Stress Index
- Thyroid Pane
- Standing Blood Pressure Assessment
- Neurotransmitter Test

#### **OTHER SYSTEMS TO CONSIDER:**



FOR THYROID SUPPORT see page 34-35



FOR CARDIO SUPPORT see page 12-15



FOR METABOLISM SUPPORT see page 30-31

## Jeffney Gladd, M.D.



"Stress has an impact on all aspects of hormonal function. I encourage folks to use the free 10 day challenge within the Head Space app for guided meditation. Most really appreciate an immediate benefit."







## AGING PROTOCOL

## SUPPORTING HEALTHY DNA & TELOMERES

When DNA replicates, undesirable changes in the sequence can occur. As we age, our repair mechanisms let errors slip through. Too much damage may cause cells to enter non-replicating state, or to kill themselves. Damage occurs at telomeres, caps at the end of DNA. Telomeres shrink with every division. Cells undergo apoptosis or senescence when telomeres are too short. An enzyme called telomerase protects telomere length

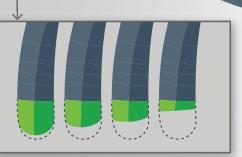
V le

**Astragaloside IV:** Highly concentrated astragulus extract which supports telomere health

**Vitamin D:** Found to support both telomere length but also telomerase activity

**Omega-3 Fatty Acids:** Shown to potentially slow the rate of telomere shortening

**Curcumin:** Supports healthy expression of telomerase activity



Chromosome

Shortened Telomere

## SUPPORTING HEALTHY LEVELS OF OXIDATIVE STRESS

Curcumin (Meriva-Phytosome Technology)

Sulphurophanes via BroccoPhane™

Green Tea (standardized to 70% EGCG)

Pomegranate (standardized to 40% Punicosides)

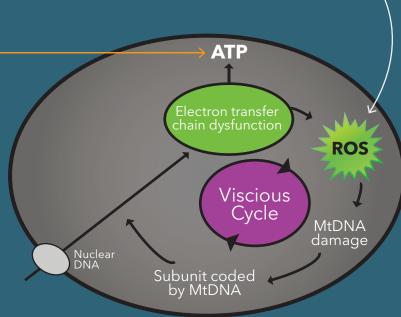
LycoBeads ® (microencapsulated Lycopene)

**Coenzyme Q10**, which is found in the mitochondria, is called the energy storage molecule and is the final electron acceptor in the Electron Transport Chain.

**D-Ribose** is a rate-limiting factor for phosphoribosylpyrophosphate (PRPP). Therefore, it is also a rate-limiting factor for the pathways that maintain adenine, ADP and AMP levels for ATP's resynthesis. Supplemental ribose works by supporting normal levels of PRPP, which leads to superior recovery of ATP levels.\*

**Acetyl-I-Carnitine** acts through supporting the normal breakdown of free longchain fatty acids for transport to and oxidation in the mitochondria.\*

**B Vitamins** are crucial for energy support, though the focus is generally on the methylation process and their ability to support red blood cell (oxygen carriers) formation.\*



Nucleus

Nuclear DNA Subunit coded by MtDNA

\*These statements have not been evaluated by the Food and Drug Administration.

#### SECONDARY SUPPORT

#### **TERTIARY SUPPORT**

Metabolic Multi Telomere Benefits™ Omega 3 HP-D Phyto Benefits™ Maxi HGH™ or Cocoa HGH

Methyl Benefits™

Mito Fuel

Spectra Purples™

A•D•K

ResveraDMG™

Astaxanthin D Liquid Pycnogenol® N-Acetyl Cysteine

Metabolic Multi:3 capsules twice dailyTelomere Benefits™:1-2 capsules dailyOmega 3 HP-D:1-2 soft gels dailyPhyto Benefits™:1-2 capsules daily

Maxi HGH or

Cocoa HGH:

Methyl Benefits™:

1-2 capsules daily

Mito Fuel:

1 scoop daily

Spectra Purples:

1 scoop daily

1 scoop daily

1 capsule daily

ResveraDMG™:

Astaxanthin D Liquid: 1 dropper Pycnogenol®: 1 capsule daily N-Acetyl Cysteine: 1-4 capsules daily

## CONSIDER THESE TESTS TO SUPPORT HEALTHY AGING:



- CBCCMPA1c
- Telomere Length Analysis
- hs-CRP Homocysteine
- Fibrinogen
- Vitamin D (25 OH)
- NMR\* instead of regular lipid panel
- Saliva cortisol/DHEA-s
- Insulin B12 & Folate

## Ranneck Bhogal D.C., D.A.B.C. J .....

1-2 capsules daily



"Five fundamental keys to healthy aging are: Incorporate more Anti inflammatory foods, eat foods that are lower on the Glycemic Index, support healthy cortisol levels, focus on stress management and support healthy sleep habits."

\*The NMR LipoProfile® test is an advanced cardiovascular diagnostic test that uses nuclear magnetic resonance (NMR) spectroscopy to uniquely provide rapid, simultaneous and direct measurement of LDL particle number and size of LDL particles, as well as direct measurement of HDL and VLDL subclasses.





#### The Allergic Cascade:

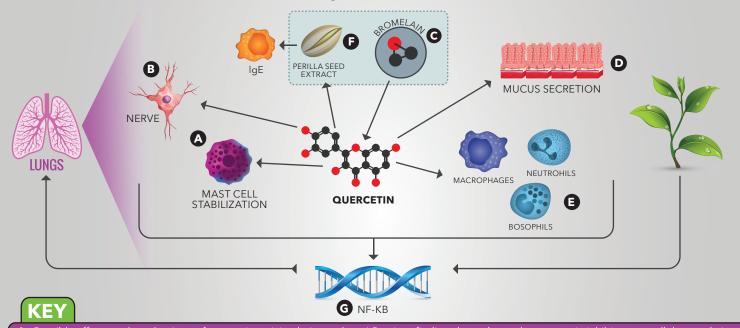
IgE antibodies (located bound to the surface of basophils and mast cells) recognize protein surface markers to identify the allergen and react, staying attached to both the mast cells and basophils but also binding to the protein surface markers. The complement complex, a specialized group of proteins, begins to circulate in the blood, having been alerted by the binding process.

A sequence occurs as complement protein after complement protein attaches and alerts, killing the cell at the end of the sequence. While this response is desired in a normal immune reaction, the mast cells and basophils as sites for binding are problematic, as they contain stores of histamine, which is released at their death into surrounding tissue.

#### **Nutrients Involved:**

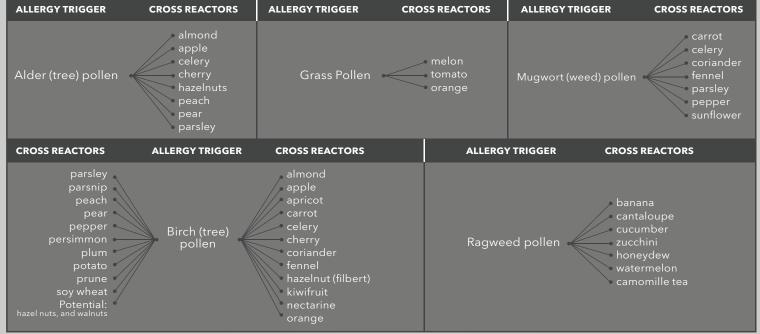
- Quercetin is a free radical scavenger.\*
- Supports normal function of signaling pathways.
- Supports a healthy histamine response.\*
- Supports stabilization of mast cells.\*

Bromelain, an enzyme, supports protein metabolism.\* It also supports the absorption of quercetin.\*



A - Possible effects and mechanisms of quercetin activity during asthma.\* Previous findings have shown that quercetin inhibits mast cell degranulation.\*

B - Supports healthy airway activity.\* C - Supports quercetin absorption.\* D - Supports healthy mucus production.\* E - Eosinophil and neutrophil recruitment.\* Supports Th1/Th2 cytokine activity.\* F - Supports healthy IgE production.\* G - Supports healthy expression of NF-kB.\*



#### SECONDARY SUPPORT

#### **TERTIARY SUPPORT**

Metabolic Multi or Daily Best™ Ultra Aller-DMG™ Nondairy Probiotic Immune Benefits™ Omega 3 HP-D Liposomal C Vitamin D 10,000 IU

Immuno-DMG™ Olivir™ 15

Metabolic Multi: 3 capsules twice daily

Daily Best™ Ultra: 1 capsule daily

Aller-DMG™: 2-4 tablets as needed during

times of increased immune stress

Nondairy Probiotic 50: 1-2 caps during

times of increased immune stress

Immune Benefits™:2 capsules dailyOmega 3 HP-D:1-2 capsules dailyLiposomal C:2-3 tsp. daily(definitely recommend if patient

is on Daily Best Ultra)

**Vitamin D 10,000 IU:** 1/2 - 1 ml daily

Immuno-DMG™: 1-2 chewables daily Olivir™ 15: 1-2 capsules daily

It is imperative to pay close attention to cross-reactive foods when helping patients manage allergies. These foods have similar protein structures as the substances your patients may be having reactions to.

jón Fox, D.C. ----



"I've found gluten elimination to be a great tool for lessening or eliminating allergies. I give folks 2-3 easy recipes for each meal of the day to follow for a few weeks to notice any improvement."







## BONE PROTOCOL

#### Osteoblasts:

- Bone-forming, connective tissue cells found at bone surface
- Can differentiate as osteocytes

#### **Osteocytes:**

- Make type 1 collagen
- Make other extracellular matrix components
- Found enclosed in the bones

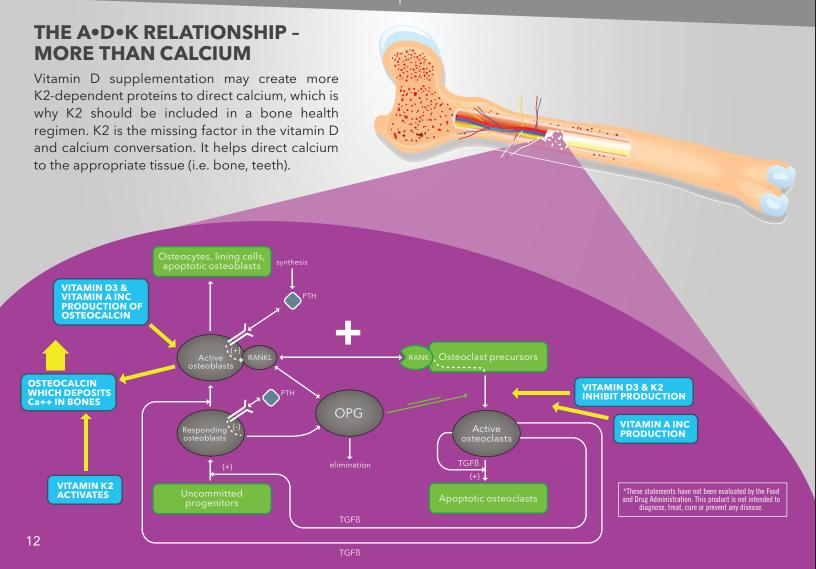
#### **Osteoclasts:**

- Large, bone-resorbing cells from bone marrow stem cells
- All involved in removal and replacement of tissue, controlled by bone metabolism

#### **ROLE OF B12**

Research published in the New England Journal of Medicine (NEJM) revealed that mice deficient in vitamin B12 have growth retardation and fewer osteoblasts (cells responsible for bone formation). The researchers suggested that lack of vitamin B12 may interfere with growth signaling in the liver and its "downstream effect" on the osteoblasts.

"High homocysteine levels may affect bone remodeling by increasing bone resorption (breakdown), decreasing bone formation, and reducing bone blood flow." (The Linus Pauling Institute Micronutrient Information Center). B vitamins support homocysteine levels within normal ranges.\* Betaine supports normal conversion of homocysteine in the blood into methionine.\*



# Multivitamin (see multivitamin chart on page 3) Cal Mag Mega Probiotic-ND™

Cal Mag: 2 tablets daily
Mega Probiotic-ND™: 3 capsules daily
(for supporting mineral bioavailability)

## IF LOW HCL & ADDITIONAL MAGNESIUM NEED



**Tri Mag 300:** 3 capsules daily (if additional magnesium is needed)

#### IF A PATIENT NEEDS ADDITIONAL VITAMINS A, D, K



#### A•D•K:

If patient taking one-a-day add 1 capsule daily. Metabolic Multi (or another multivitamin with  $\geq 2000$  IU of vitamin D and > 200 mcg of vitamin K2) recommend A•D•K 3x or 4x daily.

## CONSIDER THESE TESTS TO SUPPORT BONE HEALTH:



- Vitamin D (25 OH)
- Bone Resorption Assessment
- Celiac/Gluten Sensitivity Test
- Hydrocholoric Acid Assessment

## - Fred Pescatore, H.D., M.P.H., C.C.N.



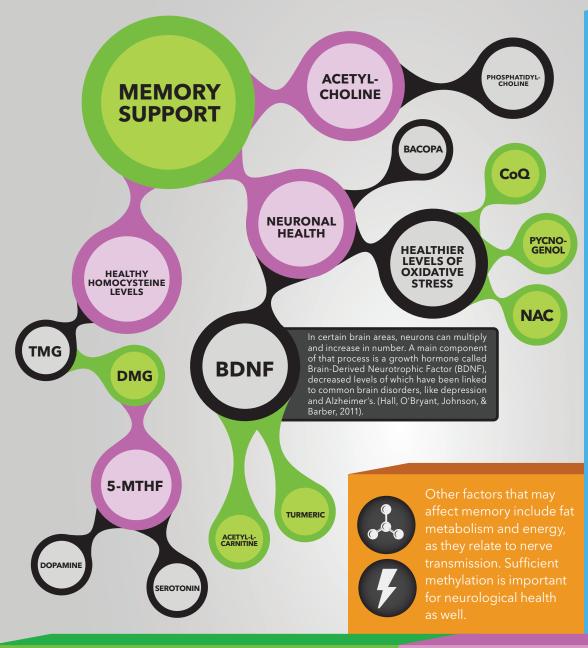
"Weight bearing exercise is the other key component to supporting healthy bones. If you're not implementing adequate physical activity, the nutritional changes are going to have a limited impact on long term success."







## BRAIN / MOOD PROTOCOL



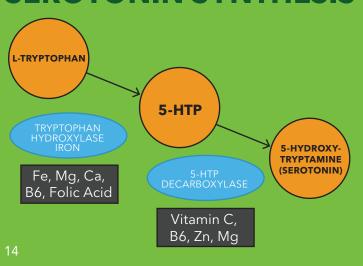
## HEALTHY CORTISOL LEVELS HEALTHY BRAIN

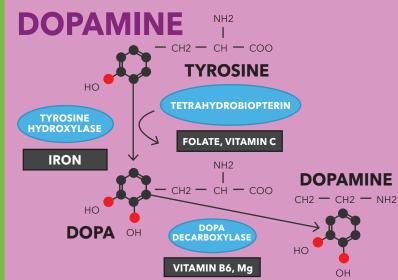
Our memories are some of our most valued possessions. Keeping the processes that affect them in good working order is high on many patients' health priority lists.

Several important physiological factors can affect our neurological function, and specifically, that of our memory. Hormones are incredibly important to our brain's health, and excessive stress (prolonged cortisol hormone) can affect memory health. Further, structural hippocampal changes in rats have been attributed to stress-related adrenal hormones. (Gould, Woolley, & McEwen, 1991).

These statements have not been evaluated by the Food and Drug Administration

## SEROTONIN SYNTHESIS





#### **MEMORY PROTOCOL:**

#### **PRIMARY SUPPORT**

#### **SECONDARY SUPPORT**

#### **TERTIARY SUPPORT**

Metabolic Multi Neuro Benefits™ Relora® with Bacopa

Methyl Benefits™ CoQ10/DMG 300/300 Phyto Benefits™ N-Acetyl Cysteine Pycnogenol® or Grape Seed 100 Neuro-DMG™

Metabolic Multi:3 capsules twice dailyNeuro Benefits™:3 capsules dailyRelora® with Bacopa:1-2 capsules

in the evening

Methyl Benefits™: 1-2 capsules daily CoQ10/DMG 300/300: 1-3 wafers daily (especially useful for patients that endure ongoing neurological stress)

Phyto Benefits™: 1-2 capsules daily

**N-Acetyl Cysteine:** 2-4 capsules (serving as a glutathione precursor)

Pycnogenol® or

Grape Seed 100: 2 caps daily
Neuro-DMG™: 2-3 capsules daily

## **MOOD PROTOCOL:**

#### PRIMARY SUPPORT

#### **SECONDARY SUPPORT**

#### **TERTIARY SUPPORT**

Daily Best™ Ultra Stress B Capsules Omega 3 HP-D

Daily Best™ Ultra:1 capsule dailyStress B Capsules:1 capsule with a mealOmega 3 HP-D:2 softgels daily

Tri Mag 300 5-MTHF/B12 MC 2000 5-HTP

**Tri Mag 300:**3 capsules daily **5-MTHF/B12 MC 2000:**1 capsule daily **5-HTP:**3-4 capsules 2 hours before bed

5-HTP L-Tyrosine

**5-HTP:** 3-4 capsules 2 hours before bed **L-Tyrosine:** 1-2 capsules daily

CONSIDER THESE TESTS TO PROVIDE THE BEST SUPPORT FOR BRAIN HEALTH:



- Basic, CMP, CBC
- Lipid Panel
- Adrenal Stress Index
- Quick Silver Scientific Mercury Tri-Test

## Jeffney Gladd, M.D.



"Some folks really benefit by adding healthy fats to their day. An easy way to do this is blending extra-virgin coconut oil, MCT oil or grassfed butter into their tea or coffee."







## CARDIO PROTOCOL

#### **GENERAL CARDIOVASCULAR HEALTH**

We all understand the importance of heart health. The heart is a powerhouse, and we need it to perform, which requires certain nutrients. The cardiovascular system demands them: from the collagen formation process for our vessels' strength to the balance of cholesterol in our blood, nutrients are key factors.

#### **KEY NUTRIENTS**

#### Coenzyme Q10:

Our heart muscles contain highest concentration
Statin drugs deplete levels of this nutrient Supports normal blood pressure\*

#### Omega 3 fatty acids EPA and DHA:

Support healthy blood pressure and cholesterol levels\*

#### **BLOOD PRESSURE**

Our heart health is connected to hormones in many ways. Aldosterone, a hormone produced by the Adrenal Cortex, affects blood pressure and volume. Lack of this hormone can lead to rapid blood pressure drops. High blood pressure, on the other hand, rarely has obvious, acute causes, and is typically seen as a long-term development, the culmination of many risk factors.

#### **CHOLESTEROL**

Supporting healthy cholesterol levels does not just support the heart itself. It also helps support other systems such as the Endocrine and Neurological systems.

The Cytochrome P450 enzymes convert cholesterol to the master steroid hormone, pregnenolon, from which the other steroid hormones, mineralcorticoids, glucocorticoids, androgens, estrogens, progestagens and vitamin D, are derived. Cholesterol is also used in the production of our cells.

#### **HOMOCYSTEINE**

An amino acid by-product of protein metabolism and an intermediate nutrient that acts as a diagnostic marker, homocysteine can build up in the blood.

Some theories suggest that homocysteine may destroy endothelial cells, leading to the idea that plaque may attempt to fill in the damaged areas of the arteries once damage has occurred. Other theories suggest that homocysteine may oxidize low-density lipoproteins, promoting buildup.

Both theories, along with several others, describe reasoning for the correlation between arterial aging and elevated homocysteine levels.

## **CARDIO PROTOCOL:** GENERAL

This protocol is designed for anyone who has a family history of cardiac issues and/or anyone over the age of 40.

\*\*The Cardio Benefits product was designed to be used with any patient currently on any cardiovascular medication.

#### PRIMARY SUPPORT

#### **SECONDARY SUPPORT**

#### TERTIARY SUPPORT

Metabolic Multi or Daily Best™ Ultra Cardio Benefits Phyto Benefits™

Methyl Benefits™ **Ubiquinol 100** Mega Probiotic-ND™

A•D•K Tri Mag 300 Spectra Reds™

Metabolic Multi: Daily Best™ Ultra: **Cardio Benefits:** Phyto Benefits™:

3 capsules twice daily 1 capsule daily 3 capsules daily 1-2 capsules daily

Methyl Benefits™: 1-2 capsules daily **Ubiquinol 100:** 1 softgels daily Mega Probiotic-ND™: 3 capsules daily ADK: 1 capsule daily Tri Mag: 3 capsules daily Spectra Reds™: 1 scoop daily

#### **CONSIDER THESE TESTS TO SUPPORT CARDIO HEALTH:**



- CBCCMP
- hs-CRPHomocysteine
- Fibrinogen Vitamin D (25 OH)NMR instead of regular lipid panelCortisol DHEAs Insulin
- B12 Folate





## **CARDIO PROTOCOL:** CHOLESTEROL

If altered cholesterol levels exist, underlying cause should be investigated and addressed, at which point a transition to the General Cardio Protocol should take place.

#### PRIMARY SUPPORT

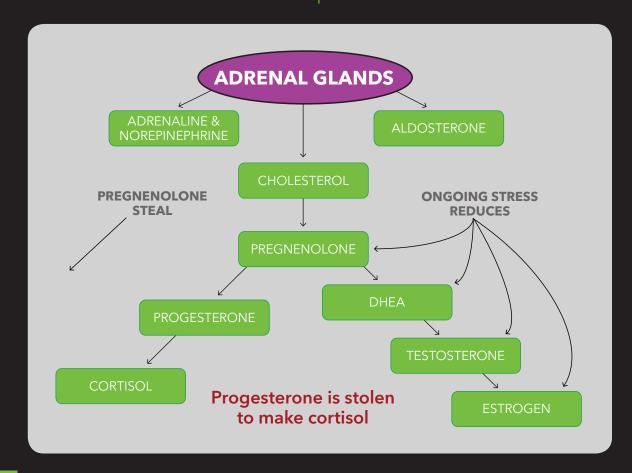
#### **SECONDARY SUPPORT**

Metabolic Multi or Daily Best Ultra™ Omega 3 HP-D or Cholestsure Mega Probiotic-ND™

Ubiquinol Cocoa HGH Liposomal C

Metabolic Multi:3 capsules twice dailyDaily Best™ Ultra:1 capsule dailyOmega 3 HP-D2-4 softgels dailyCholestSure™:3 capsules dailyMega Probiotic-ND™:3 capsules daily

Ubiquinol 100:1-2 softgels dailyCocoa HGH:1-2 scoops daily(Away from food to maximize absorption)Liposomal C:2-4 tsp daily



## **CARDIO PROTOCOL:** BLOOD PRESSURE

If altered blood pressure levels exist, underlying cause should be investigated and addressed at which point a transition to the General Cardio Protocol should take place.

#### PRIMARY SUPPORT

Metabolic Multi or Daily Best™ Ultra BP Elite™ Tri Mag

Metabolic Multi: 3 capsules twice daily

Daily Best™ Ultra: 1 capsule daily

BP Elite™: 2-4 capsules daily

\*\*If desired substitute

Tri Mag: 3 capsules daily

#### **SECONDARY SUPPORT**



Pycnogenol®: 1-2 capsules daily Hawthorn: 1-2 capsules daily

## CARDIO PROTOCOL: HOMOCYSTEINE/VASCULAR

Restoring and maintaining healthy homocysteine levels and vascular health should be an ongoing process for patients with a family history of cardiovascular issues and who have experienced cardiac stress themselves. For these patients, this would be their 'General Cardio' Protocol.

#### PRIMARY SUPPORT

Metabolic Multi or Daily Best™ Ultra Cardio Benefits™ Nattokinase Plus™

Metabolic Multi:

Daily Best™ Ultra:

Cardio Benefits™:

Nattokinase Plus™:

4 capsules for 30 days, then transition to 2 capsules ongoing

#### **SECONDARY SUPPORT**

Methyl Benefits™ Pyridoxal 5-Phosphate Liposomal C

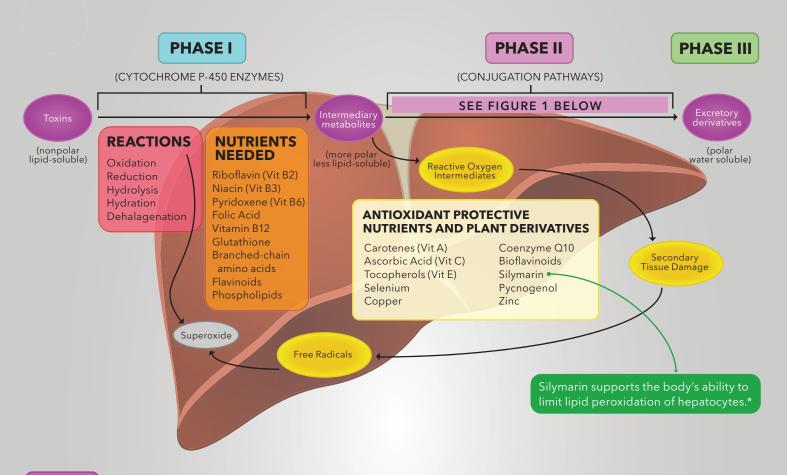
Methyl Benefits™: Pyridoxal 5-Phosphate: Liposomal C: 1-2 capsules daily 1-2 capsules daily for 60 days 2-4 tsp daily



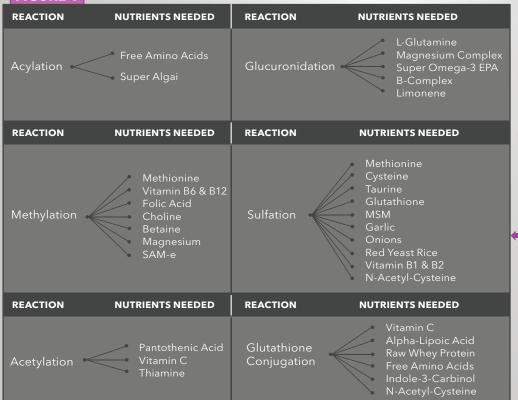




## DETOXIFICATION PROTOCOL



#### **FIGURE 1**



#### **PHASE I**

- Is called oxidation, activation or modification
- Liver excretes cytochrome P-450 low-specificity enzymes
- Enzymes convert toxic molecules to more water-soluble forms by incorporating oxygen atom (with NADH cofactor)
- Conversion process is called biotransformation
- Readies toxins for excretion

#### **PHASE II**

- Necessary follow-up to process oxidative stress from Phase I
- Major conjugation reactions include glucoronidation, amino acid conjugation, sulfation, glutathione conjugation, acetylation and methylation
- Requires selenium and sulfur-containing amino
   acids: glutamine, glycine, taurine, cysteine
- Support the body's ability to maintain microbial balance for elimation pathways in the gut and kidneys

#### **PHASE III**

- Actual elimination through excretion
- Health of this phase depends on success of Phases I and II

<sup>\*</sup>These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

#### **RATIONALE FOR PROTOCOL STEPS:**

The three steps of DaVinci's Detoxification Health Protocol parallel the three phases of the detoxification process, working to support all steps, from neutralization through elimination and repair.\*

STEP 1 is a preparation phase that provides nutrients for for structural support and digestive support to prime the body for the Cleanse Phase (Phase II).\*

Note: GI Benefits is aimed at supporting the integrity of the gut and providing permeability support so that reabsorption of mobilized toxins does not take place during Phase II.\*

STEP 2 is a cleansing phase: support for neutralization, elimination of toxins and estrogen metabolism\*

STEP 3 is a rebuilding phase that provides support for healthy bacterial repopulation and distribution, protein synthesis, and cell membrane flexibility\*

Other important nutrients, and where they fit in the detoxification process, can be explored within diagram to left.

#### **STEP 1:** PREP PHASE

#### **STEP 2:** CLEANSE PHASE **STEP 3:** REBUILD PHASE

G.I. Benefits Mega Probiotic-ND™ Digenzyme™ or All-Zyme™ Hepaticlear™

Right Whey™ Multiphase Detox™ BioDIM® I-3-C Complex Colon Cleanse **Candid-Away** Spectra Greens<sup>™</sup>

Metabolic Multi or Daily Best™ Ultra **Nondairy Probiotic 50** Omega 3 HP-D

G.I. Benefits: 1-2 scoops per day Mega Probiotic-ND™: 3-6 capsules daily Digenzyme™ or

All-Zyme™: 1 tablet with each meal Hepaticlear™: 2 capsules daily Right Whey™: 1 scoop daily Multiphase Detox™: 6 capsules daily BioDIM® I-3-C Complex: 2 capsules daily **Colon Cleanse:** 4 capsules daily Candid-Away: 3 capsules daily Spectra Greens™: 1 scoop daily

\*\*If diagnostic testing reveals parasitic population, substitute Para-Shield

Metabolic Multi: 3 capsules twice daily Daily Best™ Ultra: 1 capsule daily Nondairy Probiotic 50: 1 capsule daily for 4 weeks then transition to 3 capsules of Mega Probiotic ND, ongoing

Omega 3 HP-D: 2 softgels daily

## 2-4 WEEKS

#### 21-30 DAYS

#### **ONGOING**

#### OTHER QUICK CONSIDERATIONS:

Transition to natural soaps, lotions, dyes, dental products and cookware that are free of known neuroendocrine disruptors and carcinogens.

## - Fred Pescatore, M.D., M.P.H., C.C.N.----



"It's important to discourage "toxing" as part of a detox strategy. Conventional coffee and it's brewing using hot water through plastic is a common source. I encourage folks to opt for glass pour over (organic) coffee makin'. It's just as convenient and the coffee tastes better!"







## DIGESTIVE PROTOCOL

#### STOMACH

Stimulates intestinal production of the hormone secretin, which stimulates enzyme release from the pancreas and bile release from the gallbladder.

Why HCl is important

#### **PANCREAS**

#### **GALLBLADDER**

Stores bile and depends on adequate acidity levels in stomach for optimal function

#### **LIVER**

- Requires specific nutrients for both phases of detoxification processes
- Site for T4 to T3 conversion
- Site for nutrient conversion
- Responds to increased cortisol levels by increasing gluconeogenesis
- Is dependent on healthy insulin levels for long term liver health







\*Clinical Note: In order to support the detoxification capabilities, the

#### SMALL INTESTINE

#### LARGE INTESTINE

- Is also home to broad spectrum of beneficial bacteria

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.





The digestive protocol features support for various locations along the digestive tract, rather than primary and secondary support.\*

Often in clinical practice, *lower* digestive stress can be brought on by *upper* digestive dysfunction. Be sure to address both upper and lower when this is the case.

Foundational digestive support should always include a probiotic.\*

TO SUPPORT UPPER DIGESTIVE FUNCTION\*

TO SUPPORT LOWER DIGESTIVE FUNCTION & STRUCTURAL INTEGRITY\*

TO SUPPORT DIGESTIVE REGULARITY\*

TO SUPPORT BALANCED CANDIDA POPULATION\* TO SUPPORT LOWER
HEALTHY SMALL INTESTINAL
BACTERIAL POPULATION\*

All-Zyme™ Mega Probiotic-ND™ w/Digestive Enzymes Chewable

G.I. Benefits Mega Probiotic-ND™ Digenzyme or All-Zyme™ Clearlly Fiber Effervescent Magnesium Citrate

Nondairy Probiotic 50 Candid-Away™ Colon Cleanse Nondairy Probiotic 50 Para-Shield Colon Cleanse

Bromelain

#### All-Zyme™:

1 tablet with each meal

When Appropriate:

Mega Probiotic ND w/ Digestive Enzymes Chewable:

1-4 chewable(s) with meals

#### **GI Benefits:**

1 scoop daily for maintenance
2-3 scoops for acute digestive stress

#### Mega Probiotic-ND™:

1-3 capsules daily for maintenance 3-6 capsules daily for acute digestive stress

#### Digenzyme or All-Zyme™:

1 tablet with each meal

#### **Clearly Fiber:**

2 tsp. 1-2 times per day as needed

#### **Effervescent**

#### Magnesium Citrate:

1-2 scoops per day as needed

\*This is a short term protocol and while this protocol is being implemented, the underlying cause of the irregularity should be investigated and addressed. This is not meant to be a long term regimen.

#### **Nondairy Probiotic 50:**

1 capsule daily for 15-30 days then transition to Mega Probiotic-ND™

#### Candid-Away™:

3-6 capsules daily for 15-30 days (it is recommended that the patient work up to this dose by starting at 1-2 capsules daily for 3 days, then ease into the 3-6 capsules per day. The number of capsules is dependent on the severity of the case.)

#### Colon Cleanse:

4 capsules daily for 30 days.

\* Prior to beginning a "balanced candida protocol," your patients shoudl take 1-2 scoops of GI Benefits for 1-2 weeks. AND always recommend your patients take Colon Cleanse when taking Candid-Away or Para-Shield<sup>TM</sup>.

#### **Nondairy Probiotic 50:**

1 capsule daily for 15-30 days then transition to Mega Probiotic ND

#### Para-shield:

2-4 capsules daily for 30 days (it is recommended that the patient work up to this dose by starting at 1-2 capsules daily for 3 days, then ease into the 2-4 capsules per day. The number of capsules is dependent on the severity of the case.)

#### Colon Cleanse:

4 capsules daily for 30 days.

#### Bromelain:

2 tablets daily for 30 days

\* Prior to beginning a "balanced candida protocol," your patients should take 1-2 scoops of GI Benefits for 1-2 weeks. AND always recommend your patients take Colon Cleanse when taking Candid-Away or Para-Shield<sup>TM</sup>.

#### **OTHER SYSTEMS TO CONSIDER:**



FOR ENERGY SUPPORT see page 24-25



FOR THYROID SUPPORT see page 38-39



FOR ESTROGEN SUPPORT see page 26-27



FOR JOINT SUPPORT see page 32-33



FOR BRAIN SUPPORT see page 14-15

## Ron Hoffman, M.D., C.N.S....



"Maintain a healthy microbiome by eating naturally-fermented foods such as sauerkraut, yogurt, kimchi, and tempeh, by avoiding prescription antibiotics and antibiotic-laden proteins, fish, eggs, and poultry. Most communities have farmers' markets where you can develop a relationship with a local farmer or butcher for meat, eggs and poultry."

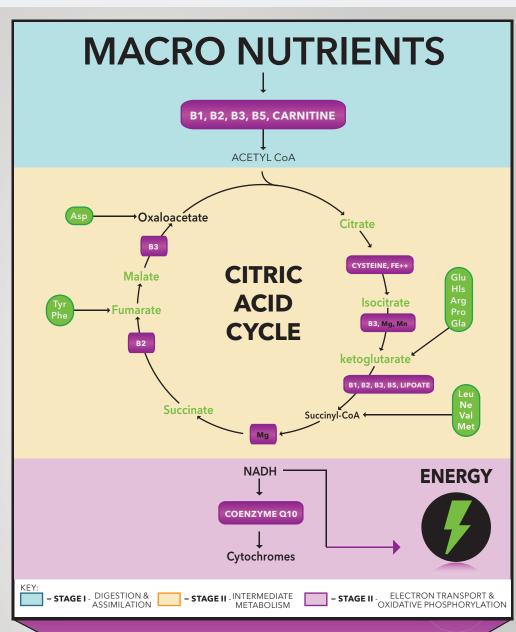


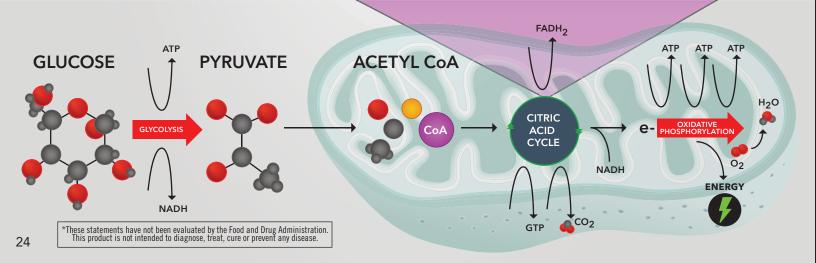




#### **ENERGY PRODUCTION AT ITS CORE** RELIES ON A RANGE OF NUTRIENTS







#### SECONDARY SUPPORT

#### TERTIARY SUPPORT

Metabolic Multi or Daily Best™ Ultra 5-MTHF/B12 MC 2000 Adrenal Benefits Mito Fuel Ubiquinol

Kre-Alkalyn® Complex
Amino 21™
Cocoa HGH
Gluconic® DMG-500

Spectra Oranges™ L-Carnitine L-Tyrosine

Metabolic Multi:3 capsules twice dailyDaily Best™ Ultra:1 capsule daily5-MTHF/B12 2000:1 capsule dailyAdrenal Benefits:2 capsules dailybefore 2 pm

Mito Fuel: 1 scoop daily in the morning

or early afternoon

**Ubiquinol 100:** 1-2 softgels daily

Kre-Alkalyn® Complex: 1 scoop daily
Amino 21™: 1 capsule, 3 times daily
Cocoa HGH: 1 scoop daily
Gluconic® DMG 500: 1-2 tablets daily

Spectra Oranges™: 1 scoop daily L-Carnitine: 1 tablet daily L-Tyrosine: 1-2 capsules daily

CONSIDER THESE TESTS TO PROVIDE THE BEST SUPPORT FOR ENERGY HEALTH:



- CBC
- CMP
- Thyroid Panel (tsh, Free T4)
   Free T3, reverse T3,
   Anti-TPO Anti-TG)
- Adrenal Stress Index

· lin Fox, D.C.



A powerful tool for optimal aging is strength training. Most people are intimidated by getting started. I use a workout online called, "The Hotel Room Workout" as a starting point for a non-equipment-based bodyweight program. High Intensity Interval Training is also very effective in supporting energy levels. And the beauty is that you can do this type of workout at your own pace. You dictate the intensity, which makes this as customized a workout as you can get.







## ESTROGEN METABOLISM PROTOCOL

## ESTROGEN =

**FAMILY OF THREE HORMONES:** 

ESTRADIOL
the most common type in women of childbearing age

ESTRIOL
the main estrogen during pregnancy

2

3

ESTRONE
the only estrogen your body makes after menopause (when menstrual periods stop)

Estriol is the weakest. Estradiol is the most active. And Estrone is the inactive storage form.

How these are metabolized is a key factor in our health. So is their balance with other hormones progesterone and testosterone.

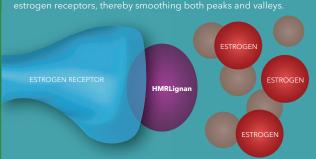
The form of Estrogen that is actually converted from testosterone into Estradiol or E2 through a process called aromatization. This conversion causes men to store fat in the belly. It is the stored belly fat that then creates more aromatization increasing fat storage in the belly, which in turn causes more aromatization.



ESTROGEN SUPPORT IS FOR BOTH FEMALES & MALES



When estrogen levels decline, lignans may have a weak estrogen-like effect, mimicking the presence of estrogen. When estrogen levels are high, lignans occupy and block the estrogen receptors, thereby smoothing both peaks and valleys.



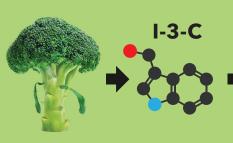
#### **LIVER DETOX**



Once estrogen goes through Phase I, it becomes a potentially damanging compound that needs to be ushered through Phase II as efficiently as possible. Amino acids and curcumin may support balance between Phases I and II.\*

HEALTHY ESTROGEN
METABOLITES

# DIM FACTOR



Many nutrients are involved in estrogen metabolism and overall hormone balance as it relates to estrogen. These include DIM (diindolylmethane), a natural compound found in cruciferous vegetables that supports our natural ability to burn fat and promotes healthy estrogen metabolism in both men and women, and I3C, one of whose byproducts is DIM.\*

PART OF THE PROPERTY OF THE PR

Research shows that Diindolylmethane (DIM) can support healthy estrogen metabolism.\*

Source: Dalessandri KM, Firestone GL, Fitch MD, Bradlow HL, Bjeldanes LF. Pilot study: effect of 3,3-diindolylmethane supplements on urinary hormone metabolites in postmenopausal women with a history of early-stage breast cancer. Nutr Cancer 2004;50(2):145

#### SECONDARY SUPPORT

Metabolic Multi or Daily Best™ Ultra BioDIM® I-3-C Complex Multiphase Detox™ \*DIMPRO® 150 (optional) **FOR MEN** 

**FOR WOMEN** 

Prostate Health
Zinc Lozenges
Libido

Adrenal Benefits™ Gamma-Lin 1300 Libido

Metabolic Multi: 3 capsules twice daily
Daily Best™ Ultra: 1 capsule daily
BioDIM® I-3-C Complex: 2 capsules daily
\*If additional DIM is needed consider
DIMPRO® 150: 1-2 capsules daily
(Can be taken concurrently with Detox
Benefits™ or alternating with Detox
Benefits™ every 30 days)
Multiphase Detox™: 6 capsules dailyy

Prostate Health: 2 capsules daily
Zinc Lozenge: 1-2 lozenges daily
Libido: 3 capsules daily away from
food (2 weeks on, 2 weeks off)

Adrenal Benefits™:

2 capsules daily prior to 2 pm Gamma-Lin 1300: 2-3 softgels daily

ongoing, 3-6 softgels during

menstrual cycle

**Libido:** 2 capsules daily away from food (2 weeks on, 2 weeks off)

FOR ADDITIONAL PHASE II LIVER SUPPORT\*

Right Whey or Amino 21™ Curcumin C3 Complex®

Right Whey: 1 scoop daily
Amino 21™: 1 capsule, 3 times daily
Curcumin C3 Complex®: 1 capsule with

Cocoa HGH DHEA Spray IF ADDITIONAL HORMONE SUPPORT IS NEEDED & INDICATED BY HORMONE TESTING

Cocoa HGH: 1 scoop daily

Liposomal

**DHEA Spray:** 1-2 sprays daily



CONSIDER THESE TESTS TO PROVIDE THE BEST SUPPORT FOR ESTROGEN HEALTH:

- CMP
   Essential Estrogens by Genova Diagnostics
- Female Hormone Panel (FHP) by diagnostechs

· AnnAlisa Behling, NND ·····



"For enhanced estrogen balance, I recommend three lifestyle changes: implement a lifestyle plan that lowers insulin, cut back on plastic exposure and increase cruciferous vegetables."

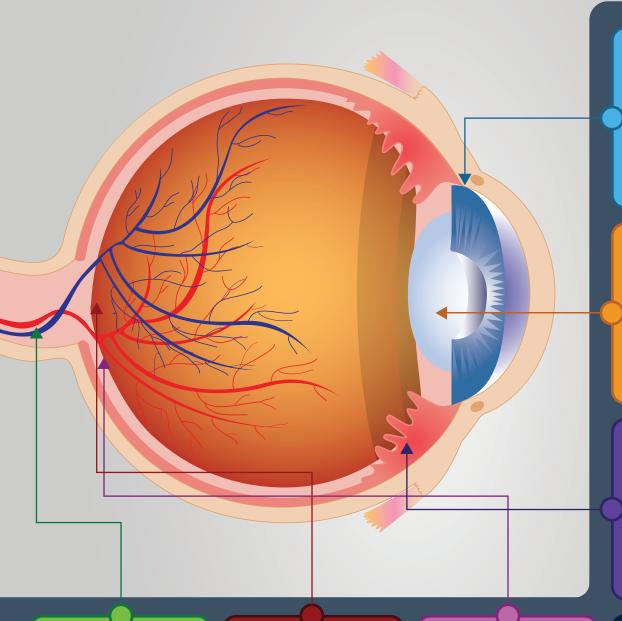


breakfast, 1 capsule with lunch





## EYE PROTOCOL



#### **CONJUNCTIVA:**

Nutrients to support hydration and vessel health may benefit the conjunctiva as this tissue contains tiny blood vessels that distribute nutrients and oxygen to the nearby tissue.

#### LENS:

Vitamins E and C may help protect the lens. Vitamin C is concentrated in the aqueous

Source: Indian Journal of Clinical Biochemistry, 2009 24 (4) 375-380

## CHOROID:

Antioxidants help to maintain integrity of choroldal blood vessels.\*

#### **OPTIC NERVE:**

Vitamins B1, B2, B6 and B12 are essential to the optic nerve.

Source: Indian J Ophthalmol. 2011 Mar-Apr 59(2): 137-141.

#### **MACULA:**

Carotenoids, including Lutein and Zeaxanthin, in the macula may help to maintain eye health as we age.\*

#### **RETINA:**

Vitamin A and Zinc are well known to help maintain the health of the retina.

Source: Christian P, West KP, Jr. Interactions between zinc and vitamin A: an update. Am J Clin Nutr. 1998;68(2 Suppl):435S-441S.

#### MONITOR BLOOD SUGAR AND BLOOD PRESSURE

Both can damage small blood vessels in the eye and cause long term damage.

Metabolic Multi or Daily Best™ Ultra Healthy Eyes™ Omega 3 HP-D

Metabolic Multi: 3 capsules twice daily

Daily Best™ Ultra: 1 capsule daily

Healthy Eyes™: 1-3 capsules depending on the needs of the patient

Omega 3 HP D: 2-4 softgels daily
\*If burping produces aftertaste, consider upper
digestive support. Hypochlorohydria or a lack of
adequate enzymes can results in unpleasant aftertaste with fish oil products

#### SECONDARY SUPPORT

N-Acetyl Cysteine Beta Carotene Astaxanthin D3 Liquid Gingko Biloba

N-Acetyl Cysteine: 1-2 capsules daily Beta Carotene: 1 softgel daily for 90 days and then transition to 1 softgel every 3 days if patient is on

Daily Best™ Ultra

Astaxanthin D3 Liquid: 1 ml daily
Gingko Biloba: 2-3 capsules daily

#### **OTHER SYSTEMS INVOLVED:**



FOR METABOLIC SUPPORT see page 34-35



FOR DETOX SUPPORT see page 20-21



FOR THYROID SUPPORT see page 38-39



FOR ADRENAL SUPPORT see page 6-7



FOR CARDIO SUPPORT see page 16-19

## - Sandha Olic, N.H.D.



"Eyes are not just the window to the soul, they're also a window into hormone balance. Wide eyes can be indicative of an overactive thyroid whereas puffy eyes can indicate underactive thyroid and dark circles under the eyes can be connected to lower adrenal function as well. In addition to indications of hormone balance, optimal thyroid function is also necessary for the beta carotene/vitamin A conversion which is essential for eye health."





## IMMUNE PROTOCOL

**VITAMIN A** supports normal white blood cell production and activity\*

**MONOLAURIN** has been found to incorporate itself into the cell membrane of gram positive bacteria, blocking replication and making it an easier enemy for your immune system to take care of. (Tokarskyy & Marshall, 2008).

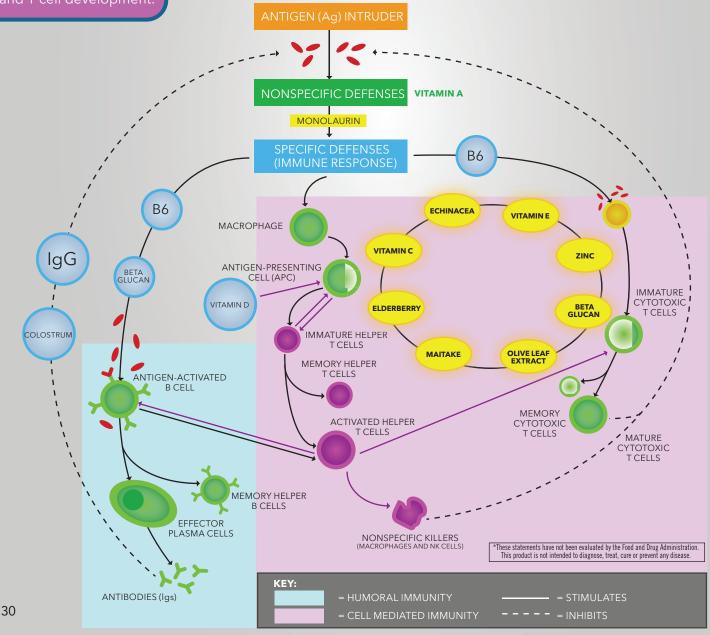
Located on many immune system cells, **VITAMIN D** receptors allow D to act as a modulating agent, supporting overall system health.\*

VITAMIN B6 supports B and T cell development.\*

**IgG**, the major immunoglobulin in blood, is a key factor in humoral response. Immunoglobulins, also known as antibodies, specifically recognize and bind to particular antigens to support destruction.

**COLOSTRUM** contains transfer factors that can teach the system to recognize antigens, essentially transferring knowledge and memory, and therefore acting as part of the humoral system.

**VITAMIN C** has been shown to stimulate both the production and function of leukocytes (white blood cells), especially neutrophils, lymphocytes, and phagocytes. Specific measures of functions stimulated by vitamin C include cellular motility, chemotaxis, and phagocytosis.



#### **IMMUNE PROTOCOL: ONGOING**

Ongoing: Primary protocol is designed for everyone. The addition of the Secondary products is designed for people whose health history indicated a need for a higher degree of immune support.

#### PRIMARY SUPPORT

Metabolic Multi or Daily Best™ Ultra Immuno Benefits™ Mega Probiotic-ND™

Metabolic Multi:3 capsules twice dailyDaily Best™ Ultra:1 capsule dailyImmuno Benefits™:2 caps dailyMega Probiotic-ND™:3 capsules daily

#### SECONDARY SUPPORT

Liposomal C Arabinogalactan Powder Gluconic®-DMG

Liposomal C: 1-2 tsp daily
Arabinogalactan: 1 scoop daily
Gluconic@-DMG 500: 1-2 tablets daily

#### **IMMUNE PROTOCOL: ACUTE**

Acute: This protocol should be implemented for the duration of the acute immune stress plus 1 week to ensure that the immune system has the support necessary to regain its full integrity.

#### PRIMARY SUPPORT

Daily Best™ Ultra Immuno-DMG™ Chewable Maitake DMG™ Liquid

**Daily Best™ Ultra:** 1 capsule daily **Immuno-DMG™ Chewable:** 

Adults (Age 18 & above): 1 tablet, 2-4 times daily
Teens (Ages 12-17): 1 tablet, twice daily
Children (Ages 4-11): 1 tablet daily

Maitake DMG<sup>TM</sup> Liquid: 1 ml 6 times daily
for 30 days then transition to 1mL 3 times
daily for 30 days and move to ongoing support

#### **SECONDARY SUPPORT**

If after three days additional support is needed:

Olivir<sup>™</sup> 15 Colostrum

Olivir™ 15: 2-4 capsules daily
Colostrum: 2-3 capsules daily







## JOINT PROTOCOL

This protocol supports joint health through a broad range of mechanisms and actions.\*

When blood cells move toward our joint sites, cartilage may become worn and the synovium (the joint lining) may swell, leading to discomfort. We also know that the normal wear and tear of cartilage over time allows for that process to occur.

OralVisc® acts using HA-Leptin: The combination of GAGs contained in HA-Leptin has demonstrated an anti-adipogenic and pro-chondrogenic effect in in vitro studies, leading to a more favorable metabolic profile. In animal studies, obese rats treated with Oralvisc® showed a higher fat loss, reduction in leptin levels and greater insulin sensitivity.

**HYALURONIC ACID:** Initially, scientists and clinicians believed HA worked simply by increasing synovial fluid viscosity. It can be incorporated into cartilage, supporting chondrocyte metabolism stimulation and cartilage repair.\*

VITAMIN C in Oralvisc® also contributes to the normal function of the cartilage and corrects energy metabolism performance.\*

PERLUXAN: Provides balanced support for Cox-1 and Cox-2 enzymes thus reducing excitatory enzymes without creating cardiovascular risk. This dramatically reduces the likelihood of adverse GI effects.

**PERNA:** The lipid content of the Green Lipped Mussel acts as a competitive substrate for specific enzymes involved in the synthesis of prostaglandins and leukotrienes.

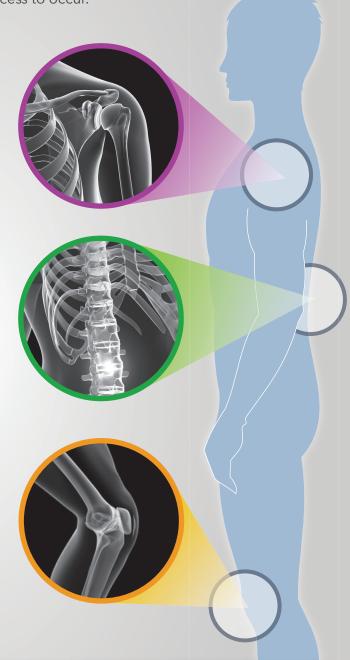
GLUCOSAMINE AND CHONDROITIN: Their chondroprotective action can be explained by a dual mechanism: (1) as basic components of cartilage and synovial fluid, they stimulate the anabolic process of the cartilage metabolism; (2) their physiological actions can modulate catabolic processes within the cartilaginous tissue.

#### **FACTORS THAT MAY AFFECT JOINT COMFORT AND** THE HEALTH OF BONE OR CARTILAGE INCLUDE:

#### • OBESITY -

While it may seem obvious that excess weight may put undue pressure on the joints, researchers have also discovered that higher production of leptin, a peptide hormone associated with obesity, may play a role in cartilage degradation. (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1754314/)

- POOR DIET
- GENETICS AGING
- OVEREXERTION
   DEHYDRATION



**OTHER SYSTEMS TO CONSIDER:** 

DIGESTIVE

**DETOX** 

METABOLISM

#### SECONDARY SUPPORT

#### TERTIARY SUPPORT

Arthri Benefits™ or Metabolic Benefits™ Enz-Flame Omega 3 HP-D

Nattokinase Circumin C3 Complex® Perna® Plus Nature's Collagen™ Hyaluronic Acid

Arthri Benefits™ or Metabolic Benefits™: Enz-Flame: 1-2 scoops daily

Omega 3 HP-D: 2-4 softgels daily

Nattokinase: 2-4 capsules daily Curcumin C3 Complex®: 1 capsule with breakfast, 1 capsule with lunch

Perna® Plus: 2-4 tablets daily

Nature's Collagen™: 2 capsules daily Hyaluronic Acid: 1-2 capsules daily

## WITH IMMUNE INVOLVEMENT GUT SUPPORT PROTOCOL

All-Zyme™ Mega Probiotic-ND™ G.I. Benefits

All-Zyme<sup>™</sup>: 1 tablet with each meal Mega Probiotic-ND<sup>™</sup>: 3-6 capsules daily G.l. Benefits: 1-2 scoops per day

## CONSIDER THESE TESTS TO PROVIDE THE BEST SUPPORT FOR JOINT HEALTH:



- CRPANAHI A-B27
- Anti-CCP

## Adam Killparthick, DC CN3



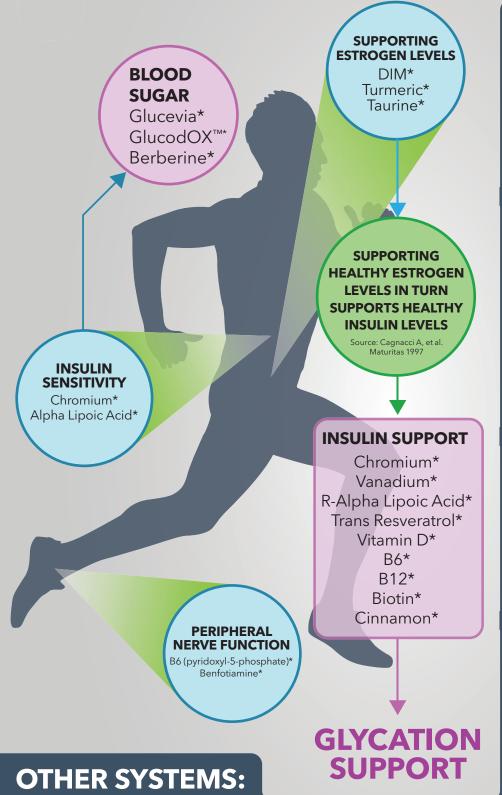
"Always keep in mind that joint pain has two components: physical (which can be addressed with manual therapies such as chiropractic, osteopathic manipulation and/or PT) and biochemical. As such, optimizing biochemistry through an anti-inflammatory diet, joint supportive nutrients (curcumin, boswellia, proteolytic enzymes etc.) and a healthy gut will set the stage for the best 'results'.\*"





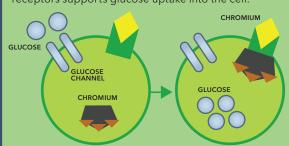


## METABOLISM PROTOCOL



#### **CHROMIUM**

Interaction between chromium and insulin and insulin receptors supports glucose uptake into the cell.



**BENFOTIAMINE** supports the production of transketolase, an enzyme responsible for efficiently converting potentially harmful byproducts of glucose breakdown into easily eliminated, harmless compounds. This is one way benfotiamine helps support the small blood vessels and nerves in the distal extremities.\*



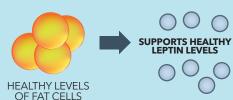
**GLUCEVIA** is standardized to 10% Nuzhenide and GI3, two compounds that were shown in preclinical animal studies to support the rate of glucose absorption in liver and muscle.



**GlucodOX**<sup>TM</sup> demonstrates energizing action through its ability to stimulate the production of AMPK.\* AMPK acts as the body's master regulator of glucose uptake.



In addition, GluocodOX $^{\text{TM}}$  supports the transformation of pre-adipocytes to adipocytes, which aids in supporting healthy leptin levels.\*



BLOOD PRESSURE

CHOLESTEROL



WEIGHT











#### **SECONDARY SUPPORT**

#### **TERTIARY SUPPORT**

Metabolic Multi or Daily Best™ Ultra Right Whey Omega 3 HP-D Gluco Benefits™ GlucoSynergy™ Berberine Force Adrenal Benefits™ or Relora® with Bacopa

†(depending on results of Adrenal Stress Index) Enz-Flame<sup>™</sup> CoQ10 Chew/Melt BioDIM<sup>®</sup> I-3-C Complex

Metabolic Multi:3 capsules twice dailyDaily Best™ Ultra:1 capsule dailyRight Whey™:1 scoop dailyOmega 3 HP-D:2-4 softgels dailyGluco Benefits™:3 capsules daily

Enz-Flame™: 1 scoop daily
CoQ10 Chew/Melt: 1-2 tablet daily
GlucoSynergy™: 2-3 capsules daily
Berberine Force: 3 capsules daily until
optimal metabolism is achieved and then
transition to 1-2 capsules daily

Adrenal Benefits™ or

**Relora® with Bacopa:** 1-2 capsules

in the evening

Enz-Flame™: 1 scoop daily CoQ10 Chew/Melt: 1-2 tablet daily

BioDIM® I-3-C

**Complex:** 2 capsules daily

Metabolism and Metabolic Syndrome: The multifaceted nature of metabolic support involves many systems. This protocol outlines each individually. The needs of the patient will dictate the combination of systems that should be supported. Keep in mind there is product crossover with each of these protocols.

#### **TESTS: BASIC METABOLISM PROFILE:**



- CBC CMP Lipids Hgb alc.
- Thyroid panel (TSH, T4, T3 uptake, Free T3)

#### **EXPANDED CARIAC ASSESSMENT:**

- hs-CRP Homocysteine Fibrinogen
- Vitamin D (25 OH)
- Cortisol DHEA-s Insulin B12 & Folate.
- NMR instead of regular lipid panel [NMR LipoProfile® test is an advanced cardiovascular diagnostic test that uses nuclear magnetic resonance (NMR) spectroscopy]



FOR CHOLESTEROL SUPPORT see page 18



FOR BLOOD PRESSURE SUPPORT see page 19



FOR DETOXIFICATION SUPPORT see page 20-21



FOR WEIGHT MANAGEMENT SUPPORT see page 42-43



FOR ADRENAL SUPPORT see page 6-7







## SLEEP PROTOCOL

#### WHY IS SLEEP SO IMPORTANT?

#### OTHER SYSTEMS TO CONSIDER:

**METABOLISM** 



ESTROGEN METABOLISM

BRAIN









Our circadian biological clock is controlled by a group of hypothalamic cells called the Suprachiasmatic Nucleus, which responds to light and dark signals received from the optic nerve of the eye. The SCN relays the signal to other parts of our brain, such as those that control hormones and body temperature. When SCN responds to natural light, (morning), the signal is: produce cortisol. It also signals that melatonin release should be delayed. At night, melatonin levels should rise and stay elevated, as signaled by the SCN.

#### THE HPA AXIS AND SLEEP:

Sleep initiation occurs concurrently with low HPA axis activation.

The paraventricular nucleus (PVN) in the hypothalamus acts on the anterior pituitary's CRH receptors, causing ACTH release. ACTH acts on the adrenal cortex. The adrenal cortex produces and releases cortisol, and cortisol displays feedback inhibition on the PVN.

#### **SLEEP DISRUPTORS**









## NATURAL REMEDIES THAT WORK







**MELATONIN**: Melatonin works through the MT1 receptor on the Suprachiasmatic Nuclei (SCN) and induce a muscle relaxation response. Melatonin seems to work best when administered 2-4 hours prior to bedtime.\* Mol Cell Biol. 2003 Feb; 23(3): 1054-1060.

**THEANINE**: crosses the blood brain barrier and binds with specific receptors to aid in the balance of dopamine, GABA and glycine.\* AANA J. 2009 Dec;77(6):445-9.

**SENSORIL**: as a result of their mimicking action, glycowithanolides decrease serum cortisol (a stress hormone), pulse rate and blood pressure – and support a healthy circadian rhythm.\*

**GABA**: exerts its main action by binding to GABA-specific receptors on either or both the presynaptic and postsynaptic neurons and resulting in an outflow of potassium cations, making the cell increasing difficult to stimulate. This is the inhibitory effect of the is neurotransmitter.\*

**BLUENESSE (LEMON BALM)**: appears to have GABAergic activity secondary to inhibiting the enzyme GABA transaminase.\* Award R, et al. Phytother Res. 2009 Aug;23:8:1075-81.

**MAGNESIUM**: natural N-methyl-D-aspartic acid (NMDA) antagonist and GABA agonist, Mg2+, seems to play a key role in the regulation of sleep.\* J Res Med Sci. 2012 Dec; 17(12): 1161-1169.

**5-MTHF/B12**: methyl donor that promotes serotonin synthesis. Serotonin is the precursor to the melatonin produced in the pineal gland.\* Sleep Med. 2008 Jan; 9(1): 27-32.

Liposomal Melatonin Spray Tri Mag 5-MTHF/B12 MC 2000

Liposomal Melatonin Spray: 2-4 sprays 1-2 hours before bed Tri Mag: 3-6 capsules in the evening or before bed 5-MTHF/B12 MC 2000: 1-2 capsules daily (preferable in the morning)

#### **SECONDARY SUPPORT**

5-HTP L-Theanine Relora® with Bacopa

**5-HTP:** 3-4 capsules 2 hours before bed **L-Theanine:** 2-3 capsules 2 hours before bed **Relora® with Bacopa:** 1-2 capsules in the evening

## CONSIDER THESE TESTS TO PROVIDE THE BEST SUPPORT FOR SLEEP HEALTH:



- Adrenal stress index
- Comprehensive Melatonin Profile
- Neurotransmitter Assessment

Barky Taylor, N.D.



"Eat less food after 7 pm. Mid morning and mid afternoon snacking is important so during sleep the nervous system can rest and there is less digestion."







## THYROID PROTOCOL

The thyroid is a complex, delicately balanced gland. Comprehensive assessment is vital to ensure you are making the appropriate recommendations. Expanded blood profiles are required to accurately assess and address the thyroid gland. Based on those results, you can recommend the best integrative approach.



TYROSINE IODINE B VITAMINS MAGNESIUM

# SECONDARY CONSIDERATIONS

1 CONVERSION

#### Possible needs

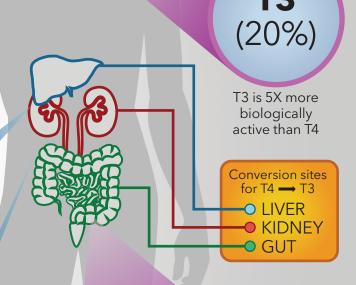
- SELENIUM
- LIVER SUPPORT
- PROBIOTIC BALANCE

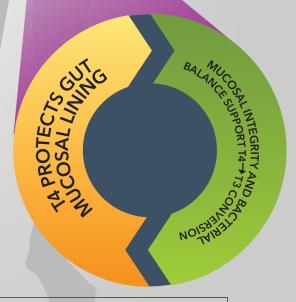
## (2) CORTISOL

Excess Cortisol  $\rightarrow$  T4

Reverse T3

(inactive form)





#### SECONDARY SUPPORT

## IF IMMUNE SYSTEM IS INVOLVED

Metabolic Multi or Daily Best™ Ultra Thyroid Basics™ Mega Probiotic-ND™

Immuno Benefits™ Multiphase Detox™ Tri-Mag 300 Vitamin D 10,000 IU
Nondairy Probiotic 50
G.I. Benefits
Arabinogalactan
Powder

Metabolic Multi: 3 capsules twice daily

Daily Best™ Ultra: 1 capsule daily

Thyroid Basics™: 2 capsules with food, twice daily until results occur. Then take 2 capsules daily with food

Mega Probiotic-ND™: 3 capsules daily

Immuno Benefits™: 1-2 capsules daily (to support any possible immune involvement)

Multiphase Detox™: 6 capsules daily Tri-Mag 300: 3 capsules daily Vitamin D 10,000 IU: 1/2 - 1 ml daily Nondairy Probiotic 50: 1-2 caps during times of increased immune stress

**G.I. Benefits:** 1-2 scoops per day **Arabinogalactan Powder :** 1-2 scoops daily (for added immune support\*)

#### IF EXCESS CORTISOL:

Relora® with Bacopa: 1-2

1-2 capsules

in the evening

## IF LIVER INVOLVEMENT IS IMPAIRING CONVERSION:

Multiphase Detox™: 6 capsules daily

## - Sandha Olic, N.H.D.



"Under diagnosis and under treatment are both problems. Also, supporting adrenals is key because a lot of these patients have adrenal fatigue or dysregulation and will continue to feel bad if not worse on thyroid replacement. Supporting digestion is also another leg of the stool because many will be low in hcl and enzyme production leading to low energy and decreased neurotransmitter production as a result of not being able to break down those proteins and poor absorption.

## CONSIDER THESE TESTS TO PROVIDE THE BEST SUPPORT FOR THYROID HEALTH:



sTSH Free T4 Free T3Reverse T3

Anti-TPO

Anti-TG







## URINARY TRACT PROTOCOL

Supporting the urinary tract is vital for overall health but specifically for detoxification capacity. There is also a need when supporting the UT to pay attention to the other detoxification organs as well as other important markers such as metabolism and insulin utilization. Increased circulating sugar levels can facilitate the proliferation of potentially pathogenic bacteria.



**CRANBERRY:** In petri dish experimentation, researchers have found that cranberry metabolites in juice prevented E. coli from sticking to other bacteria, thereby limiting its ability to multiply and grow. (Zhang, 2011)

URETER

**D-MANNOSE:** Fimbria, tiny, finger-like projections, cover the cell walls of E.coli, which allows adhesion to the inner bladder walls and provides the opportunity to proliferate upward toward the ureter and kidneys.

These projections are comprised of an amino acid-sugar complex, referred to as a glycoprotein, called lectin. This substance accounts for the stickiness of these projections.

This works in our favor, because this lectin substance will bind itself to mannose (and not the internal wall of the urinary organs) and, in theory, be flushed out of the system.

Source: Glycoconj J. 2005 Nov;22(7-9):383-94.



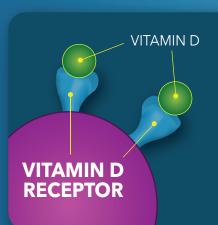
**OLIVE LEAF:** supports a healthy balance of bacteria, specifically E.coli\*

**FOS:** a prebiotic that supports the growth of bifidobacteria in the colon and reduces the number of E. coli - feeds healthy bacteria\*



**FIBERSOL:** attracts water and supports the body's ability to eliminate (flush) toxins effectively and create a balanced bacterial environment\*

PROBIOTICS: support a healthy balance of bacteria\*



## IMMUNE SUPPORT

Vitamin D promotes production of Cathelicidin, which provides immune support to the urinary tract.\* Specifically, it supports elimination of E. Coli bacteria.\*

Metabolic Multi or Daily Best™ Ultra D-Mannose Complex Nondairy Probiotic **ACUTE NEEDS** 

Olivir™ 15 Berberine Force

Metabolic Multi: 3 capsules twice daily

Daily Best™ Ultra: 1 capsule daily

D-Mannose Complex:
Ongoing: 1 scoop daily

During times of increased UT stress: 2 scoops daily

Nondairy probiotic 50: 1 capsule daily

Olivir™ 15: 2-4 capsules daily Berberine Force: 3 capsules daily until optimal metabolism is achieved and then transition to 1-2 capsules daily

CONSIDER THIS TEST TO PROVIDE THE BEST SUPPORT FOR URINARY TRACT HEALTH:



Urinalysis

POSSIBLE TESTING ASSOCIATED WITH CANDIDA IS BLOOD TEST

- (IgG, IgA, and IgM Candida Anti-bodies)
- Stool Testing
- Urine Organix Dysbiosis Test

Ranneck Bhogal D.C., D.A.B.C. J.



"Hydration is extremely important, so water intake needs to be sufficient. Additionally, I recommend patients drink Hibiscus Tea liberally to support Utrinary Tract health."







## WEIGHT PROTOCOL



WELLTRIM® IG (IGOB131®) AFRICAN MANGO **EXTRACT:** Supports body weight and waist circumference as well as plasma total cholesterol levels, LDL cholesterol, metabolic function, adiponectin and, perhaps most importantly, C-reactive protein.\* Healthy CRP levels can ultimately support healthy leptin levels.\*



WHITE KIDNEY BEAN (BEANBLOCK): Supports appetite and digestive functions in three ways:

- **Enzymatically:** Inhibiting activity U/mg: ≥1.100\*
- **Chemically:** ≥6% (HPLC % w/w) in α-amylase inhibitor protein complex\*
- Biologically: Haemagglutinating activity\* Source: Spadafranca, A., et al., Br. J. Nutr. 109(10): p. 1789-95 (2013)



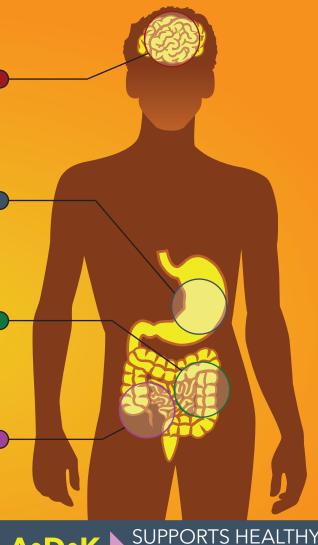
**GREEN COFFEE BEAN:** Supports healthy levels of glucose-6-phosphate, which is responsible for converting glycogen into glucose.\*

Source: J Agric Food Chem. 2010 Apr 14;58(7):4141-4



**GREEN TEA PHYTOSOME:** Supports genetic signaling associated with Adiponectin and healthy fat accumulation by supporting lipolysis within adipocytes.\*

Source: Di Pierro F., et al., Alternative Medicine Review. Volume 14, Number 2 (2009)



## CORTISOL/ DHEA RATIO

#### **HEALTHY RATIO=**

• Healthy levels of abdominal adiposity

 Healthy levels of T4 to T3 conversion (T3 is one of the body's most powerful metabolic hormones, 5x more potent than its precursor T4)

\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.



## **OTHER SYSTEMS:**

THYROID



ADRENAL





A•D•K Mango-Plex Right Whey™ DIM® Plex

All weight management programs should include a multiviatmin (Metabolic Multi or Daily Best™ Ultra)

A•D•K: 1 capsule daily

Mango-Plex: 1 capsule twice daily before a meal

Right Whey™: 1 scoop daily

DIM® Plex: 2-4 capsules daily

(if additional DIM is necessary,

consider DIM Pro or DIM Pro 150)

#### **SECONDARY SUPPORT**

Carb-Down™ Garcinia Cambogia w/ Chromemate® Thermo-Set®

Carb-Down™: 1 capsule with water, before any meal containing carbohydrates from starch

Garcinia Cambogia w/ Chromemate®:

1-2 capsules daily and reassess to determine ongoing need

**Thermo-Set®:** 2-3 capsules daily (use this product if there is adrenal involvement)

Gluco Benefits™ Relora® with Bacopa or Adrenal Benefits™

## POSSIBLY CONSIDER A DETOXIFICATION PROTOCOL

Gluco Benefits™: 3 capsules daily

Relora® with Bacopa or

Adrenal Benefits™ 2 capsules daily

## WEIGHT MANAGEMENT ENCOMPASSES NOT ONLY SUPPLEMENTS, BUT ALSO THE FOLLOWING:

- The right foods for the patient's metabolic type
- Identifying any potential food sensitivities
- Hormonal balance
- Movement
- Need for detoxification

## CONSIDER THESE TESTS TO PROVIDE THE BEST SUPPORT FOR WEIGHT HEALTH:



- Basic CBC CMP
- Lipid PanelThyroid Panel
- Adrenal Stress Index

## AnnAlisa Behling, MAD



"Counteract rising cortisol levels during times of elevated stress by decreasing coffee intake. Caffeine stimulates the production of cortisol and facilitates greater levels of belly fat."



