

# Full Case Reviews II - Part One

Hey, everybody. This week we're going to do part two of the full case reviews.



**John**  
Initial Consult

**38 y.o. Male** CC: Psoriasis

**Joint pains.** Question psoriatic arthropathy.

Given pain **medication** but didn't relieve pain adequately.

Went to Mexico to work with a physician there.

Traveled to Portland, Oregon, to work with a functional medicine MD there. That's when John was turned onto **Paleo diet**.

Started feeling better.

Now doing better; not as debilitating as previously.

**Hashimoto's**, on thyroid medication briefly.

We'll start with a patient we'll call "John," a 38-year-old male with chief complaint of psoriasis. Recently he developed joint pains, and there was a question of psoriatic arthropathy, or psoriatic arthritis. He was given pain medication, but it didn't relieve his pain adequately, so he went down to Mexico to work with a physician there. He also traveled to Portland, Oregon, to work with a functional medicine MD there, and that's where he was turned on to the Paleo diet. He started a 30-day reset and felt better. By the time he came to see us, he was definitely doing significantly better and wasn't as debilitated as he was previously, but he still had symptoms. He also had been diagnosed with Hashimoto's and was on thyroid medication briefly.

**CC:** Psoriasis

**Focused PMH:**  
 Psoriasis diagnosed  
 Then joint pains developed - question psoriatic arthropathy  
 Given pain medication but didn't relieve pain adequately

Went to Mexico to work with a physician there  
 Traveled to Portland, OR to work with a functional med MD there, that's when [redacted]  
 was turned onto Paleo diet  
 Started feeling better

Now doing better but not as debilitating as previously

Hashimoto's -- on thyroid med briefly

**Assessment and Plan:**

[redacted]

It was a pleasure speaking with you. Below is a summary of the recommended tests we discussed. You will receive an invoice within one to two business days.

- Case review blood panel, which is a standard set of labs including complete blood count, electrolytes, cholesterol, and iron panel.
- Evaluate for dysbiosis with Doctor's Data and BioHealth stool tests and evaluate for SIBO using a breath test which detects both hydrogen and methane gas.
- Organic acids test to further evaluate for dysbiosis, and also to assess cellular energy production, vitamin B status, oxidative stress and detoxification capacity.
- Complete hormone profile to evaluate hormone levels and ratios and to screen your functional methylation. This test will also assess your daily cortisol rhythm and cortisol metabolites to assess your stress response.
- Testing for wheat and gluten sensitivity using Cyrex Labs Array 3. A handout in your portal details the preparation for this test.
- After you've prepared for the wheat and gluten sensitivity test as described in the handout, then please follow a Paleo elimination diet for at least 30 days. A handout describing the dietary principles and guidelines is available through your portal.

Please send us a message through the portal if you have any questions. We look forward to working with you.

[redacted]

SIGNED

Assessment Diagnosis

Prim. Psoriasis, other (696.1 - ICD9)

Thyroiditis, chronic, Hashimoto's (245.2 - ICD9)

Plan Rx/ Orders/ Vaccines

ORD DD CSAP x3

ORD DUTCH Comp Hormone

ORD BioHealth #401H

ORD GPL OAT

ORD Cyrex Array #3

ORD CR Blood Panel [LabCorp] (F) (pre 6-29-16)

ORD Rheumatoid Arthritis Factor [LabCorp]

ORD Thyroid Antibodies [LabCorp]

Charges / Payments

[redacted]

+ Append a Comment

+ Append Follow-Up SOAP Note

We ordered a standard set of labs for him plus rheumatoid factor and thyroid antibodies to check the status of his immune system. He was still eating gluten occasionally, so we ordered Cyrex Array 3.

Please list the 5 major health concerns in your order of importance

- Joint Pain (Arthritis)
- Syndrome Signs
- Insomnia
- Chronic Fatigue
- 

Please check the appropriate number on all questions below. 0 as least/never to 3 as most/always.

Category I	0	1	2	3
Feeling that bowels do not empty completely	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Lower abdominal pain relieved by passing stool or gas	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alternating constipation and diarrhea	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Diarrhea	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constipation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard, dry, or small stool	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Coated tongue or "fuzzy" debris on tongue	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pass large amount of foul-smelling gas	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
More than 3 bowel movements daily	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use laxatives frequently	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Category II	0	1	2	3
Increasing frequency of food reactions	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Unpredictable food reactions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aches, pains, and swelling throughout the body	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Unpredictable abdominal swelling	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frequent bloating and distention after eating	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Abdominal intolerance to sugars and starches	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Category III	0	1	2	3
Intolerance to smells	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intolerance to jewelry	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intolerance to shampoo, lotion, detergents, etc.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multiple smell and chemical sensitivities	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constant skin outbreaks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Category IV	0	1	2	3
Excessive belching, burping, or bloating	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Gas immediately following a meal	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Offensive breath	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Difficult bowel movement	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Sense of fullness during and after meals	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Difficulty digesting fruits and vegetables; undigested food found in stools	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Category V</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Stomach pain, burning, or aching 1-4 hours after eating	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use antacids	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel hungry an hour or two after eating	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heartburn when lying down or bending forward	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Temporary relief by using antacids, food, milk, or carbonated beverages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Digestive problems subside with rest and relaxation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Heartburn due to spicy foods, chocolate, citrus, peppers, alcohol, and caffeine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
<b>Category VI</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Roughage and fiber cause constipation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indigestion and fullness last 2-4 hours after eating	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Pain, tenderness, soreness on left side under rib cage	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excessive passage of gas	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nausea and/or vomiting	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Stool undigested, foul smelling, mucous like, greasy, or poorly formed	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Frequent urination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased thirst and appetite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Category VII</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Greasy or high-fat foods cause distress	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Lower bowel gas and/or bloating several hours after eating	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bitter metallic taste in mouth, especially in the morning	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Burpy, fishy taste after consuming fish oils	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Difficulty losing weight	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unexplained itchy skin	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Yellowish cast to eyes	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stool color alternates from clay colored to normal brown	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Reddened skin, especially palms	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Dry or flaky skin and/or hair	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
History of gallbladder attacks or stones	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you had your gallbladder removed?				

In case review documents, he mentioned insomnia and chronic fatigue as additional complaints. Although not mentioned in the list, you can see that he has several GI issues. Again, this isn't uncommon for patients, especially for men, not to mention GI issues as a complaint but then to go on and list high scores for GI symptoms in the questionnaire. You want to pay attention to that,

especially given the well-established connection between the gut and all kinds of chronic diseases. He has high scores in stomach, small intestine, gallbladder, and the large intestine categories.

	0	1	2	3
<b>Category VIII</b>				
Acne and unhealthy skin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Excessive hair loss	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Overall sense of bloating	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Bodily swelling for no reason	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hormone imbalances	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Weight gain	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Poor bowel function	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Excessively foul-smelling sweat	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Category IX</b>				
Crave sweets during the day	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Irritable if meals are missed	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Depend on coffee to keep going/get started	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Get light-headed if meals are missed	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Eating relieves fatigue	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Feel shaky, jittery, or have tremors	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agitated, easily upset, nervous	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Poor memory/forgetful	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Blurred vision	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<b>Category X</b>				
Fatigue after meals	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crave sweets during the day	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Eating sweets does not relieve cravings for sugar	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Must have sweets after meals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Waist girth is equal or larger than hip girth	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Frequent urination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased thirst and appetite	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Difficulty losing weight	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
<b>Category XI</b>				
Cannot stay asleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Crave salt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Slow starter in the morning	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Afternoon fatigue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Dizziness when standing up quickly	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Afternoon headaches	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Headaches with exertion or stress	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weak nails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
<b>Category XII</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Cannot fall asleep	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Perspire easily	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Under high amount of stress	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Weight gain when under stress	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Wake up tired even after 6 or more hours of sleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Excessive perspiration or perspiration with little or no activity	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Category XIII</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Edema and swelling in ankles and wrists	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle cramping	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor muscle endurance	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Frequent urination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frequent thirst	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Crave salt	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Abnormal sweating from minimal activity	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Alteration in bowel regularity	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Inability to hold breath for long periods	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Shallow, rapid breathing	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Category XIV</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Tired/sluggish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel cold?hands, feet, all over	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Require excessive amounts of sleep to function properly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increase in weight even with low calorie diet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gain weight easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficult, infrequent bowel movements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Depression/lack of motivation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Morning headaches that wear off as the day progresses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outer third of eyebrow thins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thinning of hair on scalp, face, or genitals, or excessive hair loss	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dryness of skin and/or scalp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mental sluggishness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

He has a lot of blood sugar and HPA axis symptoms as well. For some reason, he didn't fill out the hypothyroid section, or his answers didn't come through.

Category XV	0	1	2	3
Heart palpitations	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inward trembling	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased pulse even at rest	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nervous and emotional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Insomnia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Night sweats	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Difficulty gaining weight	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Category XVI	0	1	2	3
Diminished sex drive	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Menstrual disorders or lack of menstruation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased ability to eat sugars without symptoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Category XVII	0	1	2	3
Increased sex drive	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tolerance to sugars reduced	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
"Splitting" - type headaches	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Category XVIII (Males Only)	0	1	2	3
Urination difficulty or dribbling	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frequent urination	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain inside of legs or heels	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling of incomplete bowel emptying	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Leg twitching at night	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Category XIX (Males Only)	0	1	2	3
Decreased libido	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Decreased number of spontaneous morning erections	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decreased fullness of erections	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Difficulty maintaining morning erections	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Spells of mental fatigue	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Inability to concentrate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Episodes of depression	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Muscle soreness	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Decreased physical stamina	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Unexplained weight gain	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increase in fat distribution around chest and hips	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

<b>Sweating attacks</b>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>More emotional than in the past</b>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Category XX (Menstruating Females Only)</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Perimenopausal	<input type="radio"/>	Yes	<input type="radio"/>	No
Alternating menstrual cycle lengths	<input type="radio"/>	Yes	<input type="radio"/>	No
Extended menstrual cycle (greater than 32 days)	<input type="radio"/>	Yes	<input type="radio"/>	No
Shortened menstrual cycle (less than 24 days)	<input type="radio"/>	Yes	<input type="radio"/>	No
Pain and cramping during periods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scanty blood flow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heavy blood flow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Breast pain and swelling during menses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pelvic pain during menses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Irritable and depressed during menses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acne	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facial hair growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hair loss/thinning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Category XXI (Menopausal Females Only)</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
How many years have you been menopausal?	<input type="text" value=""/> years			
Since menopause, do you ever have uterine bleeding	<input type="radio"/>	Yes	<input type="radio"/>	No
Hot flashes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mental foginess	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disinterest in sex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mood swings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Depression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Painful intercourse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shrinking breasts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facial hair growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acne	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased vaginal pain, dryness, or itching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

He has some high scores in the thyroid hyperfunction section as well as the male hormone section. There is really quite a bit more going on here when you look at his symptoms than you would expect from what he said during the initial consult. Again, that is not unusual, especially for men.

<input type="text" value="0"/> How many alcoholic beverages do you consume per week?	<input type="text" value="0.5"/> How many caffeinated beverages do you consume per day?
<input type="text" value="5-6"/> How many times do you eat out per week?	<input type="text" value="1"/> How many times a week do you eat raw nuts or seeds?
<input type="text" value="1"/> How many times a week do you eat fish?	<input type="text" value="0"/> How many times a week do you workout?

List the three worst foods you eat during the average week:

List the three healthiest foods you eat during the average week:

Do you smoke?  Yes |  No

Do you currently have mercury amalgams (fillings)  Yes |  No

Have you had mercury amalgam fillings removed in the past?  Yes |  No

Rate your levels of stress on a scale of 1-10 during the average week:

Please list any medications you currently take and for what conditions:

None right now.

Please list any natural supplements you currently take and for what conditions:

None right now.

Indicate the frequency with which you eat the following foods by marking in the appropriate box. **FREQUENT**= at least once a day, **OFTEN**= several times per week, **OCCASIONAL**= once a week or less, **SELDOM**= once or twice a month or less, **NEVER**= total avoidance.

	Frequent	Often	Occas.	Seldom	Never
Alcoholic Beverages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Eat Out at Restaurants	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pastries, Cookies, Candy, Ice Cream and Other Sweets	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
White Flour: Bread, Pasta, Pancakes, Crackers, Muffins, etc	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Add Sugar to Coffee, Tea, Cereals, or Other Foods	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sodas or Soft Drinks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Diet Soft Drinks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Fruit Juices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Artificial Sweeteners (NutraSweet, Saccharin, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Natural Sweeteners (Honey, Maple Syrup, Agave, etc)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Breakfast Cereals (Hot or Cold)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Packaged Foods: Chips, Crackers, Puffs, Pretzels	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vegetable Oils (Sunflower, Safflower, Canola, Corn, Soy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Margarine or Tub Vegetable Oil Spreads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Deep-Fried Foods	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Olive Oil	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Avocados	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Saturated Fats (Butter, Ghee, Lard, Coconut, Palm, Tallow)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fatty Fish (Salmon, Mackerel, Sardines, Herring)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nuts and Seeds, Nut/Seed Butters	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pasteurized Dairy (Check: <input type="checkbox"/> Nonfat, <input checked="" type="checkbox"/> Low-Fat, <input type="checkbox"/> Whole)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Raw Dairy Products (Check: <input type="checkbox"/> Nonfat, <input type="checkbox"/> Low-Fat, <input type="checkbox"/> Whole)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Fermented Dairy Products (Yogurt, Kefir, Cheese)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Eggs (Check: <input type="checkbox"/> Free-Range, <input checked="" type="checkbox"/> Pastured, <input type="checkbox"/> Organic, or <input checked="" type="checkbox"/> Conventional)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poultry or Fowl (Chicken, Turkey, Duck, etc)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pork	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Red Meat (Beef, Lamb)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processed Meats (Bacon, Sausage, Salami, Ham, etc)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

He doesn't drink alcohol. He doesn't consume a lot of caffeine, but he does eat out a lot, and he goes off the rails when he does with doughnuts, cookies, and candy. He currently has mercury amalgams, and on the diet survey, you can see again he marked often for pastries, occasional for white flour, and then often for packaged food such as chips and crackers.

Organ Meats (Liver, Kidney, Sweetbreads, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Soy Products (Tofu, Tempeh, Soy Milk, Edamame)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Salads, Uncooked Vegetables	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fermented Vegetables (Sauerkraut, Kim Chi, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Non-Starchy Vegetables (Greens, Squash, Carrots)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starchy Vegetables (Potatoes, Yams, Sweet Potatoes)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fresh Fruits	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beans and Legumes	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whole Grains and Whole Grain Breads (Wheat, Gluten)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alternative Grains (Quinoa, Buckwheat, Teff, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Herbs and Spices (Fresh or Dried)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chocolate (Check: <input checked="" type="checkbox"/> Milk or <input type="checkbox"/> Dark)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Herbal Teas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Coffee (Check: <input type="checkbox"/> Regular or <input checked="" type="checkbox"/> Decaffeinated)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Caffeinated Teas (Check: <input type="checkbox"/> Black or <input checked="" type="checkbox"/> Green)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Salt (Check: <input type="checkbox"/> Iodized or <input checked="" type="checkbox"/> Sea Salt)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate if you are on any special diet:

Ovo-lacto-vegetarian       Vegetarian       Other  
 Diabetic ADA       Vegan  
 Dairy-free       **Paleo**  
 **Gluten-free**       GAPS

If you checked any, how long have you been on this diet?

If you checked any, how strictly are you on it? For example: 80/20, or all the time, except certain holidays

Please check any and all boxes below that describe your current eating styles:

Eat while driving, in front of a TV or computer, or multi-tasking       **Fast eater**  
 Irregular eating habits (eating times, portion sizes, etc)       **Eat too much**  
 Eat late at night       Eat in the middle of the night  
 Time constraints       Travel Frequently  
 Eat more than 50% meals away from home       **Don't care to cook, or never learned**

<input type="checkbox"/> Confused about nutritional advice	<input type="checkbox"/> Don't really enjoy meals; eat mostly for fuel or calories
<input checked="" type="checkbox"/> <b>Eat lots of pre-made or pre-packaged foods and snacks</b>	<input type="checkbox"/> Lack of choice of healthy foods in neighborhood
<input type="checkbox"/> Don't eat breakfast or dinner together as a family unit	<input type="checkbox"/> Don't share same meals, even if seated together at table (special dietary needs and/or food preferences)
<input checked="" type="checkbox"/> <b>Emotional eater (when sad, bored)</b>	<input checked="" type="checkbox"/> <b>Have a negative relationship to food</b>
<input checked="" type="checkbox"/> <b>Diet often for weight control</b>	<input checked="" type="checkbox"/> <b>Struggle with eating issues or history of eating disorders</b>
<input checked="" type="checkbox"/> <b>Eat too much or too little under stress</b>	
<b>Additional Comments</b> <input type="text"/>	

As you can see, although he says he is Paleo and gluten-free, he also says he is not strict at all, and he goes on and off. He has a lot of emotional eating habits, and you may need to address these to be successful with the treatment protocol because that is almost certainly interfering with his ability to stick with a healthy diet.

The food we eat is probably the single-most important factor determining whether we are healthy or ill. The goal of this survey is not to pass judgment, but instead to get an accurate idea of what you're eating and how it may (or may not) be contributing to your health problems. The more accurate and honest you can be in your responses, the more I will be able to help you make choices that support health and well-being.

1) Describe a typical breakfast (including what time you eat it).

Usually is some kind of a processed carbohydrate like a pastry.

When I have been on track with the Paleo diet, I usually just have some kind of a fruit and take lunch early. When I feel hungry I have a small can of sardines.

2) Do you have a morning snack?  Yes  No  Sometimes

3) Describe a typical lunch (including what time you eat it).

I try to bring food left over from dinner, but I have not been consistent with this and usually go out to a fast food restaurant for a burger. Sometimes I make better choices and go to Chipotle or In N Out and order food with now grains.

4) Do you have an afternoon snack?  Yes  No  Sometimes

I usually try to make it to dinner, but often I don't and will have some kind of cookie/pastry/candy.

5) Describe a typical dinner (including what time you eat it).

Dinners are the better choices. They normally are foods with minimal grains, high protein options like salads with some meat, steamed vegetables with some kind of meat, sauteed vegetables with meat. Other sides include Mexican rice, potatoes and sauces that go along with the meats.

6) Do you eat a bedtime snack?  Yes  No  Sometimes

Once in a while if we eat dinner early, I'll have some kind of a quick carbohydrate with maybe milk

7) Do you eat dessert after:  lunch?  dinner?  both?  "I don't eat dessert"

Please describe what you eat for dessert

I have a sweet tooth and normally eat a fruit/cookie/pastry for dessert.

8) Do you wake up hungry in the middle of the night?  Yes  No  Sometimes

If so, do you eat? What do you eat?

Additional Comments

Breakfast right now is some kind of pastry. Even when he is on Paleo, he often only has fruit. That is definitely not ideal because he is overweight, and a higher protein breakfast, as you know, is better in that situation. He tends to eat lunch at Chipotle or In N Out Burger, which is obviously not ideal. Then he often has a pastry in the afternoon. Dinner tends to be a little bit better but still probably not ideal given his symptoms and his weight. Again, we see a little bit of a disconnect between what he mentioned during the initial consult and what he is actually doing on a day-to-day basis.

**ENVIRONMENTAL EXPOSURE**

Please answer the following questions:

	Yes	No	Unknown
1) Do you have exposure to the interior building of a water damaged building and/or microbial growth? If yes, please answer the next three (3) questions:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
a. Do you have samples/evidence of spore or genus and species of fungus (air test, ERM1 test, etc.)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
b. Is there visible microbial growth (mold)?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
c. Is there a presence of musty smells?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
2) Do you remember a tick bite occurring before your illness beginning? If yes, please answer the next two (2) questions:	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
a. Did you have an unexplained rash after the bite?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
b. Did you experience flu-like illness after the bite?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
3) Have you had a brown recluse or other poisonous spider bite? If yes:	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
a. Did you experience flu-like illness after the bite?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
4) Did you become ill after eating fish?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
5) Did you become ill after exposure to a body of fresh water?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
6) Did you become ill after exposure to the ocean during a 'Red Tide' or other bloom?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
7) Did you become ill after exposure to an estuary fish kill?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
8) Did you become ill after exposure to a closed shell fish bed area?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

**ASSOCIATED ILLNESSES**

Please mark yes or no:

Illness	Yes	No
Tick borne illness	<input type="radio"/>	<input checked="" type="radio"/>
Lyme Disease	<input type="radio"/>	<input checked="" type="radio"/>
Fibromyalgia	<input type="radio"/>	<input checked="" type="radio"/>
Chronic Fatigue Syndrome	<input type="radio"/>	<input checked="" type="radio"/>
Gulf War Syndrome	<input type="radio"/>	<input checked="" type="radio"/>
Chemical Sensitivity	<input type="radio"/>	<input checked="" type="radio"/>
Sick Building Syndrome	<input type="radio"/>	<input checked="" type="radio"/>
Fungus or Mycotoxicosis	<input type="radio"/>	<input checked="" type="radio"/>
Depression	<input type="radio"/>	<input checked="" type="radio"/>
Chronic Soft Tissue Injury	<input type="radio"/>	<input checked="" type="radio"/>
Irritable Bowel Syndrome	<input checked="" type="radio"/>	<input type="radio"/>
Bacteria	<input type="radio"/>	<input checked="" type="radio"/>
Bell's Palsy	<input type="radio"/>	<input checked="" type="radio"/>

Pfeisteria	<input type="radio"/>	<input checked="" type="radio"/>
Sensory Neural Hearing Loss	<input type="radio"/>	<input checked="" type="radio"/>
Ciguatera Seafood Poisoning	<input type="radio"/>	<input checked="" type="radio"/>
Any Learning Disability	<input type="radio"/>	<input checked="" type="radio"/>
Autism	<input type="radio"/>	<input checked="" type="radio"/>
Attention Deficit Disorder	<input type="radio"/>	<input checked="" type="radio"/>
Charcot Marie Tooth Syndrome	<input type="radio"/>	<input checked="" type="radio"/>
Alzheimer's Disease	<input type="radio"/>	<input checked="" type="radio"/>
Parkinson's Disease	<input type="radio"/>	<input checked="" type="radio"/>
Amyotrophic Lateral Sclerosis	<input type="radio"/>	<input checked="" type="radio"/>
Multiple Sclerosis	<input type="radio"/>	<input checked="" type="radio"/>
Diabetes	<input type="radio"/>	<input checked="" type="radio"/>
Ocular Disease (e.g., cataract)	<input type="radio"/>	<input checked="" type="radio"/>
Retinal Disease (e.g., glaucoma)	<input type="radio"/>	<input checked="" type="radio"/>
Low Vision or Blindness	<input type="radio"/>	<input checked="" type="radio"/>
Another Condition Involving Neurological Function	<input type="radio"/>	<input checked="" type="radio"/>

The single most important criteria for effective case management is a comprehensive and detailed health history. Please answer the following questions with as much detail as possible. It is important for me to know everything about you and your case. Even when you feel the questions may not be directly relevant to your situation, please do your best to answer them.

It takes tremendous time and energy for any healthcare provider to manage a complicated case. My practice is limited to a small number of patients and therefore the case review process is very important.

*Instructions: Please type answers to the following questions with as much detail as possible. Please answer each question independently.*

### HEALTH HISTORY QUESTIONS

1) Please list the following

Education:

Profession:

Interests (sports, hobbies, etc.):

- Spending time with family
- Technology (computers, keeping up with tech)
- Want to go back to being active and playing basketball
- Want to go back to being active and playing soccer
- Learning to play guitar.

2) List your chief complaints in order of your importance:

- Joint pain (not being able to be physically active)
- Unable to change my diet in the long term
- Poor sleep
- Poor digestion
- Overweight

3) List all diagnoses given to you in a timeline sequence and your personal opinions about them.

I had always had a problem with a dry scalp and in the summer of 2003 when I had longer nails than normally I aggressively scratched my scalp in response to itchiness and high stress. The result was that I started getting patches of dry skin on my head that caused me to lose hair. I saw a dermatologist that diagnosed me with Psoriasis. I treated this first episode with just mineral oil and recovered after a few months. Ever since, I haven't had any major skin problem like that which at one point caused me to believe that it was a mis-diagnosis, but the realized it might not have been when I presented out minor signs years later.

In 2008 after a visit with my doctor at Kaiser, she recommended me losing weight (I was about 300+ lbs) and gave me information for a program called Medical Weight Management through Kaiser and overseen by doctors and dieticians. I started this program and lost around 70 lbs through calorie restriction and intense exercise. A few months into the program, almost at the end I started hurting my shoulder very easily, by picking up a 5 gal water jug for example or even reaching in an awkward way. After this, other joints started bothering me as well. I saw doctors at Kaiser and got responses guiding me to believe that it was no big deal and just to tone down what I was doing as far as exercise. Eventually a doctor through my firm request agreed to do a blood test where he noticed high markers of arthritis for which he said that it might be a false positive. He did refer me to a Kaiser rheumatologist, but the only thing he said after visually inspecting my joints was something along the lines not being able to conclude that I had serious type of arthritis because my joints didn't show any deformations, so he gave my pain pills. Not being happy with this diagnosis and symptoms getting worse I saw three more rheumatologists in  each giving me a slightly more in depth diagnosis. The last (in ) saying that it could be psoriatic arthritis or rheumatoid arthritis and after giving me some anti-inflammatory medications finally advised me on Humira after asking how I could feel better than what I was even taking the medication. After this doctor I saw someone else by recommendation in M?

On the case review questionnaire, he states he had a history of joint pain which started after a medical weight loss program, which involved severe calorie restriction and intense exercise. This is a really interesting thing that happens sometimes. We don't know for sure why, but one speculation is the fat tissue is where environmental toxins are stored. One of the downsides of a crash, intensive weight loss program is that if the person has some toxic burden and then they do this type of program, there will be a rapid and significant release of environmental toxins that are stored in the fat tissue into the blood. If their detox mechanisms are impaired, then they are not going to be able to get rid of those toxins as well as they could otherwise. Even if their detox is sufficient, just the rapid release of that many toxins could be problematic. That is one possibility. Another possibility is just the extreme stress on the body that rapid weight loss represents, so it is not unusual to see something like this happen after these crash diets, and that is one of the reasons I am not typically a big fan of them, especially if someone is not in a really overall pretty healthy state.

xico which helped me a little more with my symptoms, but did not continue following up with him because within his treatment there was a medication that was patented by his father for treating these types of deceases, but I didn't feel too comfortable not knowing exactly what it was. With my current health care provider (██████████ Medical Center) I also saw a rheumatologist in 2012 and after blood work told me that I was not a "slam dunk" on having rheumatoid arthritis and took some prednisone for a couple of weeks. Right after this, through some of my own research I found a naturopath in Portland and met with him. He suggested following the Paleo diet and gave me a treatment based on supplements. I improved quite a bit, but lost communication with the naturopath. He was more of a researcher/professor than a clinician. After being introduced to the Paleo diet I improved, but never to the point where I want to be at. Now that I'm writing this I realize that I'm between the motivation of feeling better when I'm suffering symptoms and feeling good enough to fall back into my addiction sugar and processed carbohydrates.

4) What's your opinion on what has happened to your health?

At one point, when I was feeling the worst and couldn't walk without taking any anti-inflammatory medications I felt that my health was quickly deteriorating before my eyes and I couldn't do anything about it. Right now I don't feel that way, but at the same time I don't still don't have any control of my health. However, I do feel more confident that I can do something about it. For many years my mom has been dealing with joint problems but not in the same way I suddenly had. When she also had some blood work I was sure that she was going to be diagnosed with something similar to me, but she wasn't. This kind of made me feel that in some way I probably was not destined by genetics to have whatever I have (a specific decease), but maybe is the result of many years of abusing my body and is a manifestation that is being masked this way, hopefully. If not then it really doesn't matter what the diagnosis is, but what can be done about.

5) List any treatments, medications, or supplements that have improved your health.

-Please see additional documentation for this question.

6) List any treatments, medications, or supplements that have caused reactions or decreased your health.

-Please see additional documentation for this question.

7) List in a timeline sequence any medical procedures or surgeries you have had:

-Please see additional documentation for this question.

**PERSONAL OPINION QUESTIONS**

\*Please do not answer "I don't know" to any of these questions.\*

1) Why do you think healthcare practitioners have failed with your case?

I feel that most practitioners have made many assumptions and have streamlined my case into a quick diagnosis and do not take in consideration many other factors.

2) What are you looking for in a healthcare practitioner?

I'm looking for a practitioner that takes in consideration all factors for proper diagnosis and also works with me to find the best solution to my problems.

3) What do you consider a realistic window of time to see changes in your health under our care?

I would think from 1 to 2 months

4) Are you prepared to pay for the laboratory testing, consulting fees and nutritional supplements that may be required to successfully manage your condition?

I have a limited budget, but I do understand that for better results and efficient treatment test and consults need to be done to be able to see that I'm on the right path.

5) On a scale of 1 to 10, how committed are you to recovering your health?

I'm committed to this %100 (a 10) although I do realize that I have to do more than just be fully committed.

Why?

I almost feel like this is my last hope.

6) What obstacles or beliefs, if any, stand in the way of you recovering your health?

I have done Paleo and always seem to fall off the wagon. I believe that my biggest obstacle is my addiction to sugary/high carb foods

7) Are there emotional or psychological issues that may be contributing to your health problems? If so, please explain them briefly.

I have an addiction to the taste and initial feeling of eating sweets/bread. I also use food to feel better in adverse situations (boredom, happy, sad etc.)

8) Do you enjoy your work? Do you believe your work contributes to your health problems?

I do enjoy my work, but being a desk job it does contribute to a degree on my health problem. More specifically with lack of mobility and bad posture.

9) Do you have a purpose in life?

My main purpose in life is to get healthy to be able to enjoy my family to the fullest and be able to provide for them.

10) Where else do you find support? Friends? Church or religious group? Nature?

I find support in my family and by following people in social media that provide helpful information/tools for me to use on my journey for better health.

11) How did you feel about answering all of these questions and the case review process?

I feel good and hopeful about providing all this information because I believe that taking into consideration all these factors will give a better picture and will help to diagnose.

He mentions in the survey that he is committed, but he has some financial restrictions, so you would want to be aware of that during the treatment. He also points out again that he struggles with food cravings and addiction to sugary and high-carbohydrate foods, which he mentioned on the diet survey. Again, we'll have to address this in the treatment.

Marker	Value	Functional Range	Lab Range
Glucose	89	75 - 90	65 - 99
Hemoglobin A1c	5.8	4.4 - 5.4	4.8 - 5.6
Uric Acid	5.5	3.7 - 6.0	3.7 - 8.6
BUN	14	13 - 18	6 - 20
Creatinine	0.86	0.85 - 1.1	0.76 - 1.27
BUN/Creatinine Ratio	16	8 - 19	8 - 19
Sodium	142	135 - 140	134 - 144
Potassium	4.1	4.0 - 4.5	3.5 - 5.2
Chloride	103	100 - 106	97 - 108
C02	24	25 - 30	18 - 29
Calcium	9.4	9.2 - 10.1	8.7 - 10.2
Phosphorus	3.1	3.0 - 4.0	2.5 - 4.5
Magnesium	1.9	2.0 - 2.6	1.6 - 2.6
Protein, total	7.5	6.9 - 7.4	6.0 - 8.5
Albumin	4.4	4.0 - 5.0	3.5 - 5.5
Globulin	3.1	2.4 - 2.8	1.5 - 4.5
A/G ratio	1.4	1.5 - 2.0	1.1 - 2.5
Bilirubin, total	0.4	0.1 - 1.2	0.0 - 1.2
Alkaline Phosphatase	86	42 - 107	39 - 117
LDH	144	140 - 180	121 - 224
AST	24	0 - 25	0 - 40
ALT	36	0 - 26	0 - 44
GGT	27	0 - 29	0 - 65
TIBC	293	275 - 425	250 - 450
UIBC	240	175 - 350	150 - 375
Iron	53	40 - 135	40 - 155
Iron saturation	18	17 - 45	15 - 55
Ferritin	454	30 - 200	30 - 400
Vitamin B-12	845	450 - 2000	211 - 946
Vitamin D, 25-hydroxy	25.7	35 - 60	30.0 - 100.0
Cholesterol, total	205	150 - 220	100 - 199
Triglycerides	121	50 - 100	0 - 149
HDL	59	55 - 85	> 39
LDL	122	0 - 140	0 - 99
T. Chol / HDL Ratio	3.5	< 3	0 - 5.0
Triglycerides / HDL Ratio	2.05	< 2	< 3.8

Marker	Value	Functional Range	Lab Range
CRP-hs	9.76	< 1.0	0.00 - 3.00
Homocysteine	10.6	< 7.0	0.0 - 15.0
TSH	4.100	0.5 - 2.0	0.45 - 4.50
T4, total	8.8	6.0 - 12	4.5 - 12
T3 Uptake	22	30 - 38	24 - 39
T3, Total	120	100 - 180	71 - 180
T3, Free	3.1	2.5 - 4.0	2 - 4.4
T4, Free	1.12	1 - 1.5	0.82 - 1.77
<b>Thyroid - TPO Ab</b>	<b>271</b>		<b>0 - 34</b>
Thyroid - TGA	<1.0		0 - 0.9
Copper	115	81 - 157	72 - 166
Zinc	105	64 - 126	56 - 134
Zinc / Copper Ratio	0.91	> 0.85	
Serum Methylmalonic Acid (MMA)	59	< 300	0 - 378
WBC	7.3	5.0 - 8.0	3.4 - 10.8
<b>RBC</b>	<b>5.01</b>	<b>4.4 - 4.9</b>	<b>4.14 - 5.8</b>
Hemoglobin	14.5	14 - 15	12.6 - 17.7
Hematocrit	44.5	40 - 48	37.5 - 51.0
MCV	89	85 - 92	79 - 97
MCH	28.9	27.7 - 32.0	26.6 - 33.0
MCHC	32.6	32 - 35	31.5 - 35.7
RDW	13.8	11.5 - 15.0	12.3 - 15.4
Platelets	248	150 - 379	150 - 379
Neutrophils	51	40 - 60	
Lymphocytes	34	25 - 40	
Monocytes	6	4.0 - 7.0	
<b>Eosinophils</b>	<b>9</b>	<b>0.0 - 3.0</b>	
Basophils	0	0.0 - 3.0	
<b>Rheumatoid Arthritis Factor</b>	<b>28.3</b>		<b>0.0 - 13.9</b>

Fasting glucose was normal, but A1c is high at 5.8. Triglycerides are functionally high at 121. Ferritin was lab-high at 454, so there is likely a blood sugar issue here, and that is confirmed by low 25(OH)D, high CRP, high ALT, high total cholesterol-to-HDL ratio, and slightly high triglycerides-to-HDL ratio.

In addition, he has high TSH at 4.1, functionally high but well above the optimal range, and elevated TPO antibodies confirming the Hashimoto's diagnosis previously, although his total and free thyroid hormones are currently normal.

Homocysteine is high at 10.6. Serum B12 is normal, so we would want to look at formiminoglutamic acid or other markers of folate status as well as urine methylmalonic acid because his serum MMA is normal, so it's not clear what is causing that elevation in homocysteine.

Rheumatoid factor was positive as well, which suggests that the diagnosis of psoriatic arthritis, the tentative diagnosis he received earlier, may be accurate.

*Comprehensive Stool Analysis / Parasitology x3*

BACTERIOLOGY CULTURE		
Expected/Beneficial flora	Commensal (Imbalanced) flora	Dysbiotic flora
4+ Bacteroides fragilis group	3+ Alpha hemolytic strep	
4+ Bifidobacterium spp.	1+ Citrobacter freundii complex	
3+ Escherichia coli	1+ Gamma hemolytic strep	
2+ Lactobacillus spp.	1+ Klebsiella pneumoniae ssp pneumoniae	
NG Enterococcus spp.	1+ Staphylococcus aureus	
NG Clostridium spp.		
NG = No Growth		

**BACTERIA INFORMATION**

**Expected /Beneficial bacteria** make up a significant portion of the total microflora in a healthy & balanced GI tract. These beneficial bacteria have many health-protecting effects in the GI tract including manufacturing vitamins, fermenting fibers, digesting proteins and carbohydrates, and propagating anti-tumor and anti-inflammatory factors.

**Clostridia** are prevalent flora in a healthy intestine. Clostridium spp. should be considered in the context of balance with other expected/beneficial flora. Absence of clostridia or over abundance relative to other expected/beneficial flora indicates bacterial imbalance. If *C. difficile* associated disease is suspected, a Comprehensive Clostridium culture or toxigenic *C. difficile* DNA test is recommended.

**Commensal (Imbalanced) bacteria** are usually neither pathogenic nor beneficial to the host GI tract. Imbalances can occur when there are insufficient levels of beneficial bacteria and increased levels of commensal bacteria. Certain commensal bacteria are reported as dysbiotic at higher levels.

**Dysbiotic bacteria** consist of known pathogenic bacteria and those that have the potential to cause disease in the GI tract. They can be present due to a number of factors including: consumption of contaminated water or food, exposure to chemicals that are toxic to beneficial bacteria; the use of antibiotics, oral contraceptives or other medications; poor fiber intake and high stress levels.

YEAST CULTURE	
Normal flora	Dysbiotic flora
No yeast isolated	

MICROSCOPIC YEAST		YEAST INFORMATION	
<b>Result:</b>	<b>Expected:</b>	<p><b>Yeast</b> normally can be found in small quantities in the skin, mouth, intestine and mucocutaneous junctions. Overgrowth of yeast can infect virtually every organ system, leading to an extensive array of clinical manifestations. Fungal diarrhea is associated with broad-spectrum antibiotics or alterations of the patient's immune status. Symptoms may include abdominal pain, cramping and irritation. When investigating the presence of yeast, disparity may exist between culturing and microscopic examination. Yeast are not uniformly dispersed throughout the stool, this may lead to undetectable or low levels of yeast identified by microscopy, despite a cultured amount of yeast. Conversely, microscopic examination may reveal a significant amount of yeast present, but no yeast cultured. Yeast does not always survive transit through the intestines rendering it unviable.</p>	
Rare	None - Rare		
<p>The microscopic finding of yeast in the stool is helpful in identifying whether there is proliferation of yeast. Rare yeast may be normal; however, yeast observed in higher amounts (few, moderate, or many) is abnormal.</p>			

*Comprehensive Stool Analysis / Parasitology x3*

PARASITOLOGY/MICROSCOPY *	PARASITOLOGY INFORMATION
<p><b>Sample 1</b> None Ova or Parasites Rare Yeast</p> <p><b>Sample 2</b> None Ova or Parasites Rare Yeast</p> <p><b>Sample 3</b> None Ova or Parasites</p> <p><small>*A trichrome stain and concentrated iodine wet mount slide is read for each sample submitted.</small></p>	<p>Intestinal parasites are abnormal inhabitants of the gastrointestinal tract that have the potential to cause damage to their host. The presence of any parasite within the intestine generally confirms that the patient has acquired the organism through fecal-oral contamination. Damage to the host includes parasitic burden, migration, blockage and pressure. Immunologic inflammation, hypersensitivity reactions and cytotoxicity also play a large role in the morbidity of these diseases. The infective dose often relates to severity of the disease and repeat encounters can be additive.</p> <p>There are two main classes of intestinal parasites, they include protozoa and helminths. The protozoa typically have two stages; the trophozoite stage that is the metabolically active, invasive stage and the cyst stage, which is the vegetative inactive form resistant to unfavorable environmental conditions outside the human host. Helminths are large, multicellular organisms. Like protozoa, helminths can be either free-living or parasitic in nature. In their adult form, helminths cannot multiply in humans.</p> <p>In general, acute manifestations of parasitic infection may involve diarrhea with or without mucus and or blood, fever, nausea, or abdominal pain. However these symptoms do not always occur. Consequently, parasitic infections may not be diagnosed or eradicated. If left untreated, chronic parasitic infections can cause damage to the intestinal lining and can be an unsuspected cause of illness and fatigue. Chronic parasitic infections can also be associated with increased intestinal permeability, irritable bowel syndrome, irregular bowel movements, malabsorption, gastritis or indigestion, skin disorders, joint pain, allergic reactions, and decreased immune function.</p> <p>In some instances, parasites may enter the circulation and travel to various organs causing severe organ diseases such as liver abscesses and cysticercosis. In addition, some larval migration can cause pneumonia and in rare cases hyper infection syndrome with large numbers of larvae being produced and found in every tissue of the body.</p> <p>One negative parasitology x1 specimen does not rule out the possibility of parasitic disease, parasitology x3 is recommended. This exam is not designed to detect <i>Cryptosporidium</i> spp, <i>Cyclospora cayetanensis</i> or <i>Microsporidia</i> spp.</p>

GIARDIA/CRYPTOSPORIDIUM IMMUNOASSAY			
	Within	Outside	Reference Range
Giardia intestinalis	Neg		Neg
Cryptosporidium	Neg		Neg

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

He has mild dysbiosis on stool tests.

### Comprehensive Stool Analysis / Parasitology x3

DIGESTION / ABSORPTION				
	Within	Outside	Reference Range	
Elastase	405		> 200 µg/mL	<p><b>Elastase</b> findings can be used for the diagnosis or the exclusion of exocrine pancreatic insufficiency. Correlations between low levels and chronic pancreatitis and cancer have been reported. <b>Fat Stain:</b> Microscopic determination of fecal fat using Sudan IV staining is a qualitative procedure utilized to assess fat absorption and to detect steatorrhea. <b>Muscle fibers</b> in the stool are an indicator of incomplete digestion. Bloating, flatulence, feelings of "fullness" may be associated with increase in muscle fibers. <b>Vegetable fibers</b> in the stool may be indicative of inadequate chewing, or eating "on the run". <b>Carbohydrates:</b> The presence of reducing substances in stool specimens can indicate carbohydrate malabsorption.</p>
Fat Stain	None		None - Mod	
Muscle fibers	None		None - Rare	
Vegetable fibers	Few		None - Few	
Carbohydrates	Neg		Neg	

INFLAMMATION				
	Within	Outside	Reference Range	
Lactoferrin	3.3		< 7.3 µg/mL	<p><b>Lactoferrin</b> and <b>Calprotectin</b> are reliable markers for differentiating organic inflammation (IBD) from functional symptoms (IBS) and for management of IBD. Monitoring levels of fecal lactoferrin and calprotectin can play an essential role in determining the effectiveness of therapy, are good predictors of IBD remission, and can indicate a low risk of relapse. <b>Lysozyme*</b> is an enzyme secreted at the site of inflammation in the GI tract and elevated levels have been identified in IBD patients. <b>White Blood Cells (WBC)</b> and <b>Mucus</b> in the stool can occur with bacterial and parasitic infections, with mucosal irritation, and inflammatory bowel diseases such as Crohn's disease or ulcerative colitis.</p>
Calprotectin*	33		<= 50 µg/g	
Lysozyme*		914	<= 600 ng/mL	
White Blood Cells	None		None - Rare	
Mucus	Neg		Neg	

IMMUNOLOGY				
	Within	Outside	Reference Range	
Secretory IgA*		1.5	51 - 204 mg/dL	<p><b>Secretory IgA* (sIgA)</b> is secreted by mucosal tissue and represents the first line of defense of the GI mucosa and is central to the normal function of the GI tract as an immune barrier. Elevated levels of sIgA have been associated with an upregulated immune response.</p>

*Comprehensive Stool Analysis / Parasitology x3*

SHORT CHAIN FATTY ACIDS			
	Within	Outside	Reference Range
% Acetate	59		40 - 75 %
% Propionate	17		9 - 29 %
% Butyrate	21		9 - 37 %
% Valerate	3.3		0.5 - 7 %
Butyrate	4.0		0.8 - 4.8 mg/mL
Total SCFA's		19	4 - 18 mg/mL

**Short chain fatty acids (SCFAs):** SCFAs are the end product of the bacterial fermentation process of dietary fiber by beneficial flora in the gut and play an important role in the health of the GI as well as protecting against intestinal dysbiosis. Lactobacilli and bifidobacteria produce large amounts of short chain fatty acids, which decrease the pH of the intestines and therefore make the environment unsuitable for pathogens, including bacteria and yeast. Studies have shown that SCFAs have numerous implications in maintaining gut physiology. SCFAs decrease inflammation, stimulate healing, and contribute to normal cell metabolism and differentiation. Levels of **Butyrate** and **Total SCFA** in mg/mL are important for assessing overall SCFA production, and are reflective of beneficial flora levels and/or adequate fiber intake.

INTESTINAL HEALTH MARKERS			
	Within	Outside	Reference Range
Red Blood Cells	None		None - Rare
pH		5.8	6 - 7.8
Occult Blood	Neg		Neg

**Red Blood Cells (RBC)** in the stool may be associated with a parasitic or bacterial infection, or an inflammatory bowel condition such as ulcerative colitis. Colorectal cancer, anal fistulas, and hemorrhoids should also be ruled out.

**pH:** Fecal pH is largely dependent on the fermentation of fiber by the beneficial flora of the gut.

**Occult blood:** A positive occult blood indicates the presence of free hemoglobin found in the stool, which is released when red blood cells are lysed.

MACROSCOPIC APPEARANCE		
	Appearance	Expected
Color	Brown	Brown
Consistency	Soft	Formed/Soft

**Color:** Stool is normally brown because of pigments formed by bacteria acting on bile introduced into the digestive system from the liver. While certain conditions can cause changes in stool color, many changes are harmless and are caused by pigments in foods or dietary supplements. **Consistency:** Stool normally contains about 75% water and ideally should be formed and soft. Stool consistency can vary based upon transit time and water absorption.

His lysozyme was elevated at 914. His slgA was extremely low at 1.5. This is at the level that I would consider doing antibody testing, testing for total immunoglobulins, if it remains this low after treatment. I wouldn't necessarily do it right now, but if it doesn't come up after treatment, I would. Total short chain fatty acids were a little bit elevated. I don't know that that is clinically significant. Intestinal pH is a little bit low. That could be significant given the dysbiosis.

**GI Pathogen Screen with H. pylori Antigen - 401H**

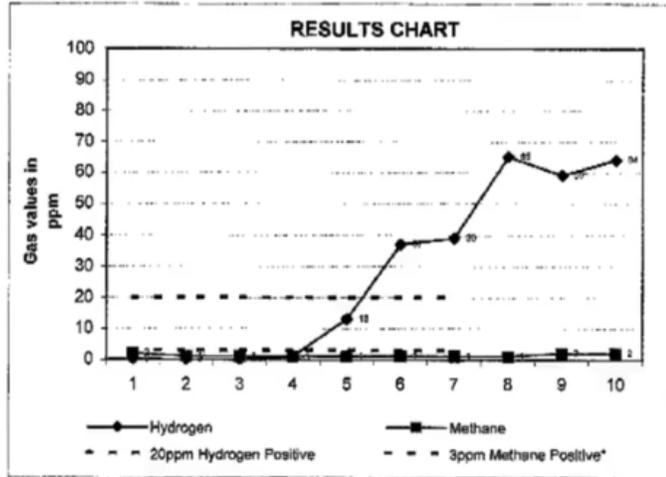
Parameter	Result
<b>*** Stool Culture ***</b>	
Preliminary Report	Normal flora after 24 hours
Final Report	* Enterobacter species isolated *
Amount of Growth	Abundant
<b>*** Ova &amp; Parasites ***</b>	
Ova & Parasites #1	* Entamoeba coli cysts detected *
Ova & Parasites #2	No Ova/Parasites detected
Ova & Parasites #3	No Ova/Parasites detected
Ova & Parasites #4	No Ova/Parasites detected
Trichrome Stain	Few cyst forms of Entamoeba coli seen on Trichrome Stain
<b>*** Stool Antigens ***</b>	
Cryptosporidium Antigen	Not detected
Giardia lamblia Antigen	Not detected
<b>*** Additional Tests ***</b>	
Fungi	No fungi isolated
C. difficile Toxin A	Not detected
C. difficile Toxin B	Not detected
Yeast	No yeasts isolated
Occult Blood	Not detected
<b>***Helicobacter Pylori Stool Antigen***</b>	
H. pylori Antigen	Not detected
<p>This stool analysis determines the presence of ova and parasites such as protozoa, flatworms, and roundworms; Cryptosporidium parvum, Entamoeba histolytica, and Giardia lamblia antigens; bacteria, fungi (including yeasts), and occult blood; and Clostridium difficile colitis toxins A and B. Sensitivity to pathogenic organisms will be reported as necessary.</p>	

Nothing remarkable on the BioHealth stool test. He did have some Entamoeba coli cysts detected. That is typically considered to be a commensal organism and not necessarily something that needs to be treated.

**SMALL INTESTINAL BACTERIAL OVERGROWTH REPORT SHEET - 10 SPECIMEN TEST**

Patient Name: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Referring Physician: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_  
 State: \_\_\_\_\_  
 Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Sample Time	Sample #	ppm H <sub>2</sub>	ppm CH <sub>4</sub>	(f) CO <sub>2</sub>
Control	1	0	2	0.89
20 min.	2	0	1	0.90
40 min.	3	0	1	0.93
60 min.	4	1	1	0.92
80 min.	5	13	1	1.01
100 min.	6	37	1	0.96
120 min.	7	39	1	0.91
140 min.	8	65	1	0.89
160 min.	9	59	2	0.96
180 min.	10	64	2	1.14



The 120 minute mark corresponds to the time the biomarker should transition from the small intestine and enter the colon.

Summary of 2 Hour Results		
Peak increase values for each trace gas are presented below:		
Peak Hydrogen (H <sub>2</sub> ) Production:	<b>39 ppm</b>	Normal <20 ppm
Peak Methane (CH <sub>4</sub> ) Production:	<b>1 ppm</b>	Normal <3 ppm*
Peak Combined Gas Production:	<b>40 ppm</b>	Normal <20 ppm

RESULT: BASED ON THE CRITERIA USED IN THIS STUDY, PRESENCE OF BACTERIAL OVERGROWTH IS SUPPORTED\*

NOTES:

On the SIBO breath test, he has a late hydrogen peak with a slight dip. Back on the symptoms survey, he marked 1 for both constipation and diarrhea, so you would want to ask him more questions about his transit time around the time that he took this test to help interpret the results. We don't see an increase that is significant until 100 minutes, and as we discussed, for many people, lactulose has already entered the colon by then, but there is a little bit of an appearance of a double peak here. There is a flat line, not a drop but a plateau between samples six and seven, and then there is a slight drop between eight and nine, but again, the interpretation of this would depend on transit time. For now, we'll just say it is equivocal.



## Organic Acids Test - Nutritional and Metabolic Profile

Metabolic Markers in Urine      Reference Range (mmol/mol creatinine)      Patient Value      Reference Population - Males Age 13 and Over

### Intestinal Microbial Overgrowth

#### Yeast and Fungal Markers

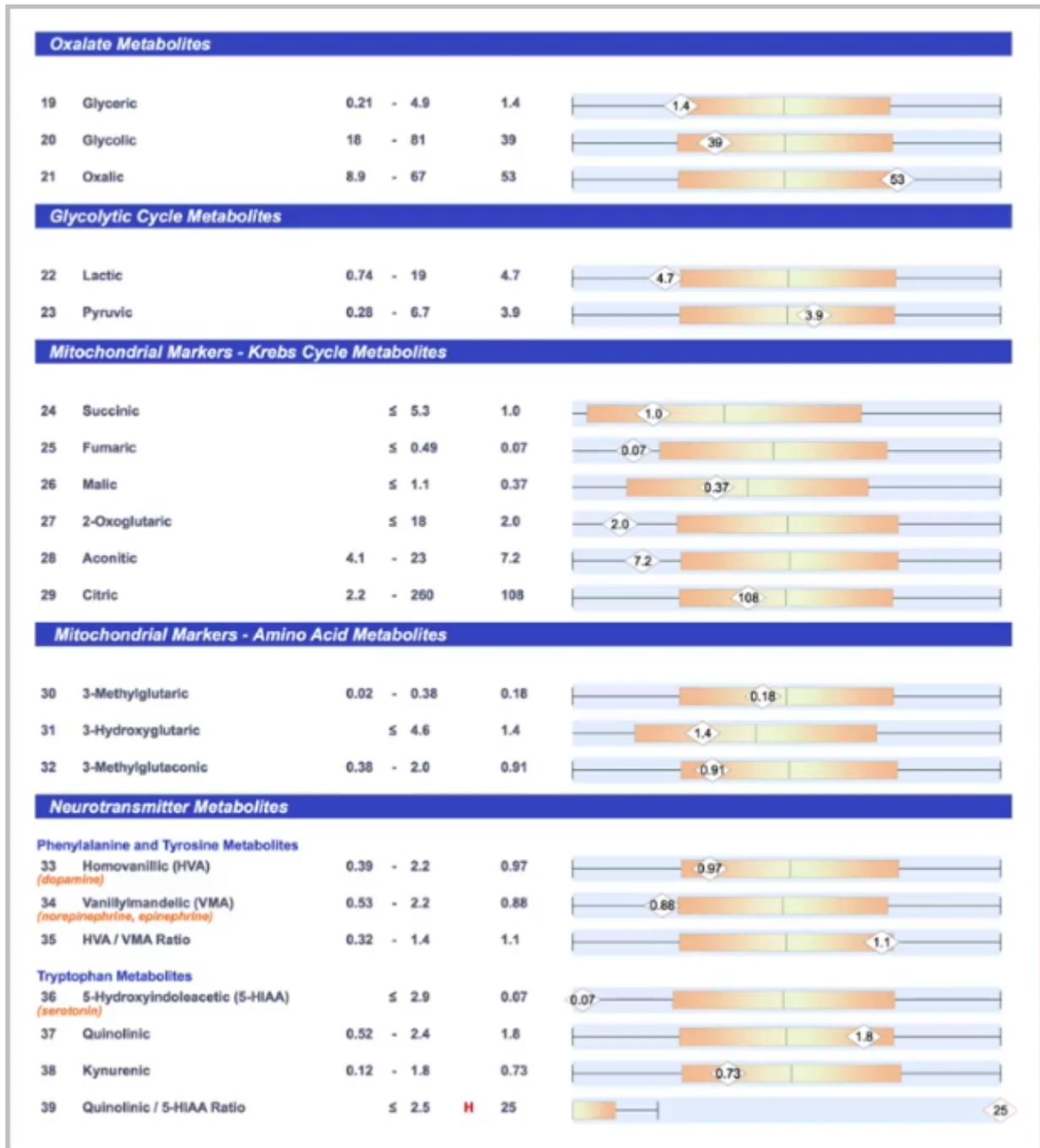
Marker	Reference Range (mmol/mol creatinine)	Patient Value	Reference Population - Males Age 13 and Over
1 Citramalic	0.11 - 2.0	1.5	
2 5-Hydroxymethyl-2-furoic	≤ 18	2.2	
3 3-Oxoglutaric	≤ 0.11	0	
4 Furan-2,5-dicarboxylic	≤ 13	2.7	
5 Furan-carbonylglycine	≤ 2.3	0.27	
6 Tartaric	≤ 5.3	0.32	
7 Arabinose	≤ 20	<b>H</b> 69	
8 Carboxycitric	≤ 20	0.10	
9 Tricarballic	≤ 0.58	0.20	

#### Bacterial Markers

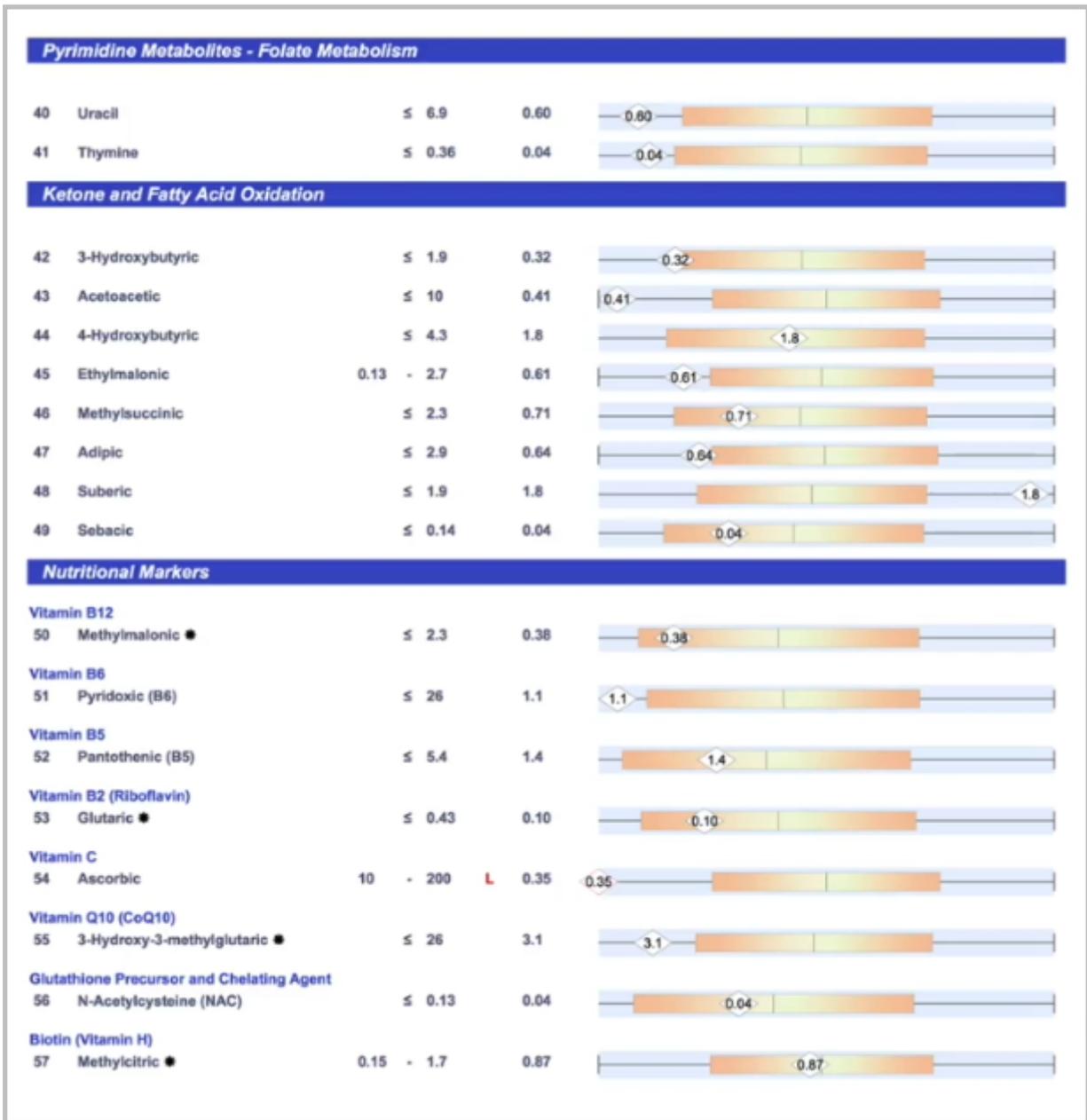
Marker	Reference Range (mmol/mol creatinine)	Patient Value	Reference Population - Males Age 13 and Over
10 Hippuric	≤ 241	64	
11 2-Hydroxyphenylacetic	0.03 - 0.47	0.14	
12 4-Hydroxybenzoic	0.01 - 0.73	0.20	
13 4-Hydroxyhippuric	≤ 14	5.3	
14 DHPPA (Beneficial Bacteria)	≤ 0.23	0.02	

#### Clostridia Bacterial Markers

Marker	Reference Range (mmol/mol creatinine)	Patient Value	Reference Population - Males Age 13 and Over
15 4-Hydroxyphenylacetic <i>(C. difficile, C. stricklandii, C. lituseburense &amp; others)</i>	≤ 18	14	
16 HPHPA <i>(C. sporogenes, C. caloritolerans, C. botulinum &amp; others)</i>	≤ 102	6.4	
17 4-Cresol <i>(C. difficile)</i>	≤ 39	4.5	
18 3-Indoleacetic <i>(C. stricklandii, C. lituseburense, C. subterminale &amp; others)</i>	≤ 6.8	0.17	



We were doing the GPL organic acids tests at this point, and his arabinose was significantly elevated at 69. As I mentioned in the organic acids unit, with only elevated arabinose, there is not very much research supporting this as an independent marker of fungal overgrowth. Based on this alone, I wouldn't necessarily treat. His quinolinic-to-5-HIAA ratio is high, which is indicative of an inflammatory response.





Not much else here other than low levels of ascorbate. Note here that his folate metabolism markers, uracil and thymine, are normal. We don't have formiminoglutamic acid on this test. His MMA, methylmalonic acid, is also normal, so there is no evidence here of B12 or folate deficiency, although we don't have formiminoglutamic acid, which I prefer to uracil and thymine, to describe the high homocysteine that he had on his blood test.

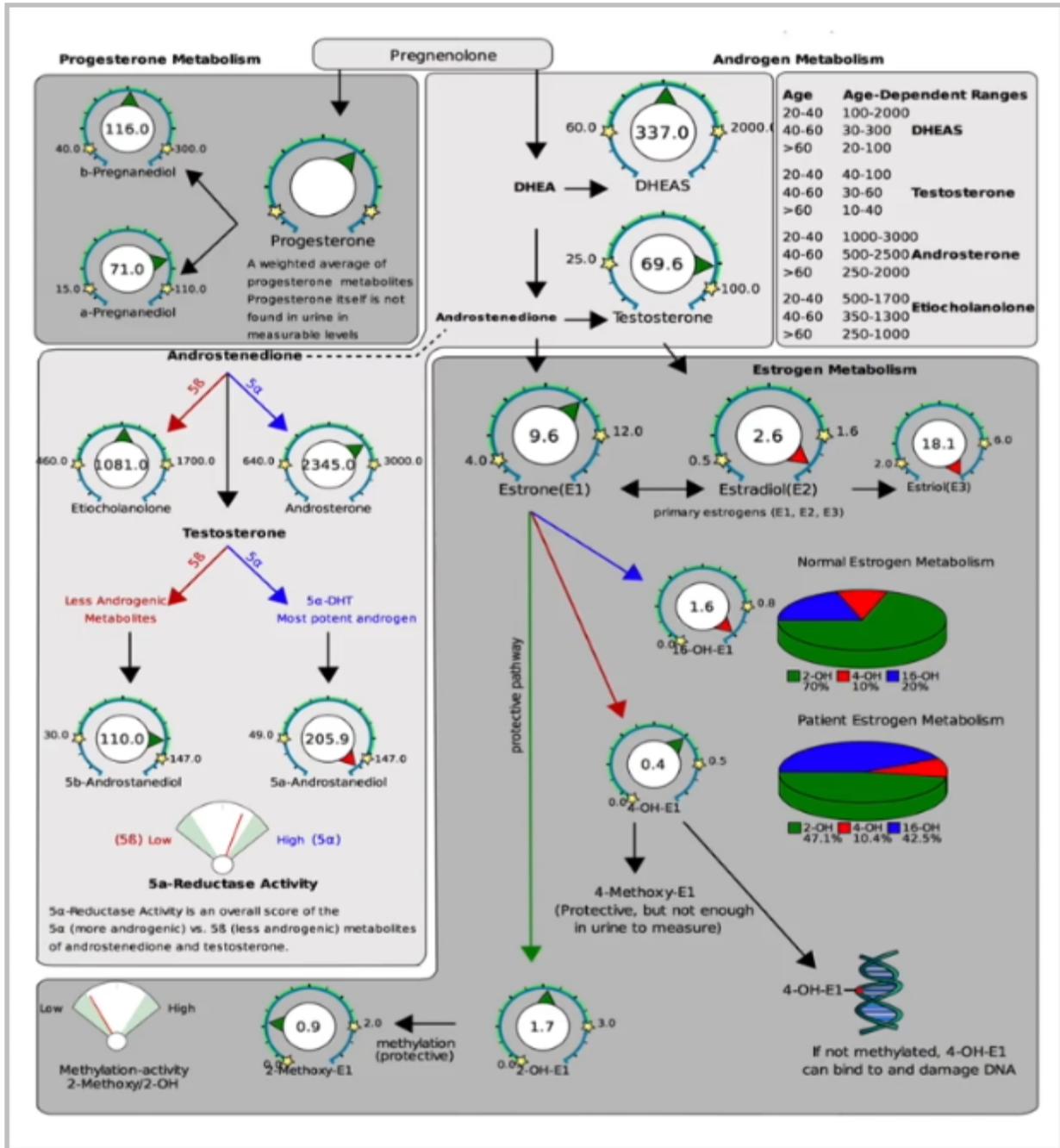
TEST	RESULT			
Array 3 – Wheat/Gluten Proteome Reactivity & Autoimmunity	IN RANGE (Normal)	EQUIVOCAL*	OUT OF RANGE	REFERENCE (ELISA Index)
Wheat IgG		1.42		0.3-1.5
Wheat IgA	0.70			0.1-1.2
Wheat Germ Agglutinin IgG	0.97			0.4-1.3
Wheat Germ Agglutinin IgA	0.70			0.2-1.1
Native & Deamidated Gliadin 33 IgG	0.69			0.2-1.2
Native & Deamidated Gliadin 33 IgA	0.44			0.1-1.1
Alpha Gliadin 17-mer IgG	0.72			0.1-1.5
Alpha Gliadin 17-mer IgA	0.32			0.1-1.1
Gamma Gliadin 15-mer IgG		1.44		0.5-1.5
Gamma Gliadin 15-mer IgA		0.96		0.1-1.0
Omega Gliadin 17-mer IgG	0.50			0.3-1.2
Omega Gliadin 17-mer IgA	0.58			0.1-1.2
Glutenin 21-mer IgG	0.89			0.1-1.5
Glutenin 21-mer IgA	0.46			0.1-1.3
Gluteomorphin + Prodynorphin IgG	0.81			0.3-1.2
Gluteomorphin + Prodynorphin IgA	0.71			0.1-1.2
Gliadin-Transglutaminase Complex IgG			1.96	0.3-1.4
Gliadin-Transglutaminase Complex IgA			2.74	0.2-1.5
Transglutaminase-2 IgG	0.63			0.3-1.6
Transglutaminase-2 IgA	1.14			0.1-1.6
Transglutaminase-3 IgG		1.50		0.2-1.6
Transglutaminase-3 IgA			1.83	0.1-1.5
Transglutaminase-6 IgG		1.43		0.2-1.5
Transglutaminase-6 IgA	0.79			0.1-1.5

Cyrex Array 3 revealed gluten intolerance and possible celiac disease. He has gliadin transglutaminase complex antibodies, which according to recent conversation with Dr. \_\_\_\_\_, is one of the most reliable markers for celiac, since it combines both gliadin and transglutaminase. Note that his tTG3 antibodies are also elevated, and recall that these are associated with the skin, and psoriasis is his main complaint. It's likely that gluten is at least in part driving his skin conditions. He also has positive tTG6 antibodies, and that means that when he eats gluten it affects his brain.



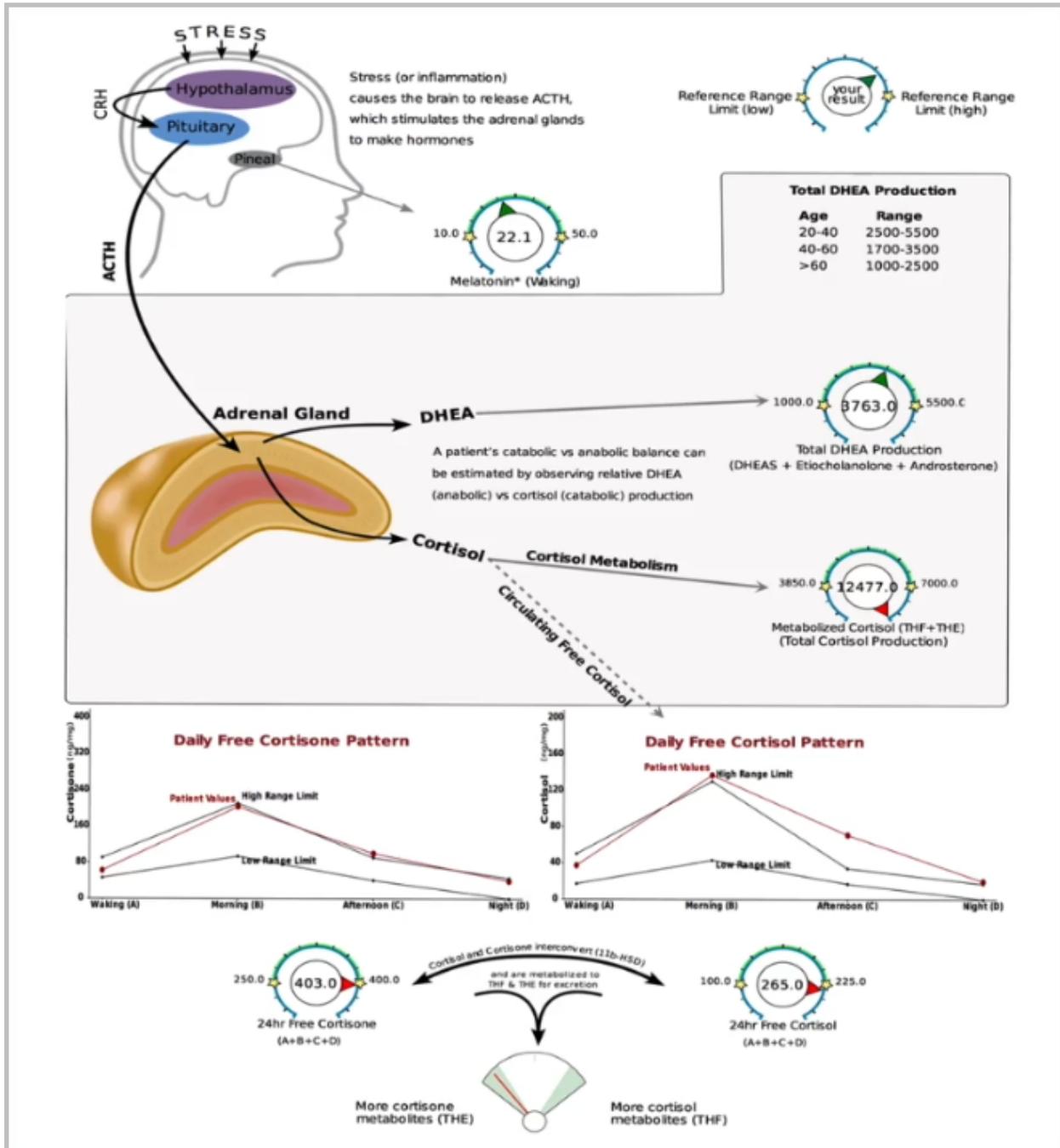
Category	Test		Result	Units	Normal Range
<b>Progesterone Metabolism</b>					
	b-Pregnanediol	Within range	116.0	ng/mg	40 - 300
	a-Pregnanediol	Within range	71.0	ng/mg	15 - 110
<b>Androgen Metabolism</b>					
	DHEAS	Low end of range	337.0	ng/mg	60 - 2000
	Androsterone	Within range	2345.0	ng/mg	640 - 3000
	Etiocholanolone	Within range	1081.0	ng/mg	460 - 1700
	Testosterone	Within range	69.6	ng/mg	25 - 100
	5a-DHT	Within range	11.2	ng/mg	9 - 16.7
	5a-Androstanediol	Above range	205.9	ng/mg	49 - 147
	5b-Androstanediol	Within range	110.0	ng/mg	30 - 147
	Epi-Testosterone	Within range	45.6	ng/mg	25 - 100
<b>Estrogen Metabolites</b>					
	Estrone(E1)	Within range	9.6	ng/mg	4 - 12
	Estradiol(E2)	Above range	2.6	ng/mg	0.5 - 1.6
	Estriol(E3)	Above range	18.1	ng/mg	2 - 6
	2-OH-E1	Within range	1.7	ng/mg	0 - 3
	4-OH-E1	High end of range	0.4	ng/mg	0 - 0.5
	16-OH-E1	Above range	1.6	ng/mg	0 - 0.8
	2-Methoxy-E1	Within range	0.9	ng/mg	0 - 2
	2-OH-E2	Within range	0.25	ng/mg	0 - 0.5

DUTCH panel found that his free cortisol was high. Metabolized cortisol was very high, almost two times the upper end of the range. This patient is overweight but not obese. If he were to become obese, you might expect to see free cortisol start to go down and even become low while the metabolites stay high. Note that estrogens are high. Testosterone is high-normal, and in patients with insulin resistance, aromatase is upregulated. Men will convert testosterone into estrogen, and that can cause enlargement of male breast tissue, double chin, and those kinds of symptoms.



Category	Test	Result	Units	Normal Range
<b>Creatinine</b>				
	Creatinine A (Waking)	Within range	1.42	mg/ml 0.3 - 3
	Creatinine B (Morning)	Within range	0.98	mg/ml 0.3 - 3
	Creatinine C (Afternoon)	Within range	1.22	mg/ml 0.3 - 3
	Creatinine D (Night)	Within range	1.21	mg/ml 0.3 - 3
<b>Daily Free Cortisol and Cortisone</b>				
	Cortisol A (Waking)	Within range	37.2	ng/mg 17 - 50
	Cortisol B (Morning)	Above range	136.8	ng/mg 43 - 130
	Cortisol C (Afternoon)	Above range	70.9	ng/mg 17 - 34
	Cortisol D (Night)	Above range	19.8	ng/mg 0 - 17
	Cortisone A (Waking)	Within range	62.2	ng/mg 46 - 90
	Cortisone B (Morning)	High end of range	202.2	ng/mg 93 - 210
	Cortisone C (Afternoon)	Above range	99.5	ng/mg 40 - 90
	Cortisone D (Night)	High end of range	38.8	ng/mg 0 - 45
	24hr Free Cortisol	Above range	265.0	ug 100 - 225
	24hr Free Cortisone	Above range	403.0	ug 250 - 400
<b>Cortisol Metabolites and DHEAS</b>				
	b-Tetrahydrocortisol (b-THF)	Above range	3495.0	ng/mg 1330 - 2330
	a-Tetrahydrocortisol (a-THF)	High end of range	667.0	ng/mg 220 - 720
	b-Tetrahydrocortisone (b-THE)	Above range	8316.0	ng/mg 2100 - 4000
	Metabolized Cortisol (THF+THE)	Above range	12477.0	ng/mg 3850 - 7000
	DHEAS	Low end of range	337.0	ng/mg 60 - 2000
<b>Melatonin (*measured as 6-OH-Melatonin-Sulfate)</b>				
	Melatonin* (Waking)	Within range	22.1	ng/mg 10 - 50

16-OH-E1 is particularly high, and that is of concern because it is a proliferative metabolite associated with increased risk of prostate cancer. His 24-hour free cortisol and cortisone are both high, and his metabolites are high, cortisol metabolites, as you remember. DHEA sulfate here is right in the middle of the range, and melatonin is normal.



Cortisone-to-cortisol balance is shifted toward cortisone, and this is common in overweight patients.



CALIFORNIA CENTER *for*  
 FUNCTIONAL MEDICINE

## CASE REVIEW REPORT OF FINDINGS

**Patient Name:** "John"

**Date:** 9-23-16

### Underlying Patterns

PATTERN	SUPPORTING MARKERS	COMMENTS
Metabolic dysfunction	A1c, TG, ferritin, TG:HDL, ALT, CRP	
Dyslipidemia	TC:HDL, TG	
Inflammation	CRP, ferritin	
Impaired methylation	Homocysteine	
Hashimoto's	TSH, TPO antibodies	
Psoriatic arthritis or RA	Rheumatoid factor; history/sx	
Vitamin D deficiency	25(OH)D	
Intestinal dysbiosis	DD CSAP; GPL OAT	
Gut inflammation	DD CSAP; GPL OAT	
Possible SIBO	CW breath test	
Ascorbate demand/deficiency	GPL OAT	
Wheat intolerance (probable celiac)	Cyrex Array 3	Affecting skin and brain
Hypocortisolism	DUTCH	
HPA axis dysfunction	DUTCH	
High estrogen	DUTCH	

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**Recommendations for further testing**

TEST	PURPOSE	COMMENTS
THD follow-up panel	Metabolism/lipids	
HDRI panel	Methylation/folate status	

**Recommendations for Treatment**

TREATMENT	PURPOSE	COMMENTS
Paleo Reset Diet	Weight loss, gut, joints	Strict wheat/gluten avoidance
Antimicrobial protocol	Dysbiosis, SIBO, inflammation	See handout
EVCLO	Vitamin D; inflammation	
Metabolic Synergy	Blood sugar/cravings	
GlucoSupreme	Blood sugar/cravings	
HPA Balance	Lower cortisol	
Phosphatidylserine	Lower cortisol	
Stress management	HPA axis support	See handout

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Here is his report of findings. Metabolic dysfunction as evidenced by all the blood chemistry markers. Dyslipidemia from the total cholesterol-to-HDL ratio and triglycerides. Inflammation with CRP and ferritin. Impaired methylation with homocysteine. Hashimoto's with the TPO antibodies and elevated TSH. Psoriatic arthritis or possibly rheumatoid arthritis with rheumatoid factor, history, and symptoms. Vitamin D deficiency with low 25(OH)D. Dysbiosis and gut inflammation from the stool test. Possible SIBO from the breath test. Ascorbate demand or deficiency from the organic acids test.

Either non-celiac wheat sensitivity or celiac, which may be more probable with the Cyrex Array 3. Hypercortisolism, HPA axis dysfunction, and high estrogens on the DUTCH panel.

In terms of follow-up, we would want to do the True Health Diagnostic follow-up panel and then the HDRI functional methylation panel. You may also want to do additional testing for celiac disease if this patient was unwilling to go completely gluten-free. In this case, he took it quite seriously, and he was willing to do that, so we didn't feel like the celiac testing was necessary.

Treatment: A 30-day Paleo reset diet and get him back on a clean diet. We talked about some other emotional support options that we could use to help facilitate that for him. Antimicrobial protocol, which I'll go over in a second. Extra-virgin cod liver oil for vitamin D. We used Metabolic Synergy and GlucoSupreme for two reasons: one to help with the metabolic dysfunction and two to help reduce the food cravings. These supplements can be really helpful in reducing cravings and helping patients stick with the dietary approach. Then we used HPA Balance and phosphatidylserine to lower cortisol, and we got him started with some stress management.

Nutraceutical	Dosage
<b>GI Synergy</b>	1 packet BID (with breakfast and dinner)
<b>Lauricidin</b>	1 scoop TID with each meal
<b>Interfase Plus</b>	3-4 capsules BID on empty stomach
<b>Prescript Assist</b>	One BID upon rising and before bed
<b>MegaSporeBiotic</b>	One capsule with lunch

Here is the antimicrobial protocol. This is just the basic core protocol because he didn't have a lot going on, just dysbiosis and equivocal SIBO. We just went with the core protocol here for 30 days.