Spring INTO VITALITY

JUNE 17-19, 2016

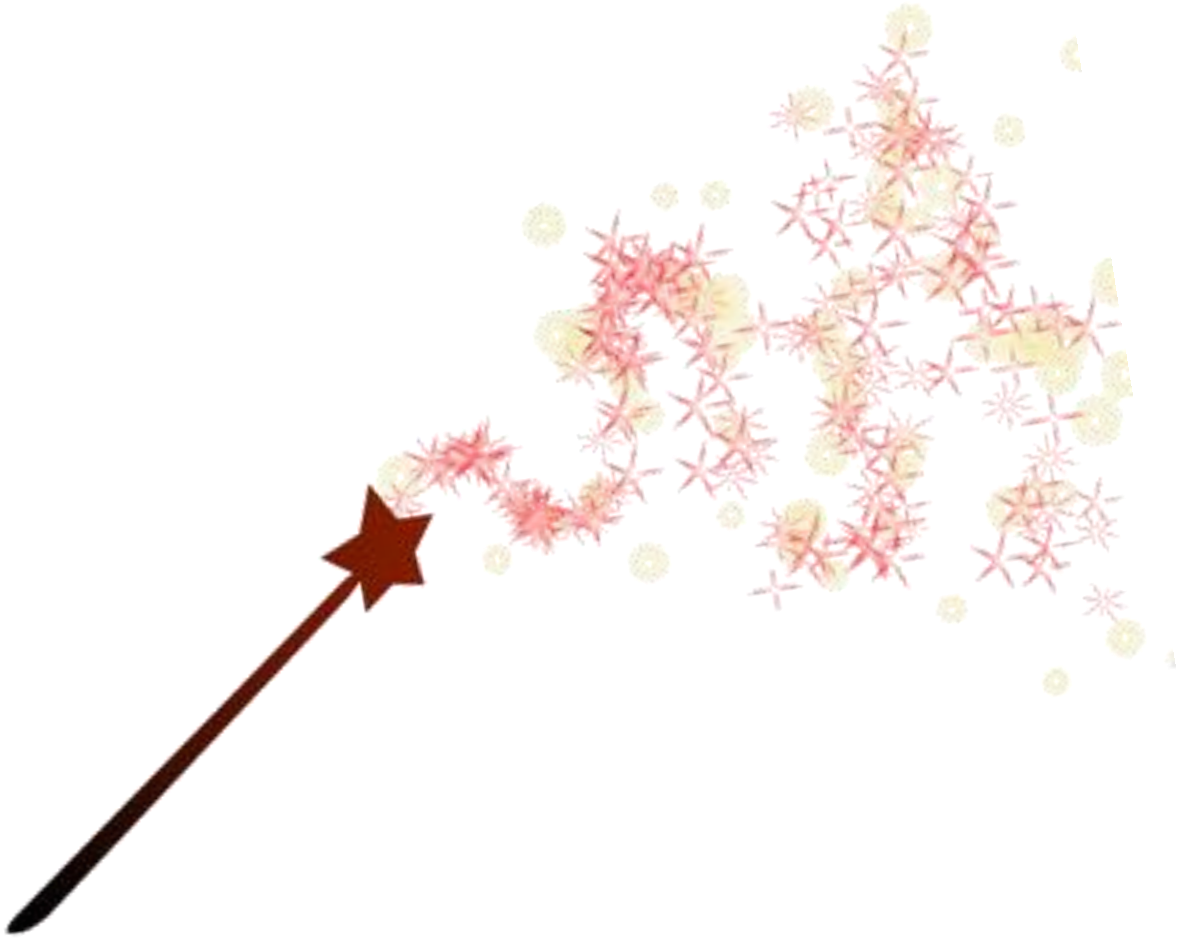
EMPOWER YOUR INNER HEALER

with Dr. Ritamarie Loscalzo

Day 2: Discover

Medical Disclaimer: The information in this presentation is not intended to replace a one-on-one relationship with a qualified health care professional and is not intended as medical advice. It is intended as a sharing of knowledge and information from the research and experience of Dr. Ritamarie Loscalzo, drritamarie.com, and the experts who have contributed. We encourage you to make your own health care decisions based upon your research and in partnership with a qualified health care professional. This presentation is provided for informational purposes only and no guarantees, promises, representations or warranties of any kind regarding specific or general benefits, have been or will be made by Dr. Ritamarie Loscalzo, her affiliates or their officers, principals, representatives, agents or employees. Dr. Ritamarie Loscalzo is not responsible for, and shall have no liability for any success or failure, acts and/or omissions, the appropriateness of the participant's decisions, or the use of or reliance on this information.

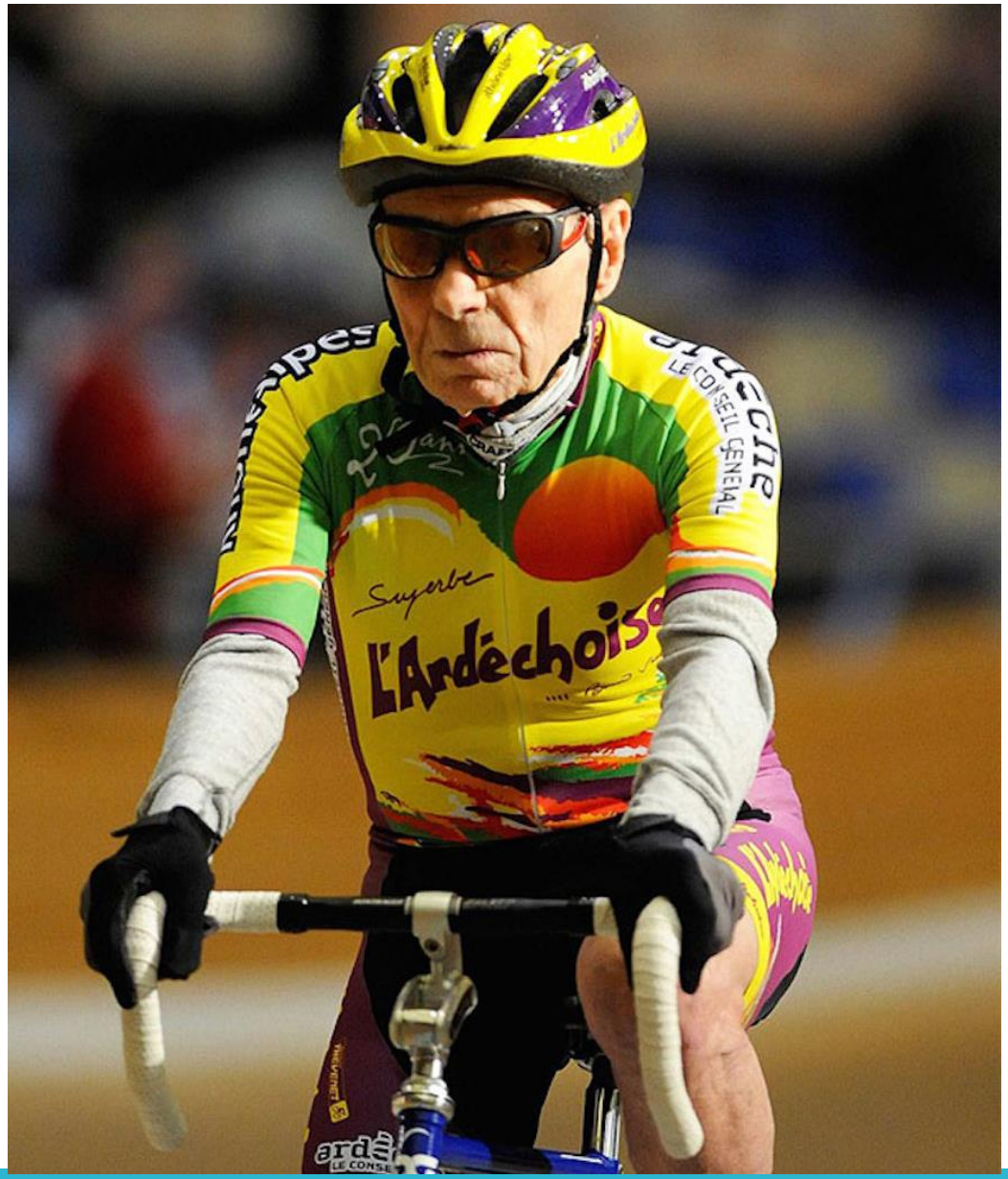
Your Magic Wand



Johanna Quaas, 87

Phyllis Sues, 91

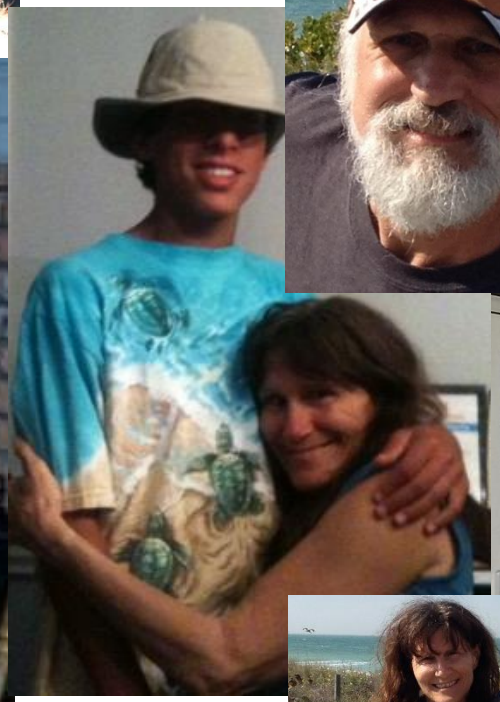
Robert Marchand, 103

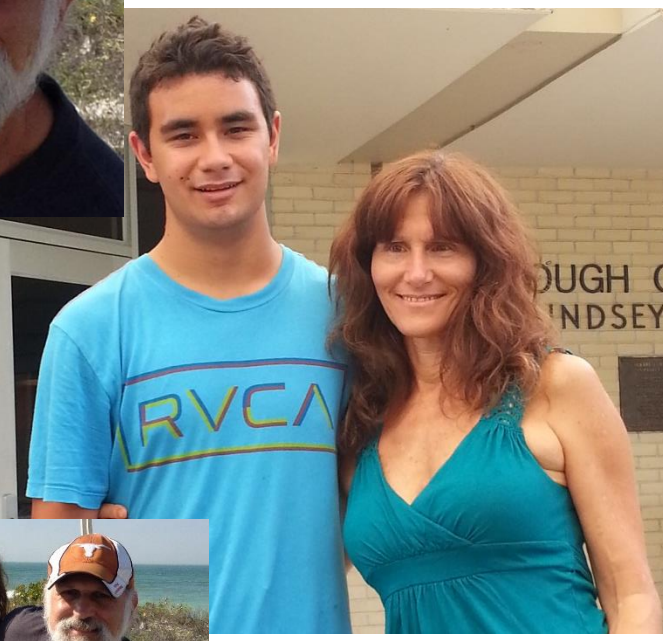


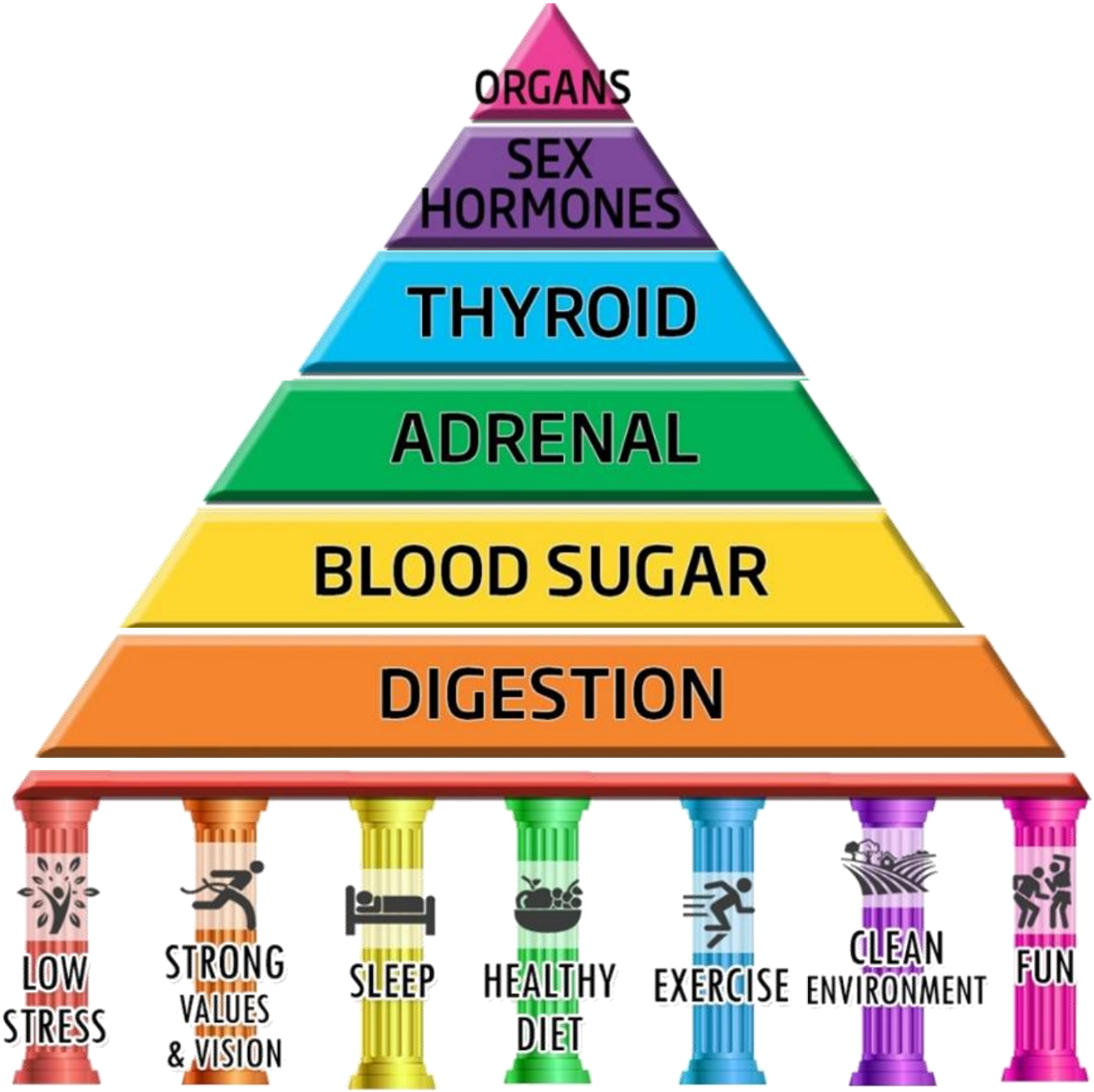
Stanislaw Kowalski, 106

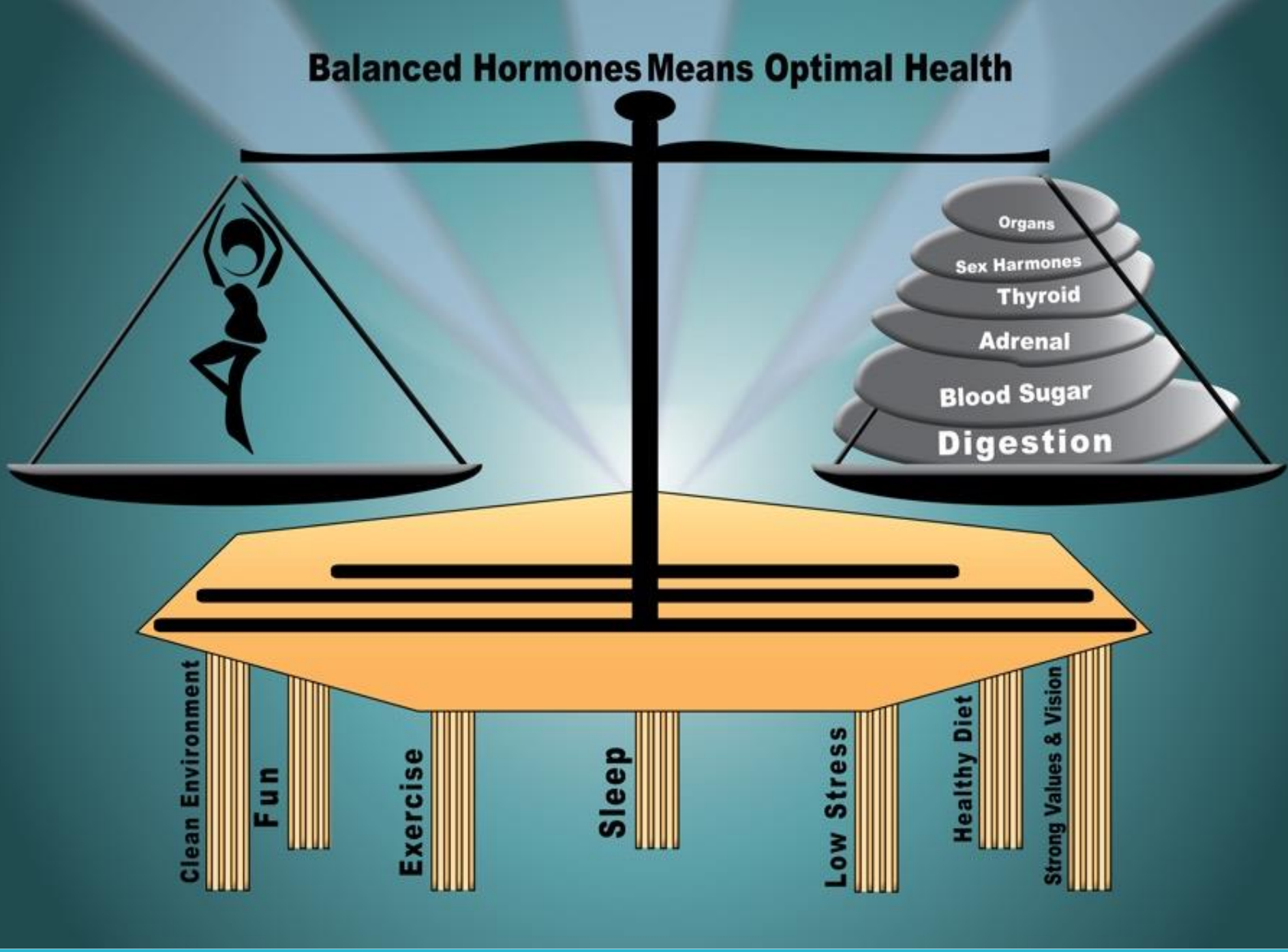
The world's oldest athlete

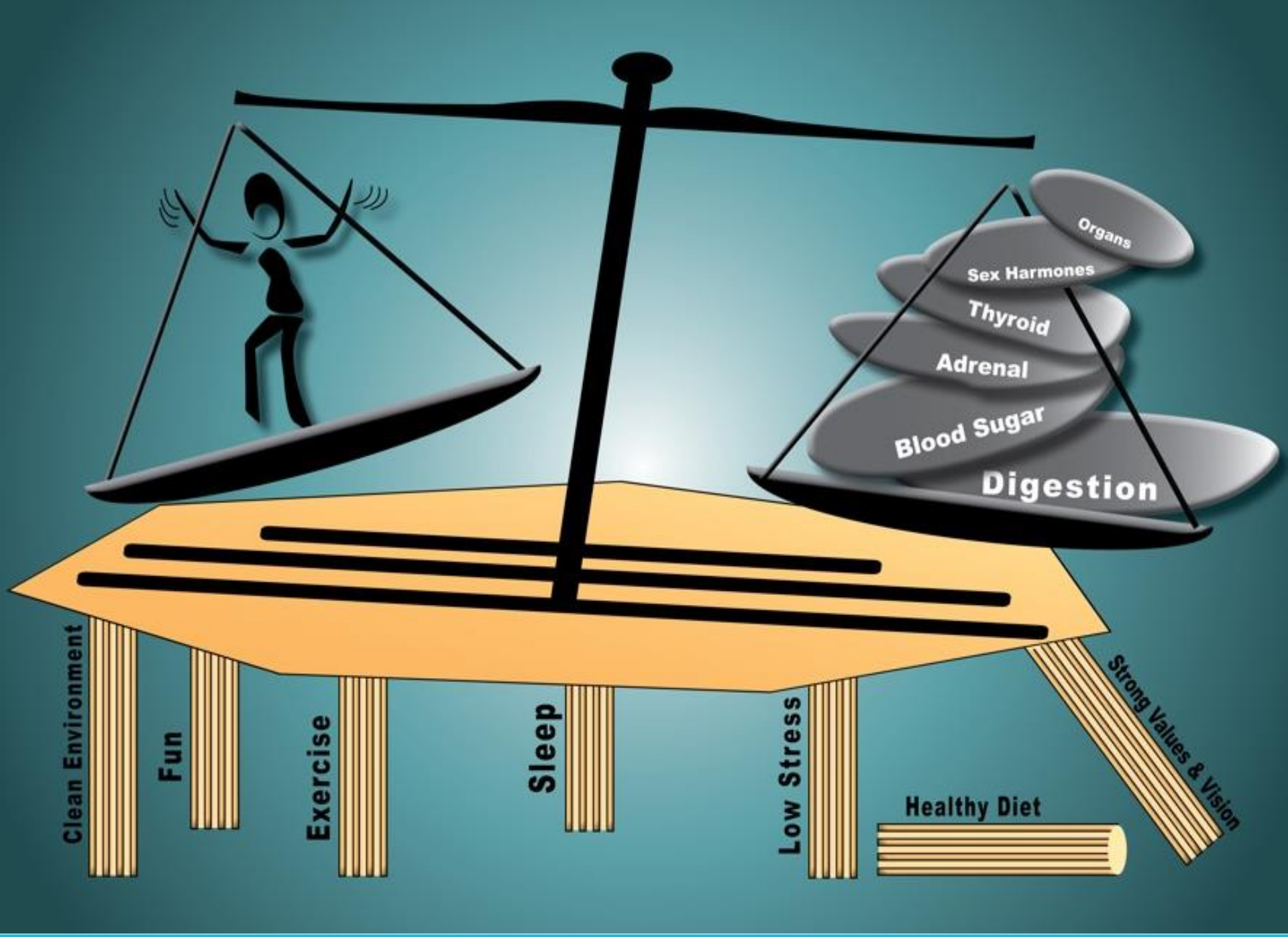
My Big Why





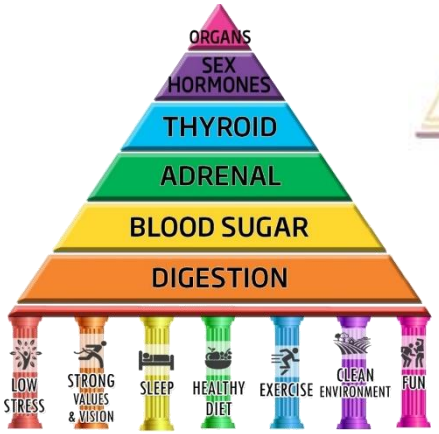






Identifying Your Obstacles

- Stress
- Attitude
- Sleep
- Nutrition
- Exercise
- Environment
- Fun & Relationships



INE INSTITUTE OF NUTRITIONAL ENDOCRINOLOGY

CHANGING LIVES WITH ROOT CAUSE HEALTH CARE

7 Pillars Scorecard Assessment

Pillar 1: Stress					
Use the descriptions to choose the appropriate score. Calculate your results as go.					
Stress Part 1		**0**	**1**	**2**	**3**
How often do you practice the power of appreciation and an "attitude of gratitude" throughout the day?	0 = 5 or more times per day 1 = 3-4 times per day 2 = 1-2 times per day 3 = Never, or just started	0	1	2	3
How often are you practicing a stress management method or technique (e.g., meditation, prayer, HeartMath "Quick Coherence", etc.)? *	0 = 5 or more times per day 1 = 3-4 times per day 2 = 1-2 times per day 3 = Never, or just started	0	1	2	3
How often are you feeling "stressed out" (i.e. above a 7) on a stress scale from 0 to 10?	0 = About once or twice a week, or less 1 = A few to several times a week 2 = A few to several times a day 3 = All the time! Every waking moment!	0	1	2	3
	Total for Each Column (number of checkmarks x value)				
	Subtotal Part 1 (Max 9)				

Stress Part 2	**YES**	**NO**
Do you feel clear about your goals in life?	0	3
Overall, do your daily actions align with your most important values and visions?	0	3
Are you happy most of the time?	0	3
Do you feel your life has meaning and purpose?	0	3
Do you like the work you do?	0	3
Would you describe your experience as a child in your family as happy and secure?	0	3
Did you feel safe growing up?	0	3
Total for Each Column (number of checkmarks x value)		
Subtotal Part 2 (Max 21)		
Subtotal Parts 1 – 2 (Max 30)		

Stress Part 3	**YES**	**NO**
Do you feel significantly less vital than you did a year ago?	3	0
Do you believe stress is presently reducing the quality of your life?	3	0
Have you experienced major losses in your life?	3	0
Do you spend the majority of your time and money to fulfill responsibilities and obligations?	3	0
Have you ever been involved in abusive relationships in your life?	3	0
Was alcoholism or substance abuse present in your childhood home?	3	0

7 Pillars Scorecard

Pillar	Max Score	Your Score	Priority: 1 = low (green) 2 = medium (blue) 3 = high (yellow) 4 = very high (red)
Pillar 1: Stress	1556		
Pillar 2: Attitude and Beliefs	66		
Pillar 3: Sleep	51		
Pillar 4: Nutrition Part 1 - Negative Habits	126		
Pillar 4: Nutrition Part 2 - Positive Habits	66		
Pillar 5: Fitness	21		
Pillar 6: Environment	249		
Pillar 7: Fun	48		

Your Health Tracker

Habits and Obstacles			
Client Name		Coach Name	
Habits and Obstacles	Positive Habits	Negative Habits	Challenges
Diet			
Movement			
Stress			
Sleep			
Schedule			
Environment			
Fun and Recreation			
Relationships			

Nutrient Scorecards

Your Nutrient Status

Nutrient Balance Assessment Scorecard

Name:				
Point Scale: **0 = No, Never/Rarely** or almost never **1 = Mild/Sometimes** experiences/effects **2 = Moderate/Frequent** experiences/effects **3 = Yes, Severe/Daily** experiences/effects				
Section 1: Essential Fatty Acids	**0**	**1**	**2**	**3**
Do you experience pain relief with aspirin?	0	1	2	3
Do you crave fatty or greasy foods?	0	1	2	3
Do you have a history of following a low or reduced-fat diet? *0 = never, 1 = years ago, 2 = within last year, 3 = within past 3 months*	0	1	2	3
Do you experience tension headaches at the base of your skull?	0	1	2	3
Do you get headaches when out in the hot sun?	0	1	2	3
Do you sunburn easily or suffer sun poisoning?	0	1	2	3
Do your muscles easily fatigue?	0	1	2	3
Do you have dry, flaky skin?	0	1	2	3
Do you ever experience "goose flesh/goose bumps"?	0	1	2	3
Do you have ridged, cracked, and/or peeling nails?	0	1	2	3
Do you have magnesium or vitamin B6 deficiencies that don't respond to supplements?	0			3
Do you have dandruff?	0	1	2	3
Do you have areas of inflamed soft tissue?	0	1	2	3
Do you have inflamed joints?	0	1	2	3
Do you have cracks in your heels?	0	1	2	3
Do you have red cuticles?	0	1	2	3
Do you have acne?	0	1	2	3
Do you have breast cysts?	0	1	2	3
Do you suffer from diarrhea?	0	1	2	3
Do you have dry hair?	0	1	2	3
Do you have Eczema?	0	1	2	3
Do you have excess ear wax?	0	1	2	3
Do you have gall stones?	0	1	2	3
Have you experienced hair loss?	0	1	2	3
Do you suffer from any immune impairment?	0	1	2	3

Your Nutrient Scorecard

Percent score is calculated by dividing your score by the max score and multiplying by 100. Look up the % score in the chart below to determine priority.

Nutrient	Max Score	Your Score	Your % Score	Priority: 1=low (green) 2=medium (blue) 3=high (yellow) 4=very high (red)
Essential Fatty Acids	99			
Amino Acids	24			
Vitamin A	30			
B Vitamins	45			

Score Interpretation:

- **0-10%**: Overall good balance. Sound nutrition and healthy habits will maintain good balance.
- **11-25%**: In need of a tune up to restore balance before serious illness sets in. Diet and lifestyle improvements should shift to normal.
- **26-50%**: Your nutrient balance is compromised and likely to significantly affect your state of health, well-being, and energy level.
- **51-100%**: Your nutrient balance is severely compromised and requires immediate attention. Take steps now to restore balance to your health, well-being, and energy level.

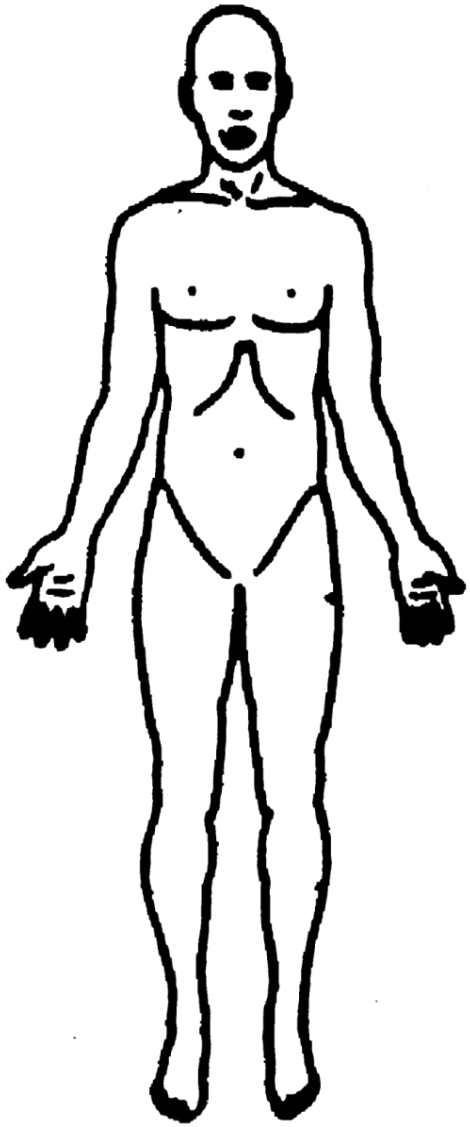
Nutrient Balance: General Assessment					
Date of Assessment					
Essential Fatty Acid Needs					
Amino Acid Needs					
Nutrient Balance: Vitamin Assessment					
Date of Assessment					
Vitamin A					
B Vitamins					
Vitamin B1 - Thiamin					
Vitamin B2 - Riboflavin					
Vitamin B3 - Niacin					
Vitamin B5 - Pantothenic acid					
Vitamin B6 - Pyridoxine					
Vitamin B7 - Biotin					
Vitamin B9 - Folic Acid					
Vitamin B12 - Cobalamin					
Vitamin C					
Vitamin D					
Vitamin E					
Vitamin K					
Nutrient Balance: Mineral Assessment					
Date of Assessment					
Calcium					
Chromium					
Copper					
Iodine					
Iron					
Magnesium					
Manganese					
Phosphorus					
Potassium					
Zinc					

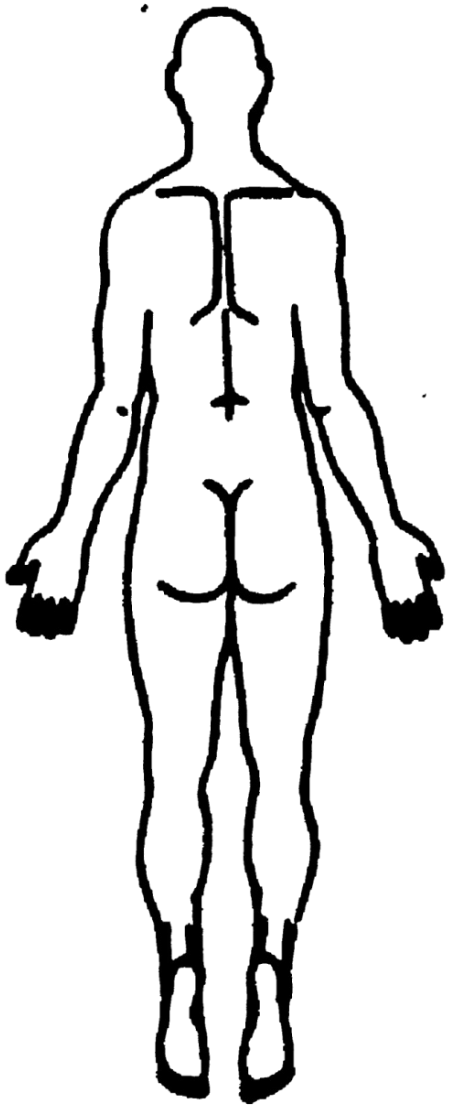
Body System and Organ Assessment					
Date of Assessment: mm/dd/yy					
Digestion - Low Stomach Acid					
Digestion - Excess Stomach Acid					
Digestion - Liver and Gallbladder					
Digestion - Small Intestine and Pancreas					
Digestion - Large Intestine					
Cardiovascular System					
Kidney and Bladder					
Immune System					
Hormone and Gland Assessment					
Date of Assessment					
Adrenal – General					
Adrenal Hypofunction					
Adrenal Hyperfunction (Cortisol high)					
Blood Sugar Dysregulation					
Blood Sugar Handling - Insulin Resistance					
Blood Sugar Handling - Glucose Fluctuation					
Thyroid Low (Hypo)					
Thyroid Excess (Hyper)					
Pituitary					
Male - Prostate					
Male - Hormones					
Female - Hormones					
Female - Menopausal					
Brain and Neurotransmitter Assessment					
Date of Assessment					
General Brain Function					
Serotonin					
Dopamine					
GABA					

Home Assessment

- ✓ Symptoms and Signs
- ✓ Nutrient Assessments
  - ➢ Minerals
  - ➢ Vitamin C
- ✓ pH Balance
- ✓ Nitric Oxide
- ✓ Blood Sugar
- ✓ Ketones
- ✓ Oxidata
- ✓ Urinalysis

Body Scan





Mineral Test Kit

The test kits allow you to test for the following minerals:

1. Potassium
2. Zinc
3. Magnesium
4. Copper
5. Chromium
6. Manganese
7. Molybdenum
8. Selenium

http://www.drritamarie.com/go/EmersonEcologics

Use code **fresh1** to access

Interpretation of Mineral Tests

	Taste Test Score	Clinical implication
1	Sweet	Definitely need the mineral
2	Pleasant	Need the mineral
3	No Taste	Need the mineral
4	Hmmmm…taste something	Sufficient
5	So-So, there is some taste	Do not need mineral
6	Don't like	Do not need mineral
7	Gross taste	Do not need mineral

- Write down the appropriate response on the score card
- Repeat this process for each of the remaining minerals

Vitamin C Testing

✓Vitamin C Urine Test Strips

- ➢Normal is greater than 20 mg/dL
- ➢Ideal is greater than 40 mg/dL
- ➢"A consistent urine Vitamin C of 20 mg/dL or lower may be trying to tell you something."

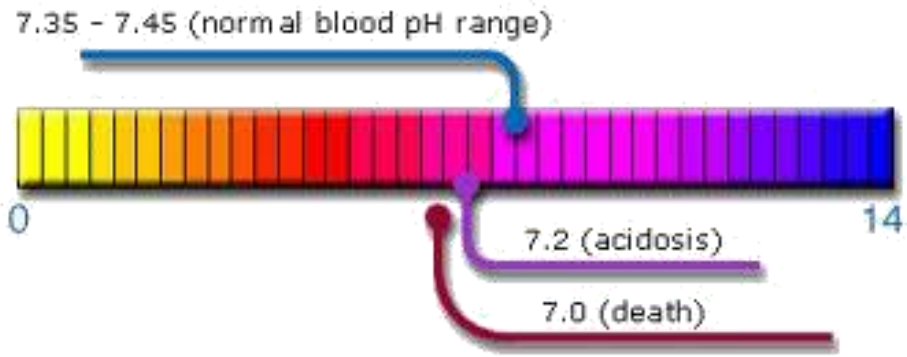
James A. Jackson, MT, Ph.D., Journal of Orthomolecular Medicine, Vol. 20,No. 4, 2005

✓Vitamin C Calibration

- ➢Determine Bowel Tolerance Dose
- ➢Take about 75% of dose that results in loose stools

Importance of pH Balance

- ✓Optimum immune function
- ✓Strong bones and teeth
- ✓Efficient digestion
- ✓Joint health
- ✓Decreased pain and inflammation
- ✓Protection from disease
- ✓Increased energy



Measuring Your pH

pHydrion paper – range 5.5 to 8

- ✓ **Saliva: 6.8 – 7.2**
  - ➢ First morning
  - ➢ During day
  - ➢ Acid challenge
- ✓ **Urine: 6.5 – 6.8**
  - ➢ First morning
  - ➢ Second morning
  - ➢ Later in day

http://www.drritamarie.com/go/pHpaper

pH Tracking

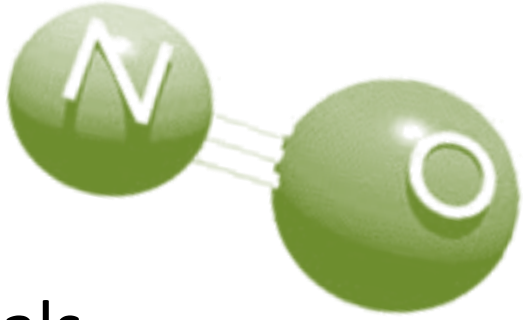
Date	Morning Saliva pH	1st AM Urine pH	2nd AM Urine pH	Afternoon Saliva pH (2 hours after food)	Afternoon Urine pH (before dinner)

Saliva: 6.8 to 7.2

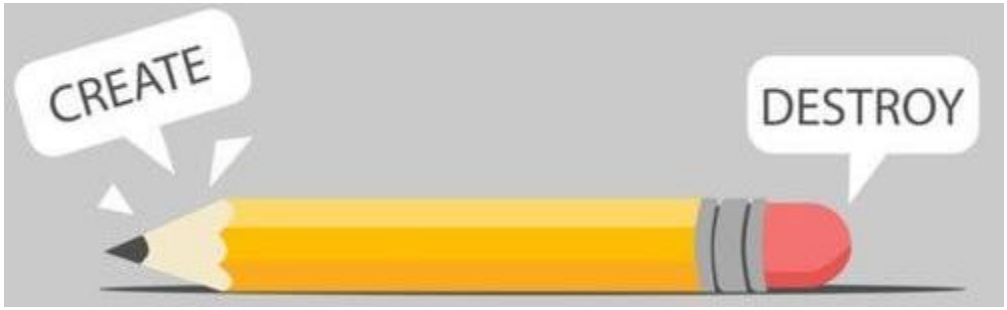
Urine: 6.4 to 6.8

Nitric Oxide Testing

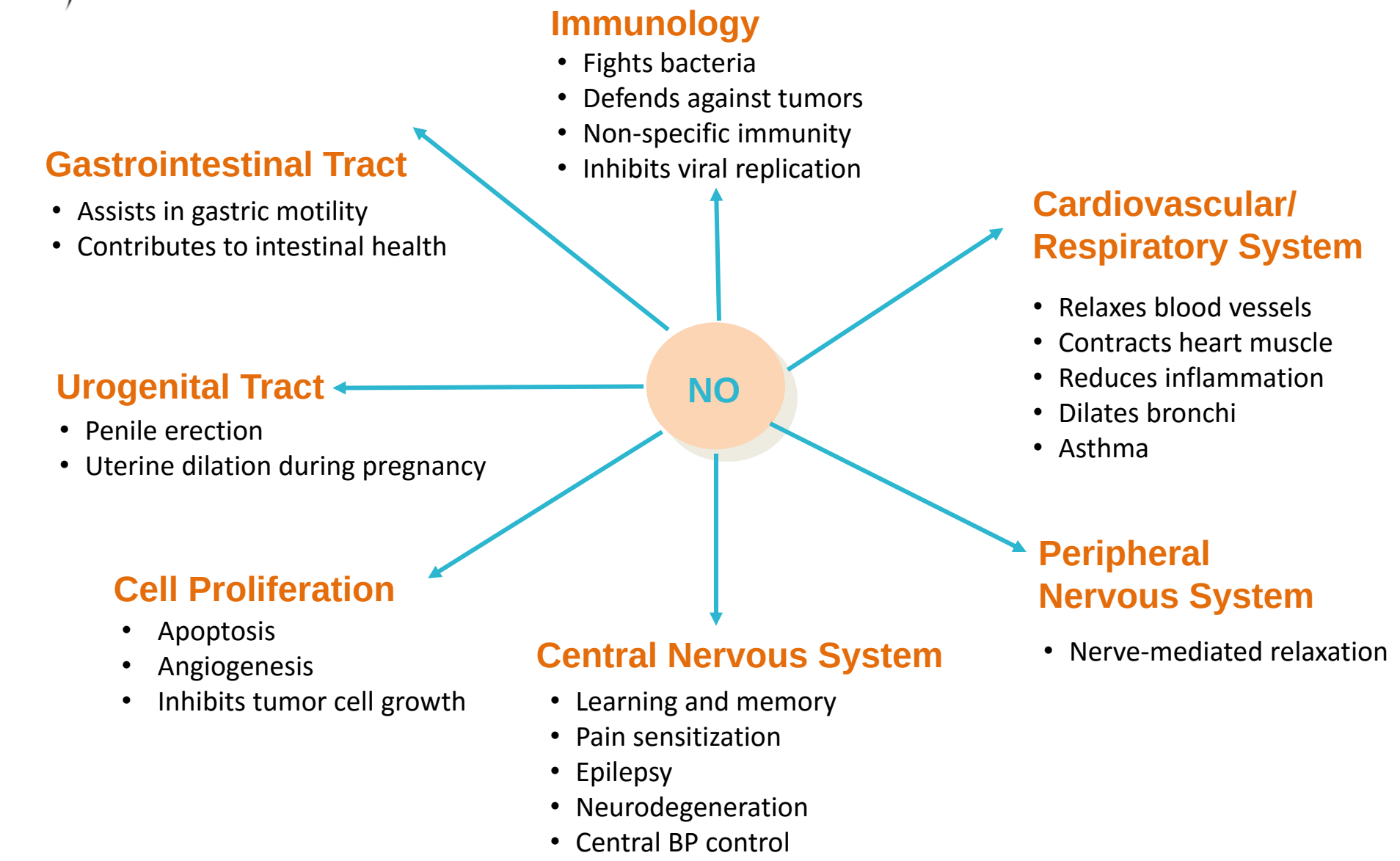
Nitric Oxide in Action



- ✓ Gas with chemical formula NO
- ✓ Important signaling molecule in mammals
- ✓ A toxic air pollutant produced by automobile engines and power plants
- ✓ Not nitrous oxide (n_2o), a general anesthetic
- ✓ It reacts with the oxygen to form nitrogen dioxide, a poisonous air pollutant
- ✓ A free radical



Nitric Oxide: Biological Functions



Immunology

- Fights bacteria
- Defends against tumors
- Non-specific immunity
- Inhibits viral replication

Gastrointestinal Tract

- Assists in gastric motility
- Contributes to intestinal health

Cardiovascular/ Respiratory System

- Relaxes blood vessels
- Contracts heart muscle
- Reduces inflammation
- Dilates bronchi
- Asthma

Urogenital Tract

- Penile erection
- Uterine dilation during pregnancy

Peripheral Nervous System

- Nerve-mediated relaxation

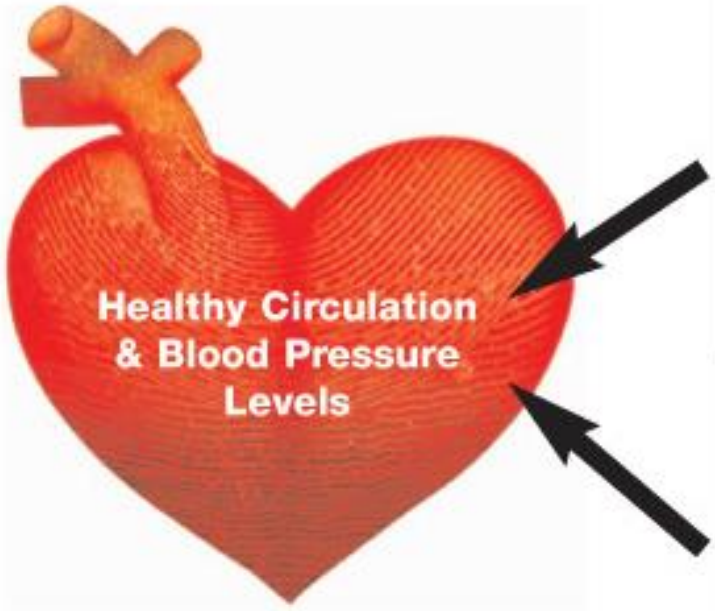
Cell Proliferation

- Apoptosis
- Angiogenesis
- Inhibits tumor cell growth

Central Nervous System

- Learning and memory
- Pain sensitization
- Epilepsy
- Neurodegeneration
- Central BP control

Two Pathways For NO Production



Pathway	Increased with	Affected by age?
Intake from salivary glands 	Healthy diet having NO potential 	No
Produced by endothelium 	Regular exercise 	Yes Endothelial production declines to 50% of what one needs by age 40. Even exercise cannot restore it all.

Nitric Oxide in Vegetables

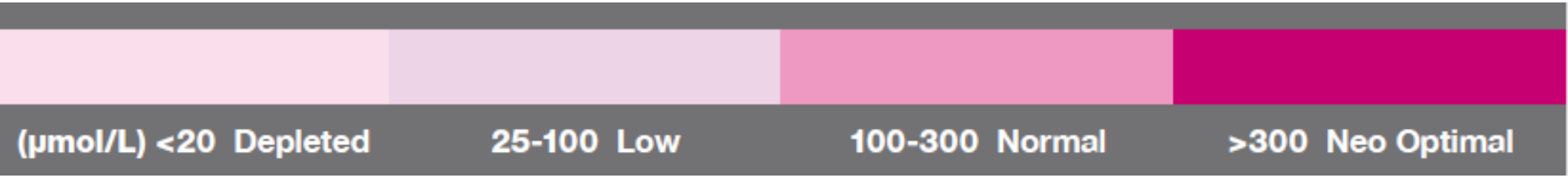
Kale	6825
Swiss Chard	2055
Arugula	1452
Spinach	1123
Chicory	938
Wild Radish	814
Bok Choy	775
Collard Greens	697
Beets	632
Chinese Cabbage	499
Lettuce	388
Cabbage	312
Mustard greens	226
Cauliflower, Raw	167
Parsley	150
Kohlrabi	136
Carrot	127
Broccoli	122

Nitric Oxide Testing

Step 1: Wash hands

Step 2: Place saliva on test strip

Step 3: Compare test strip to color indicator

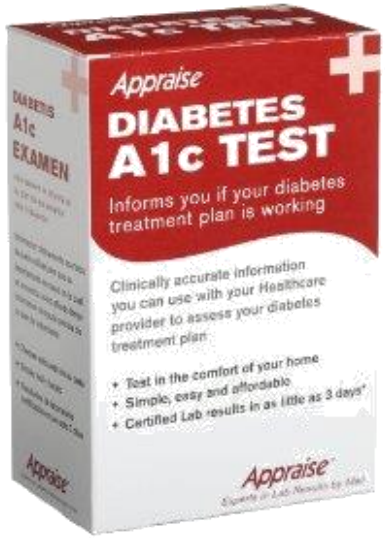


The deeper the red on the test strip, the more Nitric Oxide you have in your body

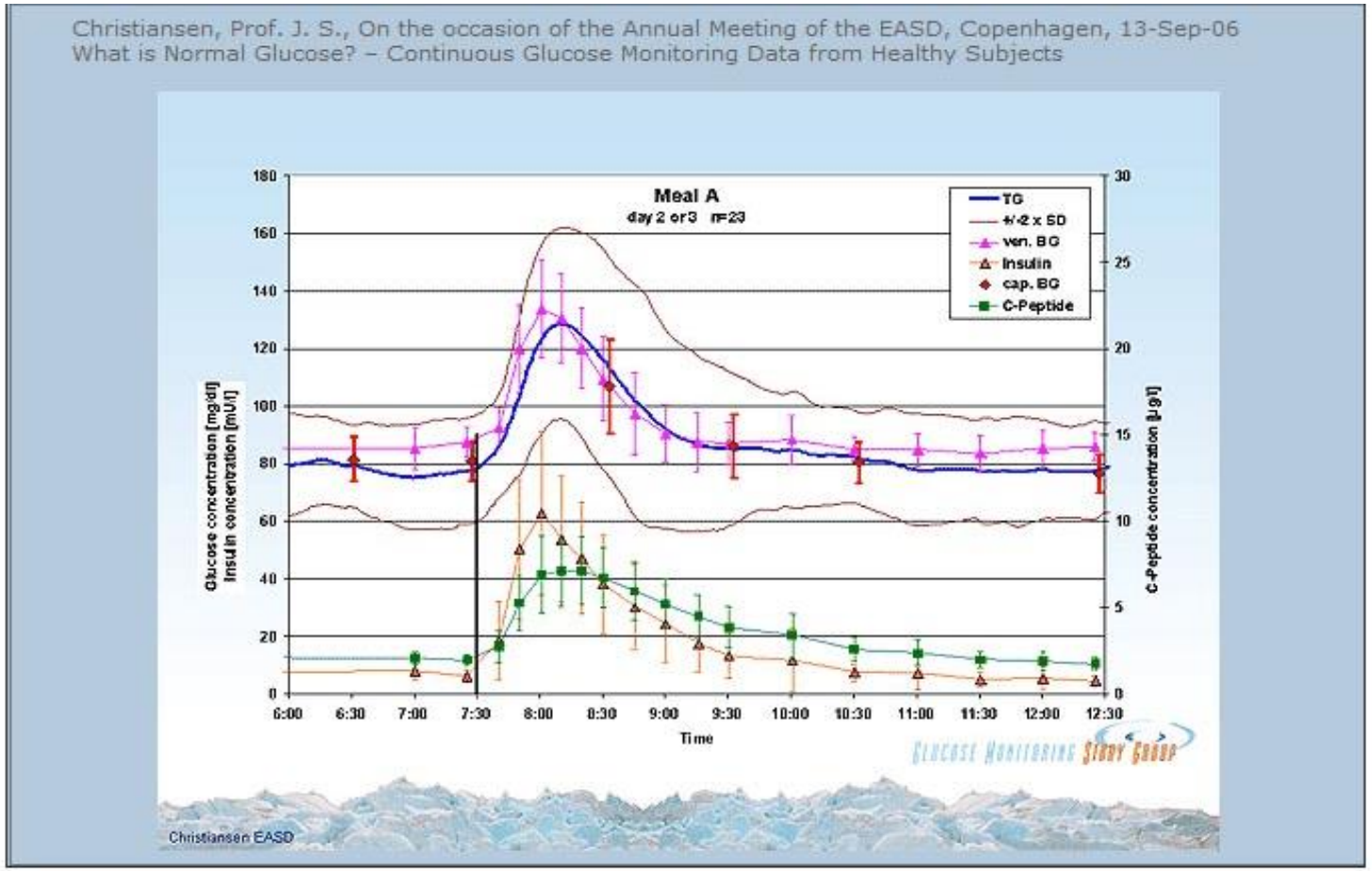
http://www.neogenis.com

Blood Sugar Measurement

- ✓ **TrueResults:** my desktop model
  http://www.drritamarie.com/go/TrueResultStarterKit
- ✓ **True2Go:** portable
  http://www.drritamarie.com/go/True2GoPortableKit
- ✓ **TrueTest Test Strips:**
  use for both glucose meters
  http://www.drritamarie.com/go/TRUEtestTestStrips100
- ✓ **Hemoglobin A1C:**
  http://www.drritamarie.com/go/HemoglobinA1C



What is Normal Blood Sugar?



What is a Normal Blood Sugar?

Normal blood sugars after a high carbohydrate breakfast eaten at 7:30 AM. The blue line is the average for the group. The brown lines show the range within which most readings fell (2 standard deviations). Bottom lines show Insulin and C-peptide levels at the same time.Graph is a screen shot from Dr. Christiansen's presentation cited below.

What is Normal Glucose? Continuous Glucose Monitoring Data from Healthy Subjects.
Professor J.S. Christiansen, presented at the Annual Meeting of the EASD.

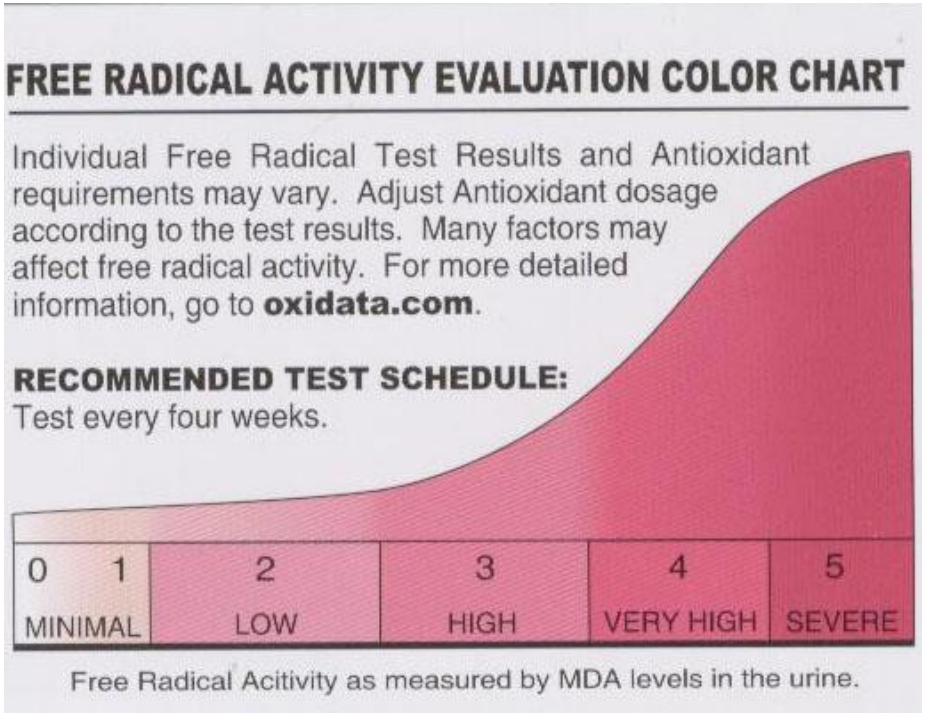
Ketones

- ✓Urine test
- ✓Monitors quantity of ketones
- ✓Ketogenic diets used for a variety of autoimmune and neurologic conditions and weight loss

Purchase on Amazon.com

Free Radical Testing at Home

- ✓ **Measures amount of free radicals in minutes**
- ✓ **Free radicals** have been implicated in countless disease processes
- ✓ Any molecule can become a free radical by either losing or gaining an electron



Free Radical Acitivity as measured by MDA levels in the urine.

http://www.drritamarie.com/go/OxidataTest

Urinalysis at Home

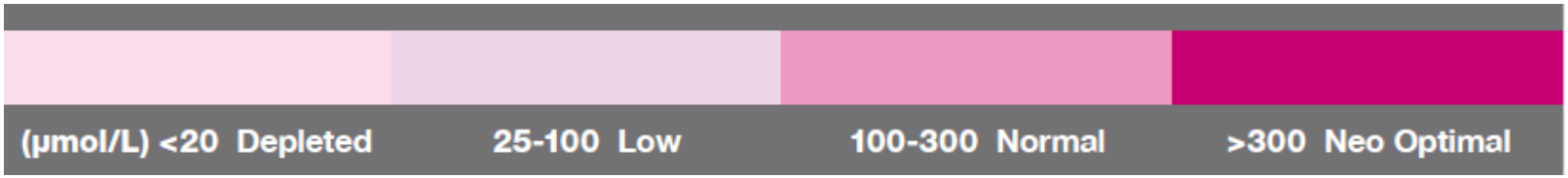
- ✓Glucose
- ✓Ketones
- ✓Bilirubin
- ✓Protein
- ✓Nitrite
- ✓pH
- ✓Blood
- ✓Specific gravity
- ✓Leukocytes
- ✓Urobilinogen

http://www.drritamarie.com/go/Urinalysis10

Page 6 of Nutritional Evaluation Document

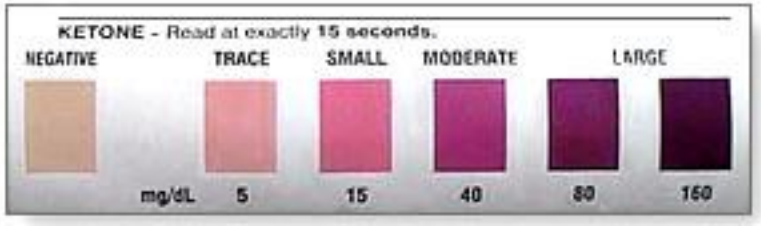
Date and Time									
Nutrients									
Potassium									
Zinc									
Magnesium									
Copper									
Chromium									
Manganese									
Molybdenum									
Selenium									
Vitamin C									
Chemistry									
pH - Saliva									
pH - Urine									
Nitric Oxide									
Blood Sugar									
Ketones									
Oxidata									
Urinalysis									
Glucose									
Ketones									
Bilirubin									
Protein									
Nitrite									
pH									
Blood									
Specific gravity									
Leukocytes									
Urobilinogen									

Nitric Oxide

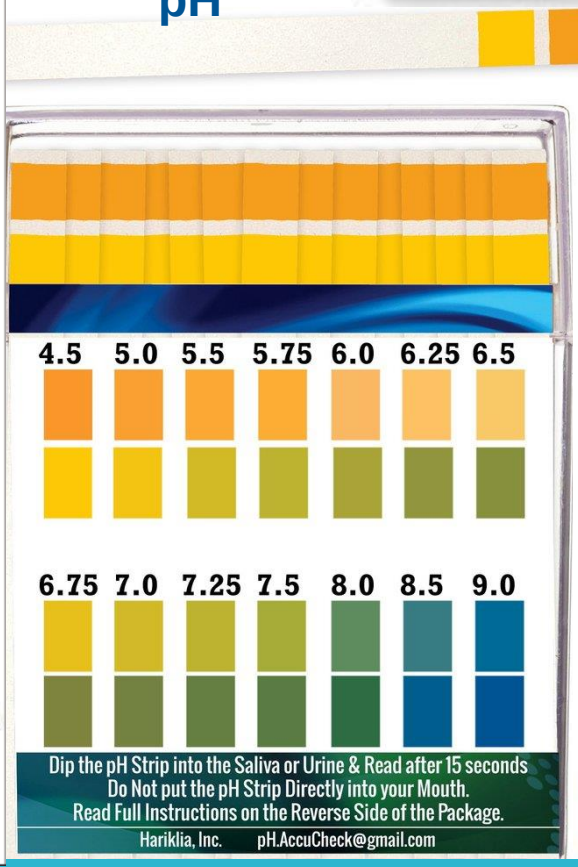


Urinalysis

Ketones



pH



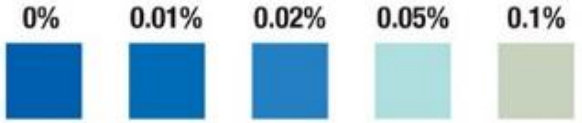
Vitamin C

Ascorbic Acid Test Strip

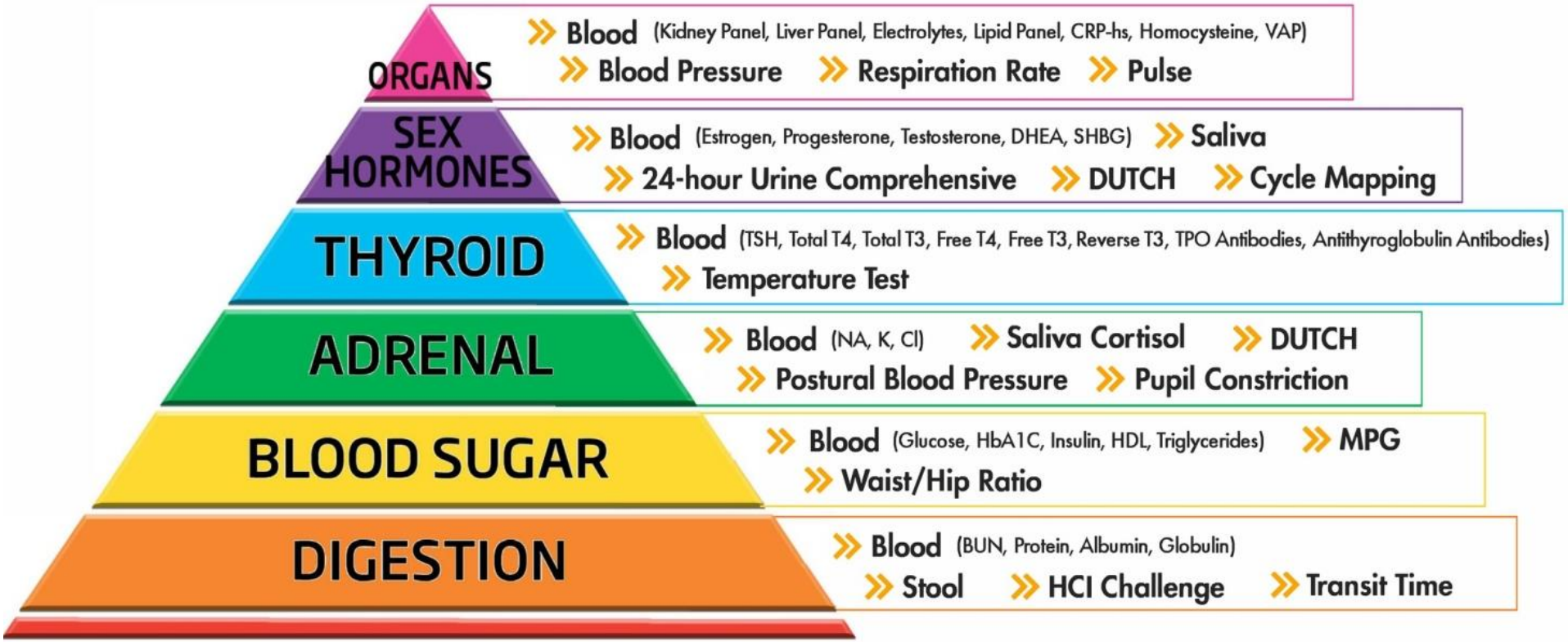
Procedure:

1. Remove one test strip from vial & close vial with cap provided.
2. Dip test strip into solution being tested for 2 seconds.
3. Compare color after 30 seconds of waiting time.

* Be certain cap is placed on vial to provide a tight closure.



Testing Your Gland and Organ Systems



Digestion

- ✓ HCl Challenge
- ✓ Transit Time
- ✓ Stool Testing
- ✓ Blood Tests
  - ➢ BUN
  - ➢ Protein
  - ➢ Albumin
  - ➢ Globulin

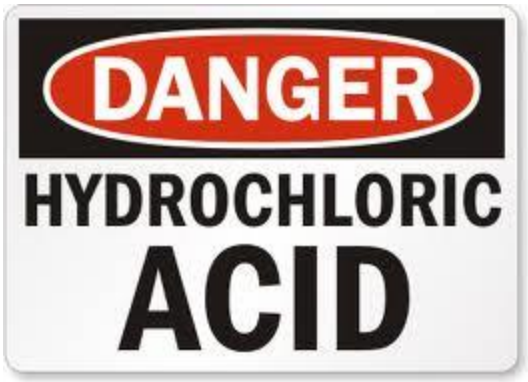
Transit Time

Time from mouth to anus should be 18 – 24 hours

- ✓ Swallow 4 charcoal capsules at your evening meal. Record the date and time.
- ✓ After each bowel movement, *observe stool for first sign of black or grey.*
- ✓ Calculate number of hours between **Time Charcoal Taken** to **Time/Date Color First Appears**. Record.
- ✓ Continue to observe and note time and date when the color completely disappears.
- ✓ Wait 5 days to make sure all sign of charcoal has completely disappeared and try again.

HCl Challenge

- ✓ Home test – assess need for stomach acid
- ✓ **Start with ONE** 500-650 mg capsule (not tablet) containing both hydrochloric acid (HCL) and 150 mg of pepsin
- ✓ Take HCL after a few bites of food; **do not take on an empty stomach or after meals**
- ✓ If no discomfort (burning or warm sensation), add one capsule per mea.
- ✓ If pain, burning, or a warm sensation, take one of the following:
  - 1 teaspoon slippery elm in 8 ounces warm water
  - ¼ cup aloe vera juice
  - ¼ teaspoon baking soda in water or...
- ✓ Next meal, go back to the dose that caused no pain



DO NOT **go above the maximal dose of 4 capsules per meal unless supervised.**

Stool Microbial

BACTERIOLOGY CULTURE		
Expected/Beneficial flora	**Commensal (Imbalanced) flora**	**Dysbiotic flora**
3+ Bacteroides fragilis group	1+ Beta strep, not group A or B	
4+ Bifidobacterium spp.	2+ Citrobacter freundii complex	
NG Escherichia coli	1+ Citrobacter freundii complex,isolate 2	
NG Lactobacillus spp.	2+ Enterobacter cloacae complex	
NG Enterococcus spp.	3+ Gamma hemolytic strep	
	1+ Staphylococcus aureus	
NG Clostridium spp.		
NG = No Growth		

MICROSCOPIC YEAST	
Result:	**Expected:**
None	None - Rare

The microscopic finding of yeast in the stool is helpful in identifying whether there is proliferation of yeast. Rare yeast may be normal; however, yeast observed in higher amounts (few, moderate, or many) is abnormal.

YEAST INFORMATION

Yeast normally can be found in small quantities in the skin, mouth, intestine and mucocutaneous junctions. Overgrowth of yeast can infect virtually every organ system, leading to an extensive array of clinical manifestations. Fungal diarrhea is associated with broad-spectrum antibiotics or alterations of the patient's immune status. Symptoms may include abdominal pain, cramping and irritation. When investigating the presence of yeast, disparity may exist between culturing and microscopic examination. Yeast are not uniformly dispersed throughout the stool, this may lead to undetectable or low levels of yeast identified by microscopy, despite a cultured amount of yeast. Conversely, microscopic examination may reveal a significant amount of yeast present, but no yeast cultured. Yeast does not always survive transit through the intestines rendering it unvialble.

Sample 3

None Ova or Parasites

illness and fatigue. Chronic parasitic infections can also be associated with increased intestinal permeability, irritable bowel syndrome, irregular bowel movements, malabsorption, gastritis or indigestion, skin disorders, joint pain, allergic reactions, and decreased immune function.

In some instances, parasites may enter the circulation and travel to various

GIARDIA/CRYPTOSPORIDIUM IMMUNOASSAY

	Within	Outside	Reference Range
Giardia intestinalis	Neg		Neg
Cryptosporidium	Neg		Neg

Giardia intestinalis (lamblia) is a protozoan that infects the small intestine and is passed in stool and spread by the fecal-oral route. Waterborne transmission is the major source of giardiasis.
Cryptosporidium is a coccidian protozoa that can be spread from direct person-to-person contact or waterborne transmission.

Stool Testing Functional

DIGESTION /ABSORPTION

	Within	Outside	Reference Range
Elastase	440		> 200 µg/mL
Fat Stain	Few		None - Mod
Muscle fibers	None		None - Rare
Vegetable fibers	Rare		None - Few
Carbohydrates	Neg		Neg

Elastase findings can be used for the diagnosis or the exclusion of exocrine pancreatic insufficiency. Correlations between low levels and chronic pancreatitis and cancer have been reported. **Fat Stain:** Microscopic determination of fecal fat using Sudan IV staining is a qualitative procedure utilized to assess fat absorption and to detect steatorrhea. **Muscle fibers** in the stool are an indicator of incomplete digestion. Bloating, flatulence, feelings of "fullness" may be associated with increase in muscle fibers. **Vegetable fibers** in the stool may be indicative of inadequate chewing, or eating "on the run". **Carbohydrates:** The presence of reducing substances in stool specimens can indicate carbohydrate malabsorption.

INFLAMMATION

	Within	Outside	Reference Range
Lactoferrin	2.6		< 7.3 µg/mL
Calprotectin*		68	10 - 50 µg/g
Lysozyme*	271		<= 600 ng/mL
White Blood Cells	None		None - Rare
Mucus	Neg		Neg

Lactoferrin and **Calprotectin** are reliable markers for differentiating organic inflammation (IBD) from function symptoms (IBS) and for management of IBD. Monitoring levels of fecal lactoferrin and calprotectin can play an essential role in determining the effectiveness of therapy, are good predictors of IBD remission, and can indicate a low risk of relapse. **Lysozyme*** is an enzyme secreted at the site of inflammation in the GI tract and elevated levels have been identified in IBD patients. **White Blood Cells** (WBC) and **Mucus** in the stool can occur with bacterial and parasitic infections, with mucosal irritation, and inflammatory bowel diseases such as Crohn's disease or ulcerative colitis.

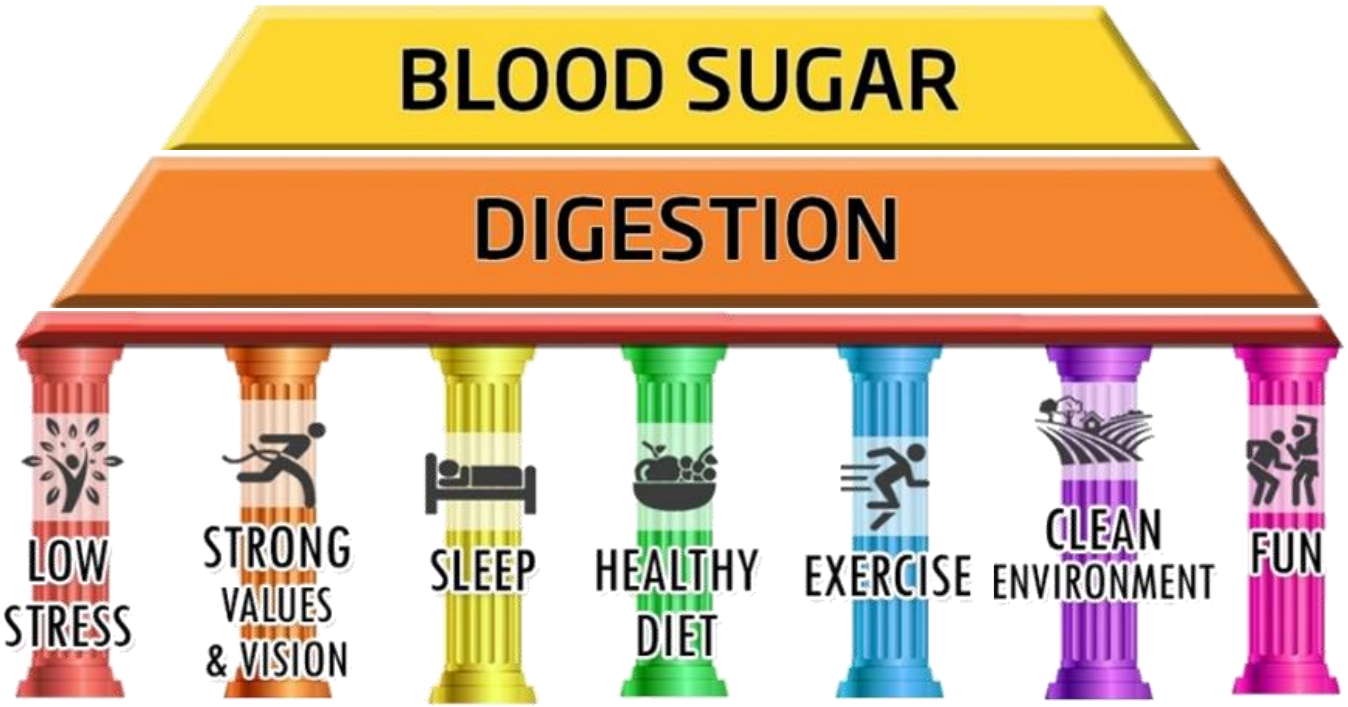
IMMUNOLOGY

	Within	Outside	Reference Range
Secretory IgA*		39.7	51 - 204 mg/dL

Secretory IgA* (sIgA) is secreted by mucosal tissue and represents the first line of defense of the GI mucosa and is central to the normal function of the GI tract as an immune barrier. Elevated levels of sIgA have been associated

Blood Sugar

- ✓ MPG: Map Postprandial Glucose
- ✓ Waist Hip Ratio
- ✓ Blood Tests
  - ➢ Glucose
  - ➢ HbA1C
  - ➢ Insulin
  - ➢ Antibodies
  - ➢ HDL
  - ➢ Triglycerides
  - ➢ HDL/Triglyceride Ratio

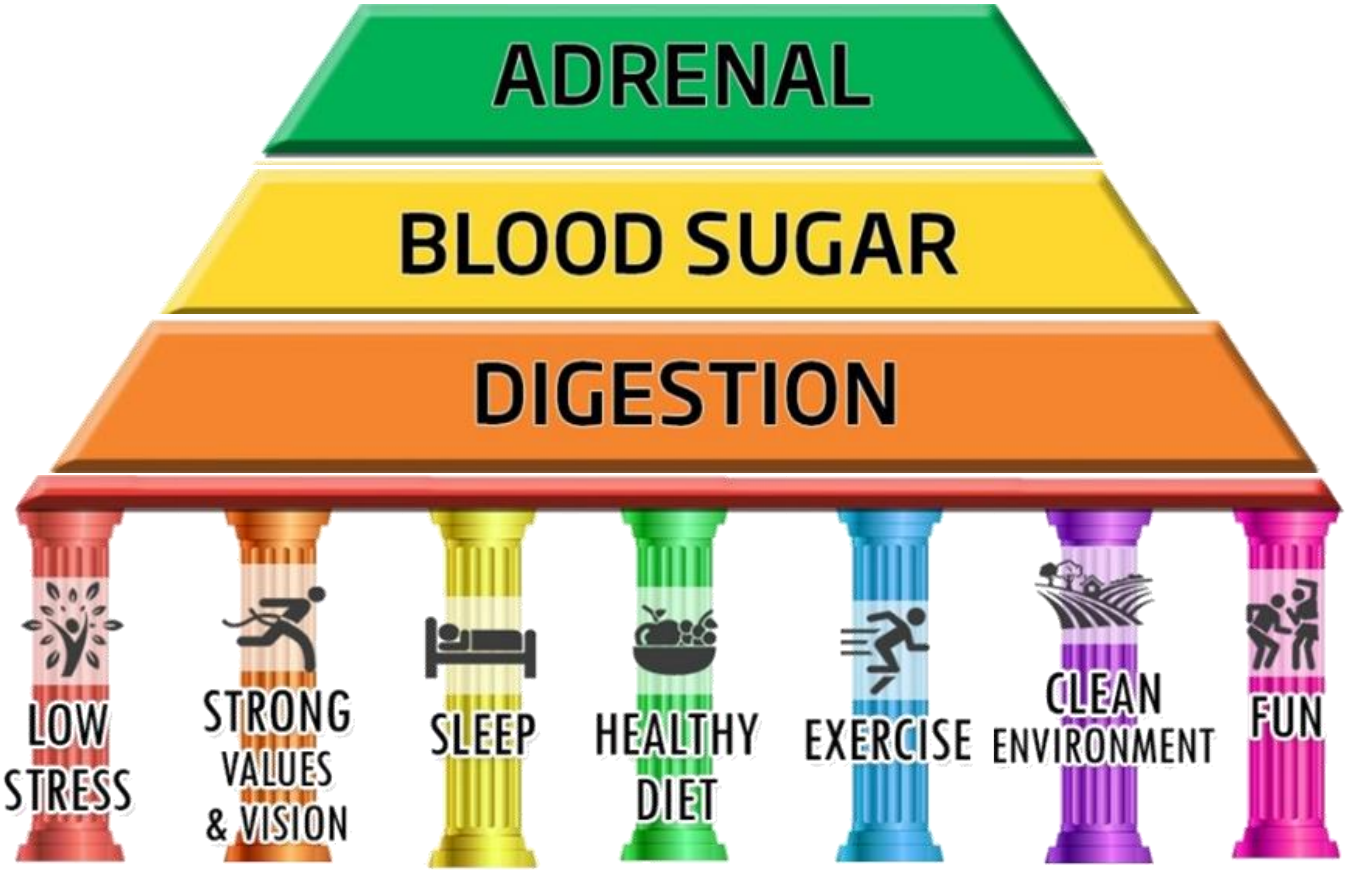


Blood Glucose Lab Testing

	Normal	Insulin Resistance	Metabolic Syndrome	Diabetes
Fasting Glucose	75-89	90-119	>=100	>=120
Triglycerides	>65	>90	>110	>110
HDL	50-90	<65	<55	<55
Fasting Insulin	2-5	Normal or >5 – varies on stage	>5	>5
Hemoglobin A1C	4.5-5%	5.3-6.5%	>5.7%	>5.7%

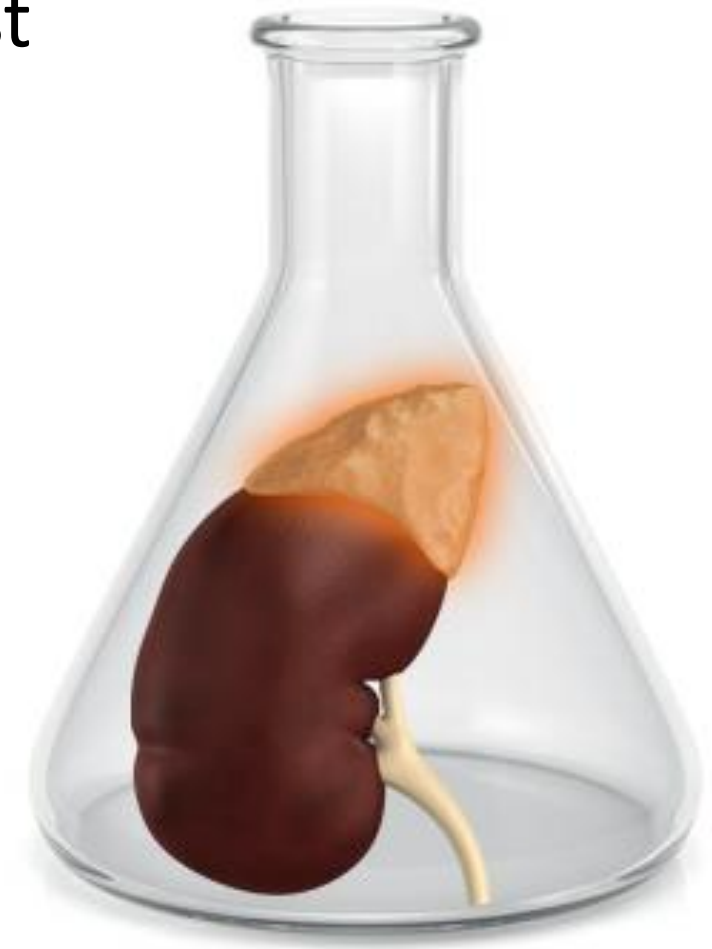
Adrenal

- ✓Saliva Cortisol and DHEA
- ✓DUTCH Test
- ✓Blood Tests
  - ➢Sodium
  - ➢Potassium
  - ➢Chloride



Adrenal Lab Analysis

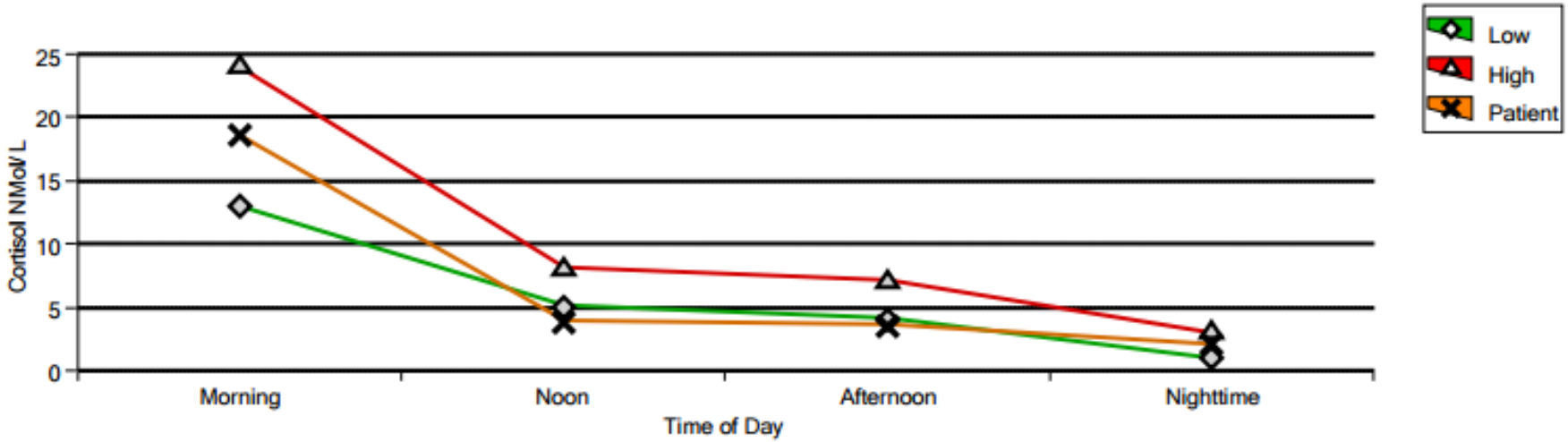
- ✓ Adrenal Stress Index: Saliva Test
  - ➢ Cortisol x 4
  - ➢ DHEA x 2
  - ➢ Secretory IgA *
  - ➢ 17-OH-Progesterone *
- ✓ Blood Cortisol Levels – not functionally significant
- ✓ Blood DHEA-S Levels
- ✓ Ratios of Blood Sodium, Potassium, and Chloride



* *Some labs include these*

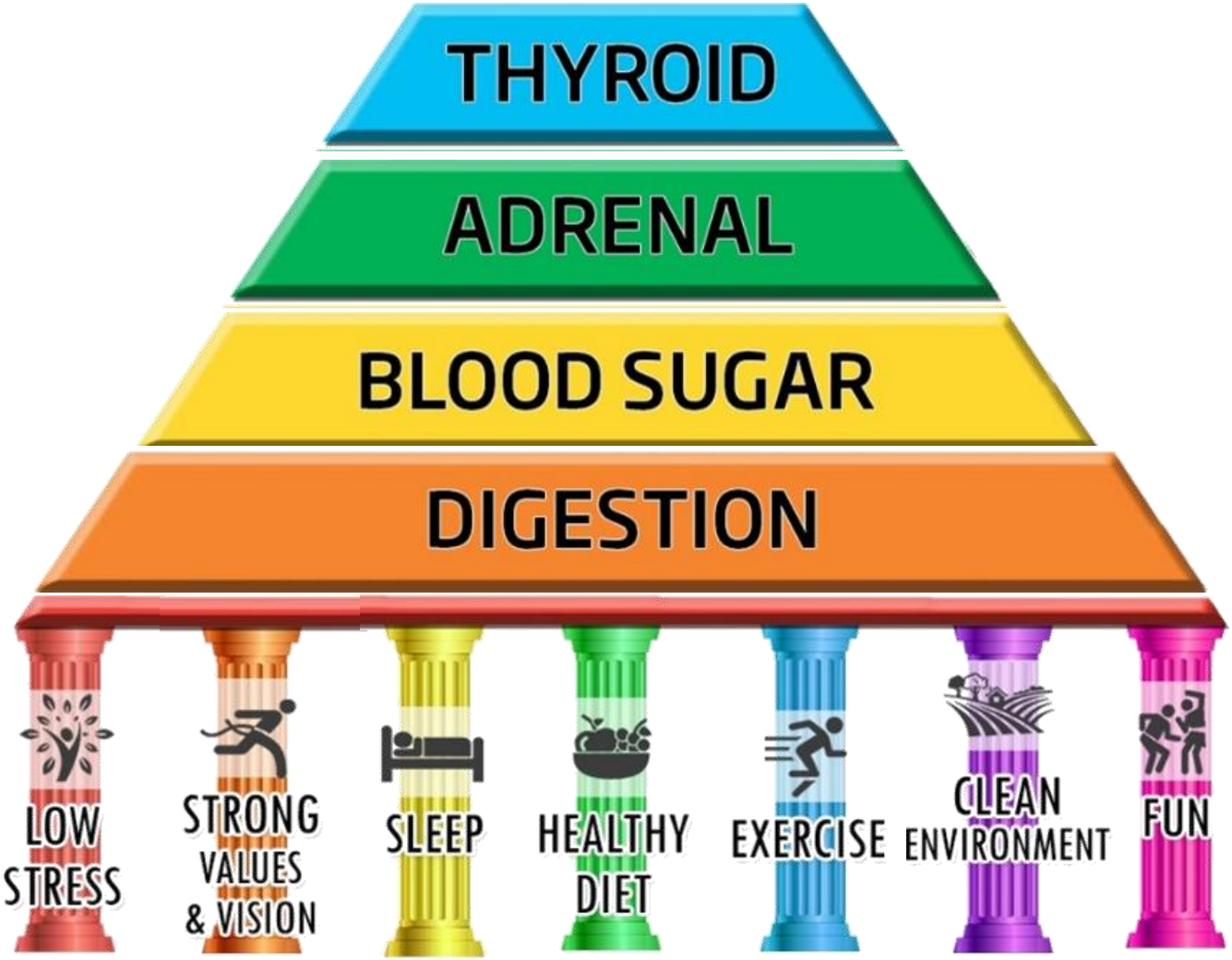
Biohealth Adrenal Test

Parameter	Result	Reference Range	Units
Cortisol - Morning (6 - 8 AM)	18.6	13.0 - 24.0	nM/L
Cortisol - Noon (12 - 1 PM)	**3.8***	5.0 - 8.0	nM/L
Cortisol - Afternoon (4 - 5 PM)	**3.5***	4.0 - 7.0	nM/L
Cortisol - Nighttime (10 PM - 12 AM)	2.1	1.0 - 3.0	nM/L
Cortisol Sum	28.0	23.0 - 42.0	nM/L
DHEA-S Average	**1.71***	2.00 - 10.00	ng/mL
Cortisol/DHEA-S Ratio	**16.4***	5.0 - 6.0	Ratio



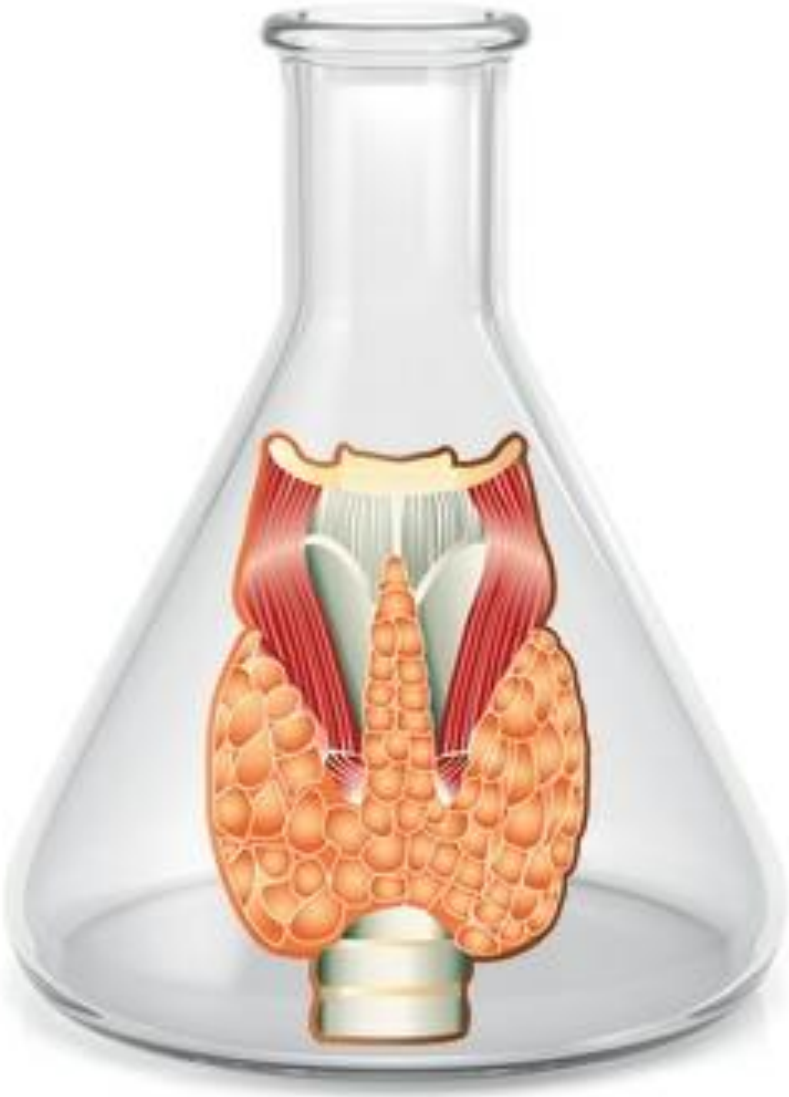
Thyroid

- ✓ Temperature
- ✓ Blood Tests
  - TSH
  - Total & Free T4
  - Total & Free T3
  - Reverse T3
  - Cholesterol
  - Homocysteine
  - Vitamin A
  - TPO Ab
  - Antithyroglobulin Ab



Thyroid Lab Analysis

- ✓ TSH
- ✓ Total T4 (thyroxine)
- ✓ Total T3 (triiodothyronine)
- ✓ Free T4
- ✓ Free T3
- ✓ Thyroid Antibodies
  - ➢ Thyroid Peroxidase
  - ➢ Antithyroglobulin
- ✓ Reverse T3
- ✓ Vitamin D
- ✓ Cholesterol

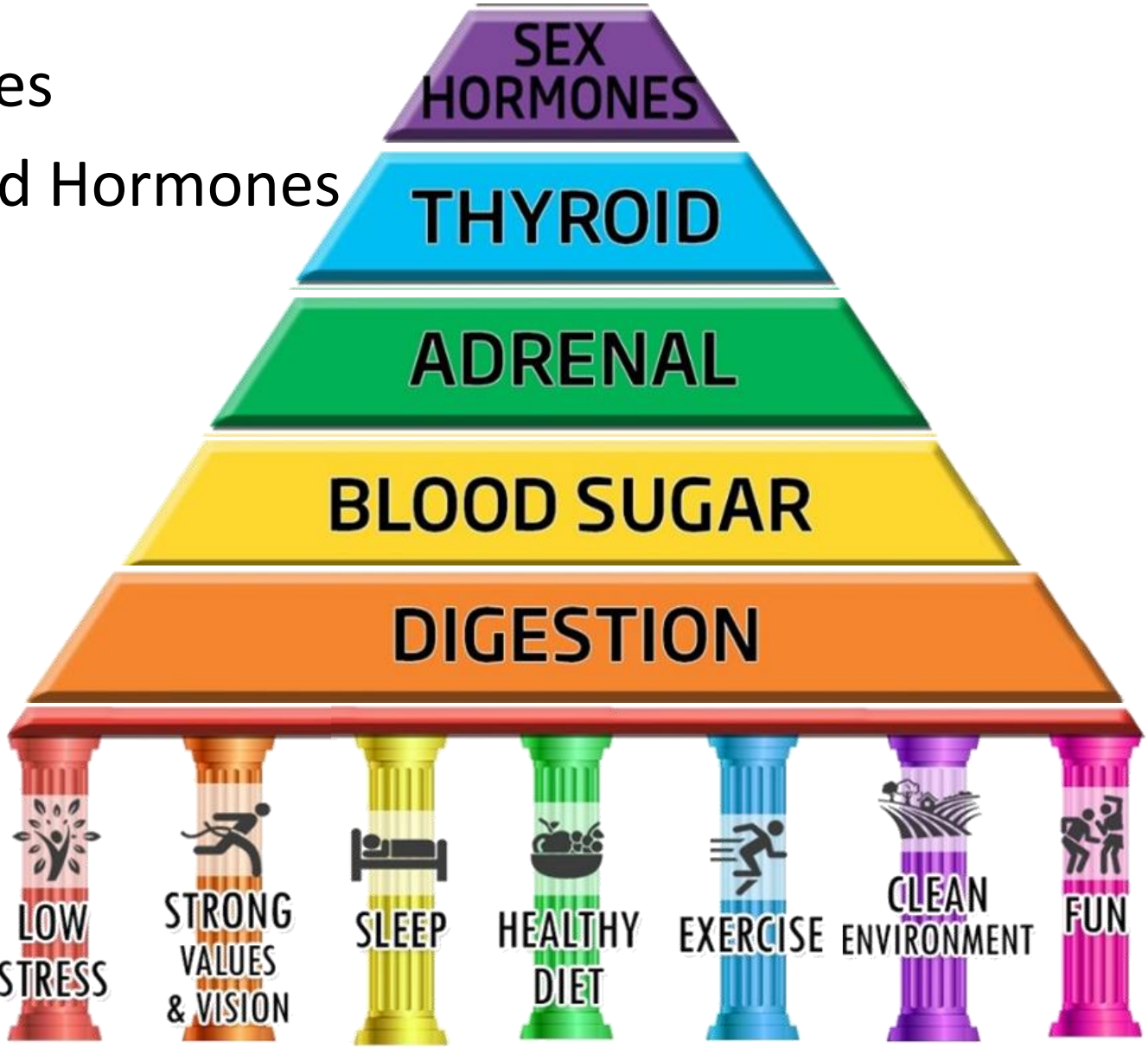


Thyroid Self-Assessment

- ✓ **Symptom Survey**
- ✓ **Physical Signs**
  - ➢ Cold hands and feet
  - ➢ Loss of lateral 1/3 of eyebrow
  - ➢ Dry skin and hair
  - ➢ Scalloped edges and teeth marks on tongue
  - ➢ Eyes “bug-out”
- ✓ **Basal Body Temperature:**
  Broda Barnes
- ✓ **Average Body Temperature:**
  Wilson’s Temperature Syndrome

Sex Hormones

- ✓ Saliva Hormones
- ✓ 24-Hour Steroid Hormones
- ✓ DUTCH
- ✓ Cycle Mapping
- ✓ Blood Tests
  - ➢ Estrogen
  - ➢ Progesterone
  - ➢ Testosterone
  - ➢ DHEA
  - ➢ SHBG



Female Hormone Testing

Blood Testing

- Progesterone
- Pregnenolone
- Estrogen
- Testosterones
- DHEA-S
- Thyroid
- Estriol

Specialty Testing

- **Female Hormone Panel - Saliva**
  - Estradiol x 11
  - Progesterone x 11
  - Testosterone average
  - DHEA
  - LH x5 (expanded panel)
  - FSH x5 (expanded panel)
- **24-Hour Urine Comprehensive**
- **Dried Urine 4 Collection Test**
- **Fatty Acid Profile**
- **Adrenal Stress Index**

Male Hormone Testing

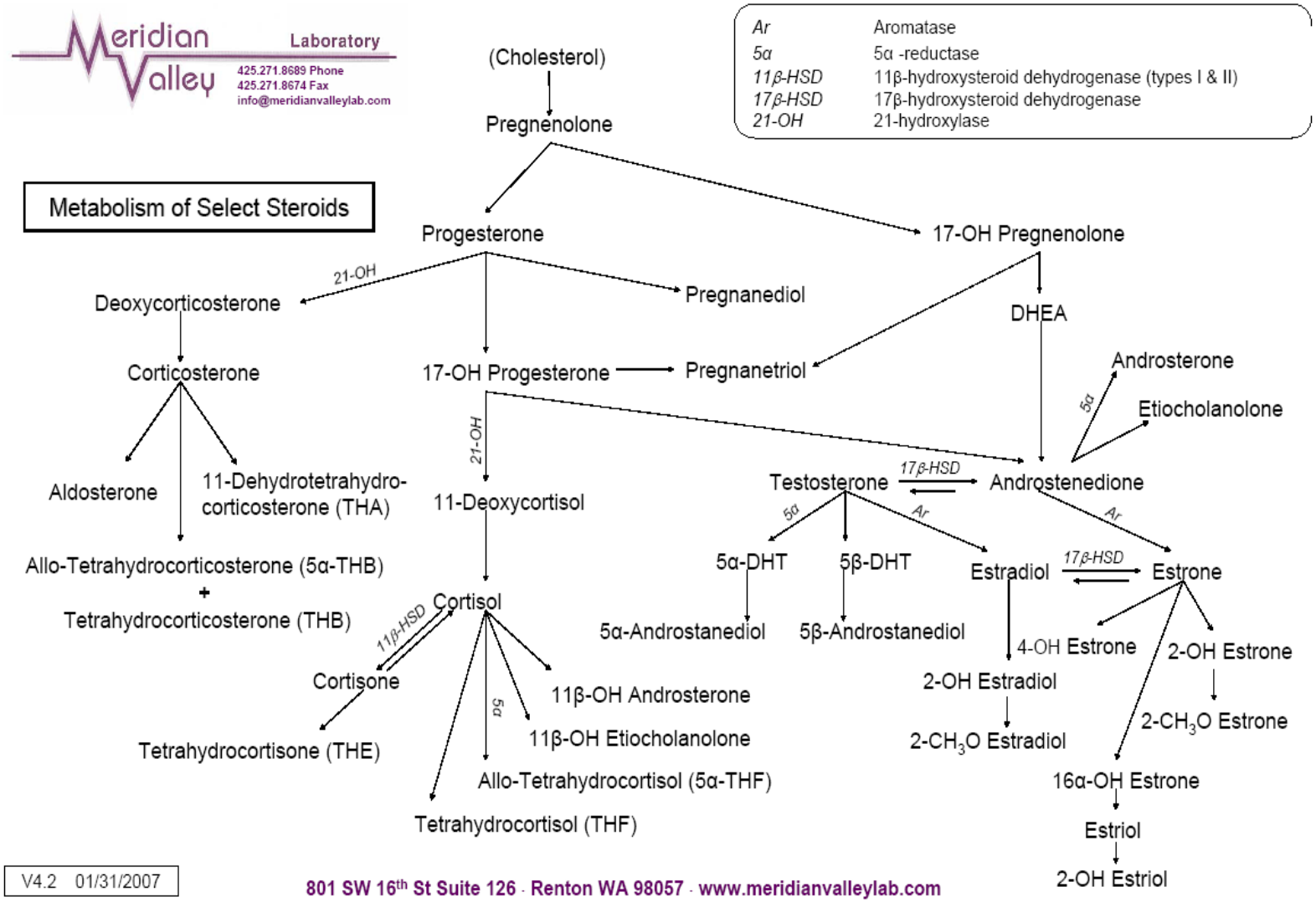
Blood Testing

- DHEA-S
- Testosterone
- Dihydrotestosterone
- Creatinine +
- Monocytes +
- PSA
- Progesterone
- Estrogen
- Thyroid

Specialty Testing

- **Male Hormone Panel - Saliva**
  - DHEA
  - Androstenedione
  - Testosterone
  - Dihydrotestosterone
  - Estrone
  - Progesterone
  - LH (expanded panel)
  - FSH (expanded panel)
- **24-Hour Urine Comprehensive**
- **Dried Urine 4 Collection Test**
- **Fatty Acid Profile**
- **Adrenal Stress Index**

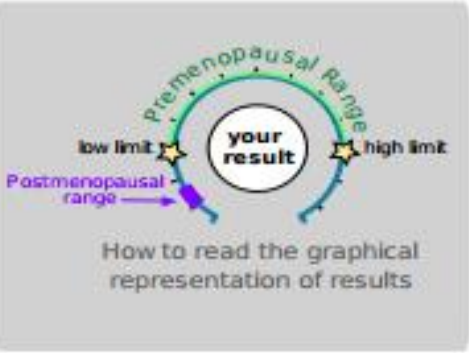
24-Hour Urine Steroid Test



DUTCH

Hormone Testing Summary

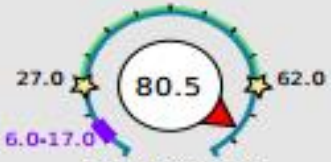
All units are given in ng/mg creatinine



How to read the graphical representation of results

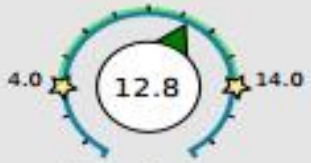
Sex Hormones

See Pages 2 and 3 for a thorough breakdown of sex hormone metabolites



Total Estrogen
(Sum of 8 Estrogen Metabolites)

Progesterone
(Serum Equivalent, ng/mL)

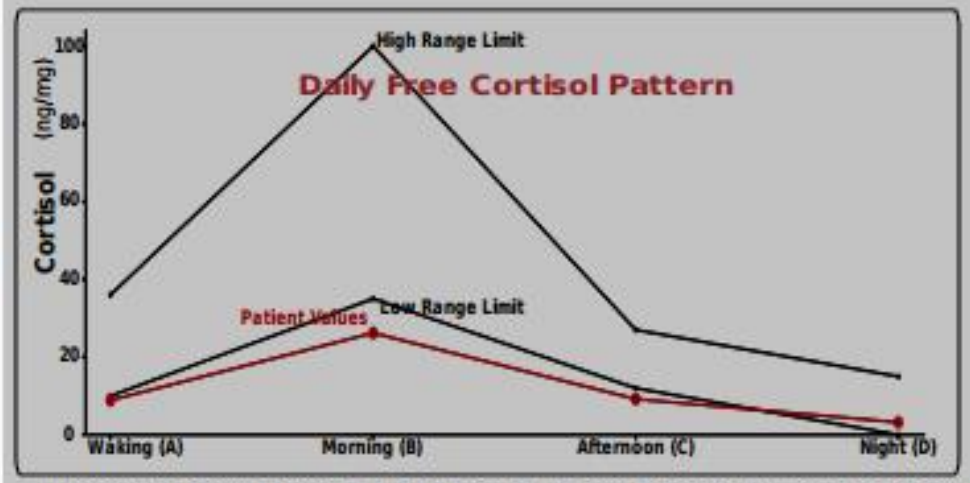


Testosterone

Progesterone Serum Equivalent is a calculated value based on urine pregnanediol.
This value may not accurately reflect serum when progesterone is taken by mouth.

Adrenal Hormones

See pages 4 and 5 for a more complete breakdown of adrenal hormones



Total DHEA Production

Age	Range
20-40	800-2500
40-60	530-1550
>60	400-1350

Total DHEA Production
(DHEAS + Etiocholanolone + Androsterone)

24hr Free Cortisol
(A+B+C+D)

cortisol metabolism

Metabolized Cortisol (THF+THE)
(Total Cortisol Production)

Free cortisol best reflects tissue levels. Metabolized cortisol best reflects total cortisol production.

www.DUTCHtest.com

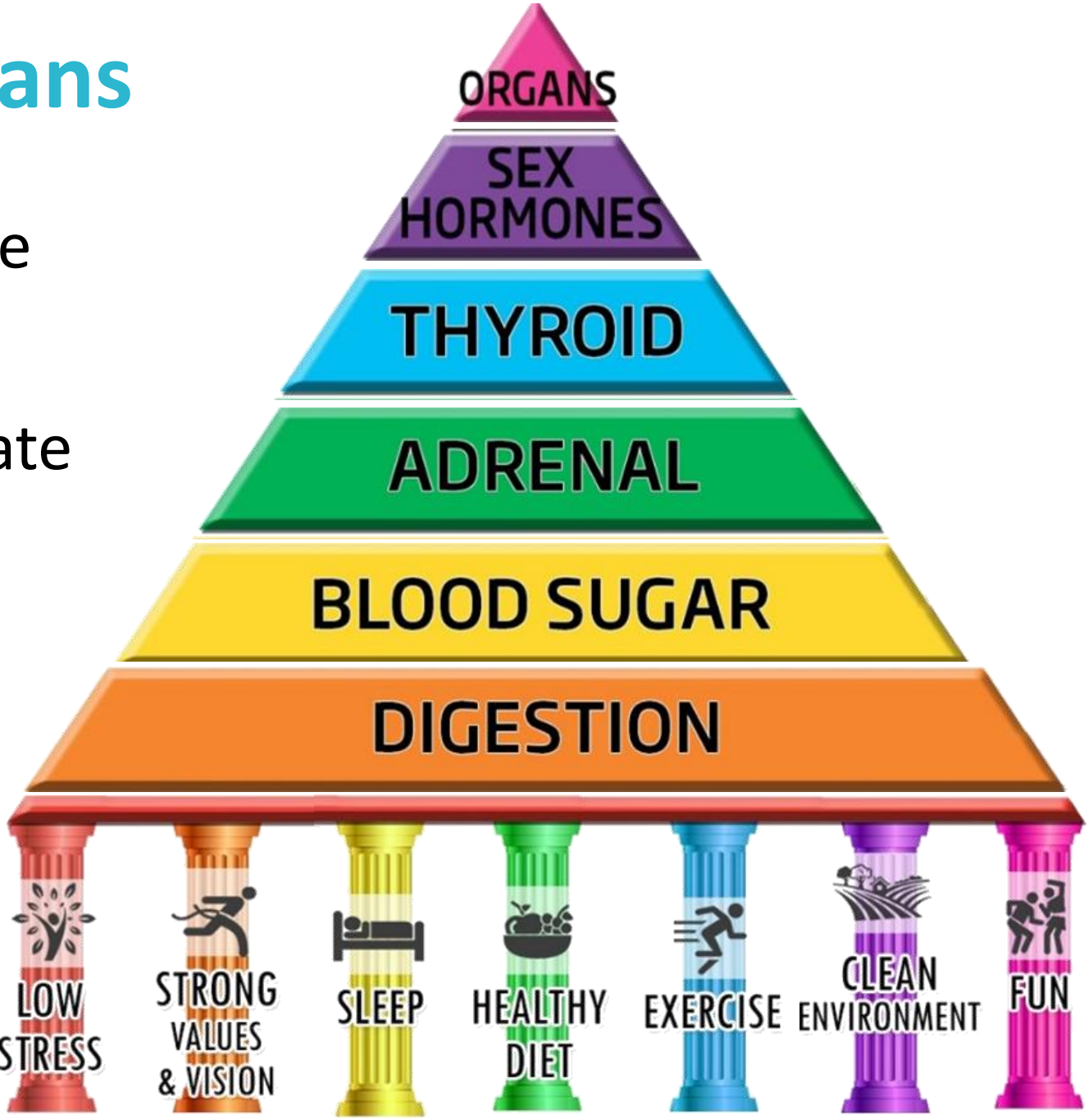
DUTCH

Progesterone Metabolism					
	b-Pregnanediol	Within range	996.0	ng/mg	450 - 1400
	a-Pregnanediol	High end of range	499.0	ng/mg	120 - 500
Androgen Metabolism					
	DHEAS	Above range	428.0	ng/mg	23 - 350
	Androsterone	Above range	1400.0	ng/mg	399 - 1364
	Etiocholanolone	Low end of range	390.0	ng/mg	371 - 765
	Testosterone	High end of range	12.8	ng/mg	4 - 14
	5a-DHT	Within range	2.1	ng/mg	0 - 8.8
	5a-Androstanediol	Within range	53.1	ng/mg	22 - 66
	5b-Androstanediol	Within range	12.1	ng/mg	6 - 32
	Epi-Testosterone	Within range	14.1	ng/mg	4.5 - 22.3
Estrogen Metabolites					
	Estrone(E1)	Above range	42.5	ng/mg	12 - 26
	Estradiol(E2)	Above range	7.4	ng/mg	1.8 - 4.5
	Estriol(E3)	Above range	22.5	ng/mg	5 - 18
	2-OH-E1	Below range	3.7	ng/mg	4.6 - 14.4
	4-OH-E1	Within range	1.1	ng/mg	0 - 1.8
	16-OH-E1	Within range	2.9	ng/mg	1 - 3.5
	2-Methoxy-E1	Below range	1.2	ng/mg	2 - 5.5
	2-OH-E2	Within range	0.4	ng/mg	0 - 1.2

www.DUTCHtest.com

Organs

- ✓ Blood Pressure
- ✓ Pulse
- ✓ Respiration Rate
- ✓ Blood Tests
  - ➢ Kidney Panel
  - ➢ Liver Panel
  - ➢ Lipid Panel
  - ➢ Electrolytes
  - ➢ CRP-hs
  - ➢ Homocysteine
  - ➢ Iron and Ferritin
  - ➢ VAP



Blood Testing for Organs and Body Systems

- ✓ Kidney Panel
- ✓ Liver Panel
- ✓ Lipid Panel
- ✓ Electrolytes
- ✓ CRP-hs
- ✓ Homocysteine
- ✓ Iron and Ferritin
- ✓ VAP

BUN	7	
Creatinine, Serum	0.68	
eGFR If NonAfricn Am	104	
eGFR If Africn Am	120	
BUN/Creatinine Ratio	10	
Sodium, Serum	139	
Potassium, Serum	4.3	
Chloride, Serum	101	
Carbon Dioxide, Total	23	
Calcium, Serum	8.9	
Phosphorus, Serum	3.2	
Protein, Total, Serum	6.6	
Albumin, Serum	4.1	
Globulin, Total	2.5	
A/G Ratio	1.6	
Bilirubin, Total	0.3	
Alkaline Phosphatase, S	80	
LDH	149	
AST (SGOT)	15	
ALT (SGPT)	14	
GGT	23	
Iron, Serum	42	
Cholesterol, Total	194	
Triglycerides	**222**	**HIGH**
HDL Cholesterol	46	

Lab Testing Resources

✓ Blood Testing

Direct Labs: http://www.DirectLabs.com/drritamarie

- All blood tests
- Some functional tests: Genova, Doctor's Data

✓ Saliva Adrenal Stress Testing

- Genova: http://www.gdx.net, via www.directlabs.com
- BioHealth: http://www.biohealthlab.com
- ZRT Labs: www.zrtlab.com

✓ Steroid Hormones with Metabolites

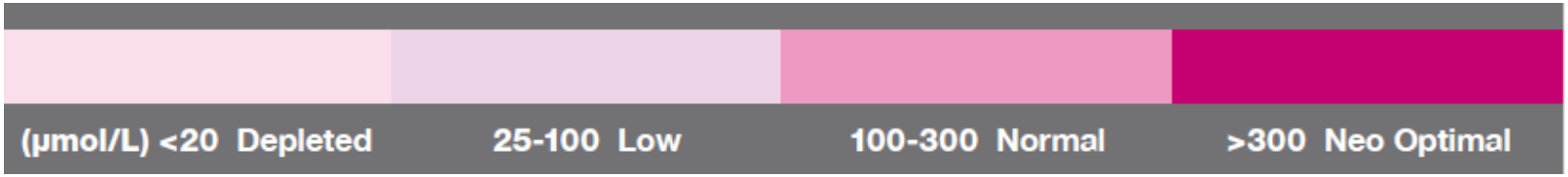
- Meridian Valley: http://www.meridianvalleylab.com
- Genova: http://www.gdx.net, via www.directlabs.com
- Precision Analytics: https://dutchtest.com/

Special Lab Tests You Can Order

http://www.DirectLabs.com

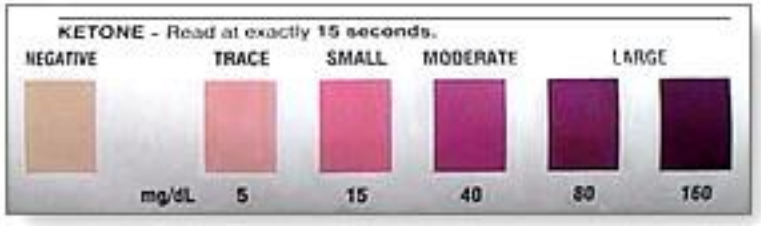
- ✓ **Blood Testing**
  - ➢ Comprehensive Wellness Profile
  - ➢ Blood Hormone Levels
  - ➢ Specialty Tests
- ✓ **Adrenal**
  - ➢ Adrenal Stress, Saliva-MetaMetrix KIT – 4x cortisol
  - ➢ Adrenal Stress-Sabre Science KIT – 6x cortisol
- ✓ **Digestion**
  - ➢ CDSA-Comprehensive Digestive Stool Analysis – Genova KIT
  - ➢ Comprehensive Stool Analysis with Parasitology – Doctors Data
- ✓ **Hormone Balance**
  - ➢ Circadian Profile (Male or Female ages 13+) – Sabre Sciences

Nitric Oxide

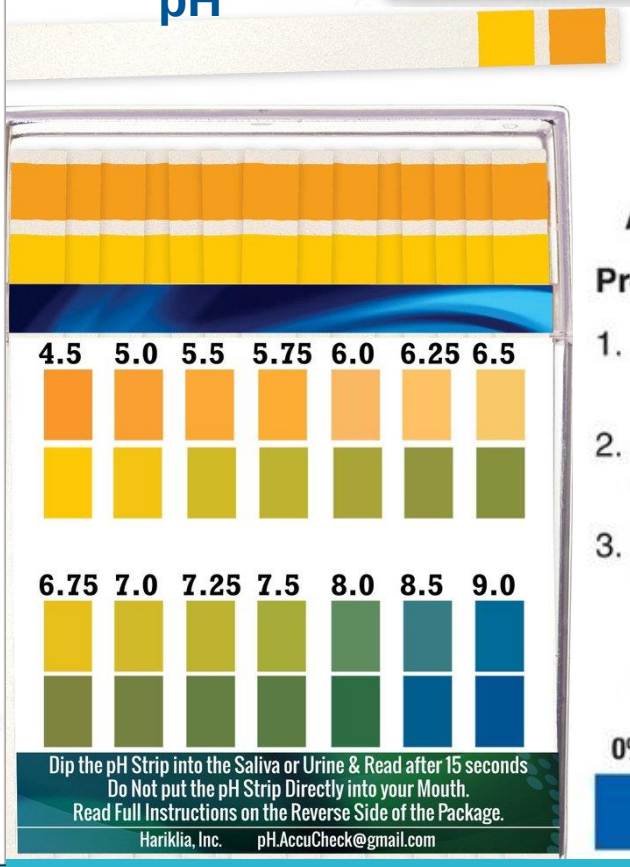


Urinalysis

Ketones



pH



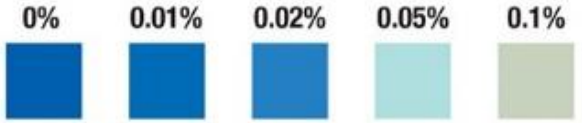
Vitamin C

Ascorbic Acid Test Strip

Procedure:

1. Remove one test strip from vial & close vial with cap provided.
2. Dip test strip into solution being tested for 2 seconds.
3. Compare color after 30 seconds of waiting time.

   * Be certain cap is placed on vial to provide a tight closure.



Lab Testing Handout

	Lab Results - U.S.								
Client Name									
	Units	**LAB RANGE**		**IDEAL RANGE**		**DATE**			
CATEGORIES		**Min**	**Max**	**Min**	**Max**		**Possible Interpretation**		
Lab Markers						**Results**	**High**	**Low**	**Follow-up**
Glucose, serum	mg/dL	65.0	110.0	75.0	89.0		Diabetes; insulin resistance; thiamin deficiency; stress; liver.	Hypoglycemia; low adrenal	Test fasting insulin, hemoglobin A1C
Uric acid, serum (female)	mg/dL	1.8	7.0	3.2	5.5		Gout; atherosclerosis; oxidative stress; rheumatoid arthritis; kidney; circulation; leaky gut syndrome	Deficiency of molybdenum, B-12/folate and/or copper	If high, evaluate for signs and symptoms of joint pain. If low, check for other signs of B12 deficiency and mineral deficiency (home tests)
Uric acid, serum (male)	mg/dL	1.8	7.0	3.7	6.0		Gout; atherosclerosis; oxidative stress; rheumatoid arthritis; kidney; circulation; leaky gut syndrome	Deficiency of molybdenum, B-12/folate and/or copper	If high, evaluate for signs and symptoms of joint pain. If low, check for other signs of B12 deficiency and mineral deficiency (home tests)
Blood urea nitrogen (BUN), serum	mg/dL	8.0	28.0	13.0	18.0		Malabsorption; kidney issues; dehydration; excessive protein intake; hyperadrenal	Malabsorption; liver dysfunction; low protein diet	HCl challenge, enzymes, optimize digestion
Creatinine, serum	mg/dL	0.5	1.2	0.7	1.1		Urinary tract congestion/obstruction; kidneys;	Muscle wasting; malabsorption	HCl challenge, enzymes, optimize digestion
Estimated glomerular filtration rate (eGFR), serum	mL/min/1.73 m^2	59.0	-	59.0	-				referral to kidney specialist
Estimated glomerular filtration rate (eGFR) (African American), serum	mL/min/1.73 m^2	59.0	-	59.0	-				referral to kidney specialist
BUN/Creatinine Ratio	-	8.0	27.0	8.0	27.0		See BUN & Creatinine	See BUN & Creatinine	HCl challenge, enzymes, optimize digestion
Sodium, serum	mEq/L	135.0	148.0	135.0	140.0		Hyperadrenal; dehydration	Hypoadrenal; edema; laxative use	check for signs of edema or dehydration, Adrenal Stress Index Test, HeartMath and other stress management skills
Potassium, serum	mEq/L	3.5	5.5	4.0	4.5		Hypoadrenal; dehydration; acidosis	Hyperadrenal; hypertension; diuretics	Check for signs of edema or dehydration, Adrenal Stress Index Test, HeartMath and other stress management skills
Chloride, serum, plasma	mEq/L	99.0	111.0	100.0	106.0		Acidosis; hyperadrenal	Hypochlorhydria; alkalosis; hypoadrenal	HCl challenge, ph monitoring and appropriate diet changes, Adrenal Stress Index Test, HeartMath and other stress management skills
Carbon dioxide, total, serum	mEq/L	19.0	31.0	25.0	30.0		Alkalosis; hyperadrenal; hypochlorhydria; respiratory	Acidosis; thiamin (B-1) deficiency; hyperventilation	pH monitoring and appropriate diet changes, HCl challenge

Order Matters!

- Digestive stress
- Inflammation
- Food stress
- Obesity
- Injuries
- Toxic exposure
- Sleep quality and quantity
- Eating too close to bedtime
- Infection

Transform Stress

Heal and Optimize Digestion → Balance Blood Sugar → Repair and Recharge Adrenal → Protect and Heal Thyroid