

# YOUR PERSONAL ROOT CAUSE ANALYSIS FROM



## RootFinder™ Analysis Report

produced on Fri Apr 15 2022 for [dr.a.lenhardt@gmail.com](mailto:dr.a.lenhardt@gmail.com)

### Demographics:

**Gender: Female, Age: 50-59**


**Smoking: Many years ago, Alcohol: 1 drink/day**

**Invoice #1650049038882**

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For more information about Complex Health Solutions and a variety of topics that might be of interest and relevance to your condition, please visit our website [complexhealthsolutions.com](http://complexhealthsolutions.com). If you have any questions or feedback, please contact us at: [basic-report@complexhealthsolutions.com](mailto:basic-report@complexhealthsolutions.com)

**Thank you for completing the RootFinder™ Assessment and congratulations on taking the first step on your path to a healthier you!**



The body is an interconnected system that requires balance for optimal function. When any part of this system is out of balance, your body sends out signals that you experience as symptoms.

Analyzing the combination of symptoms that you reported, our expert RootFinder tool, backed by over a decade of the most current scientific research and clinical evidence to-date, has identified the following most likely root causes of your current health issues.

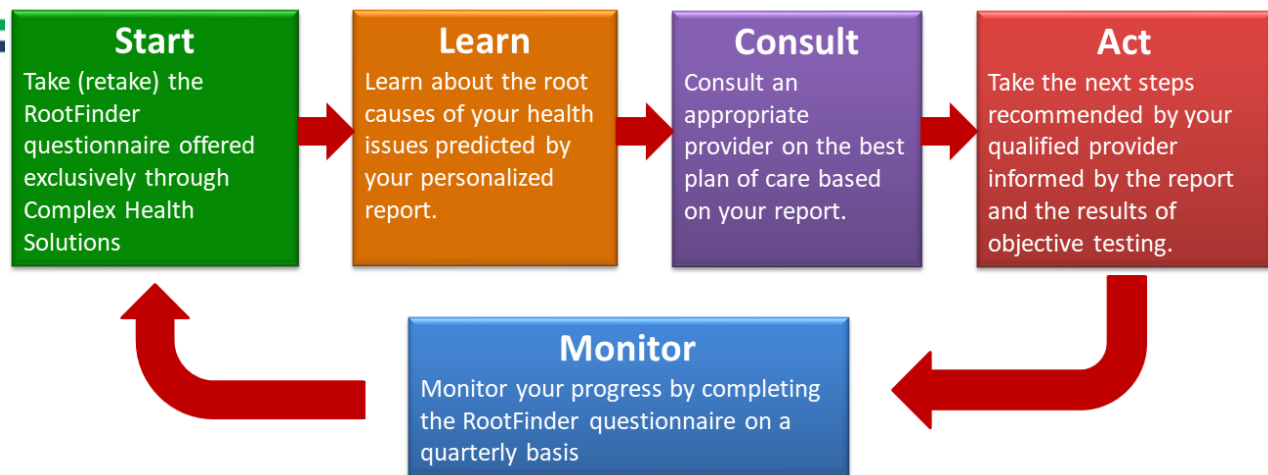
Whenever possible, it is best to verify these as active problems through objective testing. This personalized report will help you work with your healthcare provider to identify potential tests you may wish to pursue. As you work with your provider to address the true root causes of your health concerns, it will be critical to repeat the RootFinder Assessment to monitor your improvement over time and adjust your treatment plan accordingly.

It is important to understand that the goal of Complex Health Solutions is to identify and prioritize potential root causes that are not typically pursued comprehensively or at all by mainstream practitioners. Sometimes, the #1 root cause in your report is not the area that needs the most attention, and each root cause is interrelated, requiring a coordinated approach to your treatment plan. Therefore, this report is not a substitute for working with a qualified healthcare professional, because it does not provide you with any medical diagnoses, advice or management of your medical condition. However, the results from this report empower you to regain control of your health and arm you with important insight into your current health concerns so that you are better prepared to seek meaningful and effective medical care.

## **How does Complex Health Solutions determine your Root Causes?**

We have harnessed the power of computing and advanced software algorithms to create an analytical engine. This engine takes into account over one hundred symptoms, their relationship with various root causes, and information about the strength of such relationships. Under the supervision of our founder, Andrew Lenhardt, M.D., our team of professionals curates the information and the knowledge provided to our analytical engine, on an on-going basis. Our technology experts ensure that these on-going updates are used by the engine correctly and completely.

# The Path to a Healthier You



**Armed with new knowledge from this report, you can learn more about the root causes of your health issues.**

**Next, consult a healthcare provider to establish a plan of care.**

Some general considerations when choosing a practitioner to support you in your journey to a healthier you:

It is important to note that most primary care physicians are not familiar with functional medicine or focus on addressing the root causes of an illness. An appropriate and qualified practitioner who could help you might come from a variety of backgrounds including a medical doctor (M.D.), a doctor of osteopathic medicine (D.O.), a naturopathic doctor (N.D.), a doctor of philosophy (Ph.D.), a registered pharmacist (R.Ph.), a doctor of chiropractic medicine (D.C.), a licensed acupuncturist (LAc), and others.

We encourage you to research as much as possible to try to find someone with experience in managing the potential root causes identified by our analysis. For some of these areas, it may be more challenging to find a person knowledgeable in that particular area. Even so, it is strongly recommended that you find a qualified practitioner to help you navigate this complicated path.

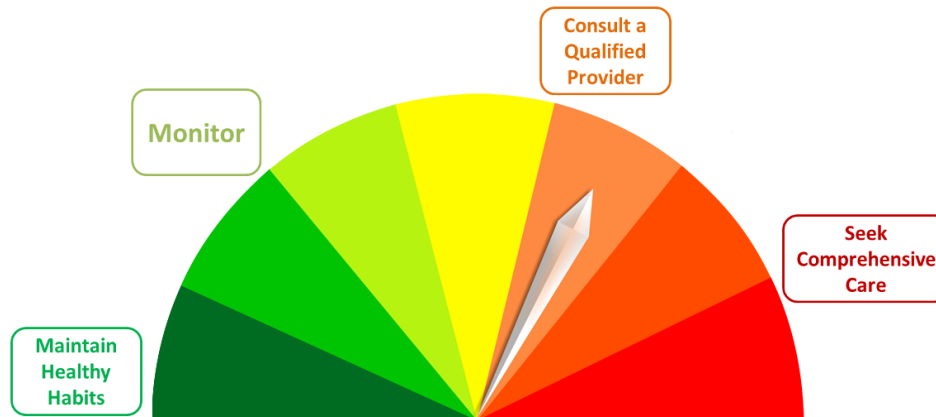
While remote visits are increasingly popular, we encourage you to try and find someone local if possible, as there is no substitute for a visit in person. Some sources that can help find someone local to you:

- The Institute for Functional Medicine: <https://www.ifm.org/find-a-practitioner/>
- The Functional Forum: <https://functionalforum.com>
- Internet search for “functional provider/practitioner”, “naturopathic provider/practitioner”, or “holistic provider/practitioner”



The RootFinder analysis has calculated a score that represents the severity of your chronic health issues. Your current Illness Index Score is:

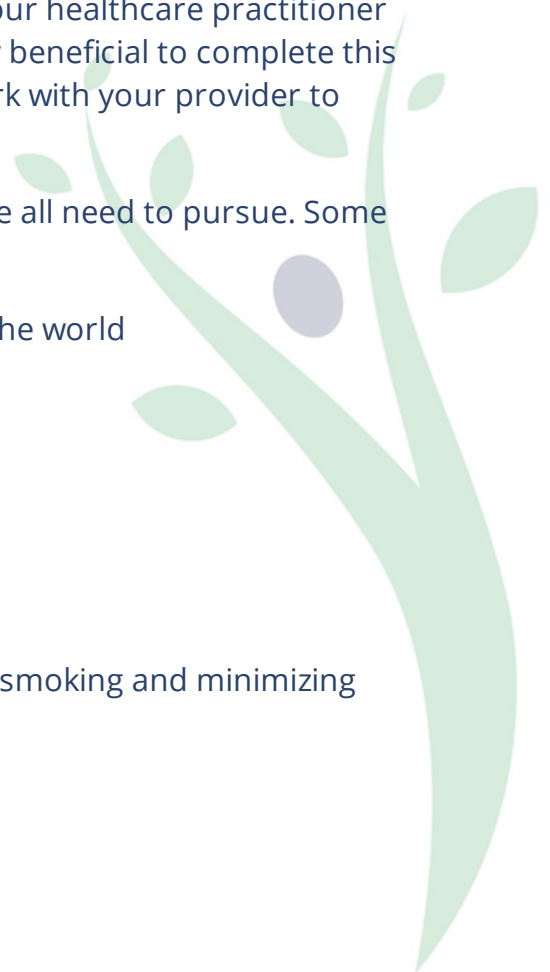
## ILLNESS INDEX: 42



This score ranges from 0 to 100 and can be used as a reference point going forward to assess whether the management plan recommended by your healthcare practitioner is showing benefit and, if so, to what extent. It can be highly beneficial to complete this survey every 3-4 months to monitor your progress and work with your provider to adjust your care plan as needed.

Additionally, there is a foundation of health and wellness we all need to pursue. Some of the most important determinants of health include:

- Strong relationships with others and connections to the world
- Maintaining a healthy, varied, nutrient-dense diet
- Regular exercise
- Adequate quantity and quality of sleep
- Stress management and mindfulness
- Weight management
- Avoidance of toxins through your food, environment, smoking and minimizing the intake of alcohol



# ROOT CAUSE ANALYSIS RESULTS



## TOP FIVE LIKELY ROOT CAUSES

The analysis completed through the RootFinder has predicted the following as your top 5 most likely underlying issues. These issues require the opinion of a qualified healthcare professional who will put them in the context of your symptoms and other relevant factors. Objective testing is often necessary as a next step to clarify the extent to which these underlying issues are active problems that require management.

Along with the predicted root cause, the RootFinder determines the Likelihood of each root cause as it relates to your personal situation. These Likelihood indicators fall into five distinct categories: Very Unlikely, Unlikely, Possible, Likely and Very Likely. The table below is a sorted list of your most likely root causes in the decreasing order of likelihood.

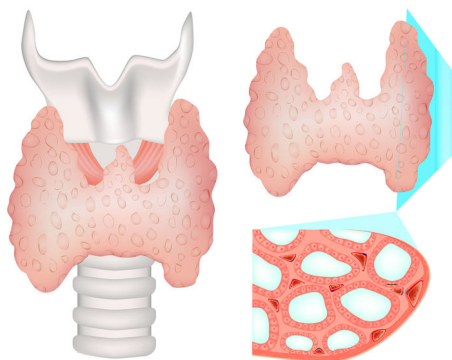
Rank	Root Cause	Likelihood
#1	Low Thyroid	Likely
#2	Mineral Deficiency/Imbalance	Possible
#3	Low Testosterone	Possible
#4	High Cortisol	Possible
#5	Low Estrogen	Possible

### Next Steps

The higher your Illness Index and/or the Likelihood of a root cause, the greater the need for you to discuss this potential underlying root cause with a qualified healthcare professional who understands the subject matter, and take appropriate action.



## Root cause #1 Low Thyroid (Likelihood: Likely)



*RootFinder* predicts that you might have an issue with Low Thyroid. This can also be referred to as hypothyroidism, an underactive thyroid or thyroid hormone deficiency.

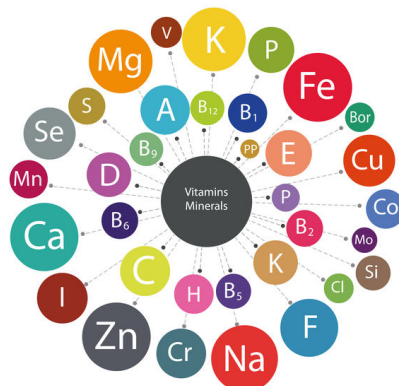
Thyroid function is a complex topic that involves the brain, thyroid gland, liver, immune system and the gastrointestinal system. Standard work-up by mainstream practitioners often focuses on the thyroid stimulating hormone (TSH) level in the blood. Many other laboratory tests are typically required to determine if the thyroid is playing a role in a person's chronic health issues. One of the most important questions for a person with hypothyroidism is whether they have Hashimoto's autoimmune thyroiditis. Some of the most common signs and symptoms of thyroid hormone deficiency include chronic fatigue, unexplained weight gain, puffiness and fluid retention, hair thinning, feeling cold with a low basal body temperature, dry skin and/or constipation out of proportion to age and lifestyle.

The **next step** to evaluate this potential root is to:

- Many times the TSH blood test is done as the only test to check for an underactive thyroid. To get a more complete picture of your thyroid hormone status, it is preferred to at least add a free T4 and free T3 level to laboratory testing. For many, those individual thyroid hormone levels need to be on the higher side of the normal range for optimal health.



## Root cause #2 Mineral Deficiency/Imbalance (Likelihood: Possible)



*RootFinder* predicts that you might have an issue with Mineral Deficiencies and Imbalances.

Minerals are essential for almost all aspects of the internal functioning of the body. Mineral deficiencies and imbalances are common and potentially relevant to the majority of adults, especially those over 50 years old. Risk factors for mineral deficiencies include stress, exercise, mediocre food sources (including fruits and vegetables from depleted soil), medications (especially proton pump inhibitor acid blocks like omeprazole and diuretics like hydrochlorothiazide used for hypertension), malabsorption, excessive alcohol use and aging. As people get older they tend to have less stomach acid with deficiencies of digestive enzymes, so those over 65-years-old are often nutrient deficient even with an optimal diet. Mineral deficiencies and imbalances are not a core competency of standard medical training.

Vitamins and minerals often work together in a balanced way, so it can be too simplistic to address symptoms and test results as only related to deficiencies. People often have relative calcium overload, for example, because they are more deficient in magnesium and the other minerals that counterbalance calcium.

The symptoms, diagnoses and health conditions that can be caused primarily or in part by chronic mineral deficiencies and imbalances is too long to list but some of the more common include: muscle cramps, palpitations and cardiac rhythm disturbances, hypertension, arthritis, type 2 diabetes, insomnia, anxiety, depression, chronic constipation, chronic fatigue and recurrent headaches.

The **next step** to evaluate this potential root cause is to:

- Research and consider running a hair tissue mineral analysis (HTMA), also often called a hair metals test, because it assesses for heavy metal toxicity as well as mineral imbalances. Reliance on standard blood tests (that tell us almost nothing about the person's full body status) is one of the main reasons that this important issue is not typically addressed. Those with chronic mineral deficiencies typically have normal blood levels of magnesium, potassium, calcium, sodium, etc.
- Should you be advised that you have a magnesium or potassium deficiency, we suggest that you check out our free handouts on [Magnesium Deficiency](#) or [Potassium Deficiency](#) Dietary Guidelines from Personal Remedies.

## Root cause #3 Low Testosterone (Likelihood: Possible)

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*RootFinder* predicts that you might have an issue with Low Testosterone. Testosterone is the predominant male sex hormone, but is important for both men and women.

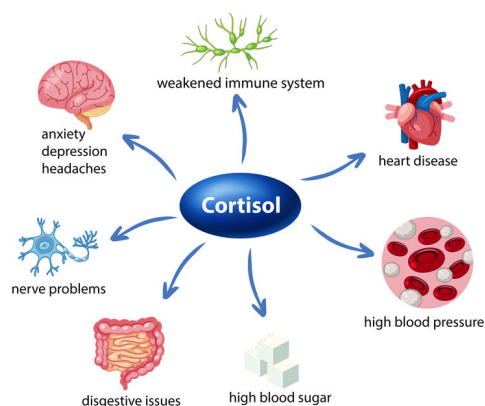
Low testosterone is one of the most common and important hormone imbalances. The medical world has focused on low testosterone in males after middle age, but this health issue is at epidemic levels in men and women of all ages. Some of the signs and symptoms of low testosterone include low libido, chronic fatigue, brain fog, muscle weakness, depressed mood, difficulty focusing and a lack of motivation.

The **next step** to evaluate this potential root cause would be:

- To check a testosterone profile through a traditional lab that includes total testosterone, free testosterone, SHBG, and bioavailable testosterone levels.
- A DHEA level may also be worthwhile to get a more complete picture of the testosterone hormone pathway.



## Root cause #4 High Cortisol (Likelihood: Possible)



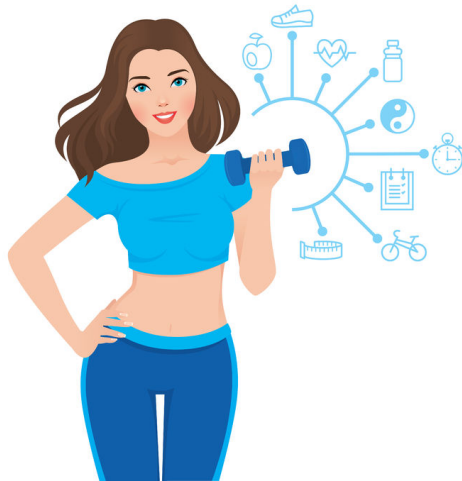
*RootFinder* predicts that you might have an issue with High Cortisol. Cortisol is a steroid hormone produced by the adrenal glands and is often described as the “stress hormone.”

Cortisol, as with other hormones, shouldn't be considered good or bad. Stress, caffeine, lack of sleep, excessive amounts of vigorous exercise, stimulant medications for Attention Deficit Disorder (ADD or ADHD) and other factors can all affect adrenal function and cortisol output. Additionally, it is possible to exhibit symptoms of both high and low cortisol at the same time. Cortisol serves a variety of important functions in the body and helps regulate blood sugar, metabolism and inflammation. Those with high cortisol levels would typically be triggered by various forms of emotional, psychological and physical stress and often have difficulty with sleep and weight loss.

The **next step** to evaluate this potential root cause might be to:

- Get a salivary cortisol profile from a lab like Great Plains. Checking a random or even a fasting blood cortisol level is of minimal value because they don't provide enough information about the adrenal cortisol output.

## Root cause #5 Low Estrogen (Likelihood: Possible)



*RootFinder* predicts that you might have an issue with Low Estrogen. Estrogen is a hormone that both males and females produce although females tend to produce significantly higher amounts relative to body mass.

Low estrogen or estrogen deficiency is most common in women after menopause. Some of the signs and symptoms of low estrogen include mood swings, hot flashes, headaches and tendency to get urinary tract infections.

Low estrogen is less common in males but Root Finder may predict this as an issue in the context of a testosterone imbalance.

**Next steps** based on this potential root cause might include

- A comprehensive hormone profile like the Dutch profile from Precision Analytical, Inc.

For more information:

- Read the book *The Hormone Cure* by Sara Gottfried, MD

# Root Cause Analysis for Specific Health Issues



At Complex Health Solutions, we understand that our users often struggle with specific health concerns. In an effort to increase the usefulness of our RootFinder tool, this page provides you with extra analysis based on your primary area of concern(s). As always, please review these predictions with a qualified healthcare provider.

The top 5 root causes predicted by *RootFinder* for you that are related to **Hormone Imbalance** are:

1. [Likely] Low Thyroid
2. [Possible] Low Testosterone
3. [Possible] High Cortisol
4. [Possible] Low Estrogen
5. [Possible] Low DHEA



# About Complex Health Solutions

Complex Health Solutions (CHS) is dedicated to improving the lives of those with complex health issues, a group that continues to be drastically underserved. Developed by a physician and enabled by AI technology, the RootFinder tool from CHS can identify the most likely root causes of a patient's symptoms and illnesses – in minutes. CHS is the first in it's industry to offer Functional Medicine professionals this unique and powerful tool to perform their job more accurately and more efficiently, saving time, money and frustration for providers and patients alike.

## About Andrew Lenhardt, MD:



Andrew Lenhardt, MD, is a board-certified family physician working in the field of integrative and functional medicine. He has served as an Assistant Professor of Medicine at Tufts Medical School for over 10 years. He also works with nurse practitioner students from Endicott College and Yale University. He is the author of two books available on Amazon: *The Best of All Worlds – A Family Doctor's Path to Integrative Medicine* and *Emotional Intelligence in a Complex World*.

Dr. Lenhardt's primary goal is to target the root causes of illness and provide patients with the tools to achieve optimal health. With a focus on prevention rather than treatment, he incorporates the principles of functional medicine, naturopathy, ancestral health, nutrition and longevity in caring for his patients. Intensive research has been done over his 20+ year medical career to understand the underlying root causes that explain chronic illness. That ongoing work is the basis for the RootFinder tool available at [complexhealthsolutions.com](https://complexhealthsolutions.com). You can also watch informative videos at the Complex Health Solutions Youtube Channel and review blogs and protocols at [drlenhardt.com](https://drlenhardt.com).

Connect with us: [Andrew@ComplexHealthSolutions.com](mailto:Andrew@ComplexHealthSolutions.com) & on social media!

