


Full Case Assignments II - Part One

Hey, everybody. In this presentation, we're going to go over the second round of case assignments.

 <p>Danny Case #1</p>	<p>Part 1</p> <p>27 y.o. Male with CC: Variety of complaints that started after course of Cipro taken at age 21.</p> <p>Anxiety w/panic (esp. when exposed to gluten), brain fog, constipation, bloating, insomnia, fatigue, itchy skin (esp. when sweats), mild tremors, poor exercise recovery, dizziness, dry hair, hair loss.</p> <p>On gluten- and dairy-free diet.</p>
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The first case we'll call "Danny," a 27-year-old male with a variety of complaints actually that started after taking a course of Cipro at age 21. He has anxiety with panic, especially when he is exposed to gluten; brain fog; constipation; bloating; insomnia; fatigue; itchy skin, especially when he sweats; mild tremors; poor exercise recovery; dizziness; dry hair; and hair loss. He was currently on a gluten- and dairy-free diet.

Two things you should be thinking about right off the bat given his symptoms would be gut, brain, and skin axis, since that is the primary axis that all of his symptoms are manifesting on, and thyroid because of the dry hair, hair loss, bloating, constipation, and the brain fog.

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

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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 checked="" type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Hard, dry, or small stool	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coated tongue or "fuzzy" debris on tongue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Category II	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 type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" type="radio"/>
Sense of fullness during and after meals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Difficulty digesting fruits and vegetables; undigested food found in stools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Category III	0	1	2	3
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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digestive problems subside with rest and relaxation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heartburn due to spicy foods, chocolate, citrus, peppers, alcohol, and caffeine	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Category IV	0	1	2	3
Roughage and fiber cause constipation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Indigestion and fullness last 2-4 hours after eating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Pain, tenderness, soreness on left side under rib cage	<input checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input 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"/>
Category V	0	1	2	3
Greasy or high-fat foods cause distress	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower bowel gas and/or bloating several hours after eating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Bitter metallic taste in mouth, especially in the morning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Burpy, fishy taste after consuming fish oils	<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 type="radio"/>
Unexplained itchy skin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>
Reddened skin, especially palms	<input type="radio"/>	<input checked="" type="radio"/>	<input 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?	<input type="radio"/> Yes <input checked="" type="radio"/> No			
Category VI	0	1	2	3
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 type="radio"/>	<input checked="" type="radio"/>
Overall sense of bloating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Bodily swelling for no reason	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Hormone imbalances	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Weight gain	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor bowel function	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Excessively foul-smelling sweat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Category VII	0	1	2	3
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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Get light-headed if meals are missed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Eating relieves fatigue	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel shaky, jittery, or have tremors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Chief complaints didn't show up on the form here. I'm not sure why. He either omitted them, or there was a glitch, but there are plenty of GI symptoms in Categories I through IV. Also gallbladder and liver symptoms in Categories V and VI. A whole lot going on in those areas, which fits with his symptoms. Several symptoms in blood sugar Category VII as well as Category VIII.

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 type="radio"/>	<input checked="" type="radio"/>
Blurred vision	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Category VIII	0	1	2	3
Fatigue after meals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Crave sweets during the day	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty losing weight	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Category IX	0	1	2	3
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 type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Afternoon headaches	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Headaches with exertion or stress	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weak nails	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Category X	0	1	2	3
Cannot fall asleep	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perspire easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input 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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Category XI	0	1	2	3
Edema and swelling in ankles and wrists	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle cramping	<input checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crave salt	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Abnormal sweating from minimal activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Alteration in bowel regularity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Inability to hold breath for long periods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Shallow, rapid breathing	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Category XII	0	1	2	3
Tired/sluggish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Feel cold? hands, feet, all over	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Require excessive amounts of sleep to function properly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Increase in weight even with low calorie diet	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gain weight easily	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Difficult, infrequent bowel movements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Depression/lack of motivation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Morning headaches that wear off as the day progresses	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outer third of eyebrow thins	<input checked="" 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 checked="" type="radio"/>
Dryness of skin and/or scalp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Mental sluggishness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Category XIII	0	1	2	3
Heart palpitations	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Inward trembling	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Increased pulse even at rest	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nervous and emotional	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insomnia	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Night sweats	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty gaining weight	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Category XIV	0	1	2	3
Diminished sex drive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>
Category XV	0	1	2	3
Increased sex drive	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tolerance to sugars reduced	<input checked="" type="radio"/>	<input 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 XVI (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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Then, he has a lot going on in HPA axis, CVD heart, thyroid, and pituitary, again not surprising given his symptoms.

Feeling of incomplete bowel emptying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Leg twitching at night	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Category XVII (Males Only)	0	1	2	3
Decreased libido	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Decreased number of spontaneous morning erections	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" type="radio"/>
Muscle soreness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Increase in fat distribution around chest and hips	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Sweating attacks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
More emotional than in the past	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Category XVIII (Menstruating Females Only)	0	1	2	3
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"/>
Category XIX (Menopausal Females Only)	0	1	2	3
How many years have you been menopausal?	<input type="text"/> 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 foggy	<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"/>

The biggest category of symptoms, though, by far is the male hormone category. You can see he has 3s for nearly every symptom and 2s for the ones that he didn't mark 3s in.

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"/>

<input type="text" value="6"/> How many alcoholic beverages do you consume per week?	<input type="text" value="1"/> How many caffeinated beverages do you consume per day?
<input type="text" value="5"/> How many times do you eat out per week?	<input type="text" value="0"/> 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="4"/> 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:

No medications

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

Vitamin D, Magnesium, Vitamin E, Alpha Lipoid Acid, Selenium,

He drinks about one alcoholic beverage a day and eats out five times a week, which may not be ideal given his symptoms. He has no mercury amalgams. He is not taking any medications, just taking a few maintenance kind of supplements such as vitamin D, magnesium, vitamin C, alpha-lipoic acid, and selenium.

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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat Out at Restaurants	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pastries, Cookies, Candy, Ice Cream and Other Sweets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
White Flour: Bread, Pasta, Pancakes, Crackers, Muffins, etc	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" type="radio"/>
Natural Sweeteners (Honey, Maple Syrup, Agave, etc)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Breakfast Cereals (Hot or Cold)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Packaged Foods: Chips, Crackers, Puffs, Pretzels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Vegetable Oils (Sunflower, Safflower, Canola, Corn, Soy)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input 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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Olive Oil	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Avocados	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Saturated Fats (Butter, Ghee, Lard, Coconut, Palm, Tallow)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Fatty Fish (Salmon, Mackerel, Sardines, Herring)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 type="checkbox"/> Low-Fat, <input type="checkbox"/> Whole)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" type="radio"/>
Eggs (Check: <input checked="" type="checkbox"/> Free-Range, <input checked="" type="checkbox"/> Pastured, <input checked="" type="checkbox"/> Organic, or <input 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 checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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 checked="" type="radio"/>	<input type="radio"/>	<input 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 type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input 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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Alternative Grains (Quinoa, Buckwheat, Teff, etc)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input 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 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coffee (Check: <input type="checkbox"/> Regular or <input type="checkbox"/> Decaffeinated)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Caffeinated Teas (Check: <input type="checkbox"/> Black or <input 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 type="checkbox"/> Sea Salt)	<input checked="" type="radio"/>	<input type="radio"/>	<input 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? Dairy free for 2 years. Gluten free for 5

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

Gluten free 100% unless I am unintentionally cross contaminated by a restaurant and I avoid that at all costs to the point that I hardly eat anywhere without a gluten free menu

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

☐ Confused about nutritional advice
 ☐ Don't really enjoy meals; eat mostly for fuel or calories

☐ Eat lots of pre-made or pre-packaged foods and snacks
 ☐ Lack of choice of healthy foods in neighborhood

☒ Don't eat breakfast or dinner together as a family unit
 ☐ Don't share same meals, even if seated together at table (special dietary needs and/or food preferences)

He has been dairy-free for two years and gluten-free for five years. He doesn't cook much. He eats late at night. He has irregular eating habits, and you may need to address this given his GI complaints.

- | | |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="checkbox"/> Emotional eater (when sad, bored) | <input type="checkbox"/> Have a negative relationship to food |
| <input type="checkbox"/> Diet often for weight control | <input type="checkbox"/> Struggle with eating issues or history of eating disorders |
| <input type="checkbox"/> Eat too much or too little under stress | |

Additional Comments

Depending on how I organize my life I don't have time to cook as I am a single male living in a big city. I had tried prepackaged meals for a while but something that isn't easy or cannot be made in very large portion sizes is always a pain. I am making lifestyle changes to hopefully remedy this.

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).

Green shake - 9 AM: Cucumber, Celery, Spinach, Pear

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

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

I will either eat out at somewhere that is gluten free like Chipotle or I'll eat some rice based meal.

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

Sometimes chips. My diet varies greatly depending on how much time I have and what my schedule looks like.

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

A typical dinner could be some sort of corn cake with a filling such as meat/chicken/egg. These meals are usually high in fat and very filling as I play a lot of sports

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

Anything with sugar or something filling like chips or

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

Please describe what you eat for dessert

Depends how filling the dinner was but sometimes I will have a banana

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

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

I don't eat in the middle of the night

Additional Comments

My diet varies greatly and I don't notice very real changes in how I feel unless I add the green shake in the morning. The only thing that is almost 100% is gluten free / dairy free. Within that I will eat things that are high in calories like bacon and eggs and rice/guacamole/beans etc.

He is a single male living in a big city. He buys prepackaged meals. He doesn't cook a lot. He has a green shake for breakfast, which is probably not optimal for energy levels and thyroid. He eats lunch out. Typically he has a rice-based meal, again also probably not optimal. He has chips for an afternoon snack. Dinner looks okay, but he has sugar for a bedtime snack often. Once again, the dietary survey can be very revealing because even when people during the initial consult or on the questionnaire mark that they have a decent diet, when you see what they are actually eating throughout the day, there is often quite a bit of room for improvement.

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, ERMI 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 checked="" type="radio"/>	<input 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 type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" type="radio"/>
a. Did you experience flu-like illness after the bite?	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>
Chronic Fatigue Syndrome	<input checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>
Depression	<input checked="" type="radio"/>	<input 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"/>
Pfisteria	<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 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"/>

Environmental exposure: Here, he says there is a presence of musty smells, and that is definitely something to follow up on. Our noses are very sensitive. Even professional mold inspectors or indoor environmental professionals will tell you that if they walk into a building, and it smells musty or moldy, that is about all the testing they need to do. Of course, they need to do further testing to find out where the source of that is, but they will say that that is a very reliable indicator for whether a building has been water damaged.

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.):

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

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

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

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

Diet - Gluten free/Dairy free

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

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

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?

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

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

As long as it takes. I would like it to take less than a month.

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

Yes

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

It's affecting my life in a way that makes it almost impossible to function as a normal adult

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

Obstacles are personal discipline due to the sometimes very strict treatments required i.e. Autoimmune Paleo diets

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

Yes - the stress of not being exactly where I would like my life to be at this age.

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

No I do not enjoy my work. I am changing jobs.

9) Do you have a purpose in life?

I'm figuring that one out as I go

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

Family - Mom and Dad

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

I would much rather someone ask too many questions than too few

On the health history questions, he lists fatigue, brain fog, weak muscles, and lack of vitality as main complaints. He was diagnosed with IBS in 2012. I think that is a relatively meaningless diagnosis, as we've discussed, but it tells you that he has had these symptoms since then. He believes a course of Cipro in 2010 destroyed his gut flora and his health. That is possible, unfortunately. Even a single course of broad-spectrum antibiotic such as Cipro can cause permanent changes in the gut flora. The clinical impact of those changes is somewhat unclear, but I think it tends to vary in people depending on what their gut flora was like prior to taking the antibiotic. I've definitely seen, unfortunately, patients who had a pretty severe and dramatic response to even a single course of an antibiotic that apparently preceded most of their health problems.

Methylated vitamins that he has tried in the past have decreased his health, so you would want to pay attention to that. Other vitamins and minerals, gluten- and dairy-free diet have improved his health. He expects changes in less than a month, so that is something you may want to discuss

with him. Certainly, in some cases, you will see changes in that amount of time, but given the length of time that he has been sick and the variety of his symptoms, you probably are going to want to have a chat with him to discuss his expectations.

Marker	Value	Functional Range	Lab Range
Glucose	79	75 - 90	65 - 99
Hemoglobin A1c	5.3	4.4 - 5.4	4.8 - 5.6
BUN	12	13 - 18	6 - 20
Creatinine	1.36	0.85 - 1.1	0.76 - 1.27
BUN/Creatinine Ratio	9	8 - 19	8 - 19
eGFR if Non-African American	71		> 59
eGFR if African American	82		> 59
Sodium	141	135 - 140	134 - 144
Potassium	4.2	4.0 - 4.5	3.5 - 5.2
Chloride	98	100 - 106	97 - 108
CO ₂	22	25 - 30	18 - 29
Calcium	9.6	9.2 - 10.1	8.7 - 10.2
Protein, total	7.2	6.9 - 7.4	6.0 - 8.5
Albumin	4.6	4.0 - 5.0	3.5 - 5.5
Bilirubin, total	0.7	0.1 - 1.2	0.0 - 1.2
Alkaline Phosphatase	103	42 - 107	39 - 117
AST	30	0 - 25	0 - 40
ALT	38	0 - 26	0 - 44
Vitamin D, 25-hydroxy	60.3	35 - 60	30.0 - 100.0
Cholesterol, total	121	150 - 240	100 - 199
Triglycerides	67	50 - 100	0 - 149
HDL	49	55 - 85	> 39
LDL	59	0 - 175	0 - 99
T. Chol / HDL Ratio	2.5	< 3	0 - 5.0
Triglycerides / HDL Ratio	1.37	< 2	< 3.8
CRP-hs	1.6	< 1.0	0.00 - 4.90
Homocysteine	12.4	< 7.0	0.0 - 15.0
TSH	1.310	0.5 - 2.0	0.45 - 4.50
T3, Free	3.5	2.5 - 4.0	2 - 4.4
T4, Free	1.1	1 - 1.5	0.82 - 1.77
Thyroid - TPO Ab	40		< 9
Thyroid - TGA	3		< 1

Marker	Value	Functional Range	Lab Range
WBC	8.0	5.0 – 8.0	3.4 - 10.8
RBC	5.02	4.4 – 4.9	4.14 - 5.8
Hemoglobin	15.0	14 - 15	12.6 - 17.7
Hematocrit	43.8	40 - 48	37.5 - 51.0
MCV	87	85 – 92	79 - 97
MCH	29.9	27.7 – 32.0	26.6 - 33.0
MCHC	34.2	32 – 35	31.5 - 35.7
RDW	12.9	11.5 – 15.0	12.3 - 15.4
Platelets	274	150 – 415	150 - 379
Neutrophils	63	40 – 60	
Lymphocytes	24	25 – 40	
Monocytes	12	4.0 – 7.0	
Eosinophils	1	0.0 – 3.0	
Basophils	1	0.0 – 3.0	
Bilirubin, Direct	0.2		0 - 0.4
Testosterone, Serum	282		348 - 1197

He had blood work done on his own, so we didn't get all the markers that we had wanted, but it was a good start. Creatinine is high at 1.36. The most likely cause of this is weight training or strength training leading to muscle breakdown, since all of his other kidney markers are normal, but you would want to ask him about that. BUN is slightly below the functional range, not significant, nor are sodium, chloride, and CO₂, which are also just very slightly out of the functional range.

AST and ALT are elevated. Patient is not overweight, and that alone does not rule out nonalcoholic fatty liver disease, but you would definitely want to explore other possibilities. We didn't have an iron panel for him or copper. As I said, he got this blood work elsewhere. Given his symptoms, you may consider hepatitis workup as well. After you've tested iron, copper, and hepatitis screen, you could retest ALT and AST too.

Vitamin D at 60. It is definitely not at a toxic level, especially if he is getting enough vitamin A, but you would want to discuss his supplement dose and consider cutting back.

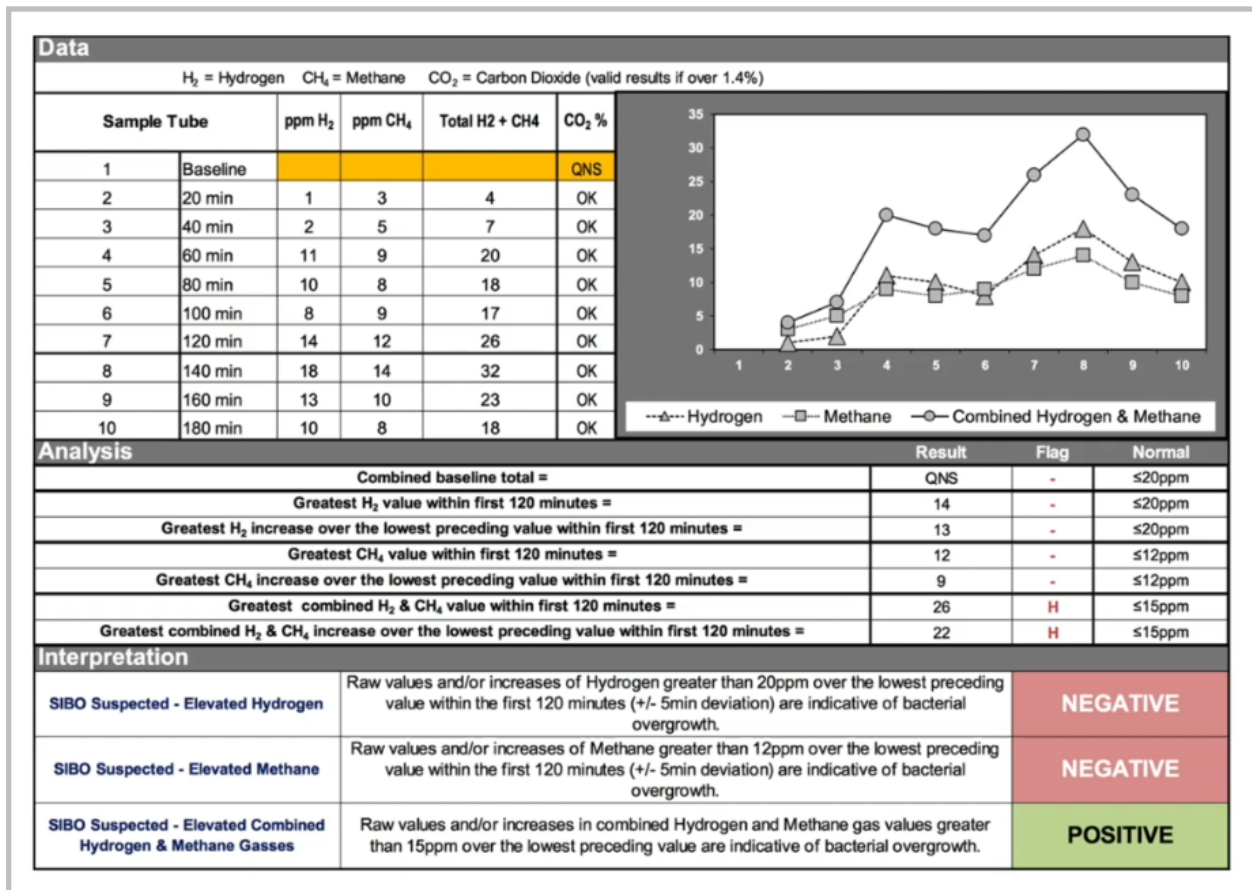
His total cholesterol is quite low at 121. That could be an issue with his liver, especially since we see AST and ALT are a little bit elevated, so those also could point to a problem with the liver. HDL at 49 is at the low end of the spectrum, but given how low his total cholesterol is, that is probably not a concern.

C-reactive protein is 1.6, which is suggestive of inflammation. He has positive thyroid antibodies. He has Hashimoto's, which is, of course, an autoimmune inflammatory condition. The Hashimoto's, as we discussed, can also be a cause of elevated AST or ALT. However, his TSH, free T4, and free T3 are optimal, so Hashimoto's is not yet causing frank hypothyroidism.

Homocysteine is functionally high at 12.4 and actually getting toward the upper end of the lab range. We don't have any B12 or folate markers, so you would need to look at urine MMA and FIGLU.

Red blood cell count is slightly high in the functional range, just very, very slightly. The upper end of the range is 4.9. He is at 5.02, so that is likely not indicative of anything at all. It could be slight dehydration possibly.

Neutrophils, lymphs, and monocytes are slightly out of the functional range. We often see that in patients with autoimmunity such as Hashimoto's. His total testosterone is low. The range is 348 to 1,197, and he is at 282, so that could definitely be contributing to fatigue.



SIBO test results were positive for combined gases, negative for hydrogen, and negative for methane alone. They were also positive if you use the Pimentel criteria for methane. I would say these results are somewhat equivocal, but given his symptoms, I would likely treat.

Comprehensive Stool Analysis / Parasitology x3

BACTERIOLOGY CULTURE		
Expected/Beneficial flora	Commensal (Imbalanced) flora	Dysbiotic flora
4+ Bacteroides fragilis group 1+ Bifidobacterium spp. NG Escherichia coli 1+ Lactobacillus spp. 3+ Enterococcus spp. 4+ Clostridium spp. NG = No Growth	2+ Bacillus spp 1+ Citrobacter amalonaticus 3+ Gamma hemolytic strep	

BACTERIA INFORMATION
<p>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.</p> <p>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 <i>C. difficile</i> associated disease is suspected, a Comprehensive Clostridium culture or toxigenic <i>C. difficile</i> DNA test is recommended.</p> <p>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.</p> <p>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.</p>

YEAST CULTURE	
Normal flora	Dysbiotic flora
1+ Candida krusei	

MICROSCOPIC YEAST	
Result:	Expected:
None	None - Rare
The microscopic finding of yeast in the stool is helpful in identifying whether there is proliferation of yeast. Rare yeast may be normal; however, yeast observed in higher amounts (few, moderate, or many) is abnormal.	

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

Comprehensive Stool Analysis / Parasitology x3

PARASITOLOGY/MICROSCOPY		PARASITOLOGY INFORMATION	
Sample 1 None Ova or Parasites Rare WBC		<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 test is not designed to detect <i>Cyclospora cayetanensis</i> or <i>Microsporidia</i> spp.</p>	
Sample 2 None Ova or Parasites			
Sample 3 None Ova or Parasites			

GIARDIA/CRYPTOSPORIDIUM IMMUNOASSAY			
	Within	Outside	Reference Range
<i>Giardia duodenalis</i>	Neg		Neg
<i>Cryptosporidium</i>	Neg		Neg

Giardia duodenalis (AKA *intestinalis* and *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.

Doctor's Data stool test showed no growth for E. coli, only a 1+ for Bifidobacteria and Lactobacillus, which are very important genre, as you know, so this would be insufficiency dysbiosis. He has some commensal imbalance flora. There was 1+ for Candida krusei in the normal floral column. No microscopic yeast on the sample, the microscopy, and no yeast on any of the three other stool samples.

Comprehensive Stool Analysis / Parasitology x3

DIGESTION / ABSORPTION				<p>Elastase findings can be used for the diagnosis or the exclusion of exocrine pancreatic insufficiency. Correlations between low levels and chronic pancreatitis and cancer have been reported. Fat Stain: Microscopic determination of fecal fat using Sudan IV staining is a qualitative procedure utilized to assess fat absorption and to detect steatorrhea. Muscle fibers in the stool are an indicator of incomplete digestion. Bloating, flatulence, feelings of "fullness" may be associated with increase in muscle fibers. Vegetable fibers in the stool may be indicative of inadequate chewing, or eating "on the run". Carbohydrates: The presence of reducing substances in stool specimens can indicate carbohydrate malabsorption.</p>
	Within	Outside	Reference Range	
Elastase	> 500		> 200 µg/mL	
Fat Stain	None		None - Mod	
Muscle fibers	None		None - Rare	
Vegetable fibers	None		None - Few	
Carbohydrates	Neg		Neg	

INFLAMMATION				<p>Lactoferrin and Calprotectin are reliable markers for differentiating organic inflammation (IBD) from function symptoms (IBS) and for management of IBD. Monitoring levels of fecal lactoferrin and calprotectin can play an essential role in determining the effectiveness of therapy, are good predictors of IBD remission, and can indicate a low risk of relapse. Lysozyme* is an enzyme secreted at the site of inflammation in the GI tract and elevated levels have been identified in IBD patients. White Blood Cells (WBC) and Mucus in the stool can occur with bacterial and parasitic infections, with mucosal irritation, and inflammatory bowel diseases such as Crohn's disease or ulcerative colitis.</p>
	Within	Outside	Reference Range	
Lactoferrin	< 0.5		< 7.3 µg/mL	
Calprotectin*	< 10		<= 50 µg/g	
Lysozyme*	399		<= 600 ng/mL	
White Blood Cells	Rare		None - Rare	
Mucus	Neg		Neg	

IMMUNOLOGY				<p>Secretory IgA* (sIgA) is secreted by mucosal tissue and represents the first line of defense of the GI mucosa and is central to the normal function of the GI tract as an immune barrier. Elevated levels of sIgA have been associated with an upregulated immune response.</p>
	Within	Outside	Reference Range	
Secretory IgA*	70.3		51 - 204 mg/dL	

Comprehensive Stool Analysis / Parasitology x3

SHORT CHAIN FATTY ACIDS				<p>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.</p>
	Within	Outside	Reference Range	
% Acetate	54		40 - 75 %	
% Propionate	11		9 - 29 %	
% Butyrate	32		9 - 37 %	
% Valerate	2.5		0.5 - 7 %	
Butyrate		5.3	0.8 - 4.8 mg/mL	
Total SCFA's	17		4 - 18 mg/mL	

INTESTINAL HEALTH MARKERS				<p>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.</p>
	Within	Outside	Reference Range	
Red Blood Cells	None		None - Rare	
pH	6.0		6 - 7.8	
Occult Blood	Neg		Neg	

MACROSCOPIC APPEARANCE			<p>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.</p>
	Appearance	Expected	
Color	Green	Brown	
Consistency	Soft	Formed/Soft	

The rest of the Doctor's Data was all normal except for butyrate actually being slightly high, which is unlikely to be pathological.

GI Pathogen Screen - 401

Microscopy			
	Sample I	Sample II	Sample III
Ova/Parasites	No Ova/Parasites Found	No Ova/Parasites Found	No Ova/Parasites Found
Trichrome Stain	No Ova/Parasites Found	No Ova/Parasites Found	No Ova/Parasites Found
Yeast	No yeast found	No yeast found	No yeast found
Each stool sample was prepared for microscopic evaluation on wet mount and trichrome stains, utilizing resource-intensive techniques to aid in the analysis and detection of organisms. Yeast, when visibly identified, is reported in terms of predominance on the sample. If 'QNS' is reported, the patient's sample was inadequate for testing purposes.			
Antigens			
Cryptosporidium parvum		NOT DETECTED	
Giardia lamblia		NOT DETECTED	
Stool antigen tests are widely used for their non-invasive nature, high sensitivity, and high specificity. Detection of antigens on the surface of organisms in stool specimens is the current test of choice for pathogen diagnosis and provides increased sensitivity over more common microscopy techniques, while avoiding the false positives of DNA-based methods.			
Cultures			
Bacteria		Yeast	
Citrobacter spp.:	NG	Candida Spp.: NG Other Yeast Identified: No other yeast identified	
Enterobacter spp.:	NG		
Escherichia coli:	+4		
Klebsiella spp.:	NG		
Proteus spp.:	NG		
Pseudomonas spp.:	NG		
Other Bacteria spp. Identified:			
No other bacteria identified			
Organisms grown on culture media are reflexed to manual and/or automated procedures to identify at the species level. The organism amount of growth is reported based on the four quadrants of the plate medium. NG= No Growth. +1 or +2 = Light. +3 = Moderate. +4 = Abundant. If 'QNS' is reported, the patient's sample was inadequate for testing purposes. Standard organisms are listed based on their known prevalence within the patient population, as well as predominance in literature as pathogens and/or causes of autoimmune activity.			
Occult Blood			
Result:		TEST CARD NOT INOCULATED	
The occult blood test aims to detect subtle blood loss in the gastrointestinal tract, anywhere from the mouth to the colon. Positive tests may result from either upper or lower gastrointestinal bleeding and warrant further investigation.			

The BioHealth stool test was completely normal here.

0091 Organix® Comprehensive Profile - Urine

Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

Summary of Abnormal Findings

	<u>Findings</u>	<u>Intervention Options</u>	<u>Common Metabolic Association</u>
Fatty Acid Metabolism			
No Abnormality Found			
Carbohydrate Metabolism			
No Abnormality Found			
Energy Production Markers			
Isocitrate	Very Low	Free-form amino acids	Amino Acid insufficiency
B-Complex Vitamin Markers			
Xanthurenate	Very High	B6	Impaired Tryptophan metabolism
Methylation Cofactor Markers			
Formiminoglutamate	High	Folic acid	Tetrahydrofolate insufficiency
Neurotransmitter Metabolism Markers			
Vanilmandelate	Low	Tyrosine, Phenylalanine	Epi- & Norepinephrine turnover inhibition
Kynurenate	High	B6	Receptor antagonist
Oxidative Damage and Antioxidant Markers			
No Abnormality Found			
Detoxification Indicators			
2-Methylhippurate	High	Glycine	Xylene exposure
Glucarate	High	N-acetylcysteine, Hepatic support	Hepatic Phase I and II detox
a-Hydroxybutyrate	Very High	N-acetylcysteine, other sulfur containing amino acids	Glutathione demand
Bacterial - General			
Phenylacetate	High	Probiotics	Intestinal Bacterial Overgrowth
L. acidophilus / general bacteria			

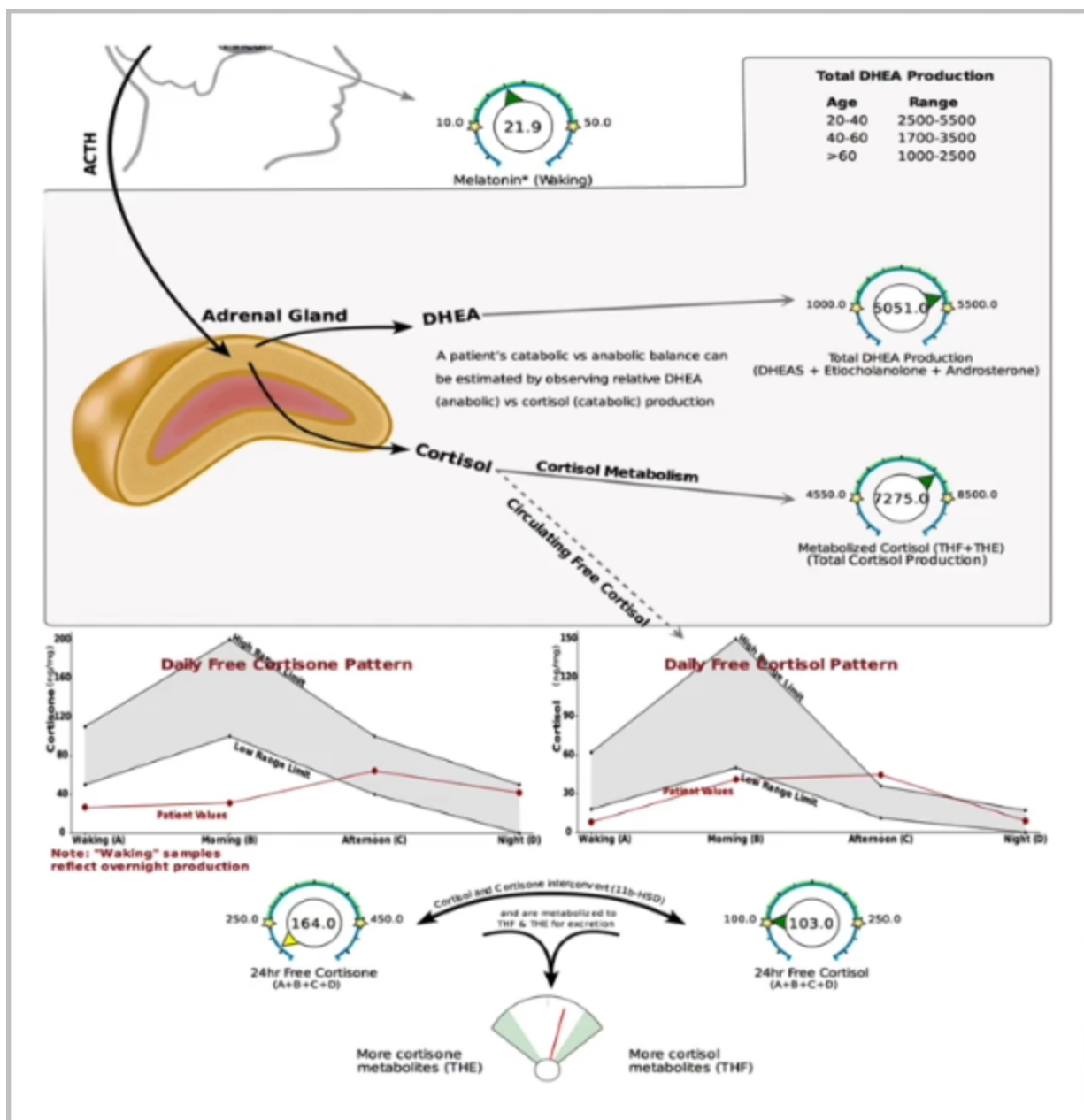
Georgia Lab Lic. Code #067-007
CLIA ID# 11D0255349
New York Clinical Lab PFI #4578
Florida Clinical Lab Lic. #800008124

Testing Performed by Genova Diagnostics, Inc. 3425 Corporate Way, Duluth, GA 30096

Laboratory Director: Robert M. David, PhD


The urine organic acids profile revealed high formiminoglutamic acid, which indicates folate deficiency, so that is the likely cause of the elevated homocysteine that we saw on the blood test. The phenylacetate is high in the bacterial section, which is supportive of the dysbiosis diagnosis. There are a number of other markers that are out of range that we haven't covered in this Level One course. Xanthurenate is very high, which is an indicator of B6 deficiency. I do frequently see that with SIBO because SIBO impairs B vitamin absorption. Kynurenate is also high, which is another marker for B6 deficiency. That is consistent with the SIBO diagnosis. There are several markers of impaired detox capacity and glutathione demand, so there is something happening with toxicity, which again is consistent with his symptoms, and some issues with cellular energy production and neurotransmitter metabolism.

Category	Test		Result	Units	Normal Range
Creatinine					
	Creatinine A (Waking)	Within range	1.84	mg/ml	0.3 - 3
	Creatinine B (Morning)	Within range	0.44	mg/ml	0.3 - 3
	Creatinine C (Afternoon)	Within range	2.16	mg/ml	0.3 - 3
	Creatinine D (Night)	Within range	1.65	mg/ml	0.3 - 3
Daily Free Cortisol and Cortisone					
	Cortisol A (Waking)	Below range	8.0	ng/mg	18 - 62
	Cortisol B (Morning)	Below range	41.1	ng/mg	50 - 150
	Cortisol C (Afternoon)	Above range	44.6	ng/mg	11 - 36
	Cortisol D (Night)	Within range	8.9	ng/mg	0 - 17
	Cortisone A (Waking)	Below range	26.6	ng/mg	50 - 110
	Cortisone B (Morning)	Below range	31.1	ng/mg	100 - 200
	Cortisone C (Afternoon)	Within range	64.3	ng/mg	40 - 100
	Cortisone D (Night)	High end of range	41.6	ng/mg	0 - 50
	24hr Free Cortisol	Low end of range	103.0	ug	100 - 250
	24hr Free Cortisone	Below range	164.0	ug	250 - 450
Cortisol Metabolites and DHEAS					
	b-Tetrahydrocortisol (b-THF)	Within range	2956.0	ng/mg	1750 - 3330
	a-Tetrahydrocortisol (a-THF)	Within range	381.0	ng/mg	175 - 520
	b-Tetrahydrocortisone (b-THE)	Within range	3937.0	ng/mg	2350 - 4800
	Metabolized Cortisol (THF+THE)	Within range	7275.0	ng/mg	4550 - 8500
	DHEAS	Within range	714.0	ng/mg	60 - 2000
Melatonin (*measured as 6-OH-Melatonin-Sulfate)					
	Melatonin* (Waking)	Within range	21.9	ng/mg	10 - 50



DUTCH test revealed borderline low free cortisol, and free cortisone is frankly low and quite below the low range, so that biases the free cortisol even lower. I would definitely say that this is a low free cortisol picture here. He also has a blunted cortisol and cortisone rhythm with very low morning cortisol and cortisone. If we were to do a cortisol awakening response test on this patient, he would probably have a very blunted rhythm, and as you know from the DUTCH and HPA axis unit, the cortisol awakening response is one of the most strongly supported tests in terms of the evidence behind it in correlating HPA axis dysfunction with disease. I think this is probably playing a significant role in his presentation.

Metabolized cortisol or total cortisol, however, is normal and even at the high-normal part of the range. As you know, one thing that can lead to this is obesity. That is not the case in this patient, but active stress response can also cause depletion of free cortisol with normal or high-normal metabolized cortisol levels.


**CALIFORNIA CENTER for
FUNCTIONAL MEDICINE**

CASE REVIEW REPORT OF FINDINGS

Patient Name: "Danny" **Date:** 10-26-16

Underlying Patterns

PATTERN	SUPPORTING MARKERS	COMMENTS
Hashimoto's	Elevated TPO/TGA antibodies	
Inflammation	CRP, AST, ALT, homocysteine	
Impaired liver function	ALT, AST, total cholesterol, Organix	Follow-up testing
Low testosterone	Testosterone, serum	
Impaired methylation	Homocysteine, figlu (Organix)	
SIBO (methane/total gases)	NUNM breath test	
Dysbiosis	DD CSAP, Organix	
HPA axis dysregulation	DUTCH	Low free cortisol, low morning cortisol

<http://ccfmed.com>



Recommendations for further testing

TEST	PURPOSE	COMMENTS
CMP	Follow-up on AST/ALT	
Iron panel + ferritin	Follow-up on AST/ALT	
Zinc/copper	Follow-up on AST/ALT	

Recommendations for Treatment

TREATMENT	PURPOSE	COMMENTS
Antimicrobial protocol	SIBO	See handout
Paleo Reset Diet w/methylation nutrient focus	SIBO, general health, methylation	See handouts
Liposomal glutathione	Immune regulation, liver detox support	
Vital Adapt	HPA-D	
Acetyl-CH	HPA-D, cognitive fx	
Stress management	HPA-D	See handout

<http://ccfmed.com>

Here is the report of findings that I did for Danny. Hashimoto's there at the top with elevated TPO and thyroglobulin antibodies. Inflammation showing up with CRP, AST, ALT, and homocysteine. Impaired liver function with AST, ALT, and maybe a little low total cholesterol and then the markers on the organic acids panel. Low testosterone on the serum test. Impaired methylation because of the homocysteine and the folate deficiency, the FIGLU on the Organix. Probably SIBO because of high methane and combined methane and hydrogen. Dysbiosis on the Doctor's Data stool panel,

the insufficiency dysbiosis, and then the marker on the Organix panel. HPA axis dysregulation with the blunted morning cortisol awakening response.

For follow-up testing, I would like to do a CMP, comprehensive metabolic panel, to get another AST and ALT reading. I would like to get an iron panel and ferritin on him and zinc-to-copper to see if those may be potential causes of the AST and ALT. If AST and ALT are elevated again and iron panel, ferritin, zinc, and copper are normal, I may consider doing hepatitis workup at that time.

For treatment, antimicrobial protocol, which I'll show you in a second. Paleo reset diet with focus on methylation nutrients given his methylation issues. Liposomal glutathione to give him some detox support since there were several markers for that on the organic acids panel. I used Vital Adapt for the HPA axis stuff because the adaptogens can actually increase free cortisol without typically increasing metabolites. I used Acetyl-CH because of the pretty profound disruption in the diurnal rhythm with a really low morning cortisol. Then, of course, stress management handout to help regulate the HPA axis.

Antimicrobial protocol

Nutriceutical	Dosage
GI Synergy	1 packet BID (<i>with breakfast and dinner</i>)
Lauricidin	1 scoop TID (<i>with each meal</i>)
Interfase Plus	3-4 capsules BID (<i>on empty stomach</i>)
PHGG	5 grams/d taken (<i>with dinner</i>)
Prescript Assist	1 BID (<i>upon rising and before bed</i>)
MegaSporeBiotic	1 capsule (<i>with lunch</i>)

With the antimicrobial protocol, we just used the core protocol given that the results were somewhat equivocal and the methane wasn't very low. The problem was primarily insufficiency dysbiosis and maybe mild SIBO. I didn't do any additions to the protocol, and I just suggested he do it for 30 days.