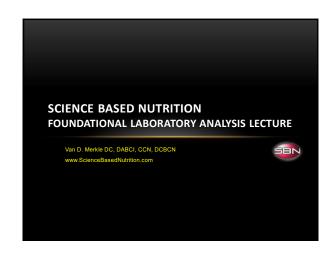
### Foundational Laboratory Analysis Seminar Notes 2021 www.ScienceBasedNutrition.com

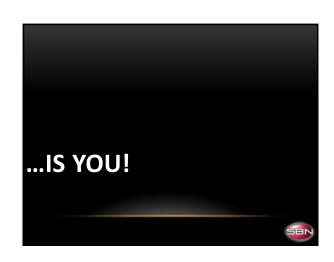


Van D. Merkle DC, DCBCN, DABCI, CCN









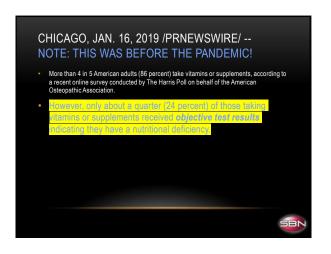
VITAMIN SALES SKYROCKET IN THE PANDEMIC,
BUT BUYER BEWARE WWW.MEDSCAPE.COM

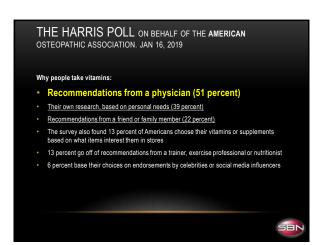
Mar 2, 2021 — The supplement market, valued at \$48 billion in 2019

2020 - \$52 Billion due to pandemic

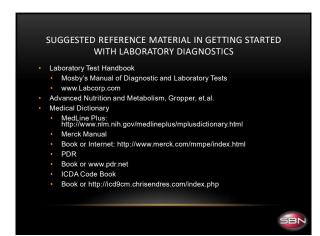
2021 - \$58 Billion is projected for 2021

CHICAGO—January 16, 2019—More than 4 in 5
American adults (86 percent) take vitamins or
supplements, according to a recent online survey
conducted by The Harris Poll on behalf of the
American Osteopathic Association. Jan 16, 2019





# REFERENCE MATERIALS Laboratory Test Handbook 4th edition Text Book of Medical Physiology 5th edition Guyton The Merck Manual 15th edition Nutritional Influences on Illiness 2nd edition Werbach Interpretation of Diagnostic Tests 6th edition Wallach A Textbook of Pathology 8th edition Lea & Febiger PDR for Herbal Medicines 2nd edition Dr. Cessna's Internal Diagnosis Courses and material PDR 55th (electronic) edition 2001 PDR 55th (electronic) edition 2001 PDR 56th edition 2002 PDR Medical Dictionary 2nd edition Drug-Induced Nutrient Depletion Handbook 2nd edition Ross Peiton The Doctors' Vitamin and Mineral Encyclopedia Sheldon Saul Hendler, M.D., Ph.D Hepatitis A to G, Alan Berkman, MD and Nicholas Bakalar PDR for Nonprescription Drugs and Dietary Supplements 23nd edition 2002

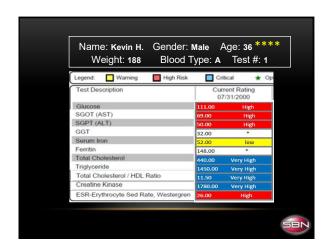




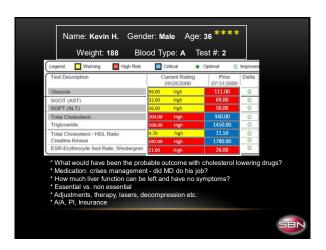


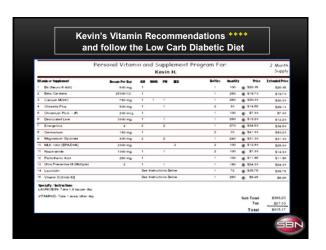


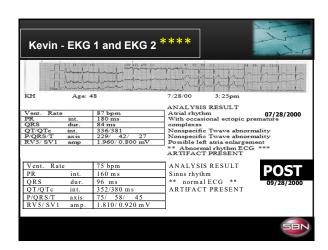




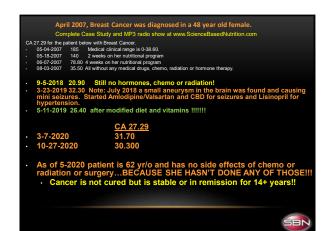


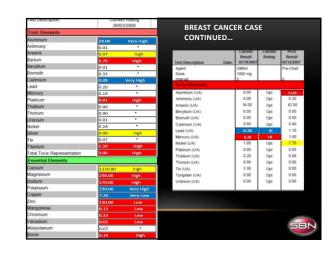




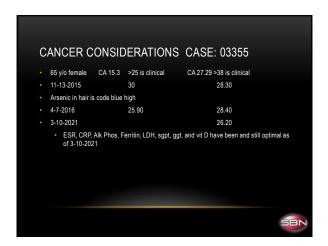


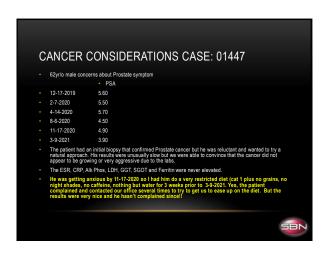


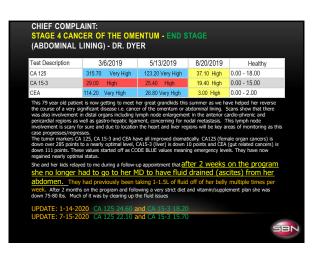




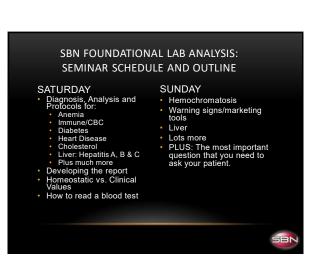


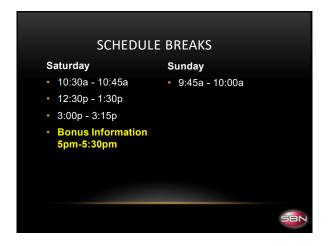


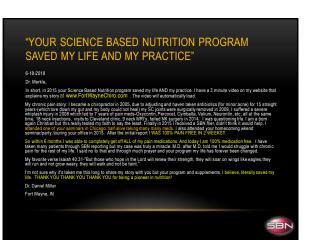


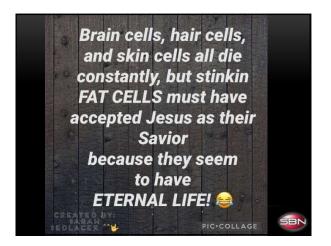


### DIAGNOSIS/TREATMENT AND LIABILITY/MALPRACTICE • Diagnosis: to diagnose or identify something-Exam, x-ray, questionnaire, energy techniques, muscle testing = Legal obligation • Treatment: adjustment, therapy, vitamins, energy technique, verbal recommendations = legal responsible and liability • If you treat something...you are legally responsible/liable







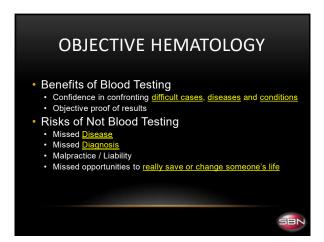


### DR. VAN D. MERKLE: CREDENTIALS

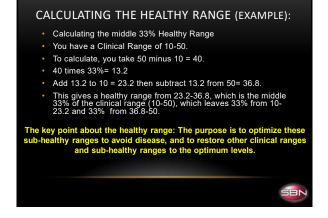
- Graduated 1982 Logan College of Chiropractic
- Doctor of Chiropractic
- Diplomate American Board of Chiropractic Internists
- Diplomate American Chiropractic Board of Nutrition
- Diplomate Chiropractic Board of Clinical Nutrition
- Vice President of Chiropractic Board of Clinical Nutrition
- · Certified Clinical Nutritionist
- American Chiropractic Association
- Ohio State Chiropractic Association







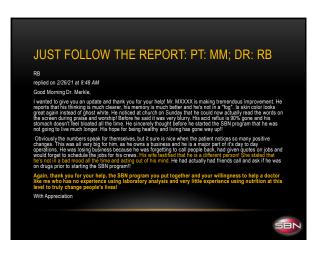
# TRUTH: WHAT THE PUBLIC BELIEVES Real doctors order blood work. Without objective lab testing- you are just guessing +95% of the population does not believe in energy testing. Do you think that the top 10 energy DC experts would get the same results each testing the same 10 patients?





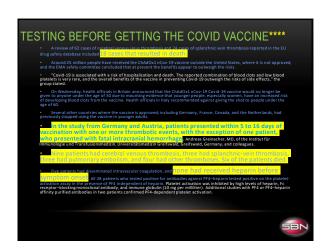
1 /	AKE 2 HE	ALTHCARE	2017 STAT	S
	Dr. Dyer:	Gross Business	Pay	%Pay of business
	2016	425,132	119,111	28
	2017	596,373	170,308	28
	Increase	40%	42%	
	Dr Marchel	Gross Business	Pay	%Pay of business
	2016	224.957	73.401	32
	2017	277.537	68,143	24
	Increase	24%	23%	
	Dr. Yahle	Gross Business	Pay	%Pay of business
	2016	343,711	87,992	25.6%
	2017	487,458	122,923	25%
	Increase	40%	39.6%	

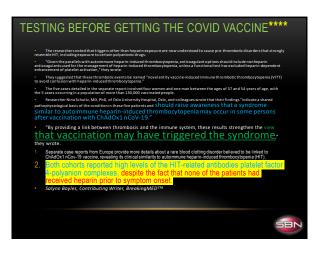




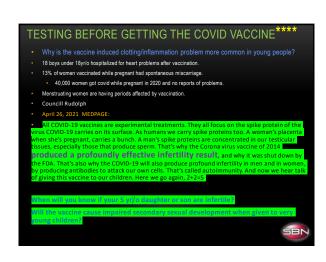


## HEPARIN FROM LABCORP.COM \*\*\*\* Heparin is an anticoagulant. It is used to decrease the clotting ability of the blood and help prevent harmfl clots from forming in blood vessels. Heparin-induced thrombocytopenia (HIT) is a potentially catastrophic, antibody-mediated complication of heparin therapy caused by immunization against platelet factor 4 complexed with heparin or other polyanions. <sup>1-6</sup> HIT antibodies bind to PF4/heparin complexes on the platelet surface, resulting in platelet activation that leads to a platelet count decrease that can be accompanied by life-threatening thrombosibs. This prothrombotic disorder can produce devastating thromboembolic complications, including ischemic limb necrosis, pulmonary embolism, myocardial infarction, and stroke. (AND DEATH\_Van) Moderate thrombocytopenia is common in the clinical settings where heparin is administered and most cases are not caused by HIT. <sup>16</sup> Differentiation of HIT from other potential causes of thrombocytopenic patients and relies on a combination of a clinical assessment and laboratory investigation. <sup>7</sup> Prompt diagnosis and management is critical to minimizing the risk of life-threatening thrombosis. Patients diagnosed with or suspected of suffering HIT must be taken off heparin and transitioned to an alternative nonheparin anticoagulant as quickly as possible.



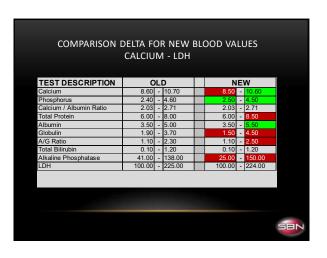


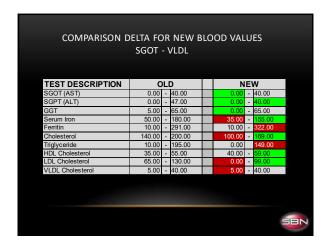
## Rarely, a spontaneous prothrombotic thrombocytopenia syndrome can occur without proximate heparin exposure. In this syndrome, the results of serologic tests and the serotonin release assay are indistinguishable from HIT, despite the fact that patients had not been treated with heparin. Warkentin and coworkers have proposed that a rigorous definition of spontaneous HIT syndrome should include otherwise unexplained thrombocytopenia/thrombosis without proximate heparin exposure and with anti-PF4/heparin antibodies that cause strong in vitro platelet activation—even in the absence of heparin. Labcorp.com: Heparin-dependent Platelet Antibody (Serotonin Release Assay) TEST: 150018 Test number copied CPT: 82542

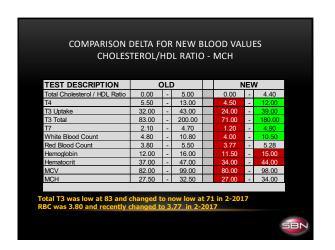


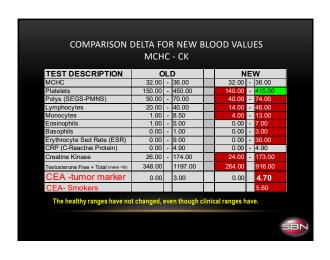
# MY COMMENTS PUBLISHED IN MEDPAGE: \*\*\*\* • June 8, 2021 • @Jean Gearing: "I have a high risk of terrible death if I catch covid, due to co-morbidities. I got my vaccine as soon as could. I hope everyone gets vaccinated. It is to possible that the US had such an unusual that the second of the sec

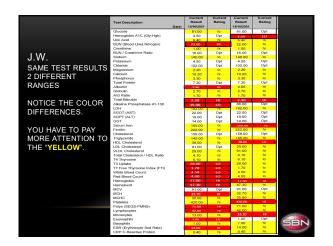
TEST DESCRIPTION	C	)L	D	N	E	W
Glucose	65.00	-	110.00	65.00	-	99.00**
Hemoglobin A1C (Gly-Hgh)	3.40	-	6.10	4.80	-	5.90
Uric Acid	2.50	-	8.00	2.40	-	8.20
Blood Urea Nitrogen (BUN)	10.00	-	20.00	5.00	-	26.00
Creatinine	0.50	-	1.50	0.50	-	1.50
BUN / Creatinine Ratio	7.50	-	18.50	8.00	-	27.00
Sodium	138.00	-	146.00	135.00	-	145.00
Potassium	3.50	-	5.50	3.50	-	5.20
Chloride	96.00	-	110.00	97.00	-	109.00
Magnesium	1.70	-	2.40	1.60	-	2.60

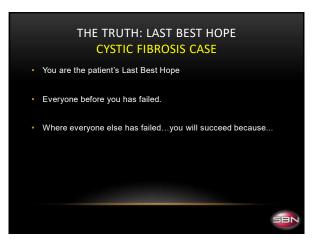




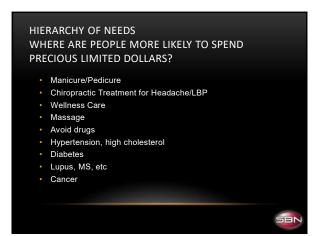


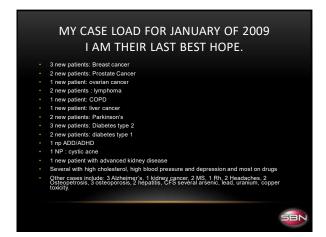


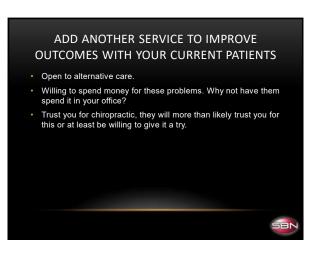




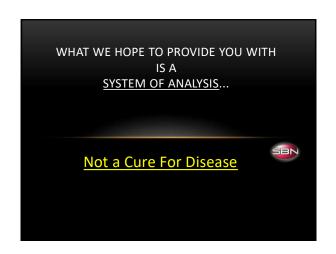
# LAST BEST HOPE CONT. You will: Never give up. Study the problem and test more when needed. Give honest hope and encouragement. Be Patient...

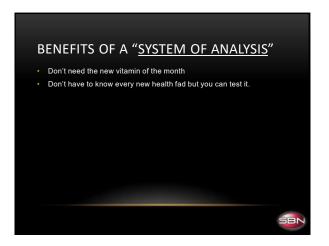












### THE SECRET!

- You don't have to know <u>everything about</u> <u>every disease</u>.
- You don't have to know the biochemistry of how it all works and why it isn't working.
   (Many time the 'experts' are baffled, too)



### THE SECRET CONT.

### All that we have to do is:

- Test
- Know what the tests mean
- Improve what we see in the testing
- Retest to chart progress



### THE SECRET CONT.

- We aren't going to treat the patient's disease whatever it is.
- But we can probably help the problems we see in the testing.
- And when these problems (anemia, thyroid/liver/GI dysfunction, mineral/vitamin deficiency, infections/inflammations, toxicity etc.) improve the patient will more than likely get healthier!!
   THEN......



### THE SECRET CONT.

- The symptoms of their disease will improve.
- Remember: We are looking for <u>Progress</u>... not <u>Perfection!</u>

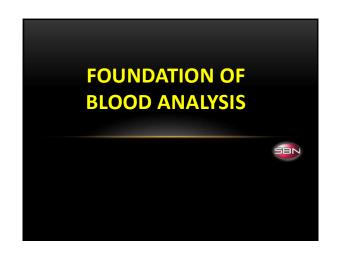


### **EXPERTS: DISEASE VS. HEALTH**

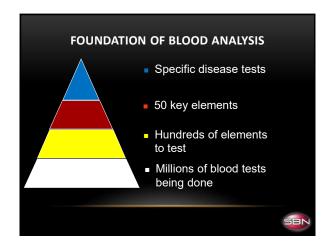
- Your patients may have been all over the country seeing the best and smartest 'Disease Experts' without success.
- Becoming the 'Health Expert' in your community is the best way you can help your patients.

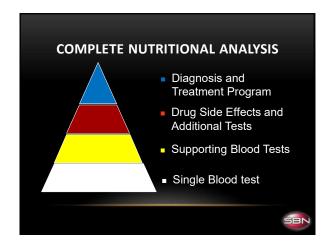


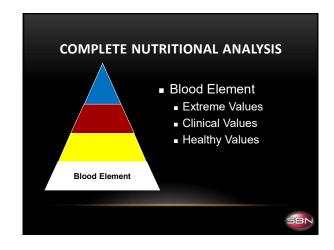


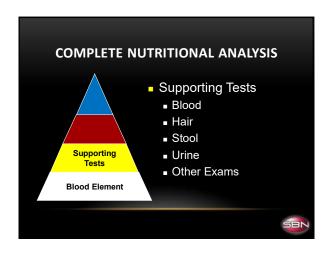


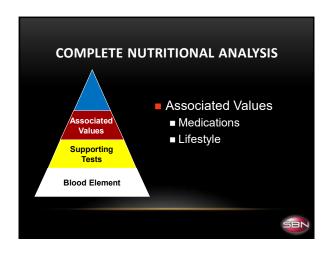
### FOUNDATION OF BLOOD ANALYSIS \*\*\*\*\* **SBN Panel - Key Elements** Bilirubin Alkaline Phosphatase LDH SGOT (AST) SGPT (ALT) Blood Type Glucose Hemoglobin A1C Uric Acid Blood Urea Nitrogen Red Blood Count Hemoglobin Hematocrit MCV MCH Creatinine BUN/Creatinine Ratio Sodium, total Potassium GGT MCHC Serum Iron Platelets Polys (SEGS-PMNS) Chloride Magnesium Calcium Phosphorus Calcium/Albumin Ratio Total Protein Lymphocytes Monocytes Basophils T3 uptake T4 T7 (Free T4 Calculated) TSH White Blood Count Erythrocyte Sed Rate C-Reactive Protein Albumin Globulin A/G Ratio Vitamin D 25 Hydroxy T3 Free

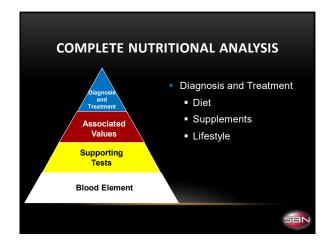


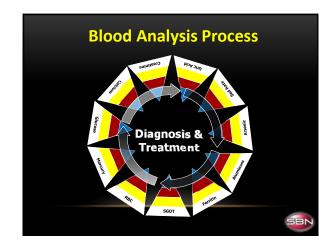






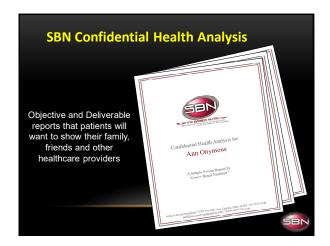


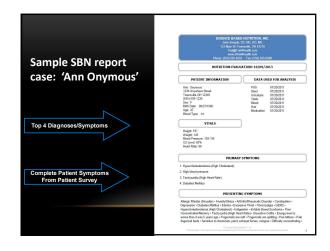


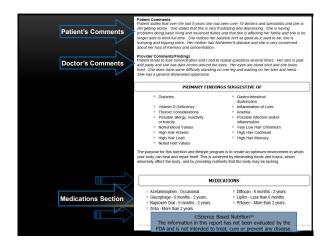


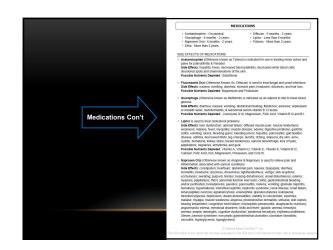


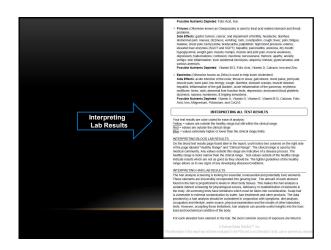


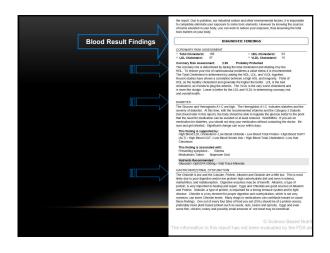


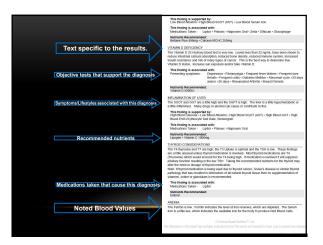


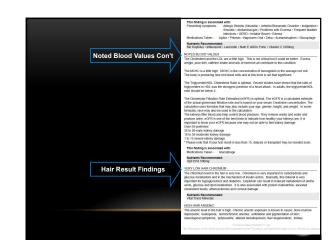


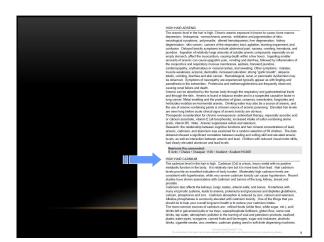


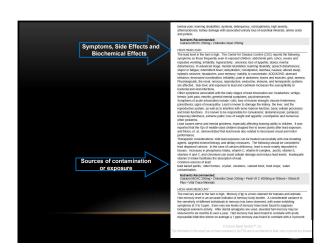




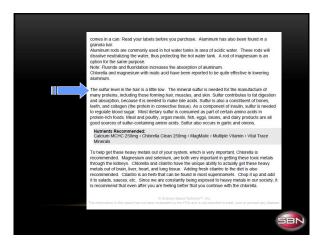


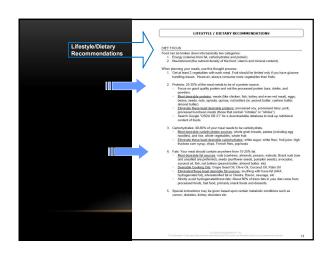


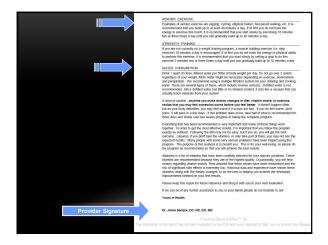


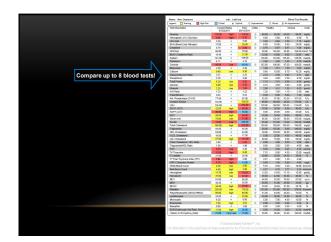


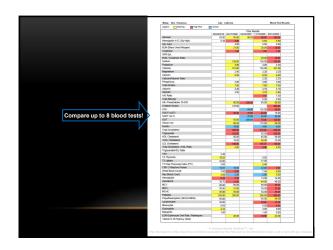


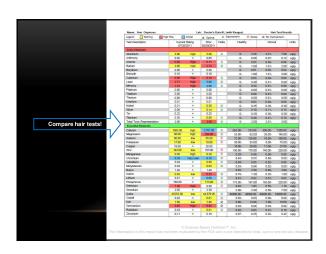


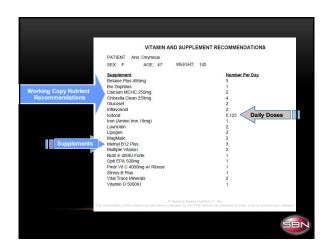


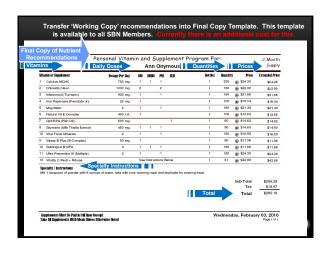


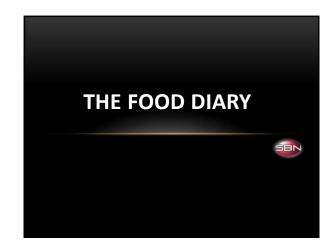








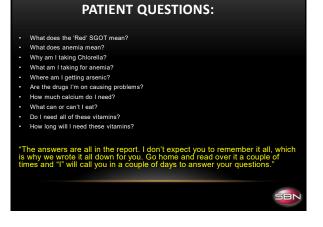








# KEY POINT: PATIENTS DO WANT TO GET BETTER This is why they came to you in the first place. If your patients are not doing the testing, not taking the vitamins or retesting then it is obvious that they have not been convinced of your ability to help them. They may let you down easy and say that they can't afford it, but rarely is that truly the case. This is difficult for most doctors to accept. They usually blame the patients instead of looking at themselves and what they are doing.



### GETTING STARTED: DO THE UA

Rule out: serious infection, possible kidney and liver disease, diabetes, etc.



### **CBC**

- Major function of RBC: transport hemoglobin which carries oxygen from lungs to tissues and carbon dioxide from the tissues to the lungs.

  Hemoglobin (protein): when free in the plasma (due to rupture or destruction of RBC's) ~3% is lost through the kidney.

  Hemoglobin in RBC's is responsible for ~ 70% of acidbase buffering power of whole blood.

  RBC is a "bag" that can be deformed into almost any shape, this does not stretch the membrane and consequently does not rupture the cell.

  Middle trimester of gestation: liver is main producer of

- Middle trimester of gestation: liver is main producer of RBC', some produces in the spleen and lymph nodes. Latter gestation and after birth, RBC produced exclusively by bone marrow.



### **CBC**

### Red Blood Cell Count:

- Bone Marrow of all bones produce RBC's till age 5.
- After age 20 only marrow of membranous bones of vertebrae, sternum, ribs and pelvis produce RBC.
- Important point: Marrow that has already stopped producing red blood cells can once again become productive, and marrow that is still producing red blood cells becomes greatly hyperplastic and produces far greater than normal quantities. Even the spleen and liver may re-establish their ability to produce RBC's when extreme stimuli persist for prolonged periods of time. Primordial Stem cells continually make hemocytoblasts which continually make RBC's.
- The hemocytoblast like the Stem cell can reproduce itself again and again.
- Tissue oxygenation determines RBC production.



### **CBC, ANEMIA AND KIDNEY**

### Erythropoietin:

- Believed to be released by the kidney in response to
- Stimulates the bone marrow to produce RBC's.
- Without kidneys, chronic advanced anemia develops due to extremely low levels of circulating erythropoietin.
- With extreme quantities of erythropoietin, RBC production can rise to 10 times normal.
- Many Cancer patients who have chemo and/or radiation will be given erythropoietin in a drug called Procrit or Epogen.
- Proorit and Epogen are produced by mammalian cells into which the human erythropoietin gene has been introduced (Recombinant DNA), also has human albumin.



### **EPOGEN/PROCRIT/ARANESP**

Subject: FDA MedWatch-Erythropoiesis Stimulating Agents- Studies Indicate Increased Mortality And More Rapid Tumor Progression In Patients With Cancer Receiving ESAs

Amgen and FDA notified healthcare professionals of changes to the Boxed Warnings/WARNINGS: Increased Mortality and/or Tumor Progression section of the Aranesn and EPIGEB-UPROCRIT labeling Progression section of the Aranesn and EPIGEB-UPROCRIT labeling these progressions and the progression section of the Aranesn and EPIGEB-UPROCRIT labeling the Section of the Aran ESAs shortened overall survival and/or time ESAs shortened overall survival and/or time to tumor progression in clinical studies in patients with breast, non-small cell lung, head and neck, lymphoid, and cervical cancers າ se n in and

clinid and needs, symphoto, and cervical cancers and needs, lymphoid, and cervical cancers when dosed to target a hemoglobin of ≥ 12 g/dL.

Read the complete 2008 MedWatch Safety Summary including a link to the manufacturer's Dear Healthcare Professional Letter regarding this issue at:

http://www.fda.gov/medwatch/safety/2008/safety08.htm#ESA



### -Focus on Elements -

### Red Blood Count

hy range 4.5-5.5. INCREASED in:

### DECREASED in:

nt marrow production

Punicious anemia- deficiency of B12 and folic acid -Phemicious disease -Chronic kidney disease -Chronic liver disease Environmental:

organic phosphate pesticides: Diazinon, Malathion and programates (carbaryl)

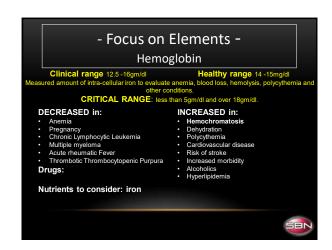
Drugs: Procrit or Epogen

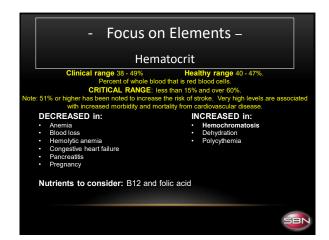
Drugs: NSAIDS

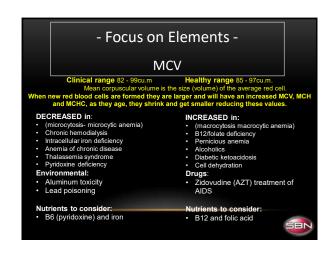
ndations: B12, Folic Acid, minerals, iron

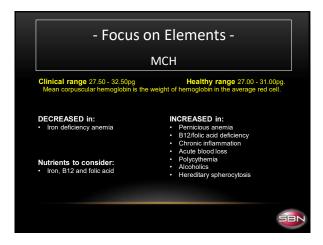


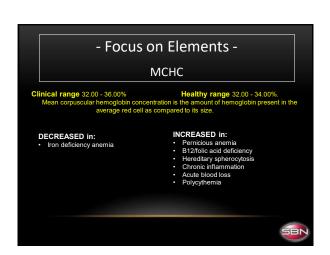












### **RDW RANGES** • Clinical 13-15%; Healthy 13.5-14.5; Critical 11-17 · RDW stands for red cell distribution width. It is a measure of variability or non-uniformity in erythrocyte size across a given sample. The RDW is normally low (normal range 12-15%), but higher values may be indicative of significant heterogeneity in RBC size, a condition sometimes referred to as anisocytosis. An elevated RDW is the first hematological manifestation of iron deficiency anemia, and hence a very sensitive screening test for that particular disorder.

### - Focus on Elements -**RDW** Clinical range 11.5 - 14.5 RDW is an electronic measurement of sis (red cell size variability). INCREASED IN: Iron deficiency anemia Beta Thalassemia minor Pernicious anemia B12 and folate deficiency Nutrients to consider: B12, Folic acid and iron

### ADDITIONAL TESTING IF ANEMIA IS PRESENT

- B12
- Folic Acid (B9)



SBN

### FOLATE/FOLIC ACID

- Folate/Folic Acid (also known as B-9) is a B vitamin that helps the body make and maintain
- It helps make DNA, RNA, amino acids and red blood cells and is very important in pregnancy to
- Digestive disease including Crohn's and celiac disease will cause poor absorption of folic acid, as will several drugs and eating excessively cook food.
- Insufficient folic acid will lead to low platelet count, low white and red blood cell counts and insuminent onic acid with lead to low pitelete count, low writte and ted blood cell counts and elevated homocystetine. High homocysteine significantly increase the risk for coronary heart disease and stroke. Low levels of folic acid have been associated with risks for breast and colorectal cancer, depression and folic acid might help to prevent cancer or cancer mutations.
- Folic acid is found in the serum and in red blood cells. The vast majority of folic acid is in red blood cells and is a better method to determine tissue levels in the body. The test to determine the folate of red blood cells is called hemolysated folate. Serum folic acid levels will fluctuate more readily depending on intake of foods, supplements and digestion.



### FOLIC ACID AND METHYLFOLATE AND MTHFR

- Folic Acid: If anemia presents with elevated levels of serum folic acid and/or homocysteine then further testing is indicated and Methylfolate will likely be required.

  MTHFR stands for methylenetetrahydrofolate reductase an enzyme that activates folic acid by adding a methyl group to it.

  Activated folate (named SMTHF) goes on to give its methyl group to other nutrients and substances a process called "methylation." It is required for the creation of every cell in your body.
- your body.

  SMTHF, along with several other nutrients, is also used to create and process neurotransmitters (messengers in the nervous system like serotonin, epinephrine, norepinephrine, and dopamine); create immune cells and process hormones (such as estrogen); as well as to produce energy and detoxify chemicals.

  Deficiencies in production or function of this enzyme have also been associated with increased risk of myocardial infarction, stroke, venous thrombosis, several types of cancer, congenital defects, inflammatorly bowel disease, and several neuropsychiatric conditions. Other significant roles of a properly functioning MTHFR enzyme include nucleic acid biosynthesis, neurotransmitter synthesis, and production of signaling molecules important for regulating embryonic development.



### PRIMARY CAUSES OF ANEMIA \*\*\*\*\*

- · Lack of good quality protein
- Poor digestion
- Lack of B12, Folic Acid, B6, Iron
- Poor liver and pancreas function
- Intestinal diseases including ulcers, crohn's, IBS and cancer
- Kidney disease- including cancer and polycystic kidney disease Urinary tract disease including Chronic UTI, bladder cancer
- Pesticides, herbicides, cleaning chemicals and industrial chemicals
- Heavy metals- especially lead, mercury, aluminum, arsenic
- Chemo therapy
- Radiation exposure



### ANEMIA'S

CONTRIBUTE/CAUSE HEART DISEASE INCLUDING HBP AND TACHYCARDIA

- One of the major effects is  $\mbox{\bf greatly increased work load on the heart}$
- Low viscosity (due to low concentration of RBC) causes greater quantity of blood return to the heart
- Hypoxia causes vessels dilation further increasing quantity of blood returning to the heart
- Both cause increasing cardiac output to such an extent that almost normal quantities of oxygen is delivered to the tissues.



### **ANEMIAS**

- Blood Loss Anemia: Can't absorb iron as fast as hemoglobin is lost. Aplastic Anemia: Bone Marrow depression (Aplasia) due to radiation, chemo, drugs, environmental toxins
- Maturation Failure Anemia (Pernicious anemia): Most common due to deficiency of B12 and folic acid. Can also be due to intestinal sprue or decreased intrinsic factor from the stomach mucosa due to atrophy or loss of part or all of stomach (think drugs that directly affect the stomach Aspirin, antacids, Prilosec, Prevacid) this may result in macro
- Hemolytic Anemia: abnormalities of RBC's, number of RBC's may be normal, cells are fragile and rupture easily even going through the spleen. The spleen is sometimes removed for this.



### **ANEMIA'S**

- Hereditary spherocytosis: spherical rather than biconcave RBC
- Sickle cell anemia: abnormal composition of hemoglobin. When the hemoglobin is exposed to low concentrations of O2 it precipitates into long crystals inside the red blood cell. These crystals elongate the cell and give it a sickle appearance. The crystals damages the cell membrane which is highly fragile, leading to serious anemia. The sickling causes impediment of blood flow causing still further decrease in oxygen tensions. blood flow causing still further decrease in oxygen tensions. Once this process starts, it can progress rapidly, leading to serious decrease in red blood cell mass within a few hours and,
- Thalassemia: small cells and have fragile membranes, that are easily ruptured
- Polycythemia: too many Blood cells RBC's, WBC's and Platelets



### ANEMIA'S

Decreased tissue oxygenation is the basic stimulus of RBC production

- Cardiac failure
- Lung disease
- Smoking
- Renal cyst
- Renal carcinoma
- Collagen disease Vascular disease
- Postoperative
- Postpartum
- · High altitudes
- Exercise
- · Polycythemia vera (tumorous condition of



### ANEMIA'S

- Polycythemia vera is a tumorous condition of the marrow or organs that produce blood cells
- Polycythemia results in increased viscosity and sluggish blood flow and decreased rate of venous return to the heart. Due to increased blood volume the cardiac output is not far from normal because these two factors neutralize each other.
- Hypoxia seen with polycythemia and reduced blood flow can give a bluish (cyanotic) tint to the skin.



### - Focus on Elements -

### Serum Iron

Clinical range 50-160

- to consider: Based on other value

- - telet count may be increased. iron absorption deficiency: Chronic infection.

### Drugs: ACTH

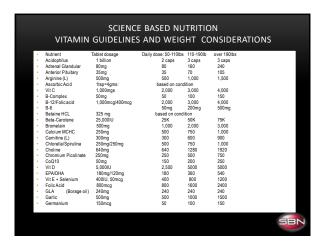
Nutrients to consider: iron, B12 & folic acid

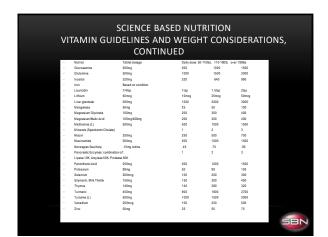


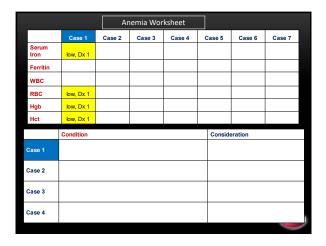
### SCIENCE BASED NUTRITION VITAMIN GUIDELINES AND WEIGHT CONSIDERATIONS

- A vitamin/nutrient listed does not mean is it recommended for any condition including pregnancy.
- Any vitamin/nutrient may cause a reaction or sensitivity of some kind in any individual.
- Any dosage recommendation is a general recommendation and is not to be considered an absolute. Many factors may dictate a need to modify the guidelines.
- Different vitamin companies may have higher or lower levels and combinations of nutrients that make it difficult getting the 'exact' dosage to match the levels listed here. More severe conditions may require higher levels than are recommended here.









Iron	low, Dx 1										
Ferritin											
WBC											
RBC	low, Dx 1										
Hgb	low, Dx 1										
Hct	low, Dx 1										
	Condition						Consideration				
Case 1	Dx 1: Iron De Nutrients for	eficiency Aner r DX 1: Iron,	mia, Blood Lo B12/Folic Aci	oss d		UA, Stool, Kidney What dosage of Nutrients?					
Case 2											
Case 3											
Case 4											

Case 2 Case 3 Case 4 Case 5 Case 6 Case 7

	Case 1	Case 2	Case 3	Case 4	Ca	se 5	Case 6	Case 7		
Serum Iron	low, Dx 1	LOW, Dx 1								
Ferritin										
WBC		HIGH, Dx 2								
RBC	low, Dx 1	LOW, Dx1								
Hgb	low, Dx 1	low, Dx 1								
Hct	low, Dx 1	low, Dx 1								
	Condition					Consideration				
Case 1	Dx 1: Iron I Nutrients f	Deficiency Ane for DX 1: Iron,	mia, Blood Lo B12/Folic Aci	oss d		UA, SI	ool, Kidney			
Case 2										
Case 3										
Case 4										

		Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7		
Sei	rum Iron	low, Dx 1	LOW, Dx 1							
Fei	Ferritin HIGH, Dx 1 & Dx 2									
WE	вс		HIGH, Dx 2	HIGH, Dx 2						
RB	С	low, Dx 1 LOW, Dx 1 LOW, Dx 1								
Hg	b	low, Dx 1	low, Dx 1	low, Dx 1						
Hc	t	low, Dx 1	low, Dx 1	low, Dx 1						
		Condition				Consideration				
	Case 1			mia, Blood Loss B12/Folic Acid		UA, Stool, Kidney				
	Case 2	Nutrients for Dx 2: Possi	or DX 1: Iron, ble Infection	mia, Blood Loss B12/Folic Acid cidin, Vit C, Echinacea	,	UA, Stool,	ESR, Kidr	ney		
	Case 3	Nutrients for Dx 2: Possi	ble Infection/In or Dx 2: Lauric	B12/Folic Acid	,	Metals, Ki	ation for D dney, Stoo ation for D	l, UA		

	C	Case 1	Case 2	Case 3	Case 4	Case	5	Case 6	Case 7						
Serum I		ow, Dx 1	LOW, Dx 1	low, Dx 1	LOW, Dx 1			VLOW, Dx 1	LOW, Dx 1						
Ferritin	itin HIGH, Dx 1 & Dx 2 low, Dx 1 LOW, Dx1		Dx1 HIGH, Dx 2		LOW, Dx 1										
WBC			HIGH, Dx 2	HIGH, Dx 2		LOW, I	Dx 1		VLOW, Dx 1						
RBC	li	ow, Dx 1	LOW, Dx1	LOW, Dx 1	LOW, Dx 1	VLOW, Dx 1		VLOW, Dx 1		VLOW, Dx 1		VLOW, Dx 1		VLOW, Dx 1	VLOW, Dx 1
Hgb	le	ow, Dx 1	low, Dx 1	low, Dx 1	LOW, Dx 1	VLOW,	OW, Dx 1 HIGH, Dx 2		VLOW, Dx 1						
Hct	le	ow, Dx 1	low, Dx 1	low, Dx 1	LOW, Dx 1	VLOW,	Dx 1	HIGH, Dx 2	VLOW, Dx 1						
Ca	ıse 4	Nutr		emia, Blood Loss : 1: B12/Folic Acid, In s	on, Carnatine	€,	Che UA	ck Metals, Live	er, Kidney, Sto						
Ca	ıse 5	Liver	, Bone Marro	emia, Blood Loss, Ch ow Depression : 1: Iron, B12/Folic Ad		Dos	Dosages?								
Ca	ıse 6		: Severe And : Hemochron												
Dx 1: Severe Anemia, Check Liver, Metals, Suspect Cancer (Cancer Tx, Blood Loss Nutrients for Dx 1: B12/Folic Acid, Iron, Trace Minerals Drugs, Cancer, UA, Stoo						A, Stool									

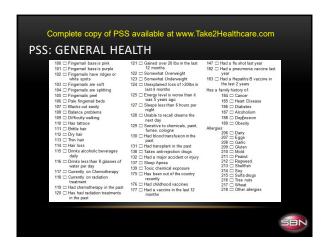
	Van D. Merkle, D.C., D.A.C.B.N., D.A.C.B.L. C.C.N.						
	Nutrition Patient Questionnaire						
	Patient# Date Classification SS#						
	NameDate of Birth						
	AddressCity/State						
	EmailZip Code						
	Telephone: HomeWork						
	Place of Employment Occupation						
	Married Single Divorced Widow(er) # of Children						
	Spouse's NamePlace of Employment						
	In Case of Emergency, who should we contact?  Name Phone Relationship						
New Patient	How did you hear about our office?						
INCW Facicine	We will provide a receipt for you to submit to your insurance. You are responsible for						
O	payment in full at the time of service.  ** I clearly understand that all services rendered me are my responsibility and payment is expected at the time						
Questionnaire:	of service.						
Qu'ou.	Patient's Signature Date If under 18 years of age, parent or guardian's signature						
Dort 1	Nutritional Informed Consent						
Part 1	Nutritional Informed Consent According to the Federal Food, Drug, and Cosmetic Act, as amended, Section 201 (g) (1), the						
	term "DRUG" is defined to mean: "Articles intended for use in the Diagnosis, Cure,						
	Mitigation, Treatment or Prevention of disease."						
	A vitamin is not a drug, NEITHER is a Mineral, Trace Element, Amino Acid, Herb, or						
	Homeopathic Remedy.						
	Although a Vitamin, a Mineral, Trace Element, Amino Acid, Herb or Homeopathic Remedy						
	may have an effect on any disease process or symptoms, this does not mean that it can be misrepresented, or be classified as a drug by anyone.						
	Therefore, please be advised that any suggested nutritional advice or dietary advice is not intended as a primary treatment and/or therapy for any disease or particular bodily symptom.						
	Nutritional counseling, vitamin recommendations, nutritional advice, and the adjunctive schedule of nutrition is provided solely to upgrade the quality of foods in the patient's diet in						
	order to supply good nutrition supporting the physiological and biomechanical processes of						
	the human body. Nutritional advice and nutritional intake may also enhance the stabilization						

PART 2: INFORMED CONSENT	
Nutritional Informed Consent  According to the Federal Food, Drug, and Cosmetic Act, as amended, Section 201 (g) (1), the term "DRUG" is defined to mean: "Articles intended for use in the Diagnosis, Cure, Mitigation, Treatment or Prevention of disease."	
A vitamin is not a drug, NEITHER is a Mineral, Trace Element, Amino Acid, Herb, or Homeopathic Remedy.	
Although a Vitamin, a Mineral, Trace Element, Amino Acid, Herb or Homeopathic Remedy may have an effect on any disease process or symptoms, this does not mean that it can be misrepresented, or be classified as a drug by anyone.	
Therefore, please be advised that any suggested nutritional advice or dietary advice is not intended as a primary treatment and/or therapy for any disease or particular bodily symptom.	
Nutritional counseling, vitamin recommendations, nutritional advice, and the adjunctive schedule of nutrition is provided solely to upgrade the quality of foods in the patient's diet in order to supply good nutrition supporting the physiological and biomechanical processes of the human body. Nutritional advice and nutritional intake may also enhance the stabilization of chiropractic adjustments and treatment.	
I have read and understand the above: Signature Date	
	SBZ

Complete copy of PSS available at www.Take2Healthcare.com
<ul> <li>This is just the first page of the Patient Symptom Survey</li> </ul>
<ul> <li>Complete copy of PSS available at www.Take2Healthcare.com</li> </ul>
58N

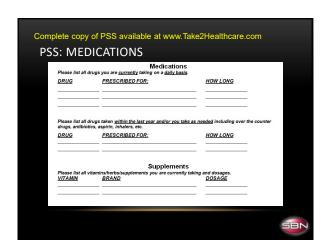
PATIE	NT SYMPTOM SUI	RVEY
DATE		
PATIENT'S NAME	AGE	
WEIGHT HEIGHT	BLOOD PRESSUREPULS	SE
the condition does not apply to condition applies to you, then d once in the last month probably	mptom survey. Please check each you or you do not understand a ten lo not check the box. Use common isn't that important and would not notable and would be marked. Plea	m or if you are not sure if a sense. For example, Insomnia be marked. However, Insomnia
Complete copy of F	PSS available at www.Take	2Healthcare.com
		SBZ







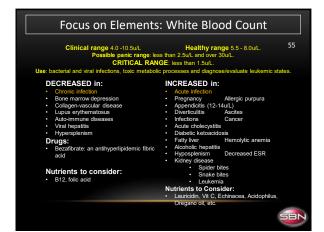




THE PURPOSE OF THE CONSULTATION
Primarily to develop confidence in the doctor by:  taking a good history  really listening to the patient  providing hope  laying out a plan of action  testing  report of findings  expected results based on previous history, experience and study
SBN



### TESTING DRIVES EVERYTHING, THE REPORT IS THE MAP ON THE QUEST FOR BETTER HEALTH Doctor's confidence Patient confidence Reporting and consultations Compliance Further testing Retesting Results which lead to: Referrals



## WHITE BLOOD CELLS Lymphocytes have a life span of 100 to 300 days... maybe even years. Circulate in the blood, pass into the tissues by diapedesis (similar to amoeba), reenter the lymph and return to the blood again and again. Multipotential cells similar to stem cells which can become, under appropriate conditions, erythroblasts (RBC's), myeloblasts (leukocytes), fibroblasts (connective tissue) etc. There is actually a blood test called the Lymphocyte Transformation Test that will detect and classify congenital or acquired immunodeficiency disorders and hypersensitivity Type 1 reactions.

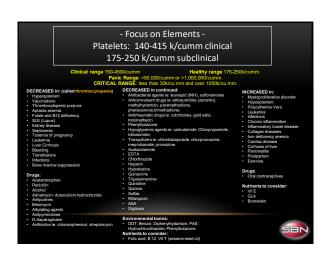
## WHITE BLOOD CELLS • Lymphocytes and immunity: B + T cells • Thymus "T" Cells are responsible for immunity at the cellular level, for rejection of transplanted organs, and useful to monitor and diagnose AIDS specifically T4 (helper cells) & T8 (suppressor cells).

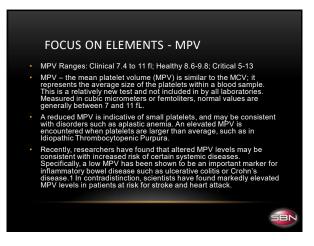
### WHITE BLOOD CELLS

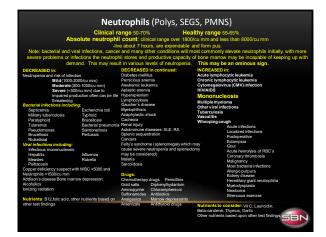
- "B" Lymphocytes migrate to the thymus, where they develop into T cells and begin to mature.
- From the thymus they go to a particular area of the peripheral lymphoid tissues and from there they circulate between blood and lymph.
- "B" Lymphocytes are responsible for antibody production.
- They become activated to a specific antigen. It produces antibody and "clones" of itself to produce more antibody. The more the antigen is introduced the more clones are made to produce specific antibodies.
- These are "dedicated" Lymphocytes to a specific antigen and only respond to it. This response may last several weeks or several months. This is the rational and philosophy of vaccination.

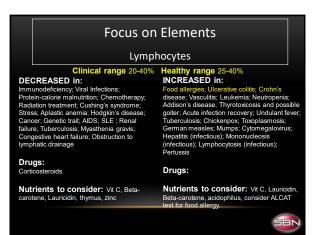


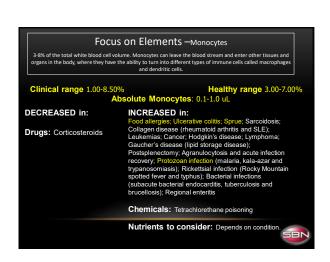
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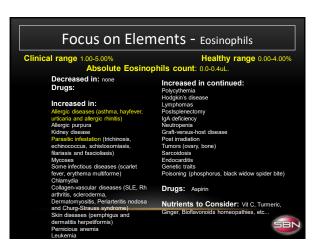


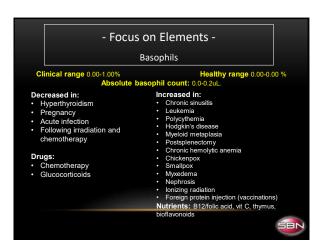






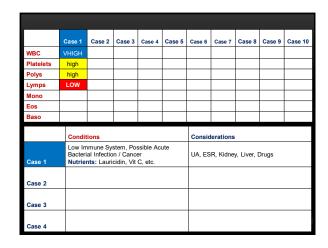








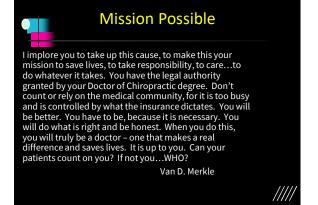


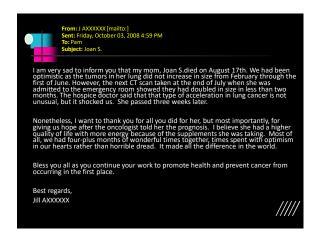


WBC	VIIIGII		LOW	LOW	поп							
Platelets	high	high HIGH										
Polys	high	high HIGH LOW										
Lymps	LOW	LOW	high	HIGH								
Mono		HIGH HIGH HIGH										
Eos		HIGH										
Baso		HIGH										
	Condi	Conditions					Considerations					
Case 5	Toxic -	es – Envir - Anaphyla nts: Vit C	actic, Car	ncer	Dairy	Digesti	on, Thyr	oid, Prote	eins, Drug	gs.		
Case 6												
Case 7												
Case 8												

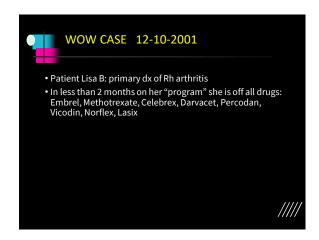
	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10		
WBC	VHIGH		LOW	LOW	HIGH	high						
Platelets	high			HIGH								
Polys	high	HIGH	LOW									
Lymps	LOW	LOW	high	HIGH								
Mono			HIGH	HIGH	HIGH							
Eos					HIGH							
Baso					HIGH							
	Condit	Conditions					Considerations					
Case 5	Toxic -	Allergies – Environmental, Food, Toxic – Anaphylactic, Cancer Nutrients: Vit C, Lauricidin, Avoid Dairy					Digestion, Thyroid, Proteins, Drugs					
Case 6	Nutrie	Chronic Infection Nutrients: Lauricidin, Vit C, Beta Carotene, Thymus, Echinacea					UA, Stool, Drugs					
Case 7												
Case 8												

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10		
WBC	VHIGH		LOW	LOW	HIGH	high			LOW	LOW		
Platelets	high			HIGH				HIGH	HIGH	LOW		
Polys	high	HIGH	LOW									
Lymps	LOW	LOW	high	HIGH			HIGH		LOW	LOW		
Mono			HIGH	HIGH	HIGH			HIGH				
Eos					HIGH							
Baso					HIGH							
	Condi	Conditions					Considerations					
Case 9	Cance Nutrie	Bad Sign/Low Immune System, Possible Cancer, Chronic Infection Nutrients: Lauricidin, Vit C, Beta Carotene, Thymus, Echinacea					UA, ESR, CRP, Proteins, Drugs					
Case 10	Very Bad, Probably Cancer Nutrients: Lauricidin, Vit C, Beta Carotene, Thymus, Echinacea					UA, Metabolic UA, Proteins, Liver, Thyroid, Drugs						
										SBZ		



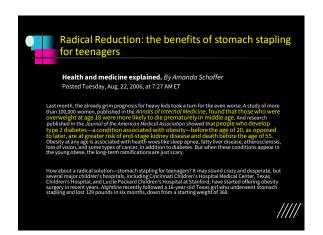






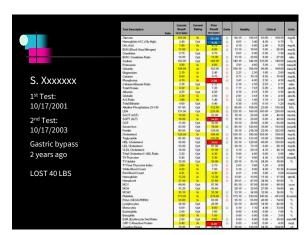


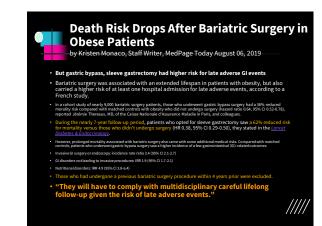


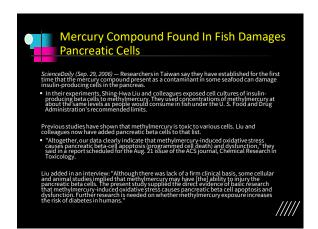


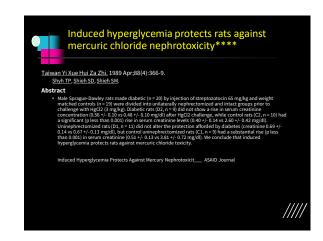


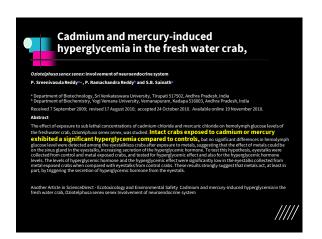
- To be sure, obesity surgery is a risky proposition. One small study, published earlier this year in the *Journal of Pediatric Surgery*, found that roughly 40 percent of kids who underwent gastric bypass experienced some kind of complication, such as intestinal leakage, dumping syndrome, bowel obstruction, wound infection, or a nutritional deficiency. (A similar complication rate has been found in adults). Nutritional deficiencies, especially of calcium, iron, vitamin B-1 and vitamin B-12, may occur partly because patients are eating less and partly because the operation bypasses a portion of the digestive tract that efficiently absorbs many vitamins and minerals.
- The potential for deficiencies means that patients must adhere to strict guidelines. All patients must eat more lean, high-quality protein; exercise; and take vitamins and minerals for the rest of their lives. Teenage girls must take additional calcium and iron.

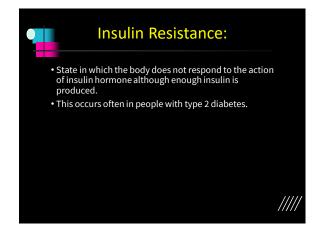


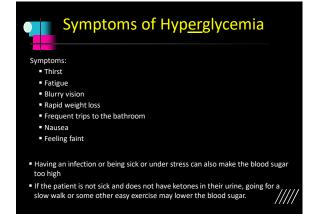


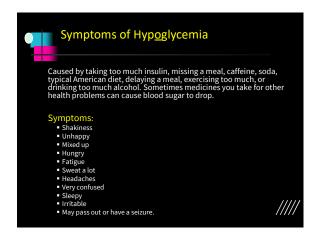
















### Causes of Diabetes Type 1

- Viruses
- Auto-immune disease
- Drugs: steroids, antibiotics etc.
- Vaccinations





### **Diabetes**

- An estimated 16 million people in the United States have diabetes mellitus
- About half of these people do not know they have diabetes and are not under care for the disorder.
   Each year, about 798,000 people are diagnosed with diabetes.
- 5th or 6th leading causes of death and disability in the United States...more than 193,140 deaths in 1996.
- One of the most common chronic disorders in children in the United States. About 123,000 children and teenagers age 19 and younger have diabetes.
- 24,000 persons with diabetes lose their sight each year. In the United States, diabetic retinopathy is the leading cause of blindness in adults under age 65.





### **Diabetic Kidney Disease**

- The most common cause of kidney failure in the United
- The greatest threat to life in adults with Type 1 Diabetes.
- After having diabetes for 15 years, one-third of people with type 1 diabetes develop kidney disease.
- Diabetes damages the small blood vessels in the kidneys, impairing their ability to filter impurities from blood for excretion in the urine.
- Persons with kidney damage must have a kidney transplant or rely on dialysis to cleanse their blood.





### **Diabetic Neuropathy**

- Can cause pain and loss of feeling in the feet, legs, and
- Can also affect the parts of the nervous system that control blood pressure, heart rate, digestion, and sexual function.
- Is a major contributing factor in foot and leg amputations among people with diabetes.





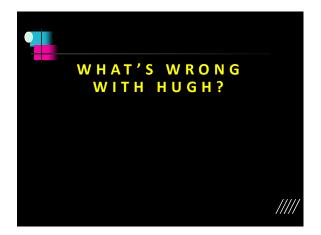
### **Diabetes...Long-term Complications**

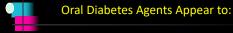
- Blindness
- Heart disease
- Strokes
- Kidney failure
- Amputations
- Nerve damage
- Uncontrolled diabetes can complicate pregnancy
- Birth defects are more common in babies born to women with diabetes.
- Don't forget about impotence



### **Study Links Cancer & Diabetes**

- ASSOCIATED PRESS DDN 1-12-05
- CHICAGO—a study of more than 1 million South Koreans suggests diabetes can raise the risk of developing and dying from several types of cancer, including digestive-tract tumors.
- Diabetes is often linked to obesity and obesity is known to increase the risk
  of cancer. Yet few of the study participants were overweight, so the
  researchers think high blood sugar levels- another hallmark of diabetesalso might be involved.
- The highest risks for developing cancer and dying from it were found in people with the highest blood sugar levels, the South Korean researchers found. The study appeared in *Journal of the American Medical Association*
- Researchers analyzed data on 1.29 million South Korean men and women ages 30-95. About 5 percent of the participants had diabetes. A total of 26,473 participants died of cancer during follow-up.
- Participants with diabetes were roughly 30 percent more likely than those without to develop and die from cancer.





Oral diabetes agents are not insulin "pills" but powdered, compressed medications that <u>appear</u> to:

- Affect the insulin-making ability of the beta cells of the pancreas
- Stimulate the forming of receptor sites on the cells
- Correct some post-receptor defects on the insides of the cells
- Effect production of glucose by the liver (hepatic glucose production).



### Metformin (Glucophage)

Increases the muscles' ability to use insulin, decreases glucose production in the liver, does not promote weight gain, somewhat reduces levels of triglycerides and other fats such as LDL or "bad" cholesterol in the blood, and may decrease the absorption of glucose from the intestine. All these effects usually result in lower blood sugar. Side effects may include loss of appetite, nausea, and diarrhea. Metformin is available in 500-mg and 850-mg tablets with a maximum dosage of 2,550-mg per day. Contraindications for metformin include patients with Type 1 diabetes; those at risk for cardiovascular disease; those with kidney or liver disease; serum creatinine levels greater than 1.4 (for men) and 1.5 (for women); those who use alcohol excessively; and children and pregnant women. The use of metformin with any of these can result in serious and potentially fatal side effects such as lactic acidosis. It can be used with oral hypoglycemic agents, acarbose, troglitazone, or insulin.



### Metformin (Glucophage) cont.

- Works by suppressing the liver's glucose production and increasing the sensitivity of the cells to insulin.
- Risks: impaired liver and kidney function causing lactic acid buildup in the blood which can be fatal.
- This drug can increase your chances of dying from cardiovascular problems by two-and-a-half times.





### Acarbose Drugs (Precose)

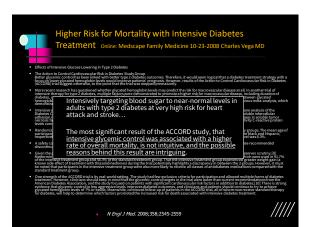
- Function: Slows carbohydrate digestion in the small intestine by blocking enzymes that naturally break down the carbohydrates
- Risks: poor digestion, cramps, gas, diarrhea, linked to cancer of kidney in lab rats.



### Lantus (Insulin Glargine) 07-01-2009 MedWatch

- Audience Diabetes healthcare professionals, patients
- FDA notified healthcare professionals and patients that it is aware of four recently-published observational
- studies that looked at the <u>use of Lantus (insulin glargine) and possible risk for cancer in patients with diabetes.</u>
- Three of the four studies suggest an increased risk for cancer associated with use of Lantus.
- FDA's currently reviewing many sources of safety data for Lantus, including these newly published observational studies, data from all completed controlled clinical trials, and information about ngoing controlled clinical trials, to better understand the risk, if any, for cancer associated with use of Lantus. Discussions are also ongoing between FDA and the manufacturer of Lantus as to whether any additional studies evaluating the safety and efficacy of this drug will need to be performed. FDA will communicate the results on its ongoing review to the public, as appropriate, as so urreview continues.
- The FDA encourages both healthcare professionals and patients to report side effects from the use of insulin glargine to the FDA's MedWatch Adverse Event Reporting Program at www.fda.gov/medwatch/report.htm.
- Read the complete MedWatch Safety summary, including a link to the Early Communication and supporting documents, at:
- http://www.fda.gov/Safety/MedWatch/SafetyInformation/SafetyAlertsforHumanMedicalProperty.





Physicians Pay Attention: You Aren't Testing Your Patients Adequately for Kidney Disease!
Posted 03/17/2008 MedScape Herman Hurwitz, MD, FCAP\*\*\*\*\*\*

- Chronic kidney disease, or CKD, is a life-threatening condition that affects more than 1 in 9 adults in the United States.[1] The consequences of inadequately treated CKD are cardiovascular disease and its comorbidities -- heart attack and stroke -- as well as renal failure. A recent Quest Diagnostics Health Trends Report suggests that patients most at risk for CKD -- specifically, those with diabetes or hypertension[2] -- are not being effectively monitored.

  Our analysis developed in a second in the control of the cont
- Our analysis, developed in partnership with the National Kidney
   Foundation, found that a stunning 60% of patients with diabetes and
   kidney disease did not receive a test for urine microalbumin during a 12month period. 90% of patients who had hypertension and kidney disease
   also did not receive the test
- That's my opinion. I'm Dr. Herman Hurwitz, Senior Medical Director, Quest Diagnostics Mid Atlantic business unit-Philadelphia Campus.



### The Silent Kidney Disease Epidemic

- More than 26 million Americans over age 20 suffer chronic kidney disease, which represents 13% of the adult population!22
- Diabetes and poorly controlled blood pressure are the leading causes of kidney failure, meaning this epidemic is largely preventable with early detection.28
- Annual blood chemistry tests and regular blood pressure checks can identify deteriorating kidney function early



### The Silent Kidney Disease Epidemic

- End-stage renal disease is the name for kidney failure so advanced that it cannot be reversed. End-stage renal disease means that kidney function is so poor that the patient cannot be kept alive without aggressive and often only partially effective treatment.
- aggressive and often only partially effective treatment.

  There are 336,000 Americans receiving chronic dialysis treatment right now.22 Another 136,000 Americans are surviving with a kidney transplant.22 These treatments can induce serous side effects that shorten the patient's life span. The annual cost of dialysis alone is about \$70,000, most of which is borne by Medicare (which is facing near-term insolvency).29





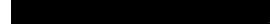
### The Silent Kidney Disease Epidemic

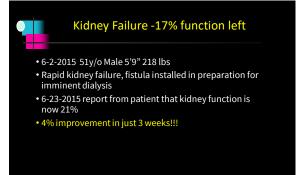
- The National Kidney Foundation estimates that more than 67,000 Americans die of kidney failure each year,
- Kidney failure is so devastating to aging individuals because it causes startlingly high levels of homocysteine and C-reactive protein, greater incidences of anemia, and a host of other complications.

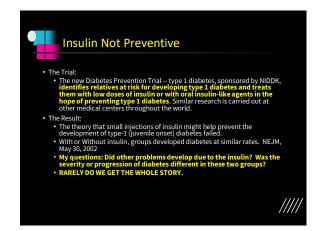


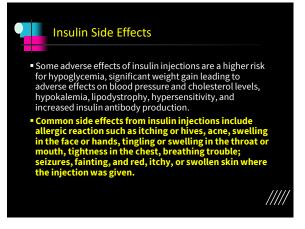
### The Silent Kidney Disease Epidemic and FDA banning Pyridoxamine B6

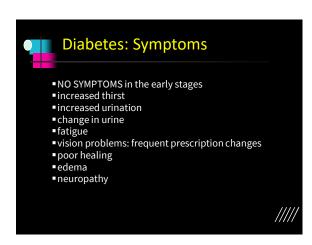
- The FDA is seeking to ban pyridoxamine, which has been demonstrated to significantly delay the progression of kidney disease.11-13
- Pyridoxamine has been shown to slow the elevation of creatinine, a blood marker of kidney function by 68%.24 These data indicate that many of those destined to perish from kidney disease will be dying prematurely because of the FDA's draconian actions to keep pyridoxamine away from the public.

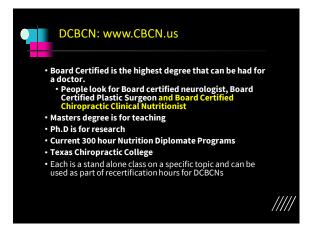


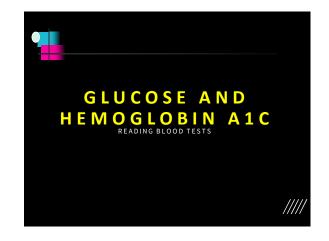


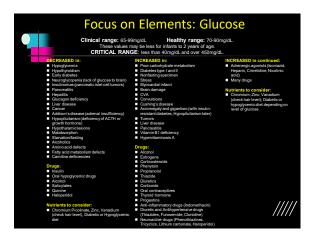


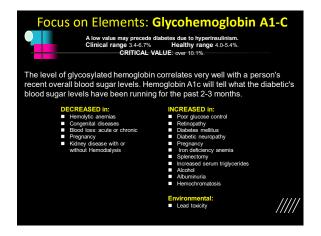


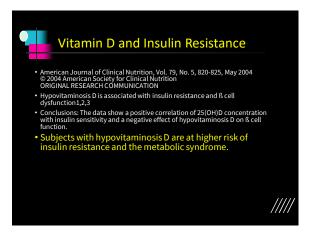


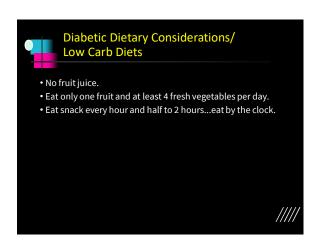


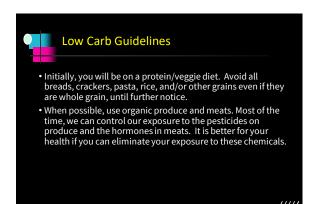






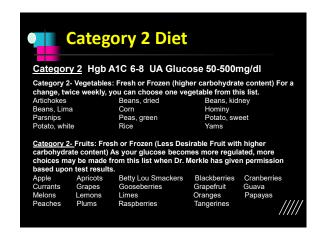


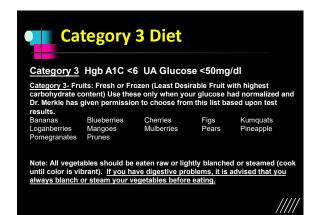


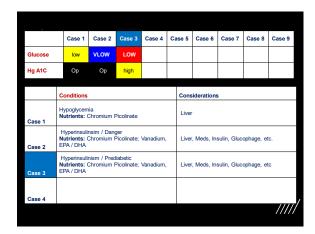


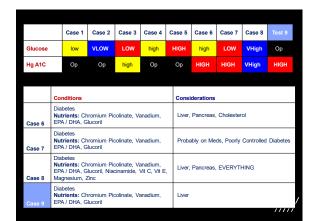




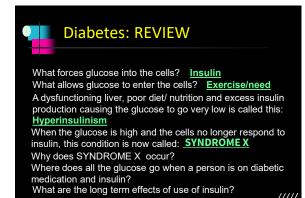


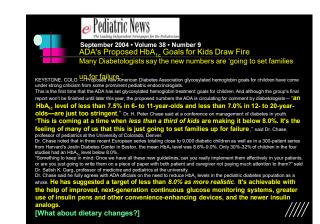


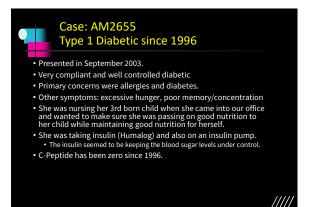


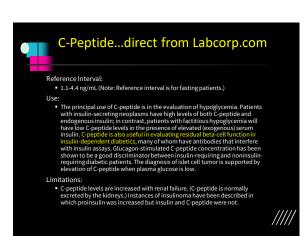


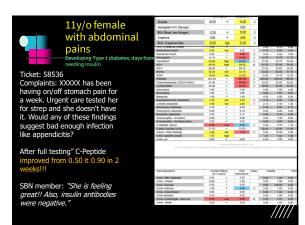


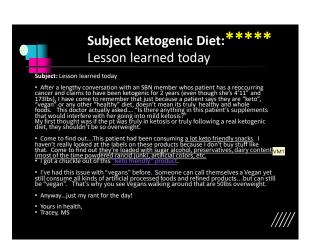














#### Insulin Auto Antibodies

- High Insulin Auto antibodies precede Type 1 diabetes, commonly referred to as insulin-dependent diabetes (IDDM)
- Insulin Auto antibodies cause pancreatic beta-cell destruction that leads to an absolute insulin deficiency.
- The clinical onset of diabetes does not occur until 80% to 90% of pancreatic beta cells have been destroyed.
- Prior to clinical onset, type 1 diabetes is often characterized by circulating autoantibodies against a variety of islet cell antigens, including glutamic acid decarboxylase (GAD), tyrosine phosphatase (IA<sub>2</sub>), and insulin.
- nune destruction of the insulin-producing pancreatic beta ght to be the primary cause of type 1 diabetes.
- ■\$91.76 TEST NUMBER 141598 CPT CODE 86337





#### IA<sub>2</sub> Antibodies (ICA512 Auto antibodies or Tyrosine Phosphatase Auto antibodies)

- $1A_2$  Antibodies The presence of these autoantibodies provides early evidence of autoimmune disease activity
- IA2 Antibodies measurement can be useful in assisting the physician with the prediction, diagnosis, and management of patients with diabetes.
- Autoantibodies to IA<sub>2</sub>, a tyrosine phosphatase-like protein, are found in 50% to 75% of type 1 diabetics at and prior to disease onset.
- $\bullet \ \ \text{These autoantibodies are generally more prevalent in younger onset patients}.$
- · The risk of diabetes is increased with the presence of each additional
- The positive predictive value of the IA<sub>2</sub> antibody test is enhanced when measured in conjunction with antibodies to GAD and insulin.
- \$140.00 TEST NUMBER 141531 CPT CODE 86341





#### GAD-65 Glutamic acid decarboxylase (GAD<sub>65</sub>)

- GAD-65 (Glutamic acid decarboxylase (GAD<sub>65</sub>)) is an enzyme that is produced primarily by pancreatic islet cells.
- A number of recent studies indicate that patients with Type 1 insulin-dependent diabetes mellitus (IDDM) often have antibodies to GAD<sub>65</sub>.
- The presence of GAD<sub>65</sub> autoantibodies has been shown to be a strong predictive marker for the eventual onset of IDDM.
- Measurement of GAD<sub>s</sub> antibody can also be of use in distinguishing insulin-dependent from noninsulin-dependent diabetics when the clinical history is ambiguous.
- GAD<sub>Es</sub> autoantibodies are often markedly elevated in patients with the stiff-person syndrome (also referred to as stiff-man syndrome), a condition that is associated with fluctuating stiffness and paroxysmal spasms of the trunk and legs.
- \$178.50 TEST NUMBER 143008 CPT CODE 83519

Beta-hydroxybutyrate (BHB)a test to determine diabetic ketoacidosis

**etone concentration.**The reason for this is that the rates of glucose and ketone production and trilitization are not the same at different stages of the DKA. Therefore, severe letosis can be missed if it is not investigated until severe hyperglycemia is also

Shekih-Ali M, Karon BS, Basu A, et al. Can serum β-hydroxybutyrate be used to diagnose diabetic ketoacidosis. Diabetes Care. 2008;31:643-647. [PubMed] [Google Scholar]
 Van de Maele, Rogier N, Damidet S, Retrospective study of owner's perception on home monitoring of blood glucose in diabetic dogs and cats. Can Vet J. 2005;46:718-723. [PMC free article] [PubMed] [Google Cheele A. (Constitution of the Constitution of

Tietz Textbook of Clinical Chemistry. Edited by CA Burtis, ER Ashwood. Philadelphia, WB Saunders Co.
1999

ygy
Vassault A, Bonnefont JP, Specola N, et al: Lactate, pyruvate, and ketone bodies. In Techniques in agnostic Human Biochemical Genetics - A Laboratory Manual. Edited by F Hommes. New York, Wiley-



#### Beta-hydroxybutyrate (BHB)-\*\*\*

a test to determine diabetic ketoacidosis

- For those with type 1 diabetes, as well as type 2 diabetes, testing for this ketone
  is critical.
   Ketones are not harmful in small levels, however, high levels of betahydroxybutyrate can be dangerous. For those following the newest trend, the keto
  diet, certain levels of ketones are desirable (between 0.5-3 mmol/L). However, for
  those with diabetes, these levels must be monitored as high levels could be
- Deadry.

  Diabetic Keto Acidosis (DKA) can occur with diabetes, high glucose, being sick, pregnant, infections or a variety of other conditions.

  The urine dipstick does not measure beta-hydroxybutyrate, the most abundant of the physiciagical letone holias:
- The dipstick reagent only reacts with ketones: acetoacetate and acetone. This
  would indicate a need for a BHB blood test especially for children and adults with
- positive dipstick ketones.
   Serum BHB increases in response to fasting, but should not exceed 0.4 mmol/L following an overnight fast (up to 12 hours).
   Twenty four-hour fasting tests should not be performed in patients <2 years of</li>











#### Case: AM22655

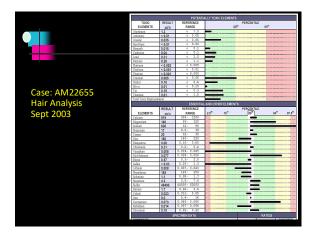
Test Results / Nutritional Recommendations

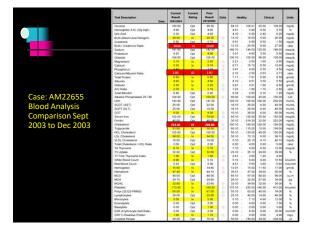
- Hypercholesterolemia: MLK (fish oils) It has been shown in humans that the serum glucose concentration does not correlate well with the blood
  - Kidney involvement: Beta Carotene, Vit C
  - Low Minerals: Calcium MCHC, Magnesium Glycinate, Spectramin Chelate
  - Gastro/Intestinal dysfunction: Betaine HCL
  - Low Functioning Thyroid: Energenics, Norwegian
  - Anemia: Iron Peptonate, Sublingual B12
  - Possible infection and/or inflammation: Vitamin C, Lauricidin

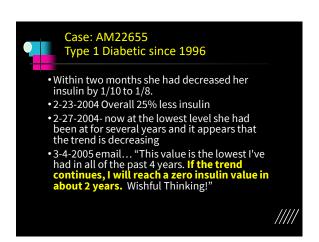




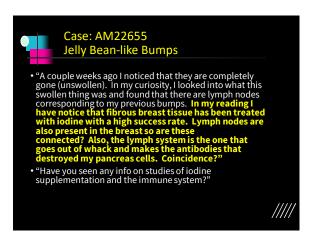


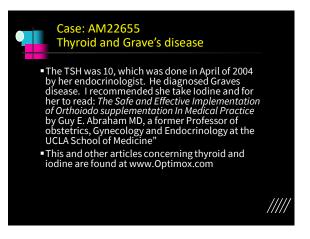


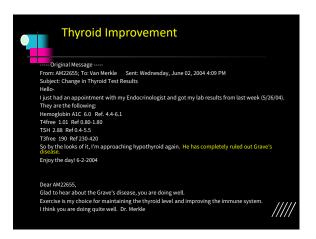


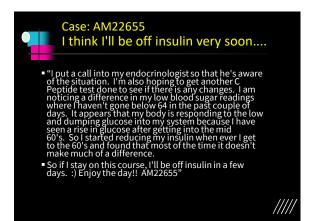


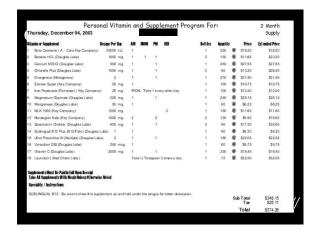




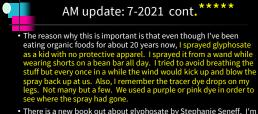




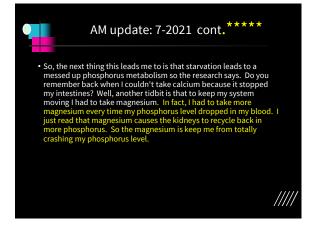








There is a new book out about glyphosate by Stephanie Seneff. I'm in the process of reading it and it clicked that I most likely stored glyphosate in my adipose tissue back then. So I messaged her and asked if glyphosate leaves through the hair and she said that another researcher found that it leaves in the hair and nails. So if you look at my hair tests when my phosphorus got low in my blood, my hair tests are high in phosphorus. So my next question is, does the hair test measure the phosphorus in glyphosate if is coming out





#### AM update: 7-2021 cont.\*\*\*\*\*

That said, I need more phosphorus. There have been times that my blood sugars unexpectedly drop at night so I like to keep my glucose from being too close to low so that I don't have issues at night. That said, having your glucose elevated at all causes more phosphorus depletion. So, do you remember when I was all happy when I found that phosphorus supplement back in 2008 that reduced my daily insulin requirements gradually every day? It was a very gradual decrease that was consistent. I tried to get more of the stuff but it was discontinued and I could not find another bottle anowhere. I so was to to try that argin. I took something call. the stuff but it was discontinued and i could not find another bottle anywhere. I so want to try that again. I took something call 'lysinated phosphorus' that was made by Swanson supplements (if you do a google of it, there is a page about it at therb). This supplement bonded lysine with phosphorus and it really worked for me the whole brief time I was able to take it. Lysine is known to really help bring minerals across the gut barrier



#### AM update: 7-2021 cont.\*\*\*\*\*

- Is there any way to get this supplement? I really think that it is key for me. I need the energy back in my life and an increase in ATP production would do a lot for my system including detoxing and glucose regulation. I know you have made your own supplements, or maybe you know someone at this Swanson company that could be the country of the c make a small batch? If this is what I am missing, then how do I get it? Any ideas?
- Anyway, I hope all is well in Ohio... Thanks! Anne Meyer
- PS.One side question, is it possible to get Ivermectin through Take
   2? Terry's got to be on campus this fall and so does our third,
   Amelia, who just graduated high school. I'm not sure how to get ahold of this stuff.





#### AM update: 7-2021 cont.\*\*\*\*\*

 And also another thing to think about from what I have read is that calcitriol causes calcium deposition when phosphorus is low. Biophosphinates prevent calcium deposition so maybe they would help with the calcium deposits I have... Also, this could would neep with the Caticum deposits Insteam. Also, this could explain why my thyroid woke up in my January 2009 testing. They thyroid also contains phosphrus that I have read. And since I had just taken phosphorus in mid 2008 and then I uped my vitamin D, did that cause my system to get revved up? I'd expect a longer reaction time when dealing with thyroid hormones... Anne



#### Case: AM22655 Results

#### Prior to treatment (9-2003):

24 units/day Daily average insulin usage

## Current level with 6 months following Dr. Merkle's advise: Daily average insulin usage 12 units/day As of April 2006, she is at 11-12 units/day Along with everything else on the SBN program she has added tyrosine PCA-Rx for heavy metal detox.

- Complicating factors: Nursing, thyroid problems, toxic elements (uranium), low minerals (iodine, vanadium, manganese), chronic infection
   Glyphosate





#### **HEART** DISEASE



#### 9 in 10 Will Develop Hypertension

- $\bullet$  The lifetime risk for the development of high BP is 90%
- 60% will receive medication
- "This public health burden will likely increase as the US population ages in the near future.
- Hypertension: greater than 140/90 JAMA 2002:287(8).





#### First sign of heart disease...sudden death.

- The vast majority of diabetic patients develop heart disease, and 80% of them die of heart disease. But 1/3 of people who have diabetes don't know it.
- DDN 2-2002: Recommended that people get more frequent urinalysis to detect kidney disease and diabetes.



#### **New Cholesterol Standards**

- Will triple the number of people taking cholesterol drugs from 13.5 million to 36 million people.
- Americans needing to make lifestyle changes will now number 65 million, up from 52 million.
- Reader's Digest August 2002





#### Statins in America

#### icans over the age of 45 take a statin

- Adverse effects:
- muscle problems
  nerve damage in hands and feet
- immune depression
   pancreas and liver dysfunction
   sexual dysfunction
- cataracts
- memory lossincreased risk of cancer



#### Statin Drugs lead to Diabetes

- Researchers looked at five different clinical trials that together examined more than 32,000 people. They found that the higher the dosage of statin drugs being taken, the greater the diabetes risk.
- "In a pooled analysis of data from 5 statin trials, intensive-dose statin therapy was associated with an increased risk of new-onset diabetes compared with moderate-dose statin therapy."
- Journal of the American Medical Association June 22, 2011; 305(24): 2556-2564







#### Statin Drugs Accelerate Cardiovascular Disease: **Coronary Calcification by More than 50 Percent**

One in four Americans over the age of 45 take a statin

Adverse effects of statin drugs include muscle problems, nerve damage in hands and feet, immune depression, pancreas and liver dysfunction, sexual dysfunction, cataracts, memory loss, and an increased risk of cancer

A new study shows that statin use is associated with a 52 percent increased prevalence and extent of calcified coronary plaque compared to non-users. Atherosclerosis August 24, 2012

The authors concluded that:

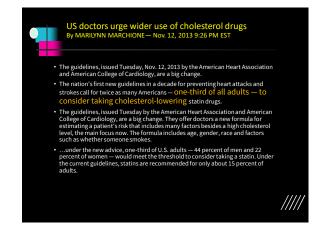
"More frequent statin use is associated with accelerated coronary artery calcification in T2DM patients with advanced atherosclerosis."



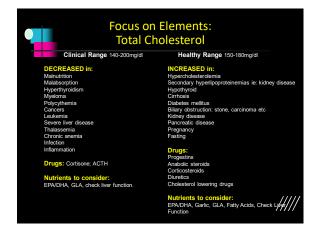
#### Statins Inhibit Vitamin K2 and Stimulate Hardening of the Arteries

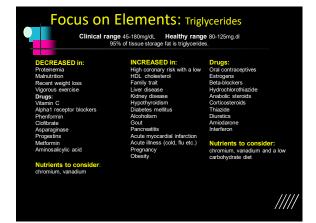


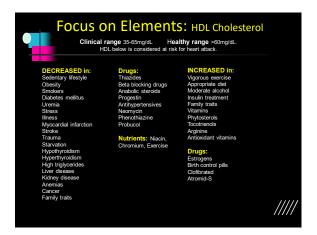


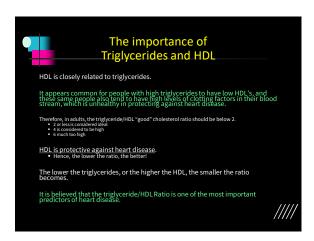


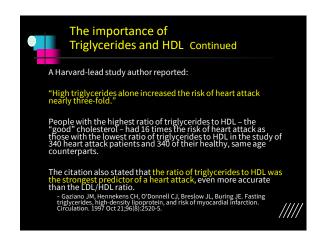




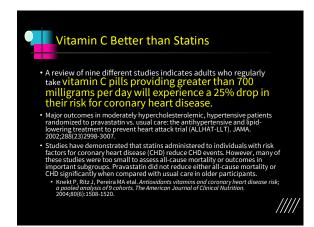


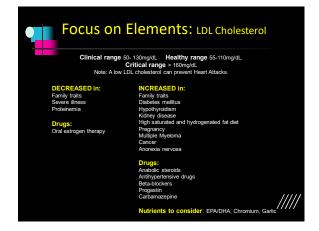


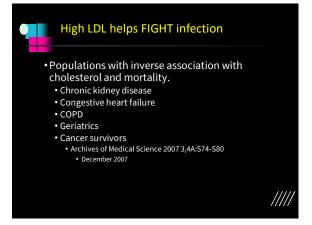


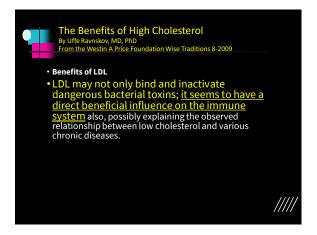


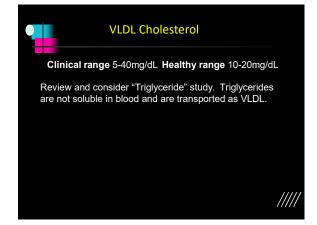














#### The Benefits of High Cholesterol By Uffe Ravnskov, MD, PhD From the Westin A Price Foundation Wise Traditions 8-2009

- People with high cholesterol live the longest emerges clearly from many scientific papers. Consider the finding of Dr. Harlan Krumholz of the Department of Cardiovascular Medicine at Yale University, who reported in 1994 that old people with low cholesterol died twice as often from a heart attack as did old people with a high cholesterol.1
- Now consider that more than 90 % of all cardiovascular disease is seen in people above age 60 also and that almost all studies have found that high cholesterol is not a risk factor for women.2 This means that high cholesterol is only a risk factor for less than 5 % of those who die from a heart attack.
- Six of the studies found that <u>total mortality was inversely</u> associated with either total or LDL-cholesterol, or both. This means that it is actually much better to have high than to have low cholesterol if you want to live to be very old.





#### **Cholesterol and Chronic Heart Failure**

- Researchers at several German and British university hospitals found that the risk of dying for patients with chronic heart failure was strongly and inversely associated with total cholesterol, LDL-cholesterol and also triglycerides; those with high lipid values lived much longer than those with low values.11,12
- Other researchers have made similar observations. The largest study has been performed by Professor Gregg C. Fonorow and his team at the UCLA Department of Medicine and Cardiomyopathy Center in Los Angeles.13 The study, led by Dr. Tamara Horwich, included more than a thousand patients with severe heart failure. After five years 62 percent of the patients with cholesterol below 129 mg/l had died, but only half as many of the patients with cholesterol above 223 mg/l.





#### The Benefits of High Cholesterol

"High cholesterol is associated with longevity in old people. It is difficult to explain away the fact that during the period of life in which most cardiovascular disease occurs and from which most people die (and most of us die from cardiovascular disease), high cholesterol occurs most often in people with the lowest mortality. How is it possible that high cholesterol is harmful to the artery walls and causes fatal coronary heart disease, the commonest cause of death, if those disease, the commonest cause of death, if those whose cholesterol is the highest, live longer than those whose cholesterol is low?"

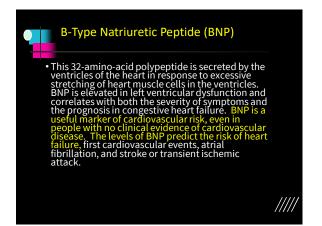
CES HIM and others. Lack of association between cholecterol and coronary heart disease mortality and morbidity and all-cause mortality in persons older than 70 years. Journal of the prizan Abdical Association 727, 1335-1340, 1990.

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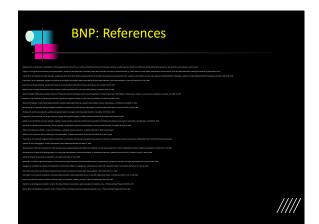
The Benefits of High Cholesterol, By Uffe Ravnskov, MD, PhD From the Westin A Price Foundation Wise Traditions 8-2009

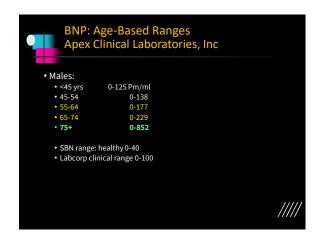
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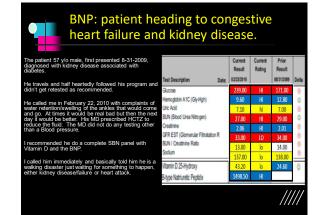
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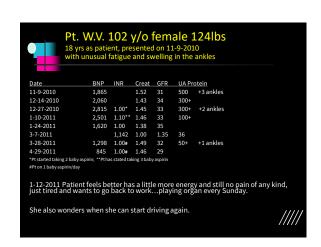


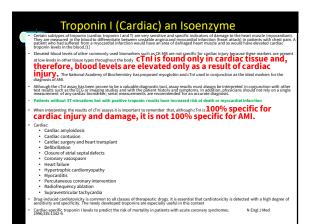


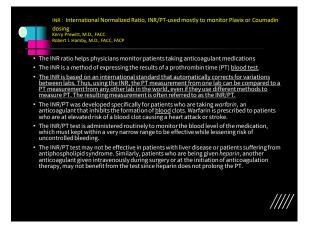














#### INR: International Normalized Ratio, INR/PT-Prewitt, M.D., FACC et I. Hamby, M.D., FACC, FACP

Aside from some changes in certain medications that may be ordered by one's physician, no special preparations are necessary for this test. A healt person will have an INR of 1.0. However, patient taking anticoagulants to reduce the risk of bloo f blood clots en 2.0 and 3.5. A higher number indicated greater anti-coagulation. Conditions that may warrant a higher-than-normal INR include atrial fibrillation, artificial heart valves, and thrombophlebitis (e.g., deep vein thrombosis, superficial vein thrombosis). Superficial vein thrombosis is usually not treated with warfarin.



#### **High Blood Pressure**

- 25% of the adult population in the US have high blood
- Decreasing the BP from 160/90 to 140/80 decreased the risk of heart disease more than 30%.
- Deficiencies of the following nutrients cause or contribute to high BP:
- Magnesium
   Omega-3 (fish oil or Flaxseed oil)
   Garlic
   Hawthorn extract
   CoQ-10
   Valerian root

- Valerian root





#### Hydrochlorothiazide:

- Constipation; diarrhea; dizziness; lightheadedness (especially when sitting up or standing); loss of appetite; nausea; temporary blurred vision.
- appetite; nausea; temporary blurred vision.

  Severa allergic reactions (rash; hives; itching; difficulty breathing; tightness in the chest; swelling of the mouth, face, lins, or tongue); confusion; dark urine; decreased urination; fainting; fast or irregular heartbeat; fever, chills, or persistent sover throat; increased thirst; joint pain, swelling, warmth, or redness (especially of the big toe joint); mental or mood changes; muscle pain or cramps; numbness or tingling; red, swollen, blistered, or peeling ashin; estzures, severe or persistent nausea or stomach pain; shortness of breath; unusual bruising or bleeding; unusual drowsiness, restlessness, tiredness, or weakness; unusually dry mouth; vomiting; yellowing of the eyes or skin. Metabolic effects: Raises cholesterol, Raises uric acid, Hyperglycemia, Low serum, Magnesium, Hyponatremia, Hypercalcemia, Metabolic alkalosis, Increases URJ 50%, May decrease insulin secretion, Increases BUN and Creatinine kindy disease, Increases the properties of the control of the contro
- http://www.drugs.com/sfx/hydrochlorothiazide-side-effects.html#ixzz0qY0nhV6Z

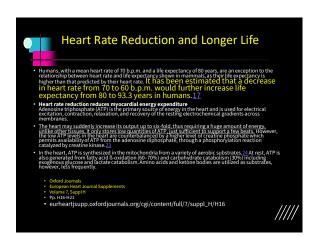


#### Lay Lecture: BP and Pulse

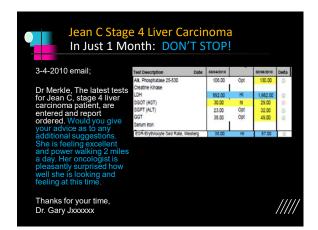
- Who lives the longest? How long do you want to live?
- · #1 cause of death
- What are the effects of aging? Preventable? Delayable?
- · Plaques/ blood clots/ inflammation
- Medical treatments: surgery, drugs, transplant
- Circulation: transporting oxygen and nutrients

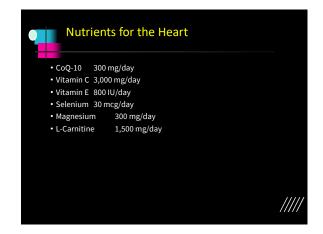
- Nutrients: what should you take: basics Vit C, E, Beta Carotene, CoQ10, Magnesium, selenium, carnitine
- How do you know what you really need?

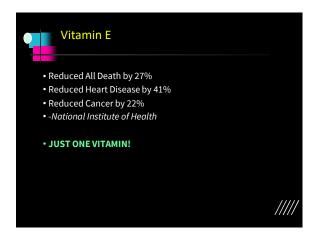


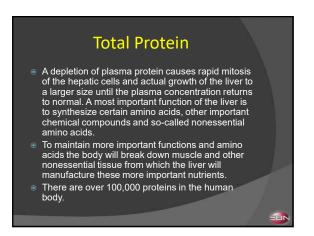


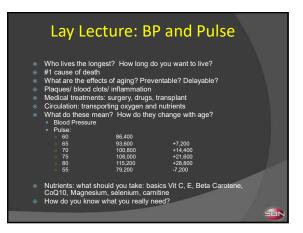


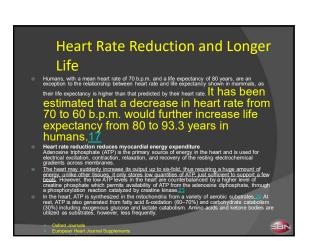


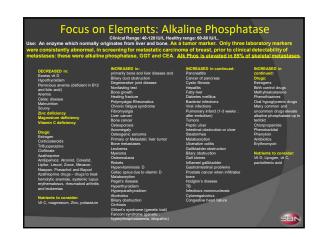






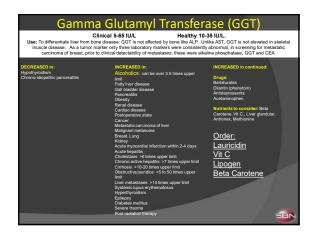


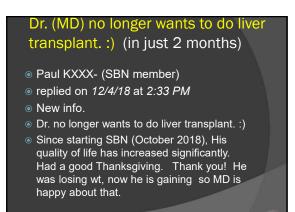


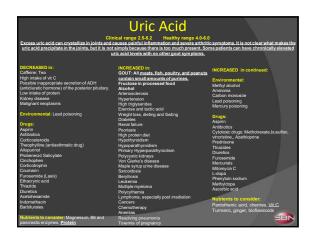


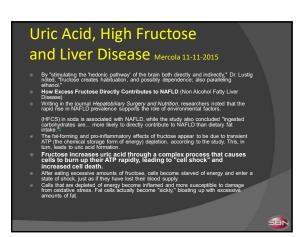


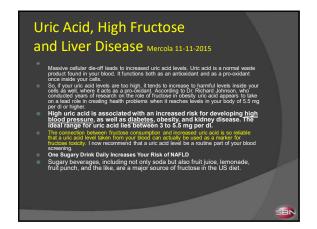


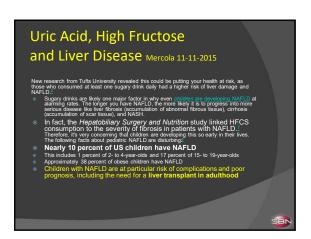


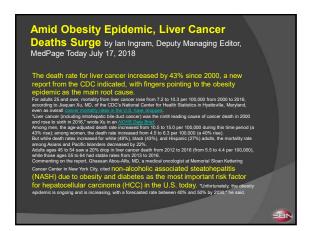


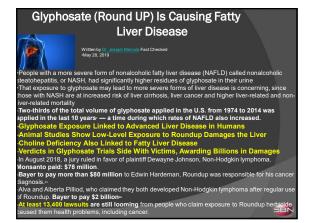








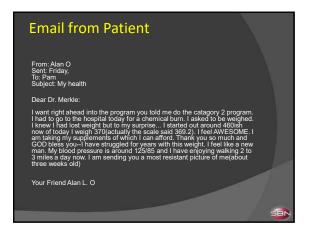


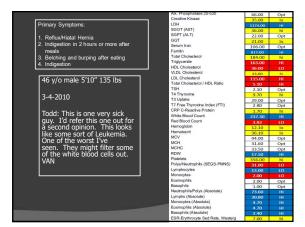


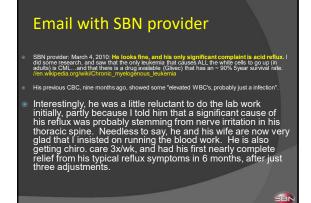


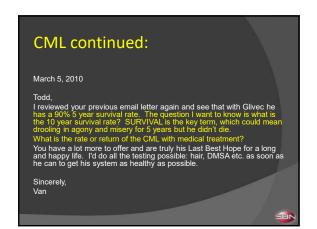


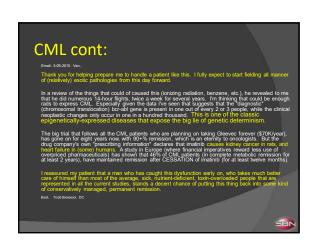


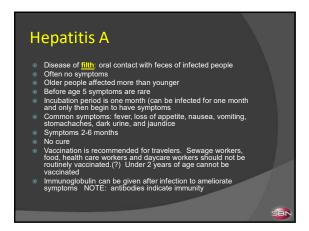












### Hepatitis A

- Mild, self-limiting disease in 4-8 weeks with no treatment.
- Pediatrics: "Most HAV infections in young children are asymptomatic...
   Clinical hepatitis occurs in fewer than 10 percent of infected children."
- NIH: "Most people who have hepatitis A get well on their own after a few weeks."
- 90% of children have no symptoms



#### Hepatitis A

- Most cases are found in Third World areas, outside the US.
- Why is the U.S. the only country in the world which recommends the vaccine on a mass scale?
  - CDC recommends vaccination for all children between 12 months and 12 years of age
  - CDC recommends vaccination for travel south of the US and just about everywhere overseas

#### Hepatitis: Inflammation of liver

- If the liver is functioning poorly, so is almost everything else in the body.
- Ocmmon signs: Rashes, eczema, aches and pains, and other organ failures
- Increased risk of liver cancer

#### Hepatitis B: Blood borne transmission

- Incubation 45-180 days.

  Not all infected people get symptoms

  Most get sick, recover and have immunity from then on.

  Symptoms: loss of appetite, tiredness, muscle and joint pain, stomachaches, diarrhea and vomiting, jaundice.

  A large number develop chronic infections (WHY?)

  200,000 new cases of HBV, 20,000 remain chronically infected

  1.25 million Americans now have chronic HBV

  caused
- caused most common in drug users and sexually active 20-39 year olds, also be aware of tattoos, ear piercing, acupuncture, needles Vaccine is available: its effectiveness is questionable, side effects can be more serious

- Medically the goal is to vaccinate everyone under 18 years of age

#### Hepatitis C: the nasty one

- The most common blood borne infection in the USA
- 4 million: most are unaware they are chronically infected The most frequent reason for liver transplants
- Medical expenses more than \$600 million per year
- Blood borne: drugs, tattoos, piercings, blood transfusions (most before 1992), transplants, accidental needle sticks
- Can be sexually transmitted
- Without/before drugs: 80% of infected people never get rid of it, but 20% do get rid of it!! NEJM 50% of children are completely cleared in 20 years
- 70% have chronic liver disease leading to liver cancer and
- 40% of all liver disease in USA is HCV

#### Medical Tx of HCV

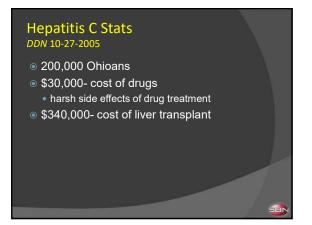
- TX: Interferon and Ribavirin-poor results and severe side effects: fatigue, hair loss, low blood count, confusion, depression, psychiatric problems, thyroid disease, seizures, acute heart & kidney failure, eye & lung problems, hearing loss, blood infection, serious anemia, birth defects
- Latest 'new' treatment: Pegasys and Peg-Interon (Long acting interferon) are once a week injections combined with ribavirin.
- Six months after the 48-week treatment stopped 56% of patients had eliminated all traces of the virus.
  - same side effects as Interferon and Ribavirin
  - Research funded by Roche, the Swiss pharmaceutical company that is developing Pegasys and a new brand of ribavirin DDN 9-24-2002

#### Hepatitis C: signs

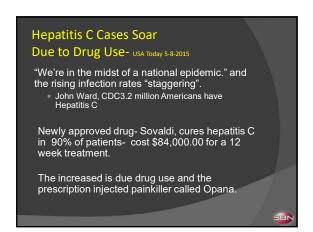
- flulike symptoms-malaise, chills, fever, indigestion, loss of appetite, diarrhea
- pain at upper right side of abdomen beneath rib cage
- stomach bloating
- pain in the joints
- mood disturbances, mental fatigue frequent or continuous
- exhaustion, and poor sleep
- bad reactions to alcohol or fatty food
- fluid retention or puffy face

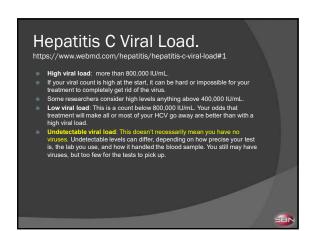
- itchy skin
- lymph node swelling
- frequent urinatioin blood sugar disorders
- irregular menses, lower libido, menopausal symptoms
- chest pains
- numbess in the extremities
- good reasons to do a comprehensive blood test!

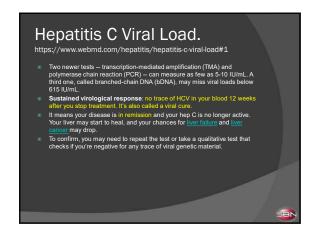




## Hepatitis C: Treatment HCV RNA, Interferon, Ribavirin Expensive Not highly effective Only sometimes efficacious Many serious side effects







Pharmaceutical companies are developing new drugs in only two therapeutic areas these days – cancer and rare diseases. by Milton Packer MD April 18, 2018 MedPage 4-19-2018

Most new drugs for cancer and rare diseases are being priced above \$400,000 a year per patient. Some at \$1 million per treatment. And prices continue to soar.

The analyst asks: "Is curing patients a sustainable business model?" According to an article by Tae Kim on CNBC, Goldman Sachs issued a report (by Salveen Richter): drug developers might want to think twice about making drugs that were too effective. Richter's report, entitled "The Genome Revolution," was issued on April 10 and says: "such treatments offer a very different outlook with regard to recurring revenue versus chronic therapies with sustained cash flow.

#### Now it seems that curing people isn't profitable enough.

- Just imagine a company has a new drug that can cure a disease in >90% of patients with one dose.

   The obvious suggestion. Could you possibly make the drug a bit less effective, so that people would need to continue to take it on an ongoing basis, so you would be able to generate more money?

Early this year, Spark Therapeutics introduced its new drug (Luxturna) for a rare form of blindness. It promises a cure with a single dose. The price tag is \$425,000 per eye. That means \$850,000 for a cure.

- Overapyments. "GILD is a case in point, where the success of its hepatitis C franchise has gradually exhausted the available pool of treatable patients," the analyst wrote. "In the case of infectious diseases such as hepatitis C, curing existing patients also decreases the number of carriers able to transmit the virus to new patients, thus the incident pool also declines."
- Also declims.

  (Ticlically's rapid rise and fall of its hepatitis C franchise highlights one of the dynamics of an effective drug that permanently cures a disease, resulting in a gradual exhaustion of the prevalent pool of patients," the analyst wrote. "... diseases such as common cancers—where the 'incident pool remains stable'— are less risky for business."



- Want to make money? Develop drugs that cure nothing, but yet promote long-term use and dependency, and shorten life. Bankers and payers will love it.
- We have those drugs already. They're called opiates. 04.18.2018

- Spring Texan
  Thanks. I share your anger, it's insane that pharma is still mouthing stuff about "value-based" thanks. I share your anger, it's insane that pharma is still mouthing stuff about "value-based". pricing (meaning, if we save your life, no price is too extortionate regardless of what our costs are) and patting itself on the back.
- thran10
- Let's talk basics. The allopathic medicine model focuses on treating the
- TWO Trillion dollars are spent annually treating the symptoms. Seniors consume 50% of the Rx drugs per year. That's 225 BILLION dollars worth.
  It's not space science. It's common sense that we have a toxic food lifestyle in the US impacting the majority of Americans.
- USDA knows it and NIH denies it.
- The US spends about 50% more per capita on healthcare than any other country and we don't have longevity in life. In fact life span in the US has flattened. Isn't it time we have a honest public discussion on our sickcare



better treatment by Ed Susman, Contributing Writer, MedPage Today April 10, 2019

VIENNA – The international Liver Conference kicked off here today with a push to find a cure – not just maintenance treatment – for the one quarter billion people living with hepatitis B virus (HBV) infection, but researchers said that finding a cure could be elusive, and it containly wont come quickly probably include a combination therapy. Said Massimo Levrore, PhD, a member of the governing body of the International Coalition to Eliminate HBV (ICE-HBV) and director of the Cancer Research Centre of Leviero, one of several participants in a press conference at the stand of the Education.

Lyon in France.

Levero, one of several participants in a press conference at the start of the 5-day annual meeting of the

European Association for the Study of the Liver, told MedPage Today that there are numerous drug treath

andidates being tested to attack various structures of the virus, but he compared HBV to HIV rather than

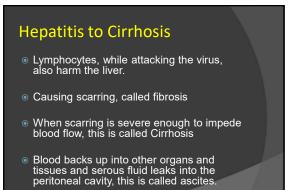
hepatitis C virus — for which an 8-week functional cure is now available. Integrations — VITUS — TO! Which an E-Week functional cure is now available. 
"Hepatitis B is very different than hepatitis C, and it is very different to reducet, as is HIV," he said.
While HIV eradication is very rare — with only two known and verified cures worldwide, hepatitis B has been cured by various methods — but in less than 10% of cases, said Peter Revull. PhD, senior medical scientist at the Victorian Infectious Diseases Reference Laboratory in Melbourne, Australia. At the press conference, Revill suggested that as many as one million people in the world have been cured of hepatitis B — but there are an estimated 257 million people living with hepatitis B infection.

#### **Hepatitis C: Etiology**

- The bodies immune system attacks virus in two ways. One by producing antibodies that destroy the virus as in HVA and HVB. The HVC virus has the ability to alter it "appearance", essentially changing its form every time the immune system devises a response to it. It may be that, as with HIV, even more new and resistant strains begin to develop when drugs are used to attack HCV.
- more new and resistant strains begin to develop when drugs are used to attack HCV

  Thus, since the antibodies can't figure a way to kill the virus. The body sends cyto-toxic (Killer) T lymphocytes to destroy the liver cells that the virus has attacked.
- There is a lot of liver and it is good at regenerating itself, however, eventually—sometimes after many years—fibrosis and further inflammation progress to cirrhosis.
- In fact, the virus may be less significant than the immune system response that it provokes. Some people with high viral loads have very little damage.





#### Dismissed by specialist

- Patient E, with Hepatitis C for 5+years.
- Started her SBN program and in 3 months her 'viral load' was back to
- Her MD was upset that she didn't do the Interferon and dismissed her as an uncooperative patient.
- She told me that the MD seemed upset that she improved so much without the



#### Hepatitis B and C Screening

- Hepatitis Profile VIII (Hep. B and C Profile) is a test that tests, evaluates, and stages the patient with HBV and HCV. The Hepatitis Panel, Acute would be a screening for ABC.

- The Hepatitis Panel, Acute would be a screening for ABC. The Hepatitis C Antibody EIA-2 test is a good screening test for Hepatitis C Virus infection.

  \* When this test is positive it can indicate chronic Hepatitis, recovered or recent acute hepatitis C. This can be a false positive if there are no symptoms, low-risk behavior and a normal SGPT (ALT) level then the diagnosis of HCV can be supported or confirmed by the recombinant immunoblot assay (RIBA) or tests for HCV RNA.

  The Hepatitis QuantaSure is really only done if a patient is a known positive for Hep. C.

  Hepatitis C Virus (HCV) QuantaSure ™ Plus, Quantitative, by TaqMan ™ PCR Test number 550033 CPT code 87522 This will measure the number of copies of Hep C virus in HCV positive patients.

The HBV quantitative real-time PCR assay has a quantitative range of 10 to 1,000,000,000 IU/mL.

- An **HBV viral load** of greater than 2,000 IU/mL indicates that the **virus** is active and has the potential to cause damage to the liver.
- potential to cause damage to the liver.

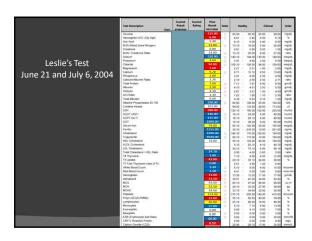
  If the **HBV viral load** is above these numbers, treatment is considered necessary.
- Instead of writing 100,000 copies/mL, labs may report it as one to the fifth power or 105 or 5 log. In mathematical jargon, a 'log' equals a number multiplied by 10. If you have a viral load of 105 copies/mL, it is actually, 10. X10 X10 X10 X10 X10 X10000. When you read a medical report that describes a patient with a high viral load as having HBV DNA that is greater than 100,000 copies/mL it may be written HBV DNA> 5 log copies/mL or 105 copies/mL.
- Entray or whitein Tray Cint >> 0.85 operation. On 100 cepts file.

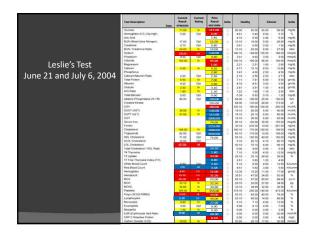
  Every log rise or fall is equivalent to a ten-fold increase or decrease. A change from 10 to 100 is a 1 log increase; a change from 1,000,000 to 10,000 is a 2-log decrease. Someone with a viral load of 300,000 copies/mL. When someone is treated, doctors monitor HBV DNA levels carefully.
- when someone is treated, obcor's monitor HsV UNAV expects carefully.

  A one- or two-log decrease in virial lead means an antiviral is working. A one- or two-log increase means an antiviral has stopped working and that viral resistance has developed.

  An undetectable viral load (which means fever HBV DNA than a lab's equipment can identify) generally is lower than about 300 copies/mt. -Moderate levels of HBV DNA begin at about 10,000 to copies/mt. -Might levels of HBV DNA can exceed 100,000 copies/mt. -Might levels of HBV DNA can exceed 100,000 copies/mt. -Might levels of HBV DNA can exceed 100,000 copies/mt. -Might levels of HBV DNA can exceed for the company of the development of the company of the co



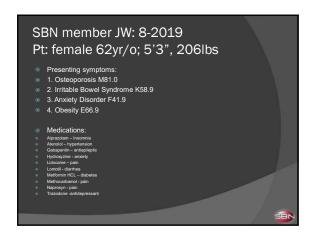


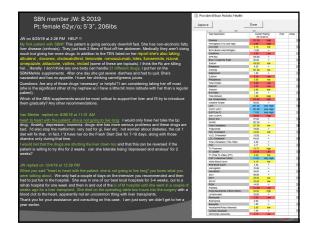


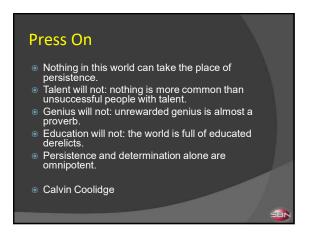






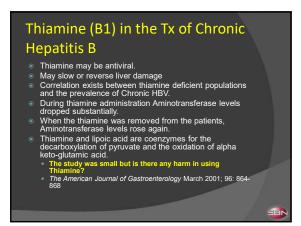


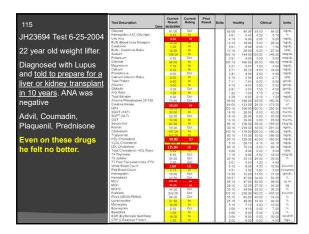




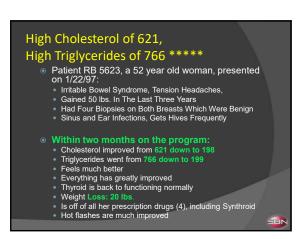
#### **Hepatitis Recommendations**

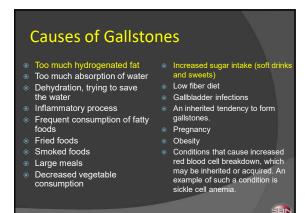
- Strict diet: semi vegan, organic, low glycemic diet
- Treat the whole body
- Vitamins for the liver, dosage based on severity and chronicity:
  - Vitamin C
  - Beta Carotene
  - Liver glandular
  - Lauricidin
  - Specialty products: RM 10; Immuni T, etc





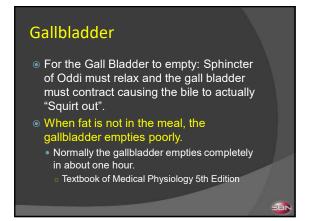


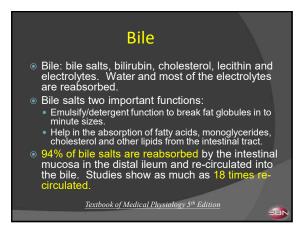


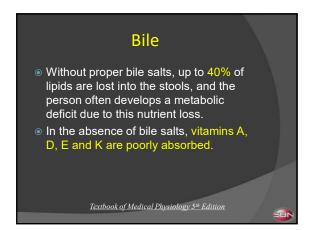


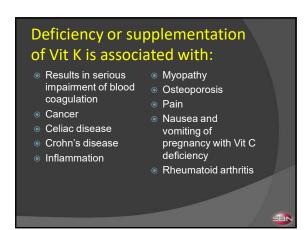
#### Symptoms of GB disease Abdominal pain Abdominal fullness, gaseous Located on the right upper quadrant or in the upper middle of the abdomen (epigastric) Mause Nausea May subside over 12 to 18 hours in uncomplicated cases Vomiting Jaundice, yellow color of the Recurrent with similar pain in past Occurs within minutes following meals skin Heartburn During deep inspiration Chills and shaking Radiating to back or below the right shoulder blade (right scapular area) Chest pain under the Worsened after eating or drinking greasy (high fat) foods or fluids breastbone

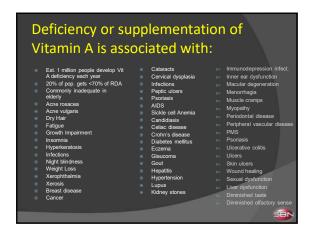
# Gallbladder Blood flow from the portal vein through the liver sinusoids: 1000 ml/minute Total secretion of bile each day: 800-1000 ml Maximum volume of the gallbladder: 40-70 ml Bile normally concentrated: 5 fold to maximum of 12 fold Textbook of Medical Physiology 5th Edition

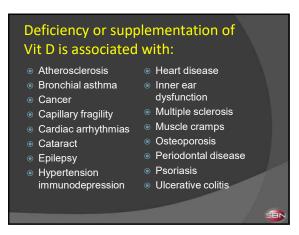








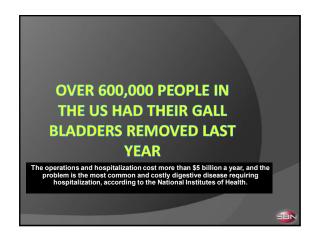




## Deficiency or supplementation of Vit E is associated with:

Benign breast disease Capillary fragility Cardiac arrhythmias rpes simplex rpes zoster

opausal symptoms



#### Gallstones

- Gallstone disease effects 10-20% of the population in the United States
- Gall bladder disease is a common ailment affecting an estimated 20 million Americans. Most gallstones seen in the United States are composed of cholesterol or cholesterol mixtures
- Although gallstones are common, only 30% of patients ever develop symptoms

#### Gallbladder and Fats

- Fats liquid at room temperature resulted in a significantly greater contraction of the gallbladder than solid fats. Almost 50% greater contraction.
  - Nutritio Dieta 2:219-22,1960
- The incidence of gallstones may be higher when fats come from polyunsaturates and transfatty acids than from saturated fats and cholesterol.
  - N Engl J Med 288 (1):24-27, 1973

#### Vitamin deficiencies associated with gallstones:

- Vitamin C, Vitamin E, Choline, Taurine
- Several studies show a correlation of gallbladder dysfunction and gastric hypo secretion.
- Nearly all of my patients with gall bladder problems take Betaine HCL.

#### **Gallbladder Recommendations**

- <u>IEAT</u> BETAINE HCL
- **BLOOD TESTING**
- Vegetarians have half the risk of forming gallstones compared with meat eaters. Vegetarians often eat fewer calories and less cholesterol. They also tend to weigh less than meat eaters which may reduce their risk.
- Constipation has been linked to gallstones. When constipation is successfully resolved, it appears to reduce the risk of gallstone formation.

#### Providing Hope...

- Patient with non small cell lung carcinoma (Pretty rare)... No hope.
- He had started our program and is feeling better. He is not coughing and spitting up and has more energy.
- Eight months on His Program the scans showed no sign of cancer. His Oncologist said this is impossible, his MD said it is miraculous.
- ...He died 6 months later.

#### **Praying for Miracles**

- It is OK to Pray for Miracles
- But sometimes God provides opportunities...and you have to do your
- The Miracle is already inside of you
- Maybe another miracle brought you

#### Cholesterol

- Precursor of the bile acids and the sex hormones
- Cell membranes
- Used in seminal fluid and vaginal lubrication
- Essential part of nerve-fiber structure
- Manufactured primarily in the liver (all tissues of the body except the brain can make it), cholesterol is present in almost all cells and is particularly high in the liver, brain and nervous tissue, and the blood.
- Transported by lipoproteins.

#### Mevacor

- Testosterone response to HCG was slightly but not significant reduced after treatment with lovastatin 40 mg daily for 16 weeks in 21 reduced after treatment with lovastatin 40 mg daily for 16 weeks in 21 men. The effects of HMG-CoA reductase inhibitors on male fertility have not been studied in adequate numbers of male patients. The effects, if any, on the pitulitary-gonadal axis in premenopausal women are unknown, optic nerve degeneration in dogs treated for 14 weeks... CNS vascular lesions, characterized by perivascular hemorrhage and edema, necrosis of small vessels, were seen in dogs Similar optic nerve and CNS vascular lesions have been observed with other drugs of this class. Cataracts were seen in dogs treated for 11 and 28 weeks at 180 mg/kg/day, Carcinogenesis, Mutagenesis, Impairment of Fertility
  In a 24-month carcinogenicity study in rats, there was a positive dose response relationship for hepatocellular carcinogenicity males at

#### Mevacor continued

- An increased incidence of thyroid neoplasms in rats appears to be a response that has been seen with other HMG-CoA reductase inhibitors.

#### Mevacor continued

- Hypersensitivity Reactions: An apparent hypersensitivity syndrome has been reported rarely which has included one or more of the following features: anaphylaxis, angloedema, lupus erythematous-like syndrome, polymyalgia rheumatica, vasculitis, purpura, thrombocytopenia, leukopenia, hemolytic anemia, positive ANA, ESR increase, eosinophilia, arthritis, arthralgia, urticaria, asthenia, photosensitivity, fever, chills, flushing, malaise, dyspnea, toxic epidermal necrolysis, erythema multiforme, including Stevens-Johnson syndrome.
- Gastrointestinal: pancreatitis, hepatitis, including chronic active hepatitis, cholestatic jaundice, fatty change in liver; and rarely, cirrhosis, fulminant hepatic necrosis, and hepatoma; anorexia, vomiting.
- **Skin:** alopecia, pruritus. A variety of skin changes (e.g., nodules, discoloration, dryness of skin/mucous membranes, changes to hair/nails) have been reported.
- Reproductive: gynecomastia, loss of libido, erectile dysfunction.

  Eye: progression of cataracts (lens opacities), ophthalmoplegia.



#### Lipitor: side effects

- Lipitor (lipid or cholesterol lowering drug) causes liver dysfunction; SGOT and SGPT three times the upper limit of normal; CPK values greater than 10 times the normal limit. Adrenal failure, diffused muscle pain; muscle tenderness; weakness; malaise; fever; myopathy or muscle disease if used with certain other drugs (these drugs include: antacid (maylox), dioxin, erythromycin, and oral contraceptives).
- contraceptives).

  Long term use in laboratory studies of two years indicated an increase in liver cancer. Should not be used in pregnant women. Other adverse reactions include: edema (part or whole of the body), digestive problems, gastritis, coilitis, vomiting, ulcers, bleeding gums, bleeding ulcers, hepatitis, pancreatitis, gall bladder disease, asthma, decreased libido, leg cramps, vercitis, monocytis, itching, alopecia, dry skin, acne, cystitis, hemoturia, kidney stone, breast tenderness, various hemorrhage, loss of taste, palpitations, migraines, arrhythmia, gout
- Nutrients Depleted: Co-Enzyme Q-10

#### Pravochol: side effects

- Pravochol: (for high cholesterol) Warnings: chest pain; rash; nausea and vomiting;
- Diarrhea; abdominal pain; constipation; flatulence; heartburn; fatigue; localized pain; myalgia; headaches; dizziness; urinary abnormality; rhinitis; cough; memory loss; insomnia; depression; anxiety; arthralgia; flushing; pancreatitis; hepatitis; cirrhosis; anorexia; alopecia; loss of libido: erectile dysfunction:
- Nutrients Depleted: Coenzyme Q10

### Are 'Vaccine Skeptics' Responsible for Flu Deaths? Some experts say anti-vaccine lobby took over messaging about flu vaccine by Molly Walker, Staff Writer, MedPage Today February 17, 2018

Are 'Vaccine Skeptics' Responsible for Flu Deaths?

## Do Statins Work? 02-2008

- In Pfizer's own Lipitor newspaper ad. the dramatic 36% figure has an asterisk. Read the smaller type. It says: "That means in a large clinical study, 3% of patient laking a sugar pilli or placebo had a heart attack compared to 2% of patients takin
- The numbers in that sentence mean that for every 100 people in the trial, which lasted 3 ½ years, three people on placebos and two people on Lipitor had heart
- \*\*Now do some simple math

  The difference credited to the drug? One fewer heart attack per 100 people. So to spare one person a heart attack, 100 people had to take Lipitor for more than three years. The other 99 got no measurable benefit. Or to put it in terms of a little-known but useful statistic, the number needed to treat (or NNT) for one person to benefit is 100.

#### Statins Shown to Extend Life by Mere Days

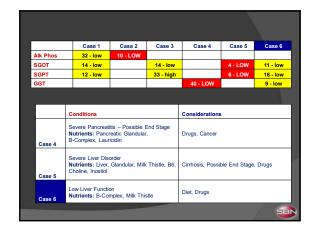
Analysis by Dr. Joseph Mercola Fact Checked September 11, 2019

- A 2015 systematic review of statin trials found that in primary prevention trials, the median postponement of death was just 3.2 days. In secondary prevention trials, death was postponed 4.1 days
- Tactics used in statin studies to exaggerate benefits include excluding eucome — an increase in life expectancy — and using a statistical tool called relative risk reduction to amplify trivial effects
- If you look at absolute risk, statin drugs benefit just 1% of the treated participants. Out of 100 people treated with statins for five years, one
- Statin trials minimize health risks by using a run-in period. Participants are given the drug for a few weeks, after which those who suffer adverse effects are simply excluded, thereby lowering the perceived frequency and severity of side effects

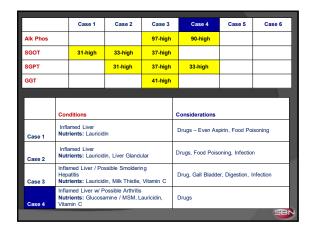










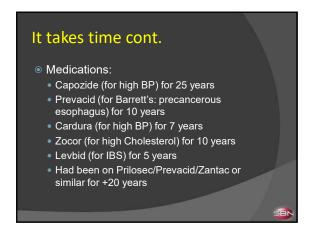


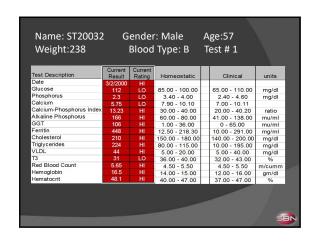
XXX		Case 7	Case 8	Case 9		Case 10	Case 11	Case 12		
Alk Phos							190-HIGH			
SGOT			75-HIGH	230-HIG	Н	37-high		110-HIGH		
SGPT			60-HIGH	250-HIG	Н	37-high		120-HIGH		
GGT		60-high				300-HIGH	150-HIGH	200-HIGH		
Case 9	Methic	nts: Lauricidin, nine, Beta Car	otene, Choline	, Inositol	Drugs – Multiple Drugs, Recent Hepatitis Exposure  Drugs, Alcohol, UA, Glucose, Hgb A1c					
Case 10	Bone Lesion, Arthritis, Liver Disease Nutrients: Vitamin C, Lauricidin, Glucosamine/MSM					Drugs, UA, LDH, ESR, CRP, Glucose, Hgb A1c, Alcohol				
	Inflamed Liver Nutrients: Liver, Vitamin C, Lauricidin					Drugs, Alcohol, UA, Glucose, Hgb A1c, Kidney				

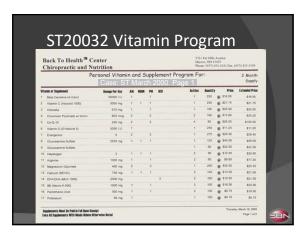
XXX	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case11	Case 12			
Alk Phos			97-high	90-high							190-HIGH				
SGOT	31 - high	33-high	37-high					75-HIGH	230-HIGH	37-high		110-HIGH			
SGPT		31-high	33-high	38-high	31-high	37-high		60-HIGH	250-HIGH	40-high		120-HIGH			
GGT			41-high		44-high		60-high	1		300-HIGH	150-HIGH	200-HIGH			
	Cor	Conditions							Considerations						
Case 1	Inflamed Liver Case 1 Nutrients: Lauricidin							Drugs - Even Aspirin, Food Poisoning							
Case 2	Inflamed Liver Nutrients: Lauricidin, Liver Glandular							Drugs, Food Poisoning, Infection							
Case 3		Inflamed Liver / Possible Smoldering Hepatitis Nutrients: Lauricidin, Milk Thistle, Vitamin C						Drugs, Gall Bladder, Digestion, Infection							
Case 4		Inflamed Liver w/ Possible Arthritis Nutrients: Glucosamine / MSM, Lauricidin, Vitamin C						Drugs							
Case 5		Liver / Pancreatic Inflammation Nutrients: Lauricidin, Vitamin C						Drugs, Glucose, Hgb A1c, Gall Bladder, Digestion, Alcohol							
Case 6		Inflamed Liver Nutrients: Vitamin C, Milk Thistle						Drugs - Especially Cholesterol Lowering Drugs							
Case 7		Pancreas Nutrient: Vitamin C, Milk Thistle, Lauricidin						Drugs, Alcohol, Glucose							
Case 8	Nut	Serious Liver Disease Nutrients: Lauricidin, Vitamin C, Liver, Methionin, Beta Carotene, Choline, Inositol						Drugs Check Everything: UA, Stool, Metabolic UA, EKG							
Case 9	Nut	Hepatitis Nutrients: Lauricidin, Vitamin C, Liver, Methionin, Beta Carotene, Choline, Inositol						Drugs - Multiple Drugs, Recent Hepatitis Exposure							
Case 10		Pancreatitis Nutrients: Liver, Vitamin C, Beta Carotene						Drugs, Alcohol, UA, Glucose, Hgb A1c							
Case 11		Bone Lesion, Arthritis, Liver Disease Nutrients: Vitamin C, Lauricidin, Glucosamine / MSM						Drugs, UA, LDH, ESR, CRP, Glucose, Hgb A1c							
Case 12		Inflamed Liver Nutrients: Liver, Vitamin C, Lauricidin							Drugs, Alcohol, UA, Glucose, Hgb A1c, Kidney						

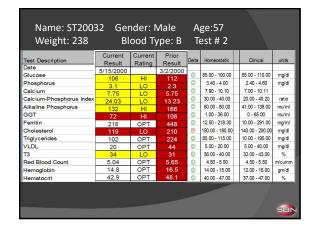


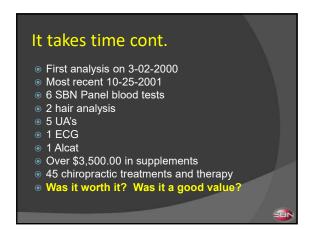
## It takes time: more or less 59y/o male 5'9", 240 pounds Symptoms: CFS, IBS, panic attacks, high BP, high pulse, decreasing memory and concentration, slow stream, cystitis, testicular pain, bloating, high cholesterol, abdominal pains, bloating, peptic ulcer, nausea, dry skin and rash (cellulitis) on legs, headaches, joint stiffness. These problems had been progressing over the last 25 years and were very significant the last 10 years.

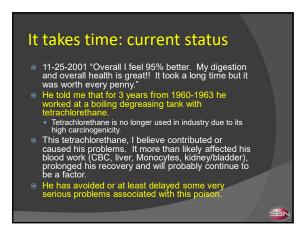


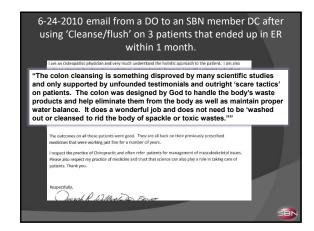


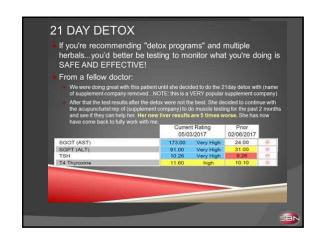






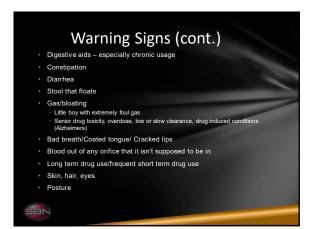














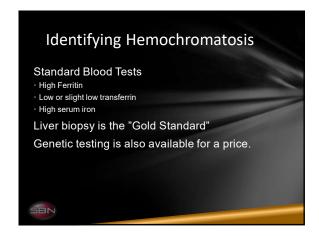


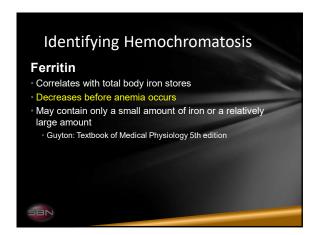




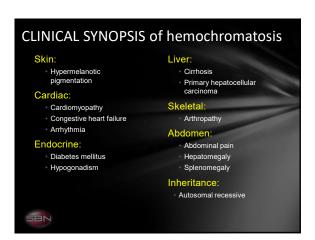




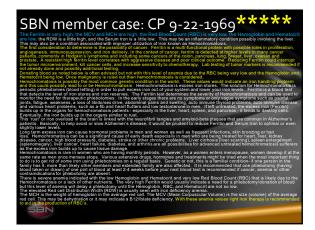


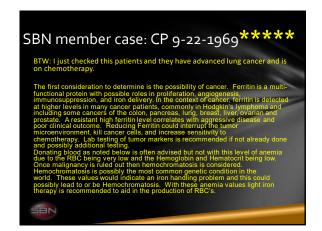


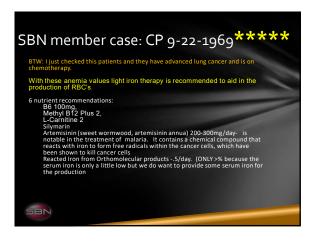


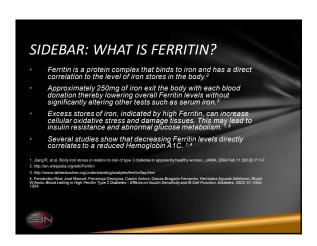


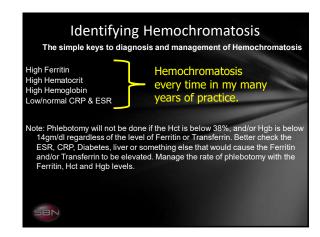


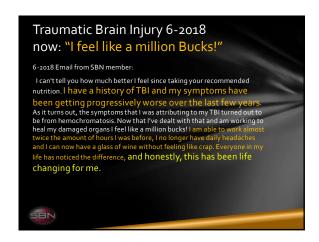


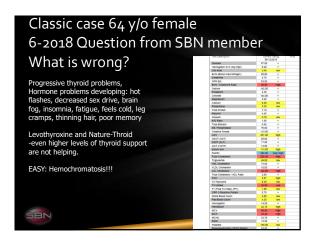


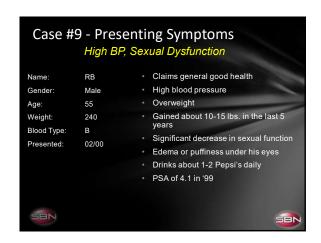




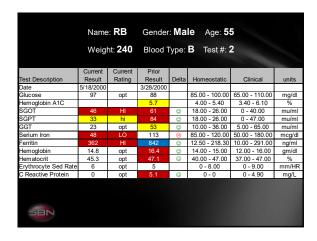




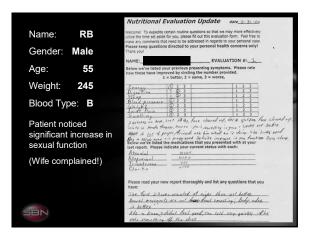


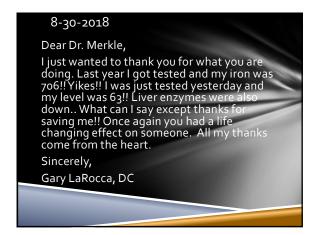


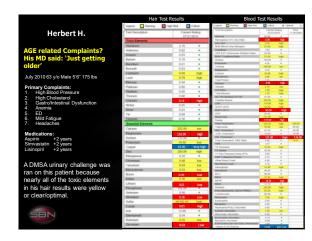
	Name: <b>RB</b>	Gend	er: <b>Male</b> Ag	e: <b>55</b>	
\	Veight: 240	Blood	Туре: В Те		
	Current	Current			
Test Description	Result	Rating	Homeostatic	Clinical	units
Date	3/28/1900				
Glucose	88	opt	85.00 - 100.00	65.00 - 110.00	mg/dl
Hemoglobin A1C	5.7	hi	4.00 - 5.40	3.40 - 6.10	%
SGOT	61	HI	18.00 - 26.00	0 - 40.00	mu/ml
SGPT	84	HI	18.00 - 26.00	0 - 47.00	mu/ml
GGT	53	hi	10.00 - 36.00	5.00 - 65.00	mu/ml
Serium Iron	113	opt	85.00 - 120.00	50.00 - 180.00	mcg/dl
Ferritin	842	HI	12.50 - 218.30	10.00 - 291.00	ng/ml
Hemoglobin	16.4	H	14.00 - 15.00	12.00 - 16.00	gm/dl
Hematocrit	47.1	HI	40.00 - 47.00	37.00 - 47.00	%
Erythrocyte Sed Rate	5	opt	0 - 8.00	0 - 9.00	mm/HR
C Reactive Protein	5.1	HI	0 - 0	0 - 4.90	mg/L

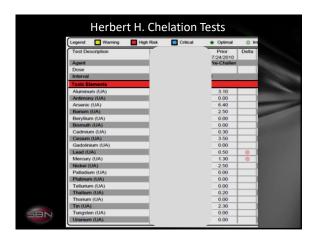








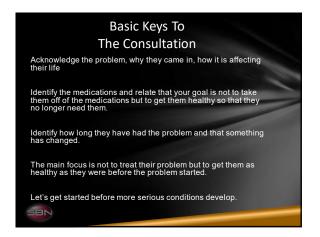


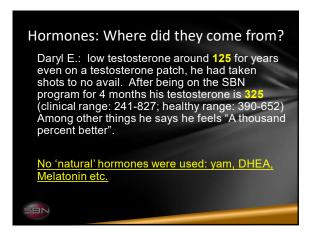
















It is not the critic who counts, not the man who points out how the strong man stumbled, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena; whose face is marred by dust and sweat and blood; who strives valiantly, who errs and comes short again and again; who knows the great enthusiasms, the great devotions, and spends himself in a worthy cause; who, at the best, knows in the end the triumph of high achievement; and who, at the worst, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who know neither victory nor defeat.

Theodore Roosevelt

SBN

than you were yesterday.

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Do something today to be healthier

# **Thyroid in 20 minutes**

- Start with minimum of T4, T3 Free and TSH
- Even better is to add: Free T4 and T3 Total

# T3 Uptake and T7: basically useless today

- T3 Uptake is an indirect measurement of the amount of thyroid-related binding proteins that happen to be in the **blood.** This includes albumin, TBG, and prealbumin.
- www.restartmed.com > t3-uptake
- Apr 16, 2020 · T3 Uptake is **one of many thyroid lab tests** available to assess thyroid function. Unfortunately, as far as clinical utility is concerned, T3 Uptake is not a helpful lab test and you can get more information from the other thyroid lab tests which are available.

# T7 Free Thyroxine Index is a calculation to calculate Free T4. Now unnecessary: just do a Free T4.

T7 Free Thyroxine Index The T7 Index is used to calculate Free T4, one of the two active thyroid hormones in your bloodstream. The T7 Index is a calculated Free T4 score and is not as accurate as a machine run Free T4 test.

# **Easy Thyroid Analysis: First things**

- Is patient on Synthroid or other prescription thyroid meds? Why is patient on Synthroid?
- Thyroid removed: Yes or No?
- Thyroid cancer: Yes or No?
- Graves' disease?
- Hashimoto's?

# **Easy Thyroid - Patient on Synthroid but** still has thyroid and does not have cancer, or history of Graves'

- Medical doctors will monitor T4 and TSH. Why?
  - Question: does an optimal T4 and TSH indicate optimal thyroid function? Answer: NO - the T4 needs to be converted into the more active Free T3 that is used by the body...

    It is true that TSH and T4 can be optimal and still have low or even very low thyroid function because the Synthroid, which is T4 keeps the TSH low.
  - Most of this T4 to T3 Free conversion occurs in the liver, kidneys and GI
  - Liver, kidney and GI tract can lower thyroid function.
  - Thyroid Peroxidase assist the conversion process of T4 into T3 Free, however, Thyroid Peroxidase Antibodies halt or slow the conversion of T4 into T3.

# **Easy Thyroid - Patient on Synthroid but** still has thyroid and does not have cancer, or history of Graves'

- TSH and T4 but also need to have at least T3 Free but also T3 Total and T4 Free.
- If TSH is low and T4 and T3 Free are optimal then Synthroid level is sufficient.
- If TSH is high and T4 and T3 Free are low then dose of Synthroid is insufficient or not effective, maybe patient is resistant to the Synthroid medication.

# **Easy Thyroid- Patient on Synthroid but** still has thyroid and does not have cancer, or history of Graves'

Is it possible to get this patient off of Synthroid?

Maybe but Synthroid has rare side effects and one of the 'safest' drugs to

However, the lower level of Synthroid needed is always a good goal. CAUTION: needing higher and higher levels of Synthroid is bad, the patient is becoming resistant or even 'allergic' to Synthroid - this can be a

DO NOT CAUSE A THYROID PROBLEM by trying to get a patient off of Synthroid too quickly.

# **Easy Thyroid - Patient on Synthroid but** still has thyroid and does not have cancer, or history of Graves'

- First start the patient on your vitamin and diet program for a week or 2 then possibly have patient reduce Synthroid by 25% for 2 weeks and retest the TSH, T4 and Free T3.
- The TSH will likely be elevated but if it is over 10, (or increased significantly since first test) indicate that was too fast of a reduction in Synthroid especially if the T4 and T3 Free has notably decreased.
- If the T4 and T 3 Free are still optimal or only a little lower, then then retest the TSH, T3 Free and T4.

# **Easy Thyroid - Patient on Synthroid but** still has thyroid and does not have cancer, or history of Graves'

ls it even pos

- $\label{eq:Thyroglobulin} Thyroglobulin (Tg) is produced only by the follicular cells of the thyroid gland and used entirely within the thyroid gland protein content of the thyroid gland.$
- If thyroglobulin is zero then there is no thyroid gland function, which is preferred if there has been a history of thyroid cancer.

  Patient will be on Synthroid or similar for life.
- Thyroglobulin Antibodies attack thyroglobulin proteins and can destroy the thyroid gland or at least reduce thyroid gland function.

   These antibodies are associated with Graves' and Hashimoto's diseases.

# **Easy Thyroid - Patient on Synthroid** History of cancer, or Thyroid gland removed maybe due to Graves'

- This patient will need to be on Synthroid for life.
- If thyroid cancer, then testing TSH and Thyroglobulin are necessary.
- Thyroglobulin indicates current thyroid gland function.
- With Thyroid cancer, removal or radiation is used to completely destroy the thyroid gland. If Thyroglobulin is not zero, this indicates residual thyroid gland tissue, which is bad.

# **Easy Thyroid - Thyroid cancer and TSH**

- TSH stimulates thyroid gland tissue, which is bad with a thyroid cancer history.
- Therefore, the dose of Synthroid needs to be high to keep the TSH as low as possible.

# **Graves' Disease**

- TSH is low
- T4, T4 Free, T3 Total and T3 Free are high or very high
- TPO Ab and Tg Ab are often elevated
- Check for infection
- Consider natural treatments for infection and inflammation
- Reduce inflammatory factors

# Hyperthyroidism

- Graves' disease is most common

  - Average onset is 20 40 year of age
  - An auto immune disorder resulting in:

    - Serum antibodies to fractions of the thyroid gland

# **Graves' Autoimmune Thyroid Disease**

Graves' Disease

Thyroid-Stimulating Immunoglobulin (TSI) - this is the primary test for Graves' disease

# **Easy Thyroid - Graves' Disease**

Teatment considerations: gluten fee diet, vitamin D based on testing and other vitamins.

L-Carnittine 2-4 gramms/day has been shown to have the ability to reverse hyperthyroid symptoms within a couple of weeks.

Retesting is indicated within a couple of weeks and a second opinion is always welcome and encouraged.

# **Hyperthyroid Symptoms**

- Cold intolerance
- Weight changes (usually weight loss)
- Sweating
- Fatigue
- Irritability
- Nervousness
- Menstrual irregularity
- Weakness (commonly upper extremity)

# **Hyperthyroid Symptoms Cont.**

- Muscle atrophy
- Fasciculations (involuntary contractions/twitching of muscle
- Exaggerated deep tendon reflexes
- Babinski's sign?

# **Hyperthyroid Symptoms Cont.**

- Dysphagia
- Hoarseness
- Respiratory weakness
- Upper eyelid not completely opens
- Weakness in chewing/tongue

# Hyperthyroid Testing Low TSH Elevated: T4 Free thyroxine index (FTI)

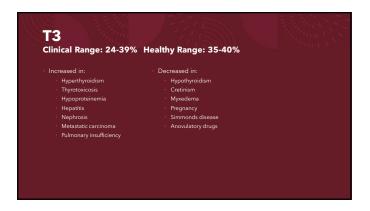
Total T3 Serum T3

Thyroid resin

# Hyperthyroid Testing Cont. For autoimmune ANA (anti-nuclear antibodies) Serum thyroperoxidase Thyroglobulin antibody titers Antithyroglobulin autoantibodies Positive in 85% of Hashimoto's disease and -80% of Graves' disease Hashimoto's thyroiditis is very unlikely cause of hypothyroidism in the absence of thyroglobulin and microsomal antibodies

# Hyperthyroid Findings Alkaline phosphatase: increased Calcium: increased Anemia







# With elevated T4 and T3 consider

- Liver (check for elevated SGPT)

# With decreased T4, T3: consider

- Avoid:

Soybeans, rutabaga, cauliflower, brussel sprouts, cabbage, kale, sauerkraut

# **Hashimoto's Thyroiditis**

- An auto immune condition.
- Commonly will present as hyperthyroidism during the initial acute phase of the disease but tends to eventually result in a hypothyroid condition, due to destruction of the hormone producing thyroid tissue.
- Antithyroglobulin Antibody (ATA) in 70% of the cases and Antimicrosomal Antibodies or Thyroid Peroxidase (TPO) antibodies are found in 95% of the cases.

# Hashimoto's Thyroiditis Confusion- FACT Experts Speak:

- Hashimoto's disease: FACT
- Q: 12 year old diagnosed with Hashimotos are there any alternative tests that should be done?? Interesting to note is that a major personality change started in late september...within weeks of a tetanus shot. Scott Close DC

# **Hashimoto's Thyroiditis**

He thought the mechanism of action for tetanus toxoid is that is "locks up" intracellular fluidity and messaging. I believe this is correct. If you have access to this technique, purchase or make a DTaP vial and treat him with it. He could quickly become better. Also be sure he is on TONS of oneca 3s far beyond the "usual" does. This helps cell fluidity.

believe that tetenus vaccine is most neurotoxic of ALI vaccines. Tetenus vaccine is made by deactivating it with formaldehyde and ammonium saffet. It is filtered and adoutbed onto aluminum phosphate. Tetanospasmin is one of the strongest neurotoxins from the mail.

because or considerationary many or as terminated in the vaccine? If you not of the eavier born into though the titled of these is no great which is a consideration of the property of the pr

has took in a minoritory partneys, too should write this up as a case report and one sure to report too vaccin, So, eye, the tetrans often can stuff in this behavior. NO vaccine is safe at any age, even if given alone. As for his Hashmoto, certainly the vaccine led to autoimmune disruption. Be sure he is on 100mcg/day of Lealenomethione. It is the form of selentim that has been about in the literature to reduce thyroid emblogietie by are much a 50% over 3.4 months (mechanism of action is that it acts like a "moy" to about excess PDO2 used in the coupling of indire to tyrosine, lodine supplementation should always coupled with selentum Hope that helpe, Do Shern Tenpenny Cleveland, Ohn was a "more than the state of the properties of the state of the properties of the state of the stat

# Hashimoto's Thyroiditis

If you are interested to find out if your son is sensitized to thimerosal and inorganic mercury, you can test him in MELISA test. Contact Dr Lana Foree in San Francisco, the contact is on our website.

Ps. The abstract of article regarding patients with autoimmune thyroiditis is given below.

Mercury and nickel allergy, risk factors in fatigue and in autoimmunity Steral let al. Neuroendocrinology Letters 1999;

The study further explores the link between hypercendoity to denial neate with chronic fatigue syndrome (CFS). It looks at 22 patients with autoimmune thyroidits, 28 fatigued patients free from endocrinopathy and 22 fatigued professionals with no evidence of autoimmunity, All had their derial amalgams replaced with non-redeline meetings. After its months, with the control of autoimmunity, All had their derial amalgams replaced with non-redeline meetings. After its months, considerably, We suggest that hypersensitivity to metal affects the hypothalamic pituriary adrenal axis (IPIA axis) and indirectly trigges psychosomatic symptons characterising CFS, floronylgia and other diseases of unknown etiology.

# **Hashimoto's Thyroiditis**

A3: check the tetanus shot for mercury containing agents as "conservatives" and do a lead and mercury and arsenic challenge test. Also a lodine/lodide (lodoral 50mg) challenge test, if less than 45 mg (90%) Iodine comes out in the 24hr urine following the 50 mg load, he needs long term lodoral replacement. When detox and nutritional support has provided the best possible circumstances, thyroid live cell therapy injections can be considered to boost his own thyroid production and hopefully reduce the dosage of medication. Good luck, R. Trossel

# **Hashimoto's Thyroiditis**

It sure seems to be a correlation to the vaccine due to the dramatic change in his physical and emotional health near the time of its use. It may be that a homeopathic remedy would help here. Homeopathic Thuja is usually given for negative effects from a vaccine, but it does not necessarily if it he symptoms of the case. I would consider finding a great constitutional homeopath to work with him. I am not sure where you live but I bet there is someone in your area. I think Andre Saine in Cahada will do phone consults???

do phone consults://
Anyway, what really hit me but does not seem to correlate to the timing of
the vaccine is that beople with Hashimotos are often very gluten sensitive
and also gluten sensitive folks often have many mood disorders. Does he
eat a lot of foods with gluten? Could you get him to do a totally strict
gluten free diet for a month or two to see how he responds?

Take care, Laura Schissell, ND, DC

# **Hashimoto's Thyroiditis**

A5: Some Hashimotos are related to gluten sensitivity even with negative antibodies, may try gluten free diet, though time course certainly suggests possible reaction to tetanus. Look at DAN, defeat autism now web site, not that he has autism, but some of their detoxification techniques may help, ie post vaccine. John Abell M D

A6: This is a classic autoimmune reaction caused by corruption of the immune system due to the inoculation, as explained in the documents on my website. I have reversed many such cases with my Hippocrates protocol.

Dr Carley

# **Hashimoto's Thyroiditis**

A7: Thyroid tests become unreliable in the face of significant antibody elevation. It could take weeks to significantly lower the TSH and many more weeks to improve symptoms completely, in fact symptom improvement may never happen with synthroid if your son has difficulty converting synthroid (synthetic 14) into 13. This is why Armour (or other more natural thyroids) which contain about 20% 13, is far preferable in my opinion. Selenium, 200 mcgs/day has been shown in recent studies to gradually lower thyroid peroxidase antibodies over 6-12 months. This of course, is about symptom relief, not addressing the underlying problems which have lead to the Hashimoto's.

I'd focus, as is often emphasized by Gary, on the total body burden of pathogens. Do a provoked urine for heavy metals, viral screen, etc., but don't expect tests to show everything! Chelate, treat pathogens and support detox pathways in all the ways regularly discussed on this site. Best of luck.

Rick Linchitz MD (Linchitz Medical Wellness, PLLC LinchitzWellness.com \$16-759-4200)

# **Hashimoto's Thyroiditis**

You can help any autoimmune disease by supporting regulatory T cell function. Vit D 4-5,000IU ODI, Glutarlione (I use a high dose liposomal delivery; Oxicell from Apex Energetics) and EPA & DHA all support regulatory T cell function.

You can also order a T&B lymphocyte & NK Cell panel(#505015), an IL-10(#826746) and a TNFa(#140673) from Laboratory Co-Op (1-866-999-4041). These tests will tell you if you are dealing with a TH1 or TH2 outset dominant autoimmunity. Knowing this will allow you to treat with the most appropriate herbs (of course, you can use drugs). You can call Apex Energetics and ask for Don Sing for help interpreting the test results. Don's not a doctor but he knows these panels well. I call on him for help whenever I need it.

The big idea is that you will get the most impact out of treating the autoimmunity. Treating the thyroid itself has minimal impact in these cases.

p.s. Iodine and/or L-tyrosine are popular supplements for thyroid patients. Hoshimoto's patients should not take these supplements however because they increase the attack and destruction of thyroid cells by the immune system.

Steve Zaeske, DC DABCI

# Hashimoto's Thyroiditis

A9: Selenium lowers thyroid antibodies. I would also give fish oil and check vitamin D levels, both nutrients which relate strongly to auto-immunity. Intestinal yersinia has been found commonly in auto-immune thyroid conditions. Also consider gluten intolerance. A person with hashimoto's has 10 x higher likelihood of having gluten intolerance. Lastly remove amalgams if he has any and irrespective of this chelate for mercury. If possibly I would consider some thyroid glandulars as well.

Best regards, Blake Graham, B.Sc (Honours) Clinical Nutritionist

# Hashimoto's Thyroiditis

A10: My guess is that he was born when your wife was over 26 years old and/or she had at least relative hypothyriodism during the pregnancy with him (reduction in libido, post parturn depression, inability to lose weight after pregnancy and changes in the menstual cycle all indicate pregnancy related hypothyriodism). If the tetanus shot was toxic due to its intrinsics, we would see more reactions like your sorts. However in an immune compromised person that is born to a hypothyriodi mother, anything that western the immune system can be failed the overgrowth of opportunistic infections. Candida is a common one, but there are certainly others that pile on like MRSA, EBV, herpes etc.

# Hashimoto's Thyroiditis

A11: Scott- The 1st thing I would do is get him off of synthroid. Armour is much better!!! But before I would put him on anything I would run the barnes test along with a saliva thyroid, (Diagnos-Jech \$) is the lab is would recommend. Blood work is the least accurate test for thyroid activity. It doesn't matter the age I find 75-80% women & 65-70% males have weak thyroid. I do ALOT of Bio-Meridian testing & I can pick up thyroid cases off of that. I can't tell you the # of pt's. I've fixed with low thyroid & the results are amazing once you get the thyroid going on how it fixes stuck cases on the bio-meridian. What I have found works the BEST is I dodra! & thytrophin from standard process. With your sons size I would use 2 bid of lodoral & 1-th of thytrophin, if his thyroid shows weakness after barnes, saliva, & bio-meridian testing. Don't forget that the thyroid is connected to the pituitury, adrenals, & testes in his case & NEEDS to be supported also for results.

Good luck - Dr. Matejka Any further questions call or email me at drglen99@sbcglobal.net or 815-455-4500

# **Hashimoto's Thyroiditis**

A12: Scott, you may want to do urine and hair analysis for metals. If his growth rate is abnormal for the family, check for a pitutary tumor (prolactin).

(prolactin).

Depending upon the results, this is an autoimmune condition and often responds better to treatment as such rather than a "thyroid" condition. There is evidence that iodine at this stage may make the condition worse (even though blood values improve). The symptoms you have listed can be related to his condition. I would ceratinly look at what changed in his environment before all this started. Full blood work is often ignored simply because practitioners are used to insurance. In addition to blood work for a pitutary tumor you may want (fasting) a CBC with diff, CMP, LH, CRP, HbA1c, Ijods, iorn, ferritin, ESR, £3, £4, £7, £8, tpo all at once to see the relationships within the body. I have found a high correlation between Voll, AK and blood, but still like to see the diagnostic testing.

Roy Horn DC

# **Hashimoto's Thyroiditis**

A13: Sorry for your situation. 12 years old, 180 pounds and defiant must be difficult. Whatever the triggering event, he appears to have a cascading situation of abnormalities in both the immune system synthetic is present the property of the property of the property of the synthetic is premature. The treatment of your son cannot be done from this one report but I would consider the following: thyroid-thyroid nutrients and iodine (any high quality manufacturer); immune-time, selenium, vit C, vit E, then I would consider a Myers followed by a glutatione IV then reassess.

2nd, seenium, vt.C. vt.C., then I would consider a Myers followed By a glutathione IV then reassess. Neurohormone - Your son seems to have a clinical picture of early depression - (Chinese -Hot) Agriated, probable high dopamine, high cortisol, high glutamate. You can test for cortisol levels. Treatment on neurohormonal basis could include tie? Journett therapy to lower cortisol increase serationin, decrease norepineiphrine, increase GABA and decrease inflammation such as taurine, CABA, theanine, inositol, MG++, B6, glutathione, vit D3 NAC, SHTP, B1Z, S-MTHF, D1A. Next you could consider the next tier of treatments using herbs (I know endocrinologist said no but I would consider the east tier of go) same, holy basil, curcumi, rehmania, rhodiola, ashwaganda. Food ideally would be no cow dair, in gluten, no nightshades. Probably avoid high tyrosine foods too eg bananas, meats, google them.

# **Hashimoto's Thyroiditis**

A14: Dear Dr Close.

Standard Process makes a product called Prolamine Iodine. Some people love it, and my friend Dr. William Schlee swears by it, but it didn't do a thing for me.

Regards, Nancy Adams, LMT

# **Hashimoto's Thyroiditis**

A15: Dr. Close: As a Mental Health Counselor and Biofeedback Clinician I have had to separate mood disorders from physical illness, frequently following extensive negative medical evaluation. As you know, teenage mood disorder of any variety is a serious thing and psychiatric antidepressants can sometimes trigger more problems in vulnerable individuals. Thus, while you search for a cause, as a priority find a like minded counselor os as to gestablish a grounding therapeutic relationship during treatment. This is especially needed if there is any family related mental illness such as Bipolar depression, etc. on either side (mother especially).

Can you provide some more information about your son please? I am wondering about the event that led to the tetanus toxoid injection. Was there an injury to the face or teeth? What dental work has your son had, and when? Also, have you spoken with a homeopath regarding the unusual behavior and sudden onset of symptoms? Interesting cross reference in B7T's Materia Medica w/Repertory.

# Hashimoto's Thyroiditis

A17: This sounds similar to a recent episode on the T.V. show "House". The young son and daughter were indirectly in contact with the father who was taking steroids for his maleness. The children were adversely affected by the steroids, changing their young libidos, emotional attitudes, and sexual characteristics. Keep looking; this may be a clue somehow....

A18: interesting set of problems, would add to the testing; free t3, free t4 and follow on the followup with the synthroid, would also get reverse t3. maybe it will be ok to consider I-carnitine and selenium and not bother the doctor since these are not herbs.

A19: Check iodine levels, Armour thyroid has both T3 and T4 which many times is more effective.

# **lodine - YES OR NO?**

#### Experts:

- Hyper thyroid including Graves' yes and no Hypo thyroid including Hashimoto's yes and no

- Test, test and test some more.

  If lodine is high in the hair do not recommend lodine.
- If lodine is low in the hair then use lodine even if Graves' or Hashimoto's
- When lodine is used the TSH will often increase for a few weeks till the new thyroid lodine and function improves, then it will go down. Be patient and don't panic.

# Thyroid Synopsis and main things to test

Total T4: Reflects the total amount of T4 present in the blood, i.e., the protein bound (unavailable) T4 and the Free T4. Note that high levels of estrogens (birth control pills or pregnancy) can increase the amount of the protein that binds T4; giving misleading elevated Total T4 values which can look like 'hyperthyroidism' when it is not.

Total T3: Reflects the total amount of T3 present in the blood, i.e., the protein bound (unavailable) T3 as well as the Free T3. Again, high estrogen levels create the same effect as mentioned in relationship to T4 above.

Free T4: Reflects the biologically active (free) form of T4. This T4 can be converted to T3 or RT3. In the presence of elevated estrogen levels, the Free T4 gives a more accurate assessment of thyroid function.

Free T3: Reflects the biologically active (free) form of T3 that can generate production of energy (in the form of ATP). In the presence of elevated estrogen levels, the free T3 gives a more accurate assessment of thyroid function.

# **Drugs That Alter Thyroid Function**

	Aluminum hydroxid
Aminoglutethimide	
	Rifampin
	Tenretol

# **Conditions Associated With Hypothyroidism**

- Mild anemia
- Low selenium
- Low copper Low iodine
- Low zinc
- High chloride
- High Bromine

- Low phosphorus
- High calcium
- High magnesium
- Low potassium
- Low globulin
- Low protein

# Soy is Bad

Soy contains goitrogens - substances that depress thyroid function. In 1997, researchers from the FDA's National Center for Toxicological Research made the embarrassing discovery that the goitrogenic components of soy were the very same isoflavones. Divi, R.L. et al., "Anti-thyroid isoflavones from the soybean." Biochemical Pharmacology (1997) 54:1087-1096.

# Soy is Bad

- In 1991, Japanese researchers reported that consumption of as little as 30 grams or two tablespoons of soybeans per day for only one month resulted in a significant increase in thyroid-stimulating hormone (TSH). Diffuse goiter and hypothyroidism appeared in some of the subjects and many complained of constipation, fatigue and lethargy, even though their intake of iodine was adequate.
- If thyroid function is lowered by soy then the pituitary tries to stimulate more thyroid function hence, the elevated TSH.

   Dr. Merkle

# Soy is Bad

An April 2000 study published in *Carcinogenesis* found that soy feeding stimulated the growth of a rat's thyroid even with iodine deficiency. This was partly through a pituitary-dependent pathway.

# Soy is Bad

25 grams of soy protein isolate, the minimum amount claimed to have cholesterol-lowering effects, contains from 50 to 70 mg of isoflavones. It took only 45 mg of isoflavones in premenopausal women to exert significant biological effects, including a reduction in hormones needed for adequate thyroid function. These effects lingered for three months after soy consumption was discontinued. Cassidy, A. et al., "Biological Effects of a Diet of Soy Protein Rich in Isoflavones on the Menstrual Cycle of Premenopausal Women", - American Journal of Clinical Nutrition (1994) 60:333-340.

# Soy is Bad

 High soy consumers and users of isoflavone supplements are at risk of thyroid disorders. The subtle effects of anti-thyroid agents such as soy on thyroid function would most likely be evidenced as subclinical, or even overt hypothyroidism.

- New Zealand Medical Journal (Volume 113, Feb 11, 2000)

# **42 Year Old Female**

- Early menopausal, headaches, hot flashes, mood swings, malaise, fatigue, and a long history of low thyroid, complete blood test and program for 6 months...minimal help.
- Soy protein drink for breakfast and sometimes lunch, 2 protein bars a day (soy), and genestein from the health food store for her hormone problems.
- 2 weeks after we took off all soy her symptoms disappeared.

# **Pass the Salt Please**

- More thyroid problems since the salt phobias in the last 20 years.
- lodized salt is a good source of iodine.
- lodine competes with fluorine and chlorine.
- Is patient on a salt restricted diet.
- Sometimes dramatic results in thyroid function with just adding salt.

# **Foods That Block Iodine Utilization** (Goitrogens)

- Raw turnips
- Brussels sprouts
- Cauliflower
- Spinach
- Cabbage
- Peanuts
- **Cooking deactivates Goitrogens**

# **Adverse Effects of Iodine Supplementation**

- lodine induced hyperthyroidism
- lodine induced goiter
- lodism: iodine poisoning marked by severe coryza (allergy symptoms) not limited to:
  - Acneiform eruption mostly seborrheic areas Headache originating in the frontal sinuses

  - Sneezing

  - Foul breath (unpleasant brassy taste)

# **lodine Induced Hyperthyroidism**

- Is an iodine deficiency disorder
  - lodine deficiency increases thyrocyte proliferation and mutation rates resulting in hyperfunctioning autonomous nodules in the thyroid...and hyperthyroidism after iodine supplementation
- Predisposing factors:
  - Treated graves' disease
  - Hashimoto's thyroiditis
  - Post-partum lymphocytic thyroiditis Subacute painful thyroiditis

  - Lobectomy for benign nodules

# **Iodine Properties Cont.**

- lodine is an essential element for breast normality and for protection against fibrocystic disease of the breast and breast
- ~7.5mg/day of iodine
  - Breast cancer and iodine by Derry D

# With Elevated T4 and T3 Consider

- L-Carnitine 2-4 grams
- Liver (check for elevated SGPT)
- Eat: rutabaga, cauliflower, brussel sprouts, cabbage, kale, sauerkraut

# With decreased T4, T3 and Elevated TSH Consider

- Raw thyroid
- Iodine- check hair
- Selenium- check hair
- - Soybeans, rutabaga, cauliflower, brussel sprouts, cabbage, kale, sauerkraut

# Ticket 7-23-2021 Thyroid Pt from SBN member

# 7-23-2021 Ticket for Thyroid pt. DR. Merkle's response:

- this pt needs to see an MD asap.
- most of this could be due to thyroid, she needs to be on thyroid medication asap, if she is on thyroid medication, it either isn't high enough dose or it is not effective. Nutritional support will not be enough or fast enough to take care of this extreme thyroid problem.
- always run a T3 Free with any thryoid study and the TPO Ab and Tg Ab should have also been run but at this time, a referral is the best and really only option.
- If she stopped her thyroid medication in May 2021 and just now retested of 7-09-7021 (which was 2 weeks ago), that is very bad that she didn't get tested/monitored sooner.
- remember, during the SBN lecture, I talk about how Synthroid is a rather 'safe' drug with few side effects and that it is very difficult to take someone off of Synthroid without frequent testing and even then only a 25% or so reduction in Synthroid should be tried for a week or 2 and then retest at least the TSH and T4 and T3 FRee
- let me know what happens but contact this patient directly and have them go to their MD or Emergency Room if she can't get in to her MD. send her a copy of the actual Labcorp form, which you can download, where the reports are stored.

# 7-23-2021 Thyroid pt. from SBN member

Julio Restad replied on 7/3/21 at 5.56 PM rep

maura approach. I will keep you updated. Thanks again for your help. I appreciate your calls, unfortunately I was still sleeping. I would still love to speak to you I you feel it's helpful. Thanks.

in Merida piled on 7/23/21 at 11:13 PM imaging to be cautious and levited that we thing patient take the vitamine for the liver that you mentioned. I do not went her imaging to be cautious and existent that also is QNs. Less is recommended, just have her do the Synthroid till she see her MD. is could have gone badquick? and she needs a blood test now to see if she is still getting worse, do alleast a TSH and T4 morrow of at all possible, those need to be improving.

11111	3 7 2 7								1 1	e (1)
	Alk. Phosphatase	99.000	high	84.000	0	64.740 -	91.260	39.000 -	117.000	IU/L
	Creatine Kinase	359.000	Very High			81.500 -	132.500	32.000 -	182.000	U/L
	LDH	296.000	Very High			138.880 -	190.700	119.000 -	226.000	IU/L
	SGOT (AST)	63.000	High			10.000 -	26.000	0.000 -	40.000	IU/L
	SGPT (ALT)	71.000	Very High			8.000 -	26.000	0.000 -	32.000	IU/L
	GGT (r-GTP)	15.000	*			10.000 -	35.000	0.000 -	60.000	IU/L
	Serum Iron	75.000	*			71.000 -	115.000	27.000 -	159.000	ug/dL
	Ferritin	107.000	*			45.000 -	110.000	15.000 -	150.000	NG/ML
	Total Cholesterol	379.000	Very High	255.000	0	150.000 -	180.000	100.000 -	199.000	mg/dL
	Triglyceride	121.000	*	76.000		50.000 -	150.000	0.000 -	200.000	mg/dL
	HDL Cholesterol	80.000	*	64.000		50.000 -	150.000	40.000 -	200.000	mg/dL
	VLDL Cholesterol	21.000	high	15.000	0	6.000 -	20.000	5.000 -	40.000	mg/dL
	LDL Cholesterol	278.000	Very High	176.000	0	50.000 -	75.000	0.000 -	99.000	mg/dL
	Total Cholesterol / HDL Ratio	4.700	High	4.000	8	0.000 -	4.000	0.000 -	4.400	ratio
	TSH	246.000	Very High	6.520	0	0.500 -	3.500	0.450 -	4.500	uIU/mL
	T4 Thyroxine	1.200	Very Low			7.100 -	9.000	4.500 -	12.000	ug/dL
	T3 Uptake	14.000	Very Low			29.000 -	35.000	24.000 -	39.000	%
	T7 (Free T4 Index) (FTI)	0.200	Very Low			2.610 -	3.600	1.200 -	4.900	
	T4, Free (Direct) Thyroxine			1.340		1.000 -	1.500	0.820 -	1.770	ng/dL
	T3 Free (Triiodothyronine)			2.000		2.600 -	3.800	2.000 -	4.400	pg/mL
	Thyroid Peroxidase (TPO) Ab (antibodies			41.000		0.000 -	9.000	0.000 -	34.000	IU/ML
	Thyroglobulin AB (Antibody)			119.000		0.000 -	1.010	0.000 -	1.100	IU/ML

# Myxedema-extreme low thyroid

- Myxedema coma is a rare fatal condition as a result of long-standing hypothyroidism with loss of the adaptive mechanism to maintain homeostasis. Hypothyroidism due to any cause, including autoimmune disease, iodine deficiency, congenital abnormalities, or medications like lithium and amiodarone, can precipitate myxedema coma if left untreated. Even with early diagnosis and treatment of myxedema coma, the mortality rate is variable, with some reports as high as 60% and others as low as 20 to 25% in the presence of advanced intensive support care. Early recognition, with a thorough history and physical exam, and early treatment is paramount for myxedema coma. History of any thyroid dysfunction, thyroid medication, adherence with thyroid medication, thyroid surgery, and history of any drugs that may affect thyroid function require assessment in any patient suspected myxedema coma.
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# What are the symptoms of myxedema?

- In addition to skin changes, other signs and symptoms of severe hypothyroidism can include:
- low blood pressure
- low heart rate

- $\underline{\text{goiter}}$  (enlargement of the thyroid gland)
- low energy and lethargy
- weakness
- cold intolerance
- constipation
- depressed mood

# Signs of Hypothyroidism

- Feeling tired, cold, dry skin, weight gain, slow heart, puffy face, and constipation.
- Not taking the medication or the dose being too low can cause hypothyroidism.

# What are the symptoms of myxedema crisis?

- Mysedema crisis occurs when your body can no longer tolerate the changes caused by severe hypothyroidism, so it decompensates. This is a life-threatening state that requires immediate medical attention. Along with the signs and symptoms of severe hypothyroidism, symptoms of mysedema crisis can include: decreased breathing (respiratory depression) lower than normal blood sodium levels

- seizures

  Myredema crisis can cause death often due to complications from infection, bleeding, or respiratory failure. It's more common in women and people over the age of 60. It can occur during pregnancy as well.

# Main point about thyroid:

- Don't stop or have patient change thyroid medication without proper guidance.
- If thyroid medication is stopped, the symptoms will often take several days or weeks to become advanced enough to consider.
- Synthroid is a rather 'safe' drug.

# SBN Hormone Panel: DHEA

- Dehydroepiandrosterone (DHEA) is a natural steroid hormone precursor produced from cholesterol mostly by the adrenal glands, gonads and adipose tissue.
- DHEA is the precursor of androstenedione, which can produce the androgen testosterone and the estrogens estrone and estradiol. Regular exercise and calorie restrictions are known to increase DHEA production in the body.
- High levels of the chemical DHEA in the body of a person bring specific effects, as this chemical is a hormone precursor similar in many respects to the other male and female hormones normally found in the body- it displays specific side effects that are connected to its hormonal action.
- Elevated levels of DHEA in the body can for example, lead to the virilization of the female body the development of masculine features. It may induce the formation of acne on the skin, it can cause greasy skin, it can lead to the development of facial hair fran thair loss in women, it may greatly enhance the rate of perspiration, and it can also lead to the development of a deeper voice in women and cause a gain it weight.

# SBN Hormone Panel: DHEA cont.

- Similarly, elevated levels of DHEA in men can lead to the opposite effect, inducing the develop of more prominent breasts in a condition known as gynecomostic, if may lead to a rise if the blood pressure, if can result in testicular washing, or make the man more aggressive in behavior.
- Men may in addition suffer from other types of hormone related side effects of DHEA, they may develop resistance to insulin, the blood sugar levels may be raised, and the patients may suffer from changed cholesterol levels as well as changed thyroid hormone levels in the blood, the supplement may also completely change the functioning of the adrenal glands.
- DHEA supplements must be used with great care by patients already suffering from diabetes or hyperglycemia, people affected by high cholesteral levels, all kinds of disorders of the thyroid, or any type of other endocrine associated hormonal abnormalities must also use the supplement with caution.

# SBN Hormone Panel: DHEA cont.

- Supplements of DHEA, if used, could theoretically speaking, increase the risk of developing certain types of cancers, including ovarian and breast cancer in women and prostate cancer in men.
- Supplements of DHEA might also be contributing to tamoxifen resistance in breast tissues of women affected by breast cancer.

- The addition of DHEA can convert into the necessary testasterone for warmen, as the body needs, but men generally do not get much conversion of DHEA to testasterone. In fact, men tend to get more estrogen conversion from DHEA, if they use too much (over 50 mg, of DHEA per day).
- Herbs like avena sativa, maca and Horny Goat Weed may completely restore the free and total testosterone to normal levels in many cases.

# SBN Hormone Panel: Estradiol (E2)

- ▶ The Estradiol (E2) is the second form of the estrogen hormone and it is the most important form of estrogen found in the body.
- Estradiol is the predominant sex hormone present in females; however, it is present in males, albeit at lower levels.
- Estradiol has not only a critical impact on reproductive and sexual functioning, but also affects other organs including the bones.
- ► Fat structure and skin composition are modified by estradiol.
- Lower-than-normal levels may indicate low estrogen production related to rapid weight loss or low body fat and other conditions including previous use of hormones.
- The main considerations would be thyroid, xenoestrogens and mineral deficiencies.

# SBN Hormone Panel: Estrogen (male)

- The Estrogen (male) is produced in small amounts by the testes and adrenals
- ▶ There may be some dysfunction at these areas and also with the liver.
- Major causes of excess estragen in men include environmental estragens like antibiotics, herbicides, pesticides and hormones used on livestock and produce.
   Medications including Ropeacia, body building supplements including DHEA and hormone and concer therapy, prolonged intense stress increases demand for cortisol, which is made from progesterione can contribute to devaded Estagen.
- Excess estrogen dominance symptoms that men can experience include weight gain, bloating, mood swings, irritability, headaches, fatigue, depression and hypoglycemia.
- ▶ Estrogen dominance is known to contribute to cancer of prostate and the breast.
- It may seem paradoxical but men are not immune to breast cancer

# SBN Hormone Panel: Follicle-Stimulating Hormone (FSH)

- ► The Follicle-Stimulating Hormone (FSH) is produced by the pituitary.
- This test may be useful in infertility. FSH levels vary over the course of the menstrual cycle with peaks at the time of ovulation.
- It is also increased in primary hypogonadism commonly known as menopause, gonadal failure, and alcoholism.
- High plasma follicle stimulating hormone (FSH) is an early indication of ovarian aging.
- Reprinces a limited in the strength of th
- In men, FSH stimulates testicular growth and enhances and sustains the maturing sperm cell.
- A low level of FSH in men is likely to adversely affect fertility.

# SBN Hormone Panel: Free Androgen Index

- ▶ In most men and women, >50% of total circulating testosterone is bound to sex hormone-binding globulin (SHBG), and most of the rest is bound to albumin.
- ▶ The free androgen index can be used to estimate physiologically active testosterone
- ▶ This index is calculated as the ratio of total testasterone divided by SHBG (both expressed in the same units) and multiplied by 100 to yield numerical results comparable in free testosterone concentration.

# SBN Hormone Panel

- Luteinizing Hormone (LH) in both males and females is essential for reproduction.
- ▶ LH levels are normally low during childhood and, in women, high after menopause
- In females, LH varies widely over the course of the female cycle. LH triggers ovulation releasing the egg and prepares the utuerus for implantation. The action of LH on the ovary stimulates androgen and other hormonal precursors for estradiol production.
- ► Female

Midcycle 8.7--76.3
 Luteal 0.5--16.9

Pregnant 0.0--1.5

Contraceptives 0.7-5.6

# SBN Hormone Panel: Luteinizing Hormone (LH)

- ▶ Luteinizing Hormone (LH) in both males and females is essential for reproduction.
- LH levels are normally low during childhood and, in women, high after menopause.
- In males, LH acts upon the testis and is responsible for the production of testosterone, which stimulates spermatogeneses and other endocrine activity.
- Persistant High II Hevels indicate the normal restricting feedback from the gonad is obsent increasing production of both LH and FSH in the pituitary gland. While this is hybrid in the menopause, it is obnormal in the reproductive years. The most common causes of persistant high LH levels are:
- ▶ 1. Premature menopause
- ▶ 2. Polycystic Ovary Syndrome
- 3. Testicular failure

# SBN Hormone Panel: Progesterone

- For females, Progesterone levels need to be correlated with the female cycle, pregnancy or menopause.
- ▶ For men, Progesterone is a potent inhibitor of 5-alpha-reductase, which reduces the conversion rate of testosterone to dihydrotestosterone (DHT).
- ▶ It is thought that adding progesterone helps to prevent testosterone from changing into DHT.
- DHT may lead to enlargement of the prostate and cause or contribute to baldness in men and women.

# SBN Hormone Panel: Prolactin

- The Prolactin Level is usually the first test done for work-up of galactorrhea (inappropriate lactation).
- It is a pituliary function test useful in the detection of prolactin secreting pituliary tumors such as microadenomas and macroadenomas with or without galactorrhea and with or without structural evidence of selfare nelar
- This value may be increased in patients on estrogens, blood pressure lowering and antidepressants, haloperidal, methyldopa and in patients with hypothyroidism. Verapamil has also been reported to have induced hyperpola
- Normal prolactin level does not rule out pituitary tumor.

  Prolactin secretion is episodic and is influenced by stress and by low glucose levels.
- TSH levels done along with Prolactin levels are recommended to rule out primary hypothyroidism. Prolactin secretion is also inhibited by levadopa, dopamine and thyroid hormones.
- Persistent elevations of plasma protactin levels may be observed with and after withdrawal from chronic accaine obuse and maybe indicative of neural derangement.

  In men, one of the primary cause of elevated protactin is use of body building steroids and/or productin rule of body building steroids and/or productin with formulas such as Propecia, which are estragen promoters and will or can increase productin.

#### SBN Hormone Panel: Total Testosterone

- The Testosterone Total Serum is the principal androgen in men but also plays a role in female health as well. The production of testosterone by the male testes is stimulated by Juleinizing hormone, LH, which is produced by the piluitary. LH secretion is, in turn, inhibited through a negative feedback loop by increased concentrations of testosterone and its metabolites.
- Diminished testosterone production is one of many potential causes of infertility in males. Low testosterone concentrations can be caused by testicular failure (primary hypogonadism) or inadequate stimulation by pitultary gonadotropins (secondary hypogonadism).
- Since men with hypogonadism often have high SHBG levels, the measurement of free or bioavaliable testosterane has been recommended when total testosterane levels are normal in men with symptoms of another gode deficiency.
- men with symptoms of androgen deficiency.

  Many women with slowly progressive androgenic symptoms are diagnosed as having polycystic avarian syndrome or PCOs. PCOs affects approximately 6% of women of reproductive age of the productive age of

# SBN Hormone Panel: Free Testosterone

- ▶ Free testosterone is the concentration of unbound testosterone in serum.¹
- ▶ The majority (approximately 60% to 90%) of serum total testosterone is associated with sex hormone binding globulin (SHBG); this fraction is tightly bound and biologically unavailable to its target fissues. The remaining bioavailable testosterone is mostly bound to albumin, with only a small fraction (approximately 0.5% to 2%) circulating in the free form.¹¹²
- ► Free testosterone is the form of testosterone that can diffuse into the tissues and act on receptors and is considered the active fraction by many physicians. <sup>1,3,4</sup> Free testosterone assessment is recommended as a primary or secondary measure of androgen activity in men<sup>2,5-11</sup> and women. <sup>12-16</sup>

# SBN Hormone Panel: Free Testosterone

- ▶ The primary screening test for the diagnosis of hypoandrogenism in men is the measurement of total testosterone in serum in a morning sample.<sup>2,5-11</sup>
- Determination of free testosterone can be of value in men with borderline total testosterone because alterations in SHBC levels can markedly affect the concentration of biologically available free testosterone.<sup>2,17,20</sup>
- Factors and conditions that tend to increase SHBG concentrations in men include aging, hyperthyroidism, estrogens, HIV disease, anticonvulsant therapy, and liver disease.<sup>2</sup>

#### SBN Hormone Panel: SHBG (Sex Hormone Binding Globulin)

- ▶ The SHBG (Sex Hormone Binding Globulin) is produced by the liver, circulates in the bloodstream and binds to sex hormones.
- Once bound to SHBG, the sex hormone is no longer available for the cells to use, commonly called reduced bioavailability.
- ► However, the bound hormone is still part of the 'total level' of a sex
- SHBG often increases with age in men and women, which results in symptoms of low testosterone due to the fact that the testosterone is bound up leading to reduced muscle mass, low bone density, increased bone fractures, reduced libido, ED, mood changes, depression and sleep disturbances.

#### SBN Hormone Panel:

# SHBG (Sex Hormone Binding Globulin) cont.

- With older age, a decline in total testosterone is associated with an increase in SHBG.
- Studies have shown that omitting all animal-based proteins and going to a vegetarian diet might actually increase SHBG levels.
- ➤ To lower SHBG levels, a diet of less fat and more protein is preferred. Dietary fat can lower total testosterone whereas excess protein does not have the same impact.
- Minimal use of alcohol, caffeine and sugar is encouraged.
- Nutrients that might be of benefit include zinc, magnesium, vitamin D, boron and possibly DIM Diindolylmethane.
- ▶ Serious over-training has been shown to increase SHBG.

# Advanced Coronary Panel: OmegaCheck

- The OmegaCheck level takes into consideration: the Total Omega 3 Fatty Acids, the Omega-3 FA DPA and the Omega-3 FA DHA and Omega-3 Fatty Acid (FA) EPA.
- The OmegaCheck value is a formula calculation that takes into consideration all of the fatty acids.
- Basically, the higher the OmegaCheck: the lower the coronary risk.
- The Fatty Acids EPA, DHA and DPA are known to lower inflammation of all forms including inflammation associated with heart disease as well as inflammation associated with autoimmune disease.
- O3FA lower triglycerides, help with depression and anxiety, improves vision in adults and neurological development in infants, may help prevent macular depeneration, improve cognitive function, and aid in sleep, inhibits plateit aggregation that can lead to blood clots and aids in improving circulation.

  They promote wound-healing and helps to prevent angiogenesis.
- Optimizing these Omega=3 FAS will likely help to reduce coronary risk and sudden death due to cardiovascular
  disease and improve overall health. With intake of 3 glday or less of EPA and DHA, there is no significant risk
  for increased bleeding time beyond the normal range. A daily dosage of 1 gram of EPA and DHA can also lower
  triglycenides. Fish and Fish oil supplements are the best source of these faity acids.

# Advanced Coronary Panel: ARA/EPA Ratio

The ARA/EPA Ratio is a very important test as it measures the level of cellular inflammation in the body. Lowering cellular inflammation is very beneficial for preventing heart disease and other inflammatory diseases as well as reducing the chance of developing chronic disease in the future. An anti-inflammatory diet and EPA supplements are the only ways to reduce the ARA/EPA ratio.

# **Advanced Coronary Panel:** Omega-6 to Omega-3 Ratio

The Omega-6 to Omega-3 Ratio. Industry-sponsored studies have suggested that omega-6 fatty acids should be consumed closer to a 1:1 ratio to omega-3, though many individuals today have a ratio of about 16:1, mainly from vegetable oils. Currently, the optimal ratio is thought to be, to 1 or lower and some sources suggest ratios as low as 1:1. A ratio of 3:1 omega 6 to omega 3 helped reduce inflammation in patients with rheumatoid arthritis. A ratio of 5:1 had a beneficial effect on patients with asthma but a 10:1 ratio had a negative effect. A ratio of 5:1 reduced rectal cell proliferation in patients with colorectal cancer, whereas a ratio of 4:1 had no effect.

# Advanced Coronary Panel: Total Omega-6 Fatty Acids

The Total Omega-6 Fatty Acids. The most important Omega-6 Fatty Acids are Arachidonic Acid (ARA) and Linoleic Acid (LA). These tend to be pro-inflammatory and pro-thrombotic and tend to increase coronary heart disease. A low or optimal level is desired.

# Advanced Coronary Panel: Omega-6 Arachidonic Acid (ARA)

The Omega-6 Arachidonic Acid (ARA) does have a significant role in inflammation related to injury and many disease states and is most abundant in the brain, muscles and liver.

- High ARA consumption is not advised when there is a history of inflammatory disease, poor health or
those who have elevated cardiovascular risk factors. Basically, elevated ARA is due to increased physical
activity, increased consumption of Omega 6 fats or the bad vegetable oils or due to exposure to toxic
chemicals.

- ARA appears to be the proper response to stress in nearly all forms and is the body's attempt to neuralize or minimize damage with inflammation and constriction and then to promote healing and repair with anti-inflammatory properties.

The cause of the elevated ARA is the key to determining the proper course of therapy.

# Advanced Coronary Panel: Omega-6 Alpha-Linoleic Acid (LA)

• The Omega-6 Alpha-Linoleic Acid (LA). LA is an essential fatty acid that serves as a source of energy and as a building block for DHA and EPA. Medical conditions like diabetes or certain allergies may significantly limit the human body's capacity for metabolizing of EPA from LA. LA is abundant in many nuts, fatty seeds (flax seeds, hemp seeds, pappy seeds, sesame seeds, etc., which are good). A deficiency of LA might show symptoms of mild skin scaling, hair loss, and poor wound healing. Heart disease, cancer and other degenerative conditions are associated with increased LA especially when the source of LA is from vegetable loils like canda, corn, soybean, cottonseed and margarines. It is also recommended to reduce or limit safflower, sunflower, grapeseed and peanut oils.

# Advanced Coronary Panel: F2 Isoprostane/Creatinine (F2-IsoPs)

The Fa Isoprostane/Creatinine (F2-IsoPs) level: A low or optimal level is desired. Elevated F2-IsoPs levels show an increased risk of atherosclerosis and coronary heart disease and are elevated with cancers, inflammatory conditions, chronic disease, and act as a potent vasoconstrictor and promote platelet activation resulting in blood clots. F2-IsoPs are usually increased in smokers and excessive intake of red meat. Improved fitness and diet will offen help to lower F2-IsoPs levels. Note: Individuals who exercise a lot may be at risk of increased oxidative stress in their bodies due to a lack of nutritional balance and insufficient exercise recovery.

# Advanced Coronary Panel: Asymmetric Dimethylarginine (ADMA)

- The Asymmetric Dimethylarginine (ADMA) and the Symmetric Dimethylarginine (SDMA) are
  metabolites of L-arginine and reduce NO production. Elevated levels are associated with endothelial
  dysfunction, insulin resistance, hypertension and subclinical or early atherosclerosis and correlates with
  interest serificial parts this leaves and below to formation.
- Elevated ADMA and SDMA in young adults has been associated with increased CT scan coronary
  artery calcification and are associated with twice the risk for adverse events including MI and stroke
  than those with normal levels.
- Elevated SDMA is also associated with impaired kidney function.

# Advanced Coronary Panel: Galectin-3

- The Galectin-3 is a carbohydrate-binding lectin, an important biomarker that assists in the detection of early heart disease and helps predict prognosis in patients with heart failure. Increased levels have been linked to higher risk of hospitalization and mortality. Patients with cancers typically have increased Galectin-Levels as well, as this glycoprotein serves as a signalling molecule for metastasis and cancer cell adhesion.
- Typically, Galectin-3 is found in small amounts in our bodies however, high levels indicate a variety
  of serious health concerns like degenerative processes such as heart failure, cancers, chronic
  inflammation, and fibrosis.
- Galectin-3 can induce cardiac fibrosis and reduced ejection fraction in animals.
- Optimal levels of Galectin-3 help to reduce or prevent heart organ fibrosis

# Advanced Coronary Panel: Myeloperoxidase (MPO)

- The Myeloperoxidase (MPO), an inflammatory enzyme, measures disease activity of the arterial
  wall. MPC in the blood is a specific marker of vascular inflammation and vulnerable
  placelerosunsynfistaries farmation that lead on a reinal blookage and reduced blood flow. As such,
  elevated levels of MPO are associated with or predict risks for cardiovascular disease,
  myocardial infarction and future cardiovascular events.
- Basically, elevated levels of MPO indicate current or developing blockage of arteries.
- A low or optimal level of MPO indicates a low probability of plaque rupture in vessels

# Advanced Coronary Panel: Oxidized LDL (OxLDL)

- The Oxidized LDL (OxLDL). An elevated OxLDL is <u>associated with coronary artery disease</u>, development of atherosclerosis and elevated levels may be seen in cardiovascular disease, metabolic syndrome, acute myocardial infarction, kidney disease, polycystic ovary syndrome, autoimmune disorders, Alzheimer's and similar diseases.
- Foods will have unpleasant odors and flavors as the fats (lipids) become oxidized. This same oxidative
  process can occur in the body leading to a myriad of adverse health effects as noted above. OxLDL levels
  usually respond to improvements in diet, weight loss, nutritional supplements and exercise. An optimal
  or low level of Ox LDL is desired.

# Advanced Coronary Panel: Lp-PLA2

- The Lp-PLA2 is a vascular-specific inflammatory enzyme that plays a direct role in the <u>development</u> of atherosclerosis.
- Increased Lp-PLA2 activity is associated with a higher risk of coronary heart disease (CHD).
- People with elevated Lp-PLA2 are twice as likely to develop CHD at 7 years and are twice as likely to
  experience a CHD event (MI or CHD related death) at 5 years.
- A low or optimal level of Lp-PLA2 is desired.

# Advanced Coronary Panel: (International Normalized Ratio) or INR

- An INR is useful in monitoring the impact of anticoagulant ("blood thinning") medicines, such as Warfarin (Coumadin). While taking Warfarin, patients have regular blood tests to monitor their INR. In healthy people, the INR is about 2.0. For splienters on anticoagulants, the INR typically should be between 20 and 3 of for patients with strial fibrillation, or between 3 of and 4.0 for patients with mechanical heart valves. However, the ideal INR must be individualized for each patient.
  The INR The (International Normalized Ratio) or INR measures the time it takes for blood to clot (Prothrombin Time) and compares it with an average.
- A n INR can be too high, a number greater than 4,0 may indicate that blood is clotting too slowly, creating a risk of uncontrolled bleeding. An INR less than 2.0 may not provide adequate protection from clotting.

# Advanced Coronary Panel: Prothrombin Time

- The Prothrombin is converted into the universal INR (International Normalized Ratio)
   Also called the INR PT

# Advanced Coronary Panel: B-type natriuretic peptide (BNP)

- The B-type natriuretic peptide (BNP), this 32-amino-acid polypeptide is secreted by the ventricles of the heart in response to excessive stretching of heart muscle cells in the ventricles.
- BNP is elevated in left ventricular dysfunction and correlates with both the severity of symptoms and the prognosis in congestive heart failure.
- BNP is a useful marker of cardiovascular risk, even in people with no clinical evidence of cardiovascular disease.
- The levels of BNP predict the risk of heart failure, first cardiovascular events, atrial fibrillation, and stroke or transient ischemic attack.