

# The Functional Approach to Balancing the Adrenals & Thyroid



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## Introduction

# The Functional Approach to Balancing the Adrenals and Thyroid Workshop

On behalf of the entire team at the Institute of Nutritional Endocrinology, it's my pleasure to welcome you to the ***Functional Approach to Balancing the Adrenals and Thyroid Workshop***. We're super excited to spend the day with you, shining a spotlight of truth on how balancing the thyroid and adrenal glands, part of the HPAT Axis, to restore their energy, stamina and focus.

We have a mission, you and I! Our current "sick care" system is failing to truly guide people to restoring and optimizing their health, and we're in the position to make a huge difference.

Together we can transform that system to a true health care system, where everyone has access to the tools, training, resources, and loving guidance needed to live the life of his or her dreams.

I've pulled together my burning passion to make a difference, my 30-plus years of clinical experience and my decades of research to offer leading-edge strategies and tools you can put to use right away.

I promise to give you my very best during our day together and to make it fun and very productive.

My ask of you is to show up, to keep your mind and heart open to the amazing potential that lies before you, be ready to let go of old beliefs and teachings that no longer serve. and to learn.

Be willing to step outside the box. Let go of limitations. Let yourself step into the power and leadership you are destined to own.

Together, my friends, we have the ability to change the health of the world, one life at a time. I'm excited to have you on this journey with me.

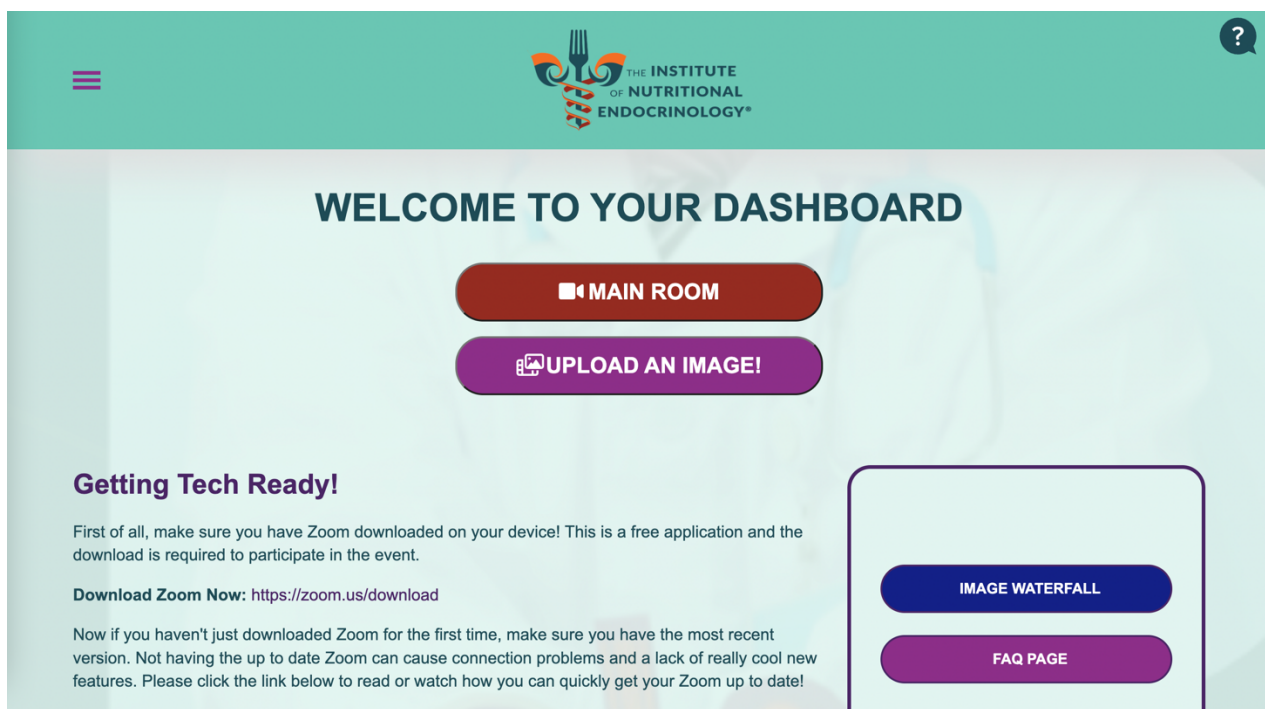
Dr. Ritamarie



## How To Get The Most From This Workshop

### Obvio: Our Workshop Hub

We're using an app called Obvio to manage the event and enhance your experience while at the workshop. Obvio provides a beautiful dashboard for you to find everything you need. As the hub of the event, Obvio includes the complete daily schedule (shown in your personal time zone), handouts, links to each of the sessions, gathering rooms for networking. With this app, you can access the workshop on any device - your laptop, tablet, desktop or phone. For any questions, reach out to our customer support center.





## Overview of the Clinical Process

I've organized our day to cover four aspects of the process I've developed to get results with your clients and patients who are suffering with fatigue, brain fog, and other symptoms of thyroid and adrenal dysfunction. This is your superhero process I call CAPE. So put on your superhero CAPE and let's get started.

### **The CAPE Process:**

1. Connect
2. Assess
3. Plan
4. Empower

This workbook is arranged in the order of this process. It includes handouts, recipes, checklists and a variety of resources to support you in putting what you'll learn during the workshop into action right away.

## CONNECT

When I work with a new client, I make it a priority to connect deeply with them right from the start.

I begin by asking about their values, visions and goals.

I ask them to imagine life without their current health challenges, and to describe it to me—what can they do that currently they cannot. When they can get in touch with what they want most they are more likely to follow through with my health plan for them, even if it gets challenging.

### **Here's my connect process:**

1. Create a connection from the start. Find something to relate to them about and let them feel that you truly care.
2. Help the client/patient connect to what matters most to them and express their goals in rich language that excites them.
3. Watch their body language for answers to their current health challenges. Their body is expressing what they may not yet have the words to say, as 95% of consciousness is expressed in non-verbal subconscious behavior. 60 - 90% of communication is non-verbal. 30% is tone of voice, and only 10% is content.

Then ask:

- How did you feel about connecting to these things?
- How can you use your insights to make your own best choices on a daily basis?
- How can you use this information to motivate and inspire your client/patient into action?



I frequently use the following Values, Visions and Goals guidelines during my first client encounter. You are welcome to use these with your own clients and patients.

During your first encounter with a new client, use some of these guidelines to ask questions that help you to build trust and get them connected to what's most important to them.

## Values, Visions and Goals Worksheet

### Your Five-Year Vision

*"If you limit your choices only to what seems possible or reasonable, you disconnect yourself from what you truly want, and all that is left is a compromise."— Robert Fritz*

*"Where there is no vision the people perish."— Proverbs 29:18*

*"Vision without execution is hallucination." — Thomas Edison*

Describe in words what you'd like your life to be like 5 years in the future. Envision the ideal you: physically, mentally, spiritually and emotionally, and write down what you desire most.

For instance, for your physical description, write about your weight, your health, physique, shape, energy, the clothes you wear, the way your body moves, physical confidence, etc. What do you look like? How does your body image impact the way you relate with other people? How do you feel? How's your energy? What are you doing with your time now that your health is optimal?

Write everything in the present tense, as if you are that person now and are describing yourself. Really get into this assignment, embellishing with as much detail as possible! Continue until you have fully captured every detail, and the person on the paper feels real to you, \*as\* you. You will find this becomes amazingly easy once you actually begin to write.

The more you let yourself go and really experience this vision of yourself, the more your present and possible future become one experience. Your subconscious mind can't tell the difference between reality and your vision. Envision it and you WILL become it.

*"If you want to be happy, set a goal that commands your thoughts, liberates your energy, and inspires your hopes." — Andrew Carnegie*



## My Vision: The Ideal Me 5 Years from Now

### Your Core Values

The goal of this exercise is to discover and clarify your deepest core values. This is the first step toward developing a lifestyle that's in harmony with your innermost desires. It's very valuable to get in touch with what's truly important to you so when difficult choices present themselves, you can make a decision that is consistent with whom you really are.

A core value is something that is so important to you that it affects how you live your life. It determines your activities in every moment. You may have core values of integrity, love, health, or any number of things, but they are so central to you that you would go to the ends of the earth to preserve them.

If you find a difference between what you really want for yourself and how you are living now, know that it's not uncommon. In fact, gaps between the two are exactly what lead to decisions that are out of alignment with what you really want in your life.

If you're among those of us who tend towards self-sabotaging behaviors (such as binging on inappropriate foods in spite of a newly devised goal suggesting otherwise...) take a moment first to recognize that finding those disconnects is an amazing discovery! In reviewing your values list, consider which are fully realized in your life, and the ones you want but are not quite actualized.

1. Make a list of the 10 things you value most in your life.
2. Go back through the list and prioritize them
3. Circle the top 5 and jot down a few lines about why they are so important to you.

### Setting Goals

*"The trouble with not having a goal is that you can spend your life running up and down the field and never scoring." – Bill Copeland*

Review your vision and values then **choose ONE goal** you'd like to celebrate completing 90 days from now. Make it specific, measurable, bold AND realistic.

For example, if you can hardly lift a five-pound bag of apples now, it is unrealistic to expect you will be bench pressing 200 pounds in 90 days—a bold goal, yes, but not at all reasonable. Targeting to lift 20 pounds in 90 days is bold, yet more realistic in light of your current strength.

The combination of BOLD and REALISTIC may at first glance seem contradictory. Yet if you think about it more carefully, you'll realize that a goal can be realistic while still being bold. Bold goals require effort to achieve but are nonetheless achievable within the specified time frame.



## *The Functional Approach to Balancing the Adrenals and Thyroid*

If the goal is not bold enough—dropping 2 pounds in 90 days, for instance—little effort is required, and there is not a lot of juice driving it. It would be easy to goof off until the end of the time period, put in a little bit of effort, and make the goal.

On the other hand, however, it is not realistic to decide to drop 80 pounds in 90 days. Even if you ate nothing for 90 days, it is unlikely you'd drop your weight by 80 pounds in that short a time.

Examples of specific, measurable bold goals, stated in the present tense:

- I am able to ride my bicycle for an hour without getting tired.
- I weigh (Fill in a number that is 20 pounds less than you weigh today), and I easily maintain this weight by eating healthy, wholesome foods.
- I am able to breathe freely without the use of medication.
- I can focus on one task at a time in 15-minute increments.
- My knees feel strong and comfortable during exercise.
- My digestion is comfortable, with regular elimination occurring 3 times a day.

Notice how specific these goals are? If yours starts out with the words “more” or “some,” it’s time to pinpoint exactly what you’d like to accomplish. Instead of more, or some, specify a quantity.

Also notice that these are *ends goals*, not *means goals*. You would not choose “I am drinking a green smoothie every day” or “I no longer eat sugar” as a 90-Day Bold Health Goal, as these are means to an end, not goals themselves. (They can, of course, still be a critical part of your Action Plan!)

Using the guidelines described above, get in touch with a goal you’d like to accomplish within the next 90 days and write it down. Keep it within your visual focus every day for the next 90 days.



# ASSESS

## Adrenal Assessment Scorecard

Name				
Based upon your health profile for <b>the past 30 days</b> , please select the appropriate number, from '0 - 3' on all questions (0 as least/never/no and 3 as most/always/yes). Check the number you feel best applies, then add the number of checks in each column to create your score.				
<b>Point Scale:</b> <b>0 = Never</b> or almost never have the experience/effect. <b>1 = Mild</b> experiences/effects <b>2 = Moderate</b> experiences/effects <b>3 = Severe/chronic</b> experiences/effects For all <b>yes/no</b> questions, 0 = no and 3 = yes				
<b>Adrenal Symptom Question</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Are there nights when you cannot stay asleep?				
Do you experience afternoon headache(s)?				
Do you crave salt?				
Are you a slow starter in the morning?				
Do you experience afternoon fatigue?				
Do you experience dizziness when standing up quickly?				
Do you experience headache(s) with exertion or stress?				
Do you tend to be a "night person"?				
Do you have difficulty falling asleep?				
Do you tend to be keyed up, and/or have trouble calming down?				
Is your blood pressure above 120/80?				
Do you experience headache(s) after exercising?				
Do you feel wired or jittery after drinking coffee?				
Do you clench or grind your teeth?				
Are you calm on the outside, but troubled on the inside?				
Do you have chronic low back pain that worsens with fatigue?				
Do you have difficulty maintaining manipulative correction?				
Do you experience pain after manipulative correction?				
Do you have arthritic tendencies?				
<b>Adrenal Symptom Question</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Do you have excess weight, especially around the middle?				
Do you have elevated blood sugar, typically above 110?				
Do you perspire easily?				
Do you have chronic fatigue and/or get drowsy often?				
Do you have bouts of afternoon yawning?				
Do you have asthma, wheezing, and/or difficulty breathing?				
Do you experience pain on the medial or inner side of the knee?				
Do you have a tendency to sprain ankles or experience "shin splints"?				



## The Functional Approach to Balancing the Adrenals and Thyroid

Do you have a tendency to need sunglasses?				
Do you have allergies and/or hives?				
Do you ever suffer from weakness and/or dizziness?				
<b>Total for Each Column (number of checkmarks x value)</b>				
<b>Grand Total /90</b>				

**0-10%** - Overall good adrenal balance. Sound nutrition and healthy habits will maintain good balance.

**11-20%** - Your adrenals are in need of a tune up to restore balance before serious illness sets in. Diet and lifestyle improvements should shift to normal.

**21-35%** - Your adrenals are out of balance and need attention.

**36-50%** - Your adrenals are very compromised, and this is likely to significantly affect your state of health, well-being and energy level.

**51-100%** - Your adrenals are severely compromised and require immediate attention.



## Thyroid Assessment Scorecard

<b>Name</b>				
Based upon your health profile for <b>the past 30 days</b> , please select the appropriate number, from '0 - 3' on all questions (0 as least/never/no and 3 as most/always/yes). Check the number you feel best applies, then add the number of checks in each column to create your score.				
<b>Point Scale:</b> <b>0 = Never</b> or almost never have the experience/effect. <b>1 = Mild</b> experiences/effects <b>2 = Moderate</b> experiences/effects <b>3 = Severe/chronic</b> experiences/effects For all <b>yes/no</b> questions, 0 = no and 3 = yes				
<b>Low Thyroid (Hypo) Symptom Question</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Do you have difficulty losing weight?				
Are you mentally sluggish or notice a reduced initiative?				
Are you easily fatigued and/or sleepy during the day?				
Are you sensitive to cold and/or have cold hands and feet?				
Do you have chronic constipation?				
Have you experienced excessive hair loss and/or coarse hair?				
Do you have morning headaches that wear off during the day?				
Do you have a loss of lateral eyebrow hair (about 1/3 of the brow line)?				
Do you experience seasonal sadness?				
Are you tired, sluggish?				
Do you require excessive amounts of sleep to function properly?				
Do you struggle with increase in weight gain even with low-calorie diet?				
Do you ever experience depression, lack of motivation?				
Is there thinning or falling out of hair on your scalp, face, or genitals				
Do you have dryness of skin and/or scalp?				
Do you notice mental sluggishness?				
<b>Total for Each Column (number of checkmarks x value)</b>				
<b>Low Thyroid Total /48</b>				

<b>Excess Thyroid (Hyper) Symptom Question</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Are you sensitive/allergic to iodine?				
Do you have difficulty gaining weight, even with a large appetite?				
Are you nervous, emotional, can't work under pressure?				
Do you experience inward trembling?				
Do you flush easily?				
Do you have an intolerance to high temperatures?				
Do you experience heart palpitations?				
Do you ever experience increased pulse, even at rest?				
Do you suffer from insomnia?				
Do you experience night sweats?				



## *The Functional Approach to Balancing the Adrenals and Thyroid*

<b>Total for Each Column (number of checkmarks x value)</b>				
<b>Excess Thyroid Total /30</b>				
<b>Grand Total /78</b>				

**0-10%** - Overall good balance. Sound nutrition and healthy habits will maintain good balance.

**11-20%** - In need of a tune up to restore balance before serious illness sets in. Diet and lifestyle improvements should shift to normal.

**21-35%** - Things are out of balance and need attention.

**36-50%** - Very compromised and likely to significantly affect your state of health, well-being and energy level.

**51-100%** - Severely compromised and requires immediate attention.



## Thyroid Lab Testing

Order through Your Lab Work at <https://RunMyLabs.com> or Direct Labs at <http://www.directlabs.com/DrRitamarie> or have clients order through their Primary Care Physician (PCP)

### Important thyroid lab markers to order and indications for ordering

- **TSH:** Produced by pituitary to stimulate the thyroid to produce thyroid hormones. A high TSH level indicates that the thyroid gland is failing because of a problem that is directly affecting the thyroid (primary hypothyroidism). When TSH is low, it usually indicates that the person has an overactive thyroid that is producing too much thyroid hormone or an abnormality in the pituitary gland, which prevents it from making enough TSH to stimulate the thyroid. Always include in thyroid screening.
- **Total T-4 (Thyroxine):** Measures the total T4 made by your thyroid. T4 is the storage form of thyroid hormone and is the main hormone produced by the thyroid. It's meant to be converted to T3, the more active form. It's always a good idea to run this test to determine the thyroid gland's overall ability to produce.
- **Total T-3 (Triiodothyronine):** The total T3 produced by the thyroid. Only 20% of gland output is T3. This is important when looking at thyroid conversions.
- **Free T-4:** An intermediate that is good to see for a complete picture, but not as important as Total T4 and free T3 except in cases of thyroid conversion issues. Free T-4 is a good idea to investigate suspicion of binding globulin problems, or when conventional test results seem inconsistent with clinical observations.
- **Free T-3:** The primary thyroid hormone component that stimulates metabolic rate at the cellular level. It's important to run in all conditions related to low thyroid function or to monitor the effects of medication.
- **Thyroid Antibodies:** These indicate whether or not your body is producing antibodies that are attacking your thyroid gland. Anyone suffering from low energy, difficulty maintaining proper weight, or any other unexplained health challenges should order these. Often overlooked by conventional medical practitioners, these are extremely important to measure.
- **Thyroid Antibodies (continued):**
  - **Thyroid Peroxidase Antibodies:** Measures antibodies that attack the thyroid peroxidase enzyme, which assists the chemical reaction that adds iodine to a protein called thyroglobulin, a critical step in generating thyroid hormones.
  - **Antithyroglobulin Antibodies:** Measures antibodies that attack a protein called thyroglobulin, which is used to make thyroid hormones T3 and T4. Autoantibodies to thyroglobulin can lead to the destruction of the thyroid gland.



- **Reverse T3:** Under normal circumstances most of the free T4 is converted to free T3; about 20% is converted to Reverse T3. Certain conditions, including being under a lot of stress for a long time or adrenal fatigue, cause more T4 to convert to reverse T3, resulting in decreased metabolic rate and low thyroid symptoms as a result of low free T3. Order this test if free T3 is low or free T4 is high, or in people who have been highly stressed or are suffering from adrenal fatigue, or have a long history of thyroid problems that are not responding to interventions.

### Thyroid Test Panels

The following special thyroid panels have been set up with Direct Labs for ease of ordering and cost savings. To order go to [www.DirectLabs.com/DrRitamarie](http://www.DirectLabs.com/DrRitamarie) Click on order tests, choose **Thyroid** from the drop down menu, then choose the tests or test panels from list to order.

- **Dr. Ritamarie's Basic plus Thyroid:** Includes all the thyroid tests above except Reverse T3, plus the Comprehensive wellness profile and Vitamin D
- **DrRitamarie's Complete Thyroid:** Contains all the thyroid tests above except Reverse T3
- **DrRitamarie's Complete Thyroid plus Vitamin D:** Contains all the thyroid tests above except Reverse T3 plus Vitamin D
- **Complete Thyroid Panel:** Includes all above tests EXCEPT the antibodies
- **Thyroid Antibodies Panel:** Contains both TPO and antithyroglobulin antibodies

\* **Vitamin D** levels need to be closely monitored in thyroid assessment.

**\*\*CWP** is the comprehensive wellness panel and contains tests for most body systems including liver, kidney, cholesterol panel, anemia markers, immune system markers and more. It's a good general screen and can be ordered with the thyroid panel if you haven't done one in a while.



## Thyroid: Other Patterns of Dysfunction

### Wilson's Temperature Syndrome

- Deficient peripheral conversion of T4 to T3 (low free T3 – usually but not always)
- Excessive peripheral conversion of T4 to reverse T3. Elevated rT3 – usually but not always rT3 is the inactive form of T3. Normally 20-40% of T4 is converted to rT3. In times of stress and nutrient deficiencies, this number can go up to 60%
- Low body temperature (below 98.6 °)
- Low BMR
- Symptoms of low thyroid function
- Normal TSH (usually)

#### Usual Treatment of Wilson's Temperature Syndrome:

- Eliminating as much physical and emotional stress as possible
- Moderate exercise for 12-15 minutes, 2 – 4 times/day (especially about 30 minutes after meals)
- Low carbohydrate meals
- Avoiding wheat and refined sugar products.
- Getting plenty of rest
- T3 only, USUALLY sustained release
- Increasing doses to a maximum, then taper back down
- Once ideal temperature is reached, stay at that dose for several weeks, then taper down.
  - Usually more than one "cycle" of treatment is needed to fully correct the problem.
  - Within 3 months, about 70% of patients successfully finish the treatment.
  - 90% finish within six months.
  - One year is the maximum treatment time for the remaining 10%.
  - About 20% of patients feel worse before they felt better.
  - 90% of patients are cured of most of their complaints. At times certain symptoms may persist after the treatment.
  - People typically feel the best when their temperatures are 98.6 and they are off the medicine. Only some people feel extremely well while at 98.6 and on the medicine.
- Up to 20% of patients may find the regimen too demanding and give up before completing the treatment

<http://www.wilsonssyndrome.com/>



## **Dr. Kharrazian's 22 Patterns of Hypothyroid**

### **1-5 hallmarked by low TSH (<1.8) with low to normal T4**

1. Hypothalamus paraventricular defect- low serotonin
2. Hypothalamus paraventricular defect- low dopamine
3. Hypothalamus paraventricular defect- promoted by cytokines
4. Hypothalamus paraventricular defect- promoted by elevated prolactin
5. Pituitary suppression from cortisol
6. Autoimmune related to thyroid peroxidase antibodies (TPO)
7. Autoimmune related to thyroglobulin antibodies
8. Down-regulated TPO due to progesterone deficiency
9. Down-regulated TPO due to a deficiency of cofactors
10. Depressed T4 to T3 conversion due to deficiency of cofactors (5-diodinase activity)
11. Depressed T4 to T3 conversion due to gut dysbiosis
12. Depressed T4 to T3 conversion due to elevated cytokines
13. Depressed T4 to T3 conversion due to elevated cortisol
14. Depressed T4 to T3 conversion due to peripheral serotonin deficiency
15. Depressed T4 to T3 conversion due to peripheral dopamine deficiency
16. Increased T4 to T3 conversion due to elevated testosterone
17. Increased thyroid binding globulin activity leading to decreased free T3 and T4 due to elevated estrogen
18. Depressed thyroid binding globulin activity leading to increased free T3 and T4 and subsequent thyroid resistance due to insulin resistance, elevated estrogen or elevated testosterone
19. Thyroid receptor resistance due to elevation of cytokines
20. Thyroid receptor resistance due to elevation of cortisol
21. Thyroid receptor resistance due to deficiency of Vitamin A
22. Thyroid receptor resistance due to elevation of homocysteine



## Thyroid Assessment - Temperature Monitoring

Take temperature under tongue using either a digital or mercury-free metal thermometer. The non-digital ones tend to be a little bit more accurate but are harder to find. For daily average, exclude the first morning temperature. Take temperature upon awakening and again 3 hours later for a total of 3 times throughout the day, as close as possible to 3 hours apart.

<b>Name:</b>			
<b>Day 1</b>		<b>Time</b>	<b>Temperature</b>
	Awakening		
	Time 1 (3 hours later)		
	Time 2 (3hours later)		
	Time 3 (3 hours later)		
<b>Average Daily Temperature (Times 1-3, excluding temperature upon awakening)</b>			
<b>Day 2</b>		<b>Time</b>	<b>Temperature</b>
	Awakening		
	Time 1 (3 hours later)		
	Time 2 (3 hours later)		
	Time 3 (3 hours later)		
<b>Average Daily Temperature (Times 1-3, excluding temperature upon awakening)</b>			
<b>Day 3</b>		<b>Time</b>	<b>Temperature</b>
	Awakening		
	Time 1 (3 hours later)		
	Time 2 (3 hours later)		
	Time 3 (3 hours later)		
<b>Average Daily Temperature (Times 1-3, excluding temperature upon awakening)</b>			
<b>Average Temperature Days 1-3</b>			



## Thyroid Home Assessments

### Basal Body Temperature Test

Your body temperature reflects your metabolism, which is largely determined by the hormones secreted by your thyroid and to a lesser degree your adrenal glands.

There is considerable evidence that the currently available tests for the diagnosis of hypothyroidism (low thyroid function) are less accurate than desired accuracy. The function of your thyroid gland can be observed by measuring your body temperature. All that is needed are a thermometer and the diligence to record temperatures at regular intervals for 7 days.

#### Procedure

1. Ideally, use a glass, mercury-filled thermometer that has been shaken down below 96.0°F the night before and put beside the bed. A good-quality digital thermometer will suffice if the old fashioned kind isn't available. Ear and tape thermometers are too inconsistent and inaccurate for this purpose. A special basal body thermometer is best. They are sold in drug stores in kits for fertility assessment.
2. Upon awakening, place the bulb part of the thermometer into the deepest part of your armpit (for 10 minutes) and record a temperature each morning for two days. Do this before you have gotten out of bed, had any physical activity, or had anything to eat or drink. Record the temperature to 1/10 of a degree as the **Arising Temperature** in the **Under Arm Reading** row of the *Temperature Tracking Chart*.
3. Next, shake the thermometer down and immediately take an oral temperature for 3 minutes. Record this temperature as the **Arising Temperature** in the **Mouth Reading** row. Repeat either the oral or armpit temperature first thing in the morning for 7 days.
4. Repeat the oral temperature at three-hour intervals for 7 days.
5. Record the time when meals are consumed and what foods are eaten.
6. Note any activity or exercise time as movement or exertion can have an effect on your core temperature.

Note for menstruating women: Take temperatures starting with day 3 of your cycle to avoid confusion with normal monthly temperature cycling.



Temperature Tracking Chart					
Name				Age	
Date			*Date of LMP		
	Arising Temp.	3 Hours Temp.	6 Hours Temp.	9 Hours Temp.	
Under Arm Reading					
Mouth Reading					
	Meal 1	Meal 2	Meal 3	Snacks (if any)	
Meal Time					
Foods					
Exercise / Activity Time(s)					

Date			*Date of LMP		
	Arising Temp.	3 Hours Temp.	6 Hours Temp.	9 Hours Temp.	
Under Arm Reading					
Mouth Reading					
	Meal 1	Meal 2	Meal 3	Snacks (if any)	
Meal Time					
Foods					
Exercise / Activity Time(s)					



## Iodine Patch Test (Controversial)

Iodine is a very common deficiency because our soils are depleted and the only reliable source of iodine is the sea. Since most people don't eat sea vegetables on a regular basis, it's difficult to consume enough iodine unless you use iodized salt. Another factor that increases your need for iodine is the presence of radioactive iodine in the environment via the widespread consumption of the iodine antagonists:

- fluoride and chlorine (added to public water supplies)
- bromine (used as a dough conditioner in most commercially available bread)

These chemicals will quickly deplete iodine from the body and interfere with iodine metabolism leading to a number of problems including hypothyroidism, lowered vitality, cognitive dysfunction, lowered immunity, and obesity. Iodine is essential for the proper synthesis of thyroid hormone, so it is very important to maintain healthy iodine levels.

The *Iodine Patch Test* is a test that's used by many functional medicine doctors to assess for iodine deficiency. It's an easy test that can be performed at home. Although it's somewhat controversial as a valid indicator for iodine deficiency, there appear to be as many opponents as proponents. One of the reasons it's controversial is that there are many factors that can affect the appearance of the iodine patch, including evaporation, perspiration, showering or getting the arm wet from doing dishes or hand washing and skin pigmentation.

The theory behind the test is that the iodine will take about 24 hours to fully penetrate the skin if the body is **sufficient** in iodine.

**If deficient**, the iodine will be absorbed more quickly. I've observed people who had their "iodine patch" disappear within 8-12 hours, then supplement with topical iodine such that as soon as it disappeared, they would reapply.

With repeated application, the patch began to last longer until after a couple of weeks, the iodine patch lasted over 24 hours. By this time, the patient was feeling more energetic and had fewer low thyroid indicators.

### Materials

A bottle of liquid iodine

### Procedure

1. Paint the skin of the inside of the forearm or the abdomen with a 2-inch square patch of 2% iodine solution, being careful not to get the solution on clothes as it will stain.
2. Note the time the iodine is applied to the skin on the *Iodine Patch Test Tracking Chart*.
3. Let the iodine patch air dry before putting on clothes.
4. Avoid soaking in hot tubs or baths for 24 hours as the chlorine or bromine in the water will cause the iodine to patch to fade.




Note the time it takes for the patch to disappear on the tracking chart.

<b>Iodine Patch Test Result Interpretation</b>		
Overall, the faster the body draws in the iodine, the greater the iodine need is likely to be.		
<b>Patch Disappears</b>	<b>Iodine Deficiency</b>	<b>Action</b>
< 12 hours	Severe	Supplement with topical iodine. Reapply as soon as it disappears. Alternatively, take Ioderal (available on Amazon) or other oral iodine supplement: 12.5 mg three times a day. Repeat test in 2 weeks and adjust dose.
12 - 18 hours	Moderate	As per above except oral dose 12.5 mg twice a day.
18 - 24 hours	Mild	As per above except oral dose 12.5 mg once a day.
> 24 hours	None	Nothing. Continue to eat and supplement as before to continue to support Iodine sufficiency.

Iodine Patch Test Tracking Chart			
Name			
Date	Time Iodine Applied	Time Color Disappears	# Hours to Completely Disappear



## Adrenal Assessment: Physical Symptoms

<b>Name:</b>		<b>Date:</b>	
With the help of a friend or family member, perform the blood pressure and adrenal stress eye examination procedures.			
<b>Blood Pressure</b>			
Seated, legs uncrossed		If difference between left and right is > 10, top or bottom, there may be a blockage.	
Left arm:			
Right arm:			
<b>Lying, face up</b>			
<b>Standing</b>		Systolic blood pressure (top number) should increase by 10 when you stand up. If it does not or if it decreases, it's suggestive of adrenal stress. The more time it takes to restore the blood pressure to what it should be is suggestive of the degree of adrenal distress. Measure once a minute for up to 5 minutes. Stop when pressure increases by 10 points.	
Immediately upon arising:			
1m:			
2m:			
3m:			
4m:			
5m:			
<b>Adrenal Stress Eye Examination</b>			
		<p><b>Pupil Constriction:</b> In a darkened room, shine a small penlight in one eye. Pupil should constrict. Continue to shine light and count how many seconds pupil stays constricted. Stop at 20 seconds or upon dilation of pupil.</p>	
<p>If a pupil does not contract when a bright light shines on to it, this indicates dulled nerve reflexes, weak adrenal glands, or an overstimulated sympathetic nervous system, often from fear as a hidden, chronic condition. Adrenal weakness is indicated if pupil does not remain constricted for 10 seconds or longer. Adrenal stress is indicated if the pupils begin to expand and contract repeatedly when exposed to bright light for 30 seconds.</p>			
<b>Pupil Constriction - seconds held:</b>			



<b>Adrenal Assessment</b>				
Circle the choice under each score (0, 1, 2, 3) that best describes your test results and physical symptoms. Then add your column scores to calculate your overall adrenal health score.				
<b>Adrenal Tests and Symptoms</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
1. Blood pressure upon standing	Incr: 10	Same	Decr <= 10	Decr >10
2. Pupil constriction with bright light	20 sec	10-20 sec	<10 Sec	<5 sec
3. Rib margin tenderness	Absent	Mild	Moderate	Severe
4. Brown discoloration below eyelids	Absent	Mild	Moderate	Severe
5. Black discoloration below eyelids	Absent	Mild	Moderate	Severe
6. Dark gray or reddish back of tongue	Absent	Mild	Moderate	Severe
7. Ulcerations or canker sores	Absent	Mild	Moderate	Severe
8. Bad breath	Absent	Mild	Moderate	Severe
9. Rough, red, flaky cuticles	Absent	Mild	Moderate	Severe
10. Tongue – inflammation around perimeter	Absent			Present
11. Tongue – crack down the middle	Absent			Present
<b>Total Adrenal (total possible is 33)</b>				
<b>% Adrenal Score (“<u>your score</u>”/33*100)</b>				



## Adrenal Fatigue Traits

Items marked (\*) are most important for nourishing adrenal glands for most people.

Nutrients	Dosages and Instructions	Alarm Stage	Fatigue Stage 1	Fatigue Stage 2	Fatigue Stage 3
*Vitamin C	1000 mg 3 times per day or to bowel tolerance	✓	✓	✓	✓
*Vitamin B5 (pantothenic acid)	500 mg 3 times per day	✓	✓	✓	✓
*B-Complex	Preferably liquid and activated forms; <i>Premier Research Labs</i> has liquid; <i>Pure Encapsulations</i> has a nice capsule	✓	✓	✓	✓
*Zinc	30 mg - 60 mg per day, preferably liquid	✓	✓	✓	✓
Vitamin D plus Vitamin K2	Lab test to determine if you need it; ideal range on lab is 80 ng/ml - 100 ng/ml	✓	✓	✓	✓
Multi-Mineral Drops	See CAFE Part 4 for details on minerals to determine which one you may need; <i>Trace Minerals Research</i> and <i>Body Bio</i> have high quality liquid minerals	✓	✓	✓	✓
Essential Fats	EPA and DHA	✓	✓	✓	✓
Licorice Root	5 - 10 drops prior to low cortisol readings; do not take later than 4:00 pm <b>Avoid if you have high blood pressure and monitor blood pressure to avoid overdose; an alternative for some is Bezwecken Isocort (not vegan)</b>		1-2 hours before times of low cortisol, if any	1-2 hours before times of low cortisol, if any	✓
Phosphorylated Serine	1 or 2 caps, 2 - 3 hours before high cortisol reading	✓	2-3 hours before times of high cortisol, if any	2-3 hours before times of high cortisol, if any	



Items marked (\*) are most important for nourishing adrenal glands for most people.

Nutrients	Dosages and Instructions	Alarm Stage	Fatigue Stage 1	Fatigue Stage 2	Fatigue Stage 3
Adaptogens	See document “ <i>Adrenal Herbal Formulas and Supplements</i> ” document for details on formulas and elixirs	✓	✓	✓	✓



# PLAN

## Thyroid Balancing Step-by-Step

Balancing your thyroid is not just a matter of taking a few herbs and supplements. There's a lot more to it. I've identified 7 key steps to balance.

### 7 Key Steps to Thyroid Balance at a Glance:

- ☐ **Step #1:** Self-Assessments
- ☐ **Step #2:** Foundational Thyroid Support
- ☐ **Step #3:** Assume and Address Thyroid Resistance
- ☐ **Step #4:** Lab Analysis
- ☐ **Step #5:** Pattern-Specific Thyroid Support
- ☐ **Step #6:** Assess Your Progress
- ☐ **Step #7:** Tweak Your Program for Optimal Success

### Step #1: Self-Assessments

You can perform these assessments at home to give you a general idea about how well your thyroid is functioning.

- ☐ **Thyroid Assessment Questionnaire:** Determines your likelihood of having thyroid issues, based on your symptoms and physical signs.
- ☐ **Basal Body Temperature:** This is your temperature taken first thing in the morning, while still in bed before any activity. Shake down the thermometer the night before. When you wake, lay quietly while taking your temperature. This process was popularized by Broda Barnes, MD in his book, *Hypothyroidism, the Unsuspecting Illness*.
- ☐ **Average Body Temperature:** Take your temperature approximately every three hours while up and doing your normal activities. Start at least 3 hours after your basal temperature reading and measure at least an hour after eating, as food can raise your temperature. This process was popularized by Denis Wilson, MD, as part of his *Wilson's Temperature Syndrome Protocol*.



## Step #2: Foundational Thyroid Support

This is a big step. In order for your thyroid to come into balance, you need to have a number of other glands and body systems working at peak performance. You also need to avoid toxic exposures and get your nutrition in order. Here are the areas that need to be addressed as part of a thyroid balancing program. I've included a summary of each area.

### Foundational Nutrition Support at a Glance

- |   |   |
|---|---|
| <input type="checkbox"/> Avoid toxic exposures and optimize detoxification pathways | <input type="checkbox"/> Do gentle exercise   |
| <input type="checkbox"/> Decrease/manage stress                                     | <input type="checkbox"/> Eat a whole-foods, antioxidant-rich diet and drink thyroid balancing elixirs |
| <input type="checkbox"/> Balance blood sugar  | <input type="checkbox"/> Add key nutrients  |
| <input type="checkbox"/> Optimize digestion   | <input type="checkbox"/> Add key herbs  |
| <input type="checkbox"/> Support adrenals   | <input type="checkbox"/> Enjoy fresh air and sunshine   |
| <input type="checkbox"/> Get quality sleep  | <input type="checkbox"/> Have fun   |

### Foundational Nutrition Support Details

**Avoid toxic exposures and optimize detoxification pathways:** The thyroid is very sensitive to chemicals, radiation, medications, and environmental toxins. **Minimize or avoid the following** as much as possible and improve detoxification by optimizing channels of elimination – sweat, poop, bile (liver), and urine (kidney):

- |  |  |
|--|--|
| <input type="checkbox"/> Tap water                     | <input type="checkbox"/> Bisphenol A (BPA)   |
| <input type="checkbox"/> Bromine, fluoride, chlorine   | <input type="checkbox"/> Triclosan           |
| <input type="checkbox"/> Pesticides and GMOs           | <input type="checkbox"/> Radioactive iodine  |
| <input type="checkbox"/> Preservatives                 | <input type="checkbox"/> X-rays and CT scans |
| <input type="checkbox"/> Artificial colors and flavors | <input type="checkbox"/> Medications         |
| <input type="checkbox"/> Irradiated food               | <input type="checkbox"/> Smoking             |

**Decrease/manage stress:** Stress causes cortisol to be released which damages thyroid function in many ways. Here are a few actions you can take to minimize the negative impact of stress on your thyroid:

- |  |   |
|--|---|
| <input type="checkbox"/> Slow down                         | <input type="checkbox"/> Counselling  |
| <input type="checkbox"/> Breathing and appreciation breaks | <input type="checkbox"/> Forgiveness  |
| <input type="checkbox"/> Get support                       | <input type="checkbox"/> Clean-up diet and environment – environmental and dietary stressors contribute to the inflammatory stress chemicals that impede thyroid function |
| <input type="checkbox"/> Meditation                        |   |
| <input type="checkbox"/> Yoga                              |   |
| <input type="checkbox"/> HeartMath                         |   |
| <input type="checkbox"/> Tapping                           |   |

**Optimize digestion:** Your gut can be the source of toxic chemicals, antigens, and microbes escaping from the gastrointestinal tract into the blood stream. What's called "leaky gut" can contribute to inflammation and is a contributing factor in most autoimmune conditions.



When it comes to thyroid, the way gut health affects thyroid is multifactorial. It contributes to increased toxic load which can damage delicate thyroid tissue. It can also cause an increase in inflammatory chemicals called cytokines which impair thyroid function. Here's an overview of steps for balancing digestion:

- ☐ Eat in a calm relaxed state. Do deep breathing and appreciation at the start and throughout your meals.
- ☐ Start the day with a cleansing beverage of warm or room temperature water, lemon, cayenne, and mint oil to jumpstart your digestion after a long night's sleep.
- ☐ Drink a glass of lukewarm water about a half hour before each meal to ready your system for food and curb your appetite.
- ☐ Take bitters (an herbal digestive support) or chew on bitter greens for a few minutes, starting 5 -15 minutes before each meal to stimulate stomach acid, bile, and enzyme secretion.
- ☐ Chew your food thoroughly.
- ☐ Eat slowly and focus on the meal. Don't multitask or watch the evening news. That's a surefire prescription for malabsorption.
- ☐ Take digestive enzymes with all cooked and complex raw meals that include higher fat than simply a salad or a smoothie.
- ☐ Practice food combining or food sequencing to optimize digestion of foods that require very different digestive environment.
- ☐ Consider taking liver and gallbladder supportive herbs, either as foods added to your meals or as tinctures, powders, or capsules. If you've had gallbladder surgery, consider adding bile salts to your regime.
- ☐ Heal inflammation and leaky gut. Take soothing demulcent and anti-inflammatory herbs and nutrients to heal the gut lining, along with eliminating the causes of the "leaky" gut in the first place. Causes include allergens (especially gluten and dairy), pathogens (including candida, parasites, and unfriendly bacteria), and processed foods and chemicals that damage the lining.
- ☐ Eat probiotic-rich foods or take a supplement of probiotics. These are the healthy bacteria that live in your intestines (or should!) and help you absorb food and make nutrients.
- ☐ Eliminate pathogens and allergens. The main culprits are often gluten and casein (milk protein). It's possible that you will need one or more rounds of therapeutic herbs to get rid of the undesirables.
- ☐ Consider colon cleansing to remove toxic debris. Cleansing can include enemas done at home or a colonic with a licensed colon hydrotherapist.

**Balance blood sugar:** Fluctuations in insulin and blood sugar along with insulin resistance can impede thyroid function and vice-versa. Here are a few steps for balancing blood sugar. Some, you will see, overlap with the steps in thyroid balancing like exercise, sleep, and stress management.

- ☐ Avoid refined foods.
- ☐ Eat an abundance of antioxidant-rich, whole, low-glycemic foods.
- ☐ Learn to measure and chart your blood sugar.



- ☐ Take nutrients to improve insulin sensitivity, like chromium, DHA, magnesium, alpha lipoic acid and others.
- ☐ Practice meal spacing of at least 4 hours, 6 is more ideal.
- ☐ Avoid eating within 3 hours of going to bed.
- ☐ Sleep 8 hours or more a night.
- ☐ Manage stress.
- ☐ Exercise.

**Support adrenals:** Your adrenal glands are responsible for getting you out of danger. There is a cascade of physiologic responses that occur in the face of stress, and many of these can impede thyroid function. Below is an overview of steps required to balance adrenal function.

- ☐ Do not restrict salt. Adrenal distress can trigger excess urination and loss of sodium.
- ☐ Avoid foods 3 hours before bedtime.
- ☐ Start your day with green protein: low carb, high fiber, moderate protein and fat breakfast with omega-3 fats.
- ☐ Do not allow yourself to become overly hungry.
- ☐ Follow a strict gluten-free diet.
- ☐ Eliminate caffeine.
- ☐ Eliminate alcohol.
- ☐ Eat for blood sugar balance – say no to refined foods.

**Get quality sleep:** Sleep is critical for thyroid healing. Consistently getting less than adequate sleep leads to adrenal burnout and blood sugar imbalances. Adrenal overstimulation leads to adrenal fatigue and weakens the thyroid through what's known as the HPA axis – the hypothalamus-pituitary-adrenal axis. This affects the ability of the pituitary to produce adequate TSH for thyroid stimulation. Insulin resistance and insulin spikes, common with blood sugar imbalance, are more common with deficient sleep. Insulin resistance causes thyroid impairment. Follow the guidelines to optimize your sleep:

- ☐ Avoid intense mental activity within 2 hours of bedtime.
- ☐ Seek out outdoor activity early in the day (before 1:00 pm) to enhance melatonin.
- ☐ Turn off bright lights as soon as possible after sunset.
- ☐ Take a neutral temperature bath (not hot) before bed; a 15 – 60-minute bath can help insomnia (add lavender oil).
- ☐ Take sleep herbs 30 – 60 minutes before bed, then again at bedtime.
- ☐ Get horizontal for 30 minutes to an hour before sleep.
- ☐ Practice meditation, visualization, and “mini-vacations”.

**Do gentle exercise:**

- ☐ Walking
- ☐ T-Tapp
- ☐ Bursts
- ☐ Yoga
- ☐ Stretching
- ☐ Weights
- ☐ Rebounding



**Eat a whole-foods, antioxidant-rich diet and drink thyroid balancing elixirs:**

- ☐ Eat a gluten-free, dairy-free, allergen-free diet.
- ☐ Include an abundance of green leafy vegetables.
- ☐ Incorporate sea vegetables: kelp, bladderwrack, dulse, nori, and more.
- ☐ Include garlic and onions.
- ☐ Choose low-glycemic fruits.
- ☐ Include coconut.
- ☐ Choose omega-3 rich foods: hemp seeds, chia seeds, flax seeds, walnuts, algae, and deep ocean fish.
- ☐ Include probiotic- and prebiotic-rich foods: kefir, rejuvelac, sauerkraut, coconut yogurt, cashew yogurt, seed yogurt, Jerusalem artichoke, and chicory root (improves T3 production).
- ☐ Eliminate dietary stressors and refined foods: caffeine, alcohol, sugar, gluten, dairy, and anything to which you are allergic.
- ☐ Drink thyroid balancing elixirs every day or at least every other day.

**Add key nutrients:** Include any nutrients that you've determined are low or are important for you due to deficiencies or because they support the thyroid well. The following nutrients are important for thyroid function. **It is not intended that you take all of them.** Use the ones you've determined are most beneficial *for you*.

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Vitamin A         | <input type="checkbox"/> Iodine (controversial)               | <input type="checkbox"/> Glutathione: liposomal, IV, cream, precursors |
| <input type="checkbox"/> Vitamin B-complex | <input type="checkbox"/> Magnesium                            | <input type="checkbox"/> Superoxide Dismutase (SOD)                    |
| <input type="checkbox"/> Vitamin C         | <input type="checkbox"/> Iron                                 | <input type="checkbox"/> CoQ10   |
| <input type="checkbox"/> Vitamin D         | <input type="checkbox"/> Essential fatty acids                |  |
| <input type="checkbox"/> Vitamin E         | <input type="checkbox"/> Amino acids: phenylalanine, arginine |  |
| <input type="checkbox"/> Selenium          |   |  |
| <input type="checkbox"/> Zinc              |   |  |

**Add key herbs:** Experiment with and add herbs (start with one or two) to your thyroid balancing elixirs (see the *TRT Recipe Collection*). Vary the selected herbs from day to day. **There are a lot of possible herbs and not all of them are going to be necessary or even right for you.** Below are some thyroid supportive herbs and spices:

- |                                       |                                       |  |
|---------------------------------------|---------------------------------------|--|
| <input type="checkbox"/> Ashwagandha  | <input type="checkbox"/> Astragalus   | <input type="checkbox"/> Cordyceps                 |
| <input type="checkbox"/> Guggulu      | <input type="checkbox"/> White willow | <input type="checkbox"/> Reishi                    |
| <input type="checkbox"/> He shou wu   | <input type="checkbox"/> Guduchi      | <input type="checkbox"/> Coleus                    |
| <input type="checkbox"/> Eleuthero    | <input type="checkbox"/> Rhodiola     | <input type="checkbox"/> Chaga                     |
| <input type="checkbox"/> Licorice     | <input type="checkbox"/> Skullcap     | <input type="checkbox"/> Lemon balm (hyperthyroid) |
| <input type="checkbox"/> Prickly ash  | <input type="checkbox"/> Pine bark    | <input type="checkbox"/> Saw palmetto berry        |
| <input type="checkbox"/> Black cohosh | <input type="checkbox"/> Shilajit     |  |
| <input type="checkbox"/> Gotu kola    | <input type="checkbox"/> Rehmannia    |  |



### **Kitchen herbs and spices to help with your thyroid:**

- ❑ **Black pepper:** Used for hypothyroidism. Black pepper is a thyroid-boosting agent, as well as an energy booster. It is warming and will help restore normal body temperature. It includes piperine, which reduces fat lipids in the blood and interferes with the activity that helps new fat cells form, the bane of hypothyroidism.
- ❑ **Cayenne pepper:** Used for hypothyroidism. Circulatory stimulant. Helps keep blood moving, which is necessary when you have low energy and fatigue. This will be helpful if you always feel cold or if you have low blood pressure. These thermogenic properties will help boost metabolism and regulate cravings.
- ❑ **Cilantro:** Used for hypothyroidism. Cilantro changes the electric charge on intracellular deposits of heavy metals to a neutral state, allowing them to be flushed from the body. Mercury especially is toxic for the thyroid gland, so cilantro can protect your thyroid gland from these metals. Heavy metals are another cause for hormone imbalances. Cilantro is also an excellent antioxidant.
- ❑ **Cinnamon:** Used for hyperthyroidism and autoimmune thyroiditis because it is anti-inflammatory. Controls blood sugar, which also affects hormonal imbalance. Improves energy levels. Raises metabolism and warms you up.
- ❑ **Garlic:** Used for hyperthyroidism and autoimmune thyroiditis. Favors a T2 immune response, which might make it better for people with Hashimoto's thyroiditis. Inhibits pro-inflammatory cytokines. Garlic is anti-bacterial, anti-fungal, anti-viral, anti-parasitic, antioxidant, and anti-microbial. Also contains selenium, which will improve thyroid function.
- ❑ **Ginger:** Relief for hypothyroidism. Circulatory stimulant. Helps keep blood moving, necessary when a person has low energy and fatigue. Ginger contains magnesium, which helps with muscle relaxing and prevents an irregular heartbeat. It also contains potassium, which helps regulate body fluids. Ginger is a digestive stimulant, which can also stimulate thyroid function. It is also anti-inflammatory.
- ❑ **Fennel:** Used for hypothyroidism. High in iodine, so it helps to produce thyroid hormone. Boosts the metabolism to help stimulate the thyroid. Fennel also contains omega-3 fatty acids, which will help to keep your thyroid functioning, and also boosts the immune system. Fennel also reduces inflammation.
- ❑ **Lemon balm:** Helpful for hyperthyroidism. Calms the nervous system, promotes sleep, strengthens the immune system, aids in digestion, and balances thyroid hormone levels. Lemon balm slows pituitary function and lowers TSH levels, which mildly reduces thyroid levels. However, it also raises thyroid levels in hypothyroidism because it strengthens the thyroid function.
- ❑ **Parsley:** Used in hypothyroidism. Parsley enhances the immune system, partly because it is high in vitamin C. Parsley will help when you combat the symptoms of weakness and fatigue due to your thyroid health. Parsley is also rich in iodine, the thyroid hormone.
- ❑ **Turmeric:** Useful for hypothyroidism. Turmeric soothes the thyroid, along with being an antioxidant. So, turmeric is anti-inflammatory, anti-microbial, along with being an antioxidant. Turmeric can also protect organs damaged by thyroid dysfunction. Turmeric can also help detox heavy metals from your cells and organs.



**Enjoy fresh air and sunshine:** Vitamin D is vital to your thyroid health, as is avoidance of toxins in the air, food, and water. Indoor air recycles pollutants. Get outdoors and allow your thyroid to benefit from the fresh air and the extra dose of Vitamin D from the sunshine.

**Have fun:** Enjoyment is the cornerstone to achieving vibrant health, and it's a tenant that is frequently overlooked. The positive emotional experience of doing what you love shifts your hormones; your neurotransmitters; and the enzymes in your digestive tract, immune system, and blood vessels. As a result, you feel more grounded, calm, relaxed and happy. Your immune system is enhanced, which is especially important for your thyroid if you have Hashimoto's. Here are a few ways to incorporate fun into your day-to-day life:

- ☐ Instead of collapsing in front of the TV, reading the newspaper, or reaching for food when you feel stressed, try engaging in a loved activity – one that brings joy and contentment on a deep level.
- ☐ Make time for fun each day, or at least several times per week. If you want to enjoy the same youthful vitality as a child, then fun should be second nature!
- ☐ Incorporate fun into your day-to-day health practices — food preparation, exercise, de-stress activities — there are fun ways to accomplish all of your daily health practices. Here are tips and tricks some of my clients have shared for making the "have to do" list a fun game:
  - ☐ Buy some fun stickers. Every time you stay focused on tasks at work, drink a smoothie, or engage in any other of the new habits you are trying to adopt, give yourself a sticker.
  - ☐ Go to the party store and get yourself a fun party favor you can blow into or play with to celebrate successes or distract yourself from boredom.
  - ☐ Take breaks every hour and read a joke or watch a quick and funny video (YouTube has lots).
  - ☐ Do something periodically in your day that YOU consider fun and silly!



### **Step #3: Assume and Address Thyroid Resistance**

Receptor resistance to thyroid hormone is a very common and frequently overlooked cause of thyroid symptoms. Many people have perfectly normal lab tests yet continue to have symptoms typical of low thyroid function. Most doctors dismiss them as thyroid patients and simply focus on giving medications for the individual symptoms – i.e. antidepressants, laxatives, weight loss drugs, skin creams, and the like.

Many people have thyroid resistance along with a thyroid dysfunction that reveals itself on lab analysis. The sad truth in these situations is that they are put on thyroid medication with little or no improvement in their symptoms even after many years of use.

I put the step of assessing and addressing thyroid resistance even before running labs and doing pattern specific interventions because it's such a common occurrence. The causes are:

- ☐ Stress, leading to high cortisol, which results in the production of inflammatory chemicals called cytokines that damage the receptors and decrease the conversion of free T3 from T4. Instead, T4 is converted into reverse T3 which binds to the receptors and prevents the metabolism boosting action of T3. Even if the T3 levels look okay in the blood, high reverse T3 and receptor resistance result in all the classic signs of thyroid disease.
- ☐ High homocysteine, a toxic by-product of low B vitamin levels -- in particular, vitamins B12, B6, and folate.
- ☐ Vitamin A deficiency can result in thyroid resistance, since binding of T3 to the receptor is dependent on retinoic acid, a form of Vitamin A.
- ☐ Zinc deficiency can play a role in thyroid resistance since zinc is involved in the binding of T3 to the receptor.
- ☐ Inflammatory chemicals called cytokines and interleukins damage thyroid receptors, which can lead to thyroid resistance.
- ☐ Excess T4 medication taken over time can cause the receptors to “burn out”.
- ☐ Toxins such as PCBs, dioxins, and others inhibit the binding of thyroid hormone to the receptor.
- ☐ Certain medications also inhibit the binding of thyroid hormone to the receptor.

If you suspect you have thyroid resistance, there are a number of ways to evaluate and take steps to reverse it:

- ☐ Assess your adrenals for elevated cortisol or stage 3 adrenal fatigue, which means you've had high levels of cortisol and now your adrenals are depleted. Address by incorporating stress management techniques as described above and supporting your adrenals. Chronic undiagnosed infection can be an underlying cause of high cortisol.
- ☐ If you have high homocysteine, supplement with methyl folate, methyl B12, and vitamin B6 in the form of pyridoxal-5-phosphate (P-5-P). Go slowly with methylated B vitamins, in case you have specific genetics that make it hard for you to process methyl groups.



- ☐ Blood tests for vitamin A are not routinely done, but available should you choose to assess. If you are deficient or have a genetic polymorphism that makes it difficult to convert beta-carotene to vitamin A, it's important to supplement with vitamin A, approximately 5000 IU per day.
- ☐ Zinc deficiency is suggested by a low blood level of an enzyme called alkaline phosphatase. Zinc supplementation in the amount of approximately 30 mg per day should be sufficient. You can also get a bottle of liquid zinc tally and test your level.
- ☐ Markers of inflammation are detected on blood testing. A blood spot fatty acid test can reveal imbalances in fats that can contribute to inflammation. Blood inflammatory markers include hs-CRP, sed rate (ESR), and more advanced testing for interleukins and cytokines. The best approach is to adopt an anti-inflammatory, alkaline diet and be sure to eat sufficient omega-3 fats or supplement them.
- ☐ Toxins can be managed by avoidance and periodic liver detoxification protocols. Periodic green juice or smoothie cleanses can help, along with liver supportive herbs and supplements.
- ☐ If you are on medication, research to determine the effect on your thyroid.

## Step #4: Lab Analysis

It's not mandatory that you use blood testing to begin addressing thyroid rebalancing techniques. All of the above steps can be done without testing, and you will likely see much improvement by incorporating them.

The purpose of the lab testing is to identify particular patterns of thyroid imbalance and address the root causes more effectively. If you live in an area where you are unable to get all the recommended tests done, focus on everything above and you are likely to see dramatic improvement.

These are the labs we recommend testing:

- ☐ TSH
- ☐ Total T4 (thyroxine)
- ☐ Total T3 (triiodothyronine)
- ☐ Free T4
- ☐ Free T3
- ☐ Thyroid Antibodies
  - ☐ Thyroid Peroxidase
  - ☐ Antithyroglobulin
- ☐ Reverse T3
- ☐ Thyroxine-Binding Globulin
- ☐ Vitamin D
- ☐ Iodine Load Test



## Step #5: Pattern-Specific Thyroid Support

After you've done the thyroid self-assessments, taken the thyroid blood tests, and received your results, the next step is to determine what pattern of thyroid imbalance you appear to display, then apply the appropriate diet, herb, lifestyle, and supplement protocol.

While more than 20 patterns of thyroid imbalance have been identified, we'll focus on 7 patterns here. We've already covered the 8<sup>th</sup> pattern, thyroid receptor resistance. This should be adequate for guiding you to create the appropriate protocol. While it's really quite a bit more complicated than this, it's a great starting point and will give you good direction for beginning to correct the problem.

### Common Patterns of Thyroid Imbalance:

- Primary Hypothyroid
- Pituitary and Hypothalamic Hypothyroid
- Autoimmune Thyroiditis
- Thyroid Under Conversion
- Increased Thyroid Binding Globulin
- Thyroid Over Conversion
- Decreased Thyroid Binding Globulin
- Thyroid Receptor Resistance

**Pattern #1: Primary Hypothyroid:** The thyroid itself is unable to make sufficient hormones.

#### ☐ **Causes:**

- ☐ Thyroid damage from radiation and environmental exposures
- ☐ Exposure to fluoride, bromine, and chlorine
- ☐ Medications
- ☐ Infections
- ☐ insufficient nutrients needed to make thyroid hormone

#### ☐ **Most Common Lab Findings:**

- ☐ High TSH
- ☐ Low or normal T4

#### ☐ **Supportive Lifestyle and Nutritional Interventions (food first then supplementation):**

- |  |  |
|--|--|
| <input type="checkbox"/> Iodine – test before supplementing and incorporate sea vegetables regularly       | <input type="checkbox"/> Selenium                |
| <input type="checkbox"/> Tyrosine, an amino acid – be sure you are eating and digesting sufficient protein | <input type="checkbox"/> Copper                  |
| <input type="checkbox"/> Zinc  | <input type="checkbox"/> Magnesium               |
|  | <input type="checkbox"/> Vitamins A, C, D, E     |
|  | <input type="checkbox"/> Antioxidants            |
|  | <input type="checkbox"/> Vitamin B2 – riboflavin |
|  | <input type="checkbox"/> Omega 3:6 balance       |



**Pattern #2: Pituitary / Hypothalamic Hypothyroidism:** There is no problem with the thyroid; the pituitary and hypothalamus have lost their ability to stimulate the thyroid appropriately.

- ☐ **Causes:**
  - ☐ Stress – adrenal fatigue
  - ☐ Postpartum hormone imbalances (post pregnancy and delivery)
  - ☐ Shut down from over medication – long-term supplementation with thyroid hormones causes a negative feedback to the pituitary which stops stimulating the thyroid
  - ☐ Neurotransmitter imbalances – especially dopamine and serotonin
  - ☐ Tumors in the pituitary
- ☐ **Most Common Lab Findings:**
  - ☐ Low or normal TSH
  - ☐ Low T4
- ☐ **Supportive Lifestyle and Nutritional Interventions (food first then supplementation):**
  - ☐ Sage leaf
  - ☐ L-Arginine
  - ☐ Zinc
  - ☐ Magnesium
  - ☐ Manganese
  - ☐ Phosphatidylserine
  - ☐ Antioxidants
  - ☐ B vitamins
  - ☐ Tyrosine, 5-HTP

**Pattern #3: Autoimmune Hypothyroidism:** This type of hypothyroidism produces antibodies to thyroid tissue. This causes the immune system to attack and destroy the thyroid, which over time causes a decline in thyroid hormone levels.

- ☐ **Causes:**

<input type="checkbox"/> Leaky gut	<input type="checkbox"/> Gluten and dairy	<input type="checkbox"/> Trauma	<input type="checkbox"/> Insulin resistance
<input type="checkbox"/> Heavy metals	<input type="checkbox"/> Stress	<input type="checkbox"/> Infection	<input type="checkbox"/> Pregnancy
<input type="checkbox"/> Food allergies			
- ☐ **Most Common Lab Findings:**
  - ☐ High or normal TSH
  - ☐ Low or normal T4
  - ☐ Elevated antibodies – TPO and/or antithyroglobulin



❑ **Supportive Lifestyle and Nutritional Interventions (food first then supplementation):**

- ❑ Balance blood sugar
- ❑ Repair leaky gut
- ❑ Manage/transform stress
- ❑ Support adrenals
- ❑ Heavy metal removal
- ❑ Clean up environment
- ❑ Support nutrient deficiencies
- ❑ Support immune system cells
- ❑ Vitamin A and beta-carotene-rich foods and supplementation: carrots; spinach, kale, collard greens and Swiss chard; winter squashes; red bell peppers; apricots; cantaloupe; sweet potato
- ❑ Vitamin C-rich foods: red bell peppers, parsley, broccoli, citrus fruits, romaine
- ❑ Vitamin E-rich foods: lightly steamed mustard greens and Swiss chard, sunflower seeds, almonds, avocado
- ❑ Iodine-rich foods: seaweeds, esp. dulse and kelp (be sure it's very high quality), seafood (free of mercury and wild, not farmed) (take care and cut back if symptoms worsen, as excess iodine is contraindicated)
- ❑ Zinc-rich foods: sesame and pumpkin seeds
- ❑ Selenium-rich foods: Brazil nuts, crimini mushrooms, sunflower seeds, flax seeds, spinach, cabbage, broccoli
- ❑ Mushrooms
- ❑ Rehmannia
- ❑ Ashwagandha: Converts T4 – T3
- ❑ Schisandra berry: Increases glutathione
- ❑ Blue flag: Detoxifies thyroid
- ❑ Eleuthero: Supports stress
- ❑ Glutathione: liposomal, IV, cream, precursors
- ❑ Superoxide dismutase (SOD)
- ❑ Essential fatty acids
- ❑ CoQ10
- ❑ Rehmannia
- ❑ Vitamin C, D, E, and B-Complex
- ❑ Selenium
- ❑ Zinc

**Pattern #4: Thyroid Under Conversion:** When an insufficient number of T4 is converted to T3, we can't have normal thyroid responses. T4 does us no good if we can't convert it to an active form.

❑ **Causes:**

- ❑ Illness
- ❑ Immune challenges
- ❑ Chronic stress
- ❑ Inflammation (IL-6)
- ❑ Blood sugar imbalances
- ❑ Fasting or famine
- ❑ Toxins
- ❑ Impaired liver function
- ❑ Impaired kidney function
- ❑ Heavy metals, especially mercury and lead

❑ **Most Common Lab Findings:**

- ❑ Normal TSH
- ❑ Normal T4
- ❑ Low T3



☐ **Supportive Lifestyle and Nutritional Interventions (food first then supplementation):**

- ☐ Selenium
- ☐ Zinc
- ☐ Vitamin D
- ☐ Iron
- ☐ Iodine
- ☐ Vitamins B6 and B12
- ☐ Copper
- ☐ Ashwagandha
- ☐ Blood sugar balance
- ☐ Low stress

**Pattern #5: Increased Thyroid Binding Globulin:** If there is a lot of TBG, the likelihood of getting active (“free” form) thyroid hormone to the tissues is reduced.

☐ **Causes:**

- ☐ Excess estrogen
- ☐ Oral contraceptives
- ☐ Pregnancy

☐ **Most Common Lab Findings:**

- ☐ Normal TSH
- ☐ Normal Total T4, T3
- ☐ Low Free T4, T3

☐ **Supportive Lifestyle and Nutritional Interventions (food first then supplementation):**

- ☐ MSM
- ☐ Trimethylglycine
- ☐ Choline
- ☐ Beet
- ☐ Betaine HCl
- ☐ Vitamin C
- ☐ Taurine
- ☐ Liver detox support
- ☐ Phosphatidylcholine

**Pattern #6: Thyroid Over Conversion:** You will convert too much hormone into the active form. This causes the cells to produce less receptor sites because they are being bombarded with thyroid hormone, and this will create symptoms of hypothyroidism despite high levels of hormones in the body.



**Pattern #7: Decreased Thyroid Binding Globulin:** If there is not enough thyroid binding globulin, there can be too much free thyroid hormone available for cells. Therefore, elevated free thyroid hormones shut down receptor sites and can therefore cause hypothyroid symptoms, despite high free thyroid hormone levels.

☐ **Causes:**

- ☐ Increased testosterone
- ☐ Insulin resistance /diabetes
- ☐ PCOS
- ☐ Stress

☐ **Most Common Lab Findings:**

- ☐ Normal TSH
- ☐ Normal Total T4
- ☐ High T3
- ☐ High Free T4, T3

☐ **Supportive Lifestyle and Nutritional Interventions (food first then supplementation):**

- ☐ Insulin resistance diet
- ☐ Detoxification program for liver
- ☐ Selenium
- ☐ Guggulu
- ☐ Antioxidants
- ☐ Phosphatidylserine 2000 mg/day

**Pattern #8: Thyroid Receptor Resistance:** This has already been covered above in *Step #3: Assume and Address Thyroid Resistance*.

The charts on subsequent pages summarize all the patterns. See there for instructions for assessing and determining what actions to take.

## **Step #6: Assess Your Progress**

It's very important to reassess at specific intervals. Functional medicine and nutrition are not based on applying specific protocols and assuming they will work. Testing and tweaking your program is vital to your success. Here are the suggested intervals at which to re-assess.

- ☐ Retake **Symptom Surveys:** 4-6 weeks
- ☐ Remeasure **Temperatures:** 4-6 weeks
- ☐ Retest **Vitamin D** if it was low: 2-3 months
- ☐ Redo **Iodine Load Test** if it was positive: 3 months
- ☐ Rerun **Thyroid Labs:** 3-6 months



## Step #7: Tweak Your Program for Optimal Success

- ☐ Revisit and improve foundational thyroid support on a regular basis. Always ask yourself how you can improve and reward yourself for successes. Diet and lifestyle changes take time and attention to implement and get right. Things change based on the time of year, your environment, and life situations.
- ☐ Adjust dosages of key supplements and herbs as indicated. As you improve, some nutrients may no longer be needed in supplemental form. Life events may create the need for more, especially in the case of trauma, change in life situation, and exposures.
- ☐ Look for hidden sources of allergens and toxins. If you are not improving as expected, perhaps there is an environmental or food exposure.
- ☐ Assess for heavy metal exposure. If things are not improving, there is special testing that can be done to assess heavy metal status including hair analysis, stool testing, and urine testing.
- ☐ Do additional functional testing as indicated. Sometimes it's necessary to do more in-depth functional testing to optimize your program. It can be ever evolving. Testing for parasites, leaky gut, fatty acid imbalance, amino acids, organic acids, and more are available through a knowledgeable functional medicine or nutritional endocrinology trained practitioner.

## Step-by-Step Guide to Creating a Custom Protocol

- **Step 1:** Use the *Determining Thyroid Pattern* chart on the following page to record the results of your lab tests. Circle or highlight: L for Low, H for High, N for Normal.
- **Step 2:** Based on where most of your circles or highlights fall, determine the pattern or patterns you are most exhibiting. It's possible to have a combination of patterns.
- **Step 3:** Find your pattern on the *Pattern-Specific Thyroid Nutrition* charts.
- **Step 4:** Make appropriate changes to diet and lifestyle and begin with a few of the major herbs and supplements to support your particular thyroid pattern.
- **Step 5:** Reevaluate based on symptom survey within a month to 6 weeks and if no changes are noticed, consider using additional supplements.
- **Step 6:** Rerun labs in 3-6 months and adjust plan as indicated.



### Determining Thyroid Pattern Chart

	Units	Ideal Low	Ideal High	Primary Hypo Thyroid	Pituitary Hypo Thyroid	Auto Immune Hypo Thyroid	Auto Immune Hyper Thyroid	Under Conversion T4 to T3	Over Conversion T4 to T3	High Thyroid Binding Globulin	Low Thyroid Binding Globulin	Thyroid Resistance
TSH		1.8	3.0	H	L	N or H	L	N	N	N	N	N
Total T4	ug/d	6.0	12.0	N or L	N or L	N or L	N or H	N or H	N or L	N	N	N
Free T4	ng/dL	1.0	1.5	N or L	N or L	N or L	N or H	N or H	N or L	L	H	N
T3 Uptake	md/dl	28.0	38.0	N or L	N	N or L	N	L	HN or H	L	H	N
Free T3	pg/mL	300.0	450.0	N or L	N or L	N or L	N or H	L	HN or H	L	H	N
Reverse T3 (rT3)	pg/ml	90.0	350.0	N	N	N	N	L	N	N	N	N
Thyroid Antibodies		0	2	N	N	H	H	N or H	N	N	N	N
<b>PLUS</b>												
Cholesterol	mg/dl	0	200	N or H			N or L					
Triglycerides	mg/dL	35	160	H			L					
Calcium	mg/dL	8.7	10.5	N or H			N or L					
<b>Possible Causes</b>				deficiency of iodine or cofactors such as Se, Mg, Cu, niacin, riboflavin, B6 and zinc	serotonin or dopamine deficiency, excess cytokines (inflammation), excess cortisol (stress) excess prolactin	antibodies to thyroid peroxidase, thyroglobulin (binding protein), TSH, T3 or T4	antibodies to TSH, or viral	deficiency of cofactors, serotonin, dopamine, gut dysbiosis, inflammation (increased cytokines), excess cortisol (stress),	excess testosterone	excess estrogen	excess testosterone	inflammation (elevated cytokines), excess cortisol (stress), deficiency of Vitamin A, elevated homo cysteine



## Diet, Lifestyle, Nutrition, and Herbs Recommendations Checklists

<input checked="" type="checkbox"/>	<b>Adrenal Supportive Diet and Lifestyle</b>
	<b>Adhere to an alkaline diet</b>
	<b>Eliminate dietary stressors:</b> Caffeine, alcohol, sugar, refined foods
	<b>Go gluten-free</b>
	<b>Avoid allergens:</b> Top 6 are gluten, dairy, eggs, corn, soy, peanuts
	<b>Avoid a high carbohydrate breakfast:</b> Your adrenals do better with more protein and high quality fats.
	<b>Balance estrogen levels:</b> Avoid environmental toxins and birth control pills
	<b>Eat coconut</b>
	<b>Eat lots of fresh fruits and vegetables:</b> Minerals, vitamins, and antioxidants improve adrenal function
	<b>Eat lots of green leafy vegetables:</b> For minerals and alkalizing effects, especially when you grow your own and fertilize with seaweeds or grow in sea water
	<b>Eat low-glycemic fruits:</b> They offer vitamins and help keep blood sugar steady
	<b>Eat omega-3 rich foods:</b> Hemp seeds, chia seeds, flax seeds, algae, and deep ocean fish
	<b>Eat garlic and onions regularly:</b> They offer sulfur and quercetin to support liver and soothe inflammation, and thus reduce stress on adrenals
	<b>Eat probiotic and prebiotic rich foods:</b> Kefir, rejuvelac, sauerkraut, coconut yogurt, seed yogurt, Jerusalem artichoke, chicory
	<b>Eat sea vegetables regularly:</b> For minerals, especially iodine, consume kelp, bladderwrack, dulse, nori, and more
	<b>Sunflower lecithin:</b> Provides phosphatidylcholine, precursor of acetylcholine, which counters adrenal stress and protects your brain
	<b>Mushrooms:</b> shiitake, maitake, reishi, cordyceps, and chaga for B-vitamins, immune and adaptogenic properties
	<b>Exercise:</b> Rebounder, T-Tapp, burst training



## Nutrients to Support Adrenal Function

Just because a nutrient is on this list doesn't mean you **MUST** take it for adrenal support. The most important ones to start with are listed towards the top and noted with **\*\***.

Getting them in foods is vital, and sometimes supplementation is necessary, at least for a short period of time.

<input checked="" type="checkbox"/>	Supplement	Function/Action
	<b>** Vitamin C</b>	Necessary for cortisol and other adrenal hormone production and as an antioxidant that protects the adrenals from damage. Because cortisol is produced under stress, more vitamin C is used. Supplementation during recovery from adrenal fatigue is indicated.  <b>Dose:</b> 2g – 6g per day
	<b>**Pantothenic Acid (Vitamin B5)</b>	Part of the energy producing pathways, B5 is necessary in high quantities in the adrenal glands because a great deal of energy is necessary in the production of adrenal hormones. Critical for conversion of glucose into energy.  <b>Dose:</b> 500mg three times per day
	<b>** Pyridoxal-5-Phosphate (Vitamin B6)</b>	A co-factor in the enzymatic production of adrenal hormones.  <b>Dose:</b> 25mg – 50mg per day
	<b>** Magnesium</b>	Necessary for cellular energy production, adrenal function, and restful sleep, and is often depleted in patients on diuretics or who suffer from frequent urination.  <b>Dose:</b> 400mg – 600mg per day or to bowel tolerance. Best taken after 8 p.m. to promote sleep
	<b>** Essential Fatty Acids</b>	Omega-3 and omega-6 fatty acids contribute to a balanced nervous system, increased focus, ability to handle stress, and adrenal gland health and recovery.  <b>Dose:</b> DHA 400mg – 800mg, EPA 200mg up to several grams if there is an inflammatory condition or depression
	<b>** Trace Minerals</b>	Zinc, manganese, selenium, molybdenum, copper, and iodine are all trace minerals that are necessary for overall health and specifically to calm an overexcited nervous system that can lead to adrenal gland maladaptation.  <b>Dose:</b> These can be provided in a formula, preferably liquid, or individually. Green powders and sea vegetables are excellent sources.  General guidelines: Zinc: 25mg – 75mg per day Selenium: 200IU – 400IU per day, or 2 Brazil nuts



<input checked="" type="checkbox"/>	Supplement	Function/Action
		Copper: 900mcg – 1800mcg Molybdenum: 50mcg – 100mcg per day Iodine: 1mg up to 50mg in some severe cases. Iodine loading test recommended before supplementing large doses
	<b>Vitamin E</b>	Essential to enzymatic reactions in the adrenal gland that neutralize free radicals produced during the manufacture of adrenal hormones.  <b>Dose:</b> 400IU – 800IU per day
	<b>Chromium</b>	Helps to regulate blood sugar by improving tendency to insulin resistance and reduces cravings for simple carbohydrates.  <b>Dose:</b> 400mg – 800mg per day
	<b>Phosphatidylserine</b>	Promotes calming neurotransmitters and appears to lower excess cortisol in the resistance phase.  <b>Dose:</b> 100mg, 2 – 3 times per day or more, as indicated by an Adrenal Stress Index Saliva Test
	<b>Tyrosine</b>	As a precursor to catecholamine neurotransmitters, it is helpful to treat depression and to promote healthy thyroid function.  <b>Dose:</b> 500mg, 2 – 3 times per day



## Adaptogenic Herbs Used to Support Adrenals

This is a fairly comprehensive list. Choose those to take based on the description and results of your evaluations. Many can be purchased in powdered form or as loose leaf to make into a tea and add to elixirs, smoothies, and foods. See the *CAFE Recipe Collection* for ideas.

<input checked="" type="checkbox"/>	Name	Latin Name	Use in Adrenal Support & General Uses
	Ashwagandha	Withania somnifera	<p>Supports the hypothalamic-pituitary axis function (HPA). Helps adaptability to both physical and chemical stress. Can reduce vitamin C and cortisol depletion under times of stress. Can increase catecholamine production. Tonic for debility, exhaustion, emaciation, memory loss, muscle weakness, overwork, and insomnia.</p> <p>Capable of normalizing cortisol levels, whether they are too high or too low. Beneficial in both the “resistance” and “exhaustion” phases of adrenal fatigue.</p> <p><b>Indications:</b> General &amp; sexual debility, nervous exhaustion, convalescence, problems related to aging, emaciation (especially in children), loss of memory, muscle weakness, spermatorrhea, overwork, tissue deficiency, insomnia, paralysis, multiple sclerosis, tired eyes, rheumatism, skin afflictions, cough, dyspnea, anemia, fatigue, infertility, glandular swellings, AIDS, immune system problems, and lumbago.</p>
	Astragalus or Chinese Milk Vetch	Astragalus membranaceus	<p>Tones the adrenals, lungs and spleen. Classic Chinese energy tonic with considerable immune-enhancing properties. Antiviral, carminative (digestion soothing), antispasmodic, supports liver function, improves glucose tolerance, vasodilator. Helps with diarrhea, fatigue, prolapsed uterus, fluid balance.</p> <p><b>Dose:</b> 2g – 6g once a day</p>
	Borage	Borago officinalis	<p>Helps to restore the adrenal glands after internal stress of cortisone or steroid use. Often used after fevers as a diaphoretic and long term for convalescence. Stimulates the milk flow in nursing mothers. Useful in respiratory ailments due to expectorant, emollient and anti-inflammatory action.</p>



## The Functional Approach to Balancing the Adrenals and Thyroid

<input checked="" type="checkbox"/>	Name	Latin Name	Use in Adrenal Support & General Uses
	Dang Shen	Codonopsis pilosula	Used in Chinese medicine for fatigue, weakness, loss of appetite, and vertigo. Western research has demonstrated its strong antioxidant, anti-inflammatory, antispasmodic, and analgesic capabilities.  <b>Dose:</b> 1g – 6g per day or as tea
	Devil's Club Root	Oplopanax horridum	Used for hyperglycemia or unstable blood sugar. Has a balancing affected on the endocrine system, therefore used in the treatment of diabetes and for people whose energy levels vary considerably throughout the day. Useful for diabetes, lung hemorrhage, tuberculosis, swollen glands, burns, wounds, chronic infections, stress headaches.  <b>Dose:</b> 1g per day
	Fo-ti, Ho Shou Wu	Polygonum multiflorum	Prime rejuvenating herb in Chinese medicine. Used to treat dizziness, weakness, and numbness and to support healthy function of the liver and kidneys.  <b>Dose:</b> 1g – 4g per day
	Ginseng (Korean)*	Eleutherococcus senticosus	Commonly used to treat adrenocortical hypofunction. Acts on the pituitary to stimulate the adrenal gland, thus increasing the ability for people to handle stress and to improve mental fatigue and physical endurance. Particularly useful to treat adrenal exhaustion and to correct disruptions in the HPA after a period of exogenous steroid use.  Supports immune function, improves visual acuity, promotes physical and mental endurance, and supports faster healing postoperatively.  <b>Dose:</b> 2g – 4g three times per day or 100mg – 200mg of a 1:20 extract (1% eleutherosides)  <b>*Caution:</b> Ginseng can sometimes cause insomnia.
	Ginseng (North American)*	Panax quinquefolius	Extracts of ginseng containing eleutherosides were found to have specific binding affinity to adrenal receptor sites, including glucocorticoid, mineralocorticoid and progesterin receptors, which may be part of the mechanism of the balancing adrenal effects.



## The Functional Approach to Balancing the Adrenals and Thyroid

☑	Name	Latin Name	Use in Adrenal Support & General Uses
			<p>Effective for nervous indigestion, mental and other forms of nervous exhaustion from overwork, heart and blood circulation, diabetes, depression, neurasthenia, neurosis.</p> <p><b>*Caution: Ginseng can sometimes cause insomnia.</b></p>
	Golden Root	Rhodiola rosea	<p>Increases the body's resistance against mental and physical stress. Good for depression, immune function, long-term memory, cardiac arrhythmias.</p>
	Licorice Root*	Glycyrrhiza glabra	<p>Licorice is an adrenal tonic that helps with adrenal insufficiency (exhaustion), including Addison's disease. It has anti-inflammatory, demulcent, expectorant, mild laxative, pancreatic tonic, immune stimulant with anti-viral properties. It Increases cortisol levels and aids problems with low blood pressure. Improves the body's ability to retain sodium and magnesium, thereby reducing problems with frequent urination.</p> <p>Licorice inhibits the key enzyme that inactivates steroid hormones in the liver and kidneys. Stimulates aldosterone. Soothes and tones GI tract. Used topically for herpes lesions, eczema, and psoriasis.</p> <p><b>Dose:</b> 1g – 2g root three times a day or 250mg – 500mg extract three times per day. Caution in people with high blood pressure.</p> <p><b>*Caution: Licorice in high doses can cause high blood pressure.</b></p>
	Sarsaparilla	Smilax officinalis	<p>The natural steroidal glycosides found in sarsaparilla root enhance glandular balance, boost hormone production, and aid muscle building. Increases testosterone so helps with muscle bulk and libido, and increases progesterone, so useful in premenstrual syndrome and menopause. Helpful for eczema, psoriasis, general pruritis, rheumatism, gout, Lyme disease, herpes and other venereal complaints.</p>



## The Functional Approach to Balancing the Adrenals and Thyroid

<input checked="" type="checkbox"/>	Name	Latin Name	Use in Adrenal Support & General Uses
	Schisandra	Schisandra chinensis	Counteracts testosterone-induced atrophy of the adrenals in animal studies. Used to aid with poor liver function, hepatitis, liver cancer, loss of libido, diminished kidney function, insomnia, mental illness, forgetfulness, irritability and immune function.
	Shatavari	Asparagus racemosus	Restores fluids and soothes inflamed membranes; useful in dysentery, diarrhea, stomach ulcers, cough, and dehydration. Topically for stiffness throughout the body.
	Wild Yam	Dioscorea villosa	<p>Wild yams contain a sapogenin called diosgenin, which is a precursor to the hormone progesterone. The wild yams do not contain any hormones, but they are potential precursors.</p> <p>It's anti-inflammatory, antispasmodic, anti-rheumatic, hepatic, and diaphoretic, assists with nausea in pregnancy, dysmenorrhea, uterine, and ovarian pain, and diverticulosis.</p> <p><b>*Caution:</b> May stimulate the uterus; check with your doctor before using.</p>

Adapted from Restorative Formulas website: [www.restorative.com](http://www.restorative.com)



## Herbs Summary Chart

This is a fairly comprehensive list. Choose those to take based on the description and results of your evaluations. Many can be purchased in powdered form or as loose leaf to make into a tea and add to elixirs, smoothies, and foods. See the *CAFE Recipe Collection* for details.

<input checked="" type="checkbox"/>	Name and Dosage	Taste/ Energy	Stage of Adrenal Fatigue	Who Needs It and What It Can Do
	<b>Ashwaganda</b> <b>Powder:</b> ½-1 teaspoon in elixir, 1-2x/day <b>Tincture:</b> 30-40 drops, 2-3x/day <b>Capsule:</b> 400-500 mg, 2x/day	Bitter, warm and dry; good for cold, damp conditions	All stages	For weakness, exhaustion, emaciation, memory loss, muscle weakness, over-work, anxiety and insomnia. May also be helpful for tired eyes, joint pain, skin breakouts, cough, anemia, infertility, immune system problems, blood sugar imbalance, and low thyroid function. Can reduce vitamin C loss and normalize cortisol levels.
	<b>Astragalus</b> <b>Powder:</b> ½-1 teaspoon in elixir, 1-2x/day <b>Tincture:</b> 40-80 drops, 2-3x/day	Sweet, warm, moist; good for cold, dry conditions	All stages	Tones the adrenals, strengthens the lungs, calms digestion, improves glucose tolerance, enhances the immune system, protects kidneys and liver, and improves blood flow to the heart.
	<b>Chaga</b> <b>Tea – Decoct:</b> 2-3 teaspoons in 24 ounces water, decoct 1-4 hours, drink 3-4 cups per day water <b>Powder:</b> 1 teaspoon in elixirs and other foods <b>Tincture:</b> 60-90 drops 4x/day <b>Capsule:</b> 3/day or as directed	Bitter, warm	All stages	Powerful antioxidant, anti-tumor, immune system modulator, and effective against all sorts of microbes.  It has the highest level of the powerful antioxidant, superoxide dismutase (SOD) detected in any food or herb in the world. It's a powerful adaptogen that modulates response to stress, increasing energy, improving sleep, and providing an abundance of adrenal supportive nutrients.  It's rich in zinc and B vitamins and deeply nourishes and supports your adrenals.



## The Functional Approach to Balancing the Adrenals and Thyroid

☑	Name and Dosage	Taste/ Energy	Stage of Adrenal Fatigue	Who Needs It and What It Can Do
	<b>Chamomile</b> <b>Tea:</b> 1-2 teaspoons in 8 oz. water, steep 30-40 min, 3 cups/day <b>Tincture:</b> 60-90 drops, 3-4x/day	Sweet, pleasant	All stages, especially Stage 1	Relaxing, calming. Good for ADHD, irritability, teething pain, gas, PMS anxiety, and stress induced gut symptoms.
	<b>Cordyceps</b> <b>Powder:</b> ½-1 teaspoon in elixir, 1-2x/day <b>Tincture:</b> 20-40 drops, 2-3x/day <b>Capsule:</b> 400-500 mg, 2x/day	Sweet, warm, moist; good for cold, dry conditions	All stages	Supports lungs, liver, and blood; lowers cholesterol; supports immune system; protects kidneys; strengthens heart; improves infertility; and enhances aerobic capacity and thus increases stamina and endurance.  It's also been shown to help with dizziness, chronic bronchitis, ringing in the ears, night sweats, and frequent urination.
	<b>Dang Shen</b> (Codonopsis) <b>Decoction:</b> 2-3 teaspoons in 16 oz. water, 8 oz. 2x/day <b>Tincture:</b> 40-80 drops, 3-4x/day <b>Capsule:</b> 400-500 mg, 2x/day	Sweet, moist, slightly warm; good for cool and dry conditions	All stages	Used for fatigue, weakness, loss of appetite, vertigo, ulcers, digestive irritation, and as a strong antioxidant, anti-inflammatory, antispasmodic, and analgesic.  Also used blood sugar balance, wheezing, dry mouth, and to increase hemoglobin.  Considered by some to be "poor man's ginseng".
	<b>Devil's Club Root</b> <b>Tea:</b> 3 grams powdered herb in tea, 2-3x/day or 1-2 oz. root bark, decocted in 8-16 oz. water <b>Tincture:</b> 15-30 drops, 3x/day	Warming	All stages but best for stage 2 and stage 3	Used for hyperglycemia or unstable blood sugar. Also used for lung hemorrhage, tuberculosis, swollen glands, burns, wounds, chronic infections, stress headaches.  Same family as ginseng -- sometimes called Alaskan ginseng.
	<b>Ginseng - American (Panax)***</b> <b>Powder:</b> 1-2 teaspoons powdered root or extract in elixir or tea, 1-2x/day	Sweet, bitter, slightly cool, moist	Stage 3, or for times of low cortisol in Stage 1 and Stage 2	Extracts of ginseng containing eleutherosides were found to have specific binding affinity to adrenal receptor sites including glucocorticoid, mineralocorticoid, and progesterin receptors, which may be part of the mechanism of the balancing adrenal effects.



## The Functional Approach to Balancing the Adrenals and Thyroid

☑	Name and Dosage	Taste/ Energy	Stage of Adrenal Fatigue	Who Needs It and What It Can Do
	<b>Tincture:</b> 60-100 drops, 3x/day <b>Capsule:</b> 1000 mg, 2x/day		(it's stimulating)	Effective for nervous indigestion; mental, and other forms of nervous exhaustion from overwork; heart and blood circulation; diabetes; depression; neurasthenia; and neurosis.  <b>*** Ginseng can sometimes cause insomnia.</b>
	<b>Ginseng – Siberian (Eleuthero)***</b> <b>Powder:</b> 1-2 teaspoons powdered root or extract in elixir or tea, 1-2x/day <b>Tincture:</b> 60-100 drops 3-4x/day <b>Capsule:</b> 100-200 mg extract or 2-4 grams whole herb/day	Sweet, slightly bitter, slightly warm	Stage 3 and Stage 2 mostly, and for periods of low cortisol on ASI	Particularly useful to treat adrenal exhaustion. Acts on the pituitary to stimulate the adrenal gland, thus increasing the ability for people to handle stress and to improve mental fatigue and physical endurance.  Also supports immune function, improves visual acuity, promotes physical and mental endurance, and supports faster healing after surgery. Also good for athletes who have high demand for physical strength and endurance.  <b>*** Ginseng can sometimes cause insomnia.</b>
	<b>Gynostemma</b> <b>Tea:</b> 1-2 teaspoons in 8 oz. water, steep for 40 minutes. Take 1-2 cups /day (also available as tea bags – Spring Dragon Tea) <b>Tincture:</b> 80-120 drops, 3x/day <b>Capsule:</b> 10 mg, 1-2 capsules 3x/day	Sweet, slightly bitter, neutral in heat	All stages	Enhances immune system, inhibits tumor growth, and as an antioxidant enhances superoxide dismutase (SOD). Can also help with heart circulation, blood sugar regulation, lowering lipids, and lowering blood pressure. Also used for stress headaches, insomnia, and anxiety.  Caution if taking warfarin; excessive use can cause GI upset, rash, fatigue dizziness or palpitations.
	<b>He Shou Wu</b> <b>Powder:</b> ½-1 teaspoon in elixir, 1-2x/day <b>Tincture:</b> 30-40 drops, 3x/day	Sweet, bitter, slightly warm	All Stages	Prime rejuvenating herb in Chinese medicine. Used to treat dizziness, ringing in ears, anemia, poor vision, low back pain, premature graying of hair, weakness, and numbness. Also used to support healthy function of the liver and kidneys.  Also used as an antioxidant, cholagogue (helps move bile), cholesterol lowering, laxative, and neuroprotective. Known also for sex hormone balance, including impotence and excess vaginal bleeding.



## The Functional Approach to Balancing the Adrenals and Thyroid

☑	Name and Dosage	Taste/ Energy	Stage of Adrenal Fatigue	Who Needs It and What It Can Do
	<b>Holy Basil (Tulsi)</b> <b>Tea:</b> 1 teaspoon in 8 oz. water, steep for 5-10 minutes. 4 oz. up to 3x/day <b>Tincture:</b> 40-60 drops, 3x/day <b>Capsule:</b> 2-3x/day	Pungent, sweet, warm	All stages	Antioxidant; neuroprotective; stress reducing; protects against radiation; good for brain fog, poor memory, and ADD; liver protective; blood sugar lowering; inhibits allergies; reduces asthma; and prevents gastric ulcers. Possibly speeds up liver detoxification of certain medications.
	<b>Hops</b> <b>Tea:</b> 1-2 teaspoons in 8 oz. water, steep 10-15 min, take 2-3 cups/day <b>Tincture:</b> 80-100 drops, 3-4x/day	Bitter, warm	All stages, especially Stage 1	A sedative and mild nervine, hops is good for nervousness, anxiety, nervous stomach, and insomnia and muscle spasms. It's also a digestive stimulant.
	<b>Lemon Balm</b> <b>Tea:</b> 1-2 teaspoons in 8 oz. water, steep 10-15 min, 2-3 cups/day <b>Tincture:</b> 80-100 drops, 3-4x/day	Sweet, cooling	All stages, especially Stage 1	Mood elevating; calming; and helpful for mild to moderate memory loss, insomnia, and stress headaches. It's also helpful for ADHD and stomach upset.  Large amounts can inhibit thyroid function.
	<b>Licorice Root***</b> <b>Tea – Decoct:</b> ½ teaspoon per 8 oz. water, decoct 15 min, 1x/day <b>Powder:</b> ½-1 teaspoon per day in elixir <b>Tincture:</b> 10-20 drops, 3x/day Tablets: in the form of DGL used for gut healing, 200-300 mg before meals	Sweet, slightly bitter, moist, warm	Stage 2 and Stage 3 – about 2 hours before low cortisol on ASI	Helps with adrenal insufficiency (exhaustion), including Addison's disease. It is anti-inflammatory, demulcent, expectorant, mild laxative, pancreatic tonic, and an immune stimulant with anti-viral properties.  It increases cortisol levels and raises blood pressure. Improves the body's ability to retain sodium and magnesium, thus helps with frequent urination. It helps heal the gastrointestinal mucous membrane, heals ulcers, soothes lungs, and helps dry coughs. Used topically for herpes lesions, eczema, and psoriasis.  <b>***Caution in people with high blood pressure.</b>
	<b>Lyceum (Goji)</b> <b>Food:</b> 1-2 oz. berries per day <b>Powder:</b> 1 teaspoon to 1 tablespoon per day in elixirs or smoothies <b>Tea – Decoct:</b> 2 teaspoons in 12 ounces	Sweet, slightly warm	All stages	Tonic for liver, kidneys and blood, strengthener for weak muscles and ligaments, improves male sexual performance, and relieves night sweats. It's good for eyes, like poor night vision and macular degeneration, dry red or painful eyes, and to prevent cataracts and glaucoma.



## The Functional Approach to Balancing the Adrenals and Thyroid

☑	Name and Dosage	Taste/ Energy	Stage of Adrenal Fatigue	Who Needs It and What It Can Do
	water, decoct 15-20 min, steep 40-50 min <b>Tincture:</b> 60-90 drops, 4/day			It moistens the lungs, strengthens blood vessels, protects liver, promotes good bowel flora, lowers LDL cholesterol, and can mildly lower blood sugar.
	<b>Maca</b> <b>Powder:</b> 1 teaspoon in elixir, 1-2x/day <b>Tincture:</b> 30-50 drops, 3-4x/day <b>Capsule:</b> 500-1500 mg, 2-3x/day	Bitter, warming	All stages	A true adaptogen, Maca contains high amounts of minerals including calcium and magnesium, B-vitamins, enzymes, and all of the essential amino acids. It's energizing in a non-stimulating way and is said to be a great substitute for coffee.  Research suggests that the alkaloids in maca act on the hypothalamus and the pituitary gland, which together help regulate the endocrine glands including the adrenals, the thyroid, the ovaries, and the testes by releasing higher levels of precursor hormones.
	<b>Magnolia</b> <b>Tincture:</b> 12-20 drops, 2-3x/day <b>Capsule:</b> 200-400 mg, 2-3x/day	Bitter, warm	Stage 1	Lowers cortisol, decreases anxiety 5 times more powerfully than Valium, and improves acetylcholine levels in the brain, which means it's helpful for short-term memory and may decrease risk of Alzheimer's. Magnolia bark has been used to treat menstrual cramps, abdominal pain, abdominal bloating and gas, nausea, indigestion, coughs, and asthma.  Research shows that "honokiol" and "magnolol", two chemicals found in magnolia bark, are up to 1000 times more potent than vitamin E in antioxidant activity.  Found as a capsule (Swanson) and as part of formulas – Integrative Therapeutics Cortisol Manager.
	<b>Milky Oat</b> <b>Tincture:</b> 80-100 drops, 3-4x/day <b>Glycerite:</b> 120-140 drops, 3-4x/day	Sweet	All stages, especially Stage 1	Calms nerves; relieves anxiety and emotional instability; and helps restore peace and tranquility to overstressed, angry, and chronically upset people. Good for withdrawal from cigarettes and coffee, amphetamines, and sleep medications. Best for people who are emotionally frazzled.



## The Functional Approach to Balancing the Adrenals and Thyroid

✓	Name and Dosage	Taste/ Energy	Stage of Adrenal Fatigue	Who Needs It and What It Can Do
	<b>Passionflower</b> <b>Tea:</b> 1-2 teaspoons in 8 oz. water, steep 20-30 min, take 4 oz., 4x/day  <b>Tincture:</b> 60-80 drops, 3-4x/day	N/A	All stages, especially Stage 1	Nervine, sedative, and antispasmodic. It's good for anxiety, insomnia caused by a racing mind, stress-induced headaches, teeth grinding, still neck, and withdrawal symptoms.
	<b>Rehmannia</b> <b>Pieces:</b> 1-2/day eaten whole or in elixir or smoothie <b>Tincture:</b> 30-50 drops, 3x/day Capsule: 400-500 mg, 3x/day	Bitter, cooling	Stage 2 and 3	Studies have shown it to support the cells of the pituitary gland and adrenal cortex during times of stress. Studies have also shown its potential to help autoimmune conditions of the thyroid and adrenal glands.
	<b>Reishi</b> <b>Tea – Decoct:</b> 1-2 oz. in 32 ounces water, decoct 2-4 hours, drink 3-4 cups per day water <b>Berries/powder:</b> 1-2 teaspoons in elixir <b>Powder:</b> 1 teaspoon in elixirs and other foods <b>Tincture:</b> 80-100 drops 4-6x/day <b>Capsule:</b> 3 500-1000 mg capsules, 3x/day	Bitter, warm	All stages	Mild and cumulative effects on adrenals. It improves adrenal function and alleviates stress. It can help with altitude sickness if taken 4 weeks before trip.  It's considered an immunomodulator, which means it can strengthen an underactive immune system and calm an overactive immune system, as in allergies and autoimmunity. It's been shown to be effective as a cancer fighter and also for improving cardiovascular function. Used for anxiety, insomnia, bad dreams, moodiness, poor memory, fatigue, weakness, shortness of breath, and dizziness.
	<b>Rhodiola Rosea</b> <b>Decoction:</b> 1-2 teaspoons in 8-10 oz. water, decoct 15 minutes, 1-3 cups daily <b>Tincture:</b> 40-60 drops 3x/day <b>Capsule:</b> 2-4 per day	Sweet, slightly bitter, spicy, cool, dry	All stages	Increases the body's resistance against mental and physical stress. Enhances energy, good for depression, frequently good for anxiety, supports immune function, enhances long-term memory, keeps heart rhythms steady, enhances lung function, is non-stimulating, enhances alertness, balances blood sugar, assists in reproductive hormone imbalances, and enhances memory.
	<b>Sarsaparilla</b> <b>Tea – Decoct:</b> 1-2 teaspoons to 8 oz. water, decoct 15 minutes, drink 2 cups per day water <b>Powder:</b> 1 teaspoon in elixirs and other foods	Slightly sweet, slightly bitter; neutral, cool, moist	All stages	Mild adaptogen containing anti-inflammatory sterols which enhance glandular balance, boost hormone production, and aid muscle building. Increases testosterone so helps with muscle bulk and libido and increases progesterone, so it's useful in premenstrual syndrome and menopause.



☑	Name and Dosage	Taste/ Energy	Stage of Adrenal Fatigue	Who Needs It and What It Can Do
	<b>Tincture:</b> 60-90 drops 3-4x/day <b>Capsule:</b> 3 500-1000 mg capsules, 3x/day			Used for psoriasis, eczema, fibromyalgia, arthritis, gout, bursitis, colitis, Lyme disease, herpes, and other venereal complaints. Used for auto-immune conditions such as rheumatoid arthritis and inflammation of connective tissue like scleroderma and Ankylosing spondylitis.
	<b>Schisandra</b> <b>Tea – Decoct:</b> 1-2 teaspoons dried berries in 8-10 oz. water <b>Berries/powder:</b> 1-2 teaspoons in elixir <b>Powder:</b> ½-1 teaspoon in elixir Tincture: 40-80 drops, 3-4x/day <b>Capsule:</b> 2 400-500 mg capsules, 2-3x/day.	Sour, sweet, salty, bitter, pungent, warm and dry	All stages	Benefits yin organs: liver, kidney, heart, lung, and spleen. Helps control diarrhea, frequent urination, vaginal discharge, premature ejaculation, and night sweats. Also good for asthma, inflammation, palpitations, anxiety, and insomnia.  Protects liver, enhances mental acuity, normalized blood pressure, increases nitric oxide, and often helps with adult ADHD. Used to aid with poor liver function, hepatitis, liver cancer, loss of libido, diminished kidney function, and forgetfulness.
	<b>Shatavari</b> <b>Tea:</b> 2 teaspoons in 8 oz. water, decoct 10-15 minutes, steep 40 minutes, 2 cups/day <b>Powder:</b> 1 teaspoon in elixirs and other foods <b>Tincture:</b> 40-80 drops, 3x/day <b>Capsule:</b> 3 capsule 3x/day	Sweet, bitter, warm, moist	All stages	Restores fluids and soothes inflamed membranes; useful in dysentery, diarrhea, stomach ulcers, cough, and dehydration. Used topically for stiffness throughout the body.  Enhances libido and fertility, helps vaginal dryness, fatigue, anemia, and poor appetite. Supports pituitary, which helps adrenal function, and is even useful for bladder infections.
	<b>Shilajit</b> <b>Powder:</b> 1 teaspoon in elixirs or smoothies <b>Capsules:</b> 1-2 500 mg, 2x/day	Bitter, slightly pungent, salty and warm	All stages	Blood sugar lowering (better than the drug Metformin), reduces blood lipids, increases dopamine, relieves anxiety and stress, prevents ulcers, decreases joint inflammation, and is deeply nourishing.



# EMPOWER

## Thyroid Health: Nutrition and Lifestyle Recommendations Checklists

Use the resources in this section to create your own empowering handouts for your clients.

<input checked="" type="checkbox"/>	<b>Nutrients that Support Healthy Thyroid Function</b>
	<b>Antioxidants:</b> Glutathione, SOD
	<b>Arginine:</b> Precursor to nitric oxide, which stimulates thyroid hormone production
	<b>Iodine:</b> Vital part of the thyroid hormone molecule
	<b>Iron:</b> Delivers oxygen to the thyroid and assists in converting T4 to T3
	<b>Magnesium:</b> Necessary for absorption of iodine
	<b>Phenylalanine:</b> Precursor to Tyrosine
	<b>Riboflavin:</b> For converting iodine and tyrosine to thyroid hormone
	<b>Rubidium:</b> Assists in the transport of tyrosine into the thyroid
	<b>Selenium:</b> For converting T4 to T3, degrading rT3, and converting iodine and tyrosine to thyroid hormone
	<b>Tyrosine:</b> Core of thyroid hormone
	<b>Vitamin A:</b> Regulates production of TSH, activates receptors
	<b>Vitamin B12:</b> Associated with decreased levels of an enzyme that activates thyroid hormone
	<b>Vitamin D3:</b> Immune modulator, suppresses autoimmune activity and along with bioflavonoids protect against thyroid cancer
	<b>Zinc:</b> Needed for hypothalamus and pituitary stimulation, T3 production, and reducing antibodies



<input checked="" type="checkbox"/>	<b>Thyroid Supportive Diet and Lifestyle</b>
	<b>Adhere to an alkaline diet</b>
	<b>Avoid gluten</b>
	<b>Balance estrogen levels:</b> High estrogen increases thyroid binding globulin
	<b>Drink purified water:</b> Avoid halides, fluoride, chlorine, bromine
	<b>Eat coconut</b>
	<b>Eat garlic and onions</b>
	<b>Eat lots of fresh fruits and vegetables:</b> Minerals, vitamins, and antioxidants improve function
	<b>Eat lots of green leafy vegetables:</b> For minerals and alkalizing effects
	<b>Eat low-glycemic fruits</b>
	<b>Eat omega-3 rich foods:</b> Hemp seeds, chia seeds, flax seeds, algae, and deep ocean fish
	<b>Eat probiotic and prebiotic rich foods:</b> Kefir, rejuvelac, sauerkraut, coconut yogurt, seed yogurt, Jerusalem artichoke, chicory -- improves T3 production
	<b>Eat sea vegetables regularly:</b> For minerals, especially iodine kelp, bladderwrack, dulse, nori, and more
	<b>Eliminate dietary stressors:</b> Caffeine, alcohol, sugar, refined foods
	<b>Exercise:</b> Rebounder, T-Tapp
	<b>Grow your own vegetables:</b> Fertilize with seaweeds or grow in sea water
	<b>Massage your thyroid</b>
	<b>Minimize thyroid inhibitors:</b> Avoid pesticides, synthetic colorings and flavors, and environmental toxins



<input checked="" type="checkbox"/>	<b>Herbs for Thyroid Health</b>
	<b>Ashwaganda:</b> Stimulates T3 and T4 synthesis and increase antioxidants, including SOD
	<b>Astragalus:</b> Immune support – helpful for some cases of Autoimmune thyroid disease (where TH2 is dominant)
	<b>Bee Propolis:</b> Boosts thyroid function
	<b>Black Cohosh:</b> General thyroid healing benefit
	<b>Black Walnut:</b> Thyroid gland stimulant high in iodine
	<b>Bladderwrack:</b> Source of iodine to help normalize hormone production; contains preformed DIT
	<b>Chickweed (<i>Stellaria media</i>):</b> Useful when TSH levels are elevated, but T3 and T4 are below ideal
	<b>Coleus Forskohlii:</b> Supports the production and release of thyroid hormones
	<b>Eleuthero:</b> Helps to reduce the effects of stress and modulates immune system, so helpful in Graves and Hashimoto's
	<b>Gentian:</b> Has a normalizing effect on the thyroid gland
	<b>Gotu Kola:</b> Improves subclinical hypothyroid – receptor resistance and high thyroid binding globulin
	<b>Guduchi:</b> General endocrine and energy metabolism support
	<b>Guggulu:</b> Supports thyroid function through its role in conversion of T3 to T4 in the liver
	<b>He Shou Wu:</b> Overall endocrine balance
	<b>Licorice:</b> May be useful for hyperthyroid
	<b>Mushrooms:</b> Regulates immune system, controls inflammation
	<b>Nettle:</b> Source of iron and potassium for cellular homeostasis and support of thyroid hormone production and the adrenals
	<b>Oregon Grape:</b> Stimulates the thyroid gland
	<b>Parsley:</b> Has good amounts of Vitamin A, Vitamin C, copper and manganese, nutrients that support thyroid hormone production
	<b>Prickly Ash:</b> Tonic; alternative circulatory stimulant that has a general benefit for long-term thyroid function
	<b>Rhodiola:</b> Normalize endocrine function
	<b>Rosemary:</b> Contains carnosic acid that supports pituitary-thyroid signaling



<input checked="" type="checkbox"/>	<b>Herbs for Thyroid Health</b>
	<b>Siberian Ginseng:</b> Normalize endocrine function and has been shown to increase a general sense of well-being ** May have mild side effects if taken in large doses for longer than 60 days and may potentially be contraindicated in hypertensive persons **
	<b>White Willow:</b> Anti-inflammatory

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## Autoimmune Diet Phase 1

### FOODS TO INCLUDE ON PHASE 1 OF AUTOIMMUNE PROTOCOL

VEGETABLES	MEDIUM & HIGH GLYCEMIC FRUITS	LOW-GLYCEMIC FRESH FRUITS
artichoke arugula asparagus bok choy broccoli brussels sprout cabbage cauliflower celery chard collard green cucumber	fennel green bean kale leek lettuce mushroom rhubarb snap pea spinach squash watercress all green leafy & non-starchy vegetables	(unless they spike your blood sugar) best eaten with greens, in smoothies or on salads to prevent blood sugar spikes apples (green) lime blackberry raspberry blueberry strawberry lemon other berries
ROOTS	HERBS	NON SWEET FRUITS
beet carrot celeriac jicama onion parsnip	apricots orange banana papaya cantaloupe passion fruit cherry peaches cherimoya pears clementine persimmon grape pineapple grapefruit plums guava pomegranate kiwi star fruit mango tangerine nectarine watermelon	avocado coconut
FERMENTS	SPICES	ORGANICALLY RAISED & PASTURED MEATS WITH FISH
sauerkraut fermented vegetables (carrot, beet, etc.) kombucha water kefir kefir	basil mint bay leaves parsley chamomile peppermint chives rosemary cilantro sage dill spearmint lavender tarragon lemongrass thyme marjoram	beef chicken bison turkey buffalo duck lamb rabbit fish venison shellfish salmon sardines tuna
		CONDIMENTS
		apple-cider vinegar coconut aminos arrowroot olives powder ume plum coconut flour vinegar coconut flakes coconut vinegar



## FOODS TO AVOID

PHASE 1 OF AUTOIMMUNE HEALING PROTOCOL (ELIMINATION DIET)  
APPROXIMATELY 3 WEEKS

GRAINS - ALL		NIGHTSHADES		SPICES	
amaranth	oats	cayenne	poblano	allspice	cumin
barley	quinoa	chili pepper	potato	anise	fennel seed
buckwheat	rice	eggplant	sweet pepper	annatto	fennugreek
bulgur	rye	goji berry	tobacco	canola	juniper
corn	sorghum	ground cherry	tomato	caraway	mustard
farro	spelt	haba <span>ñ</span> ero	tomatillo	cardamom	nutmeg
kamut	teff	jalepeno	wolf berries	celery seed	pepper
millet	wheat	paprika		coriander	poppy
BEANS + LEGUMES - ALL		NUTS + SEEDS		DAIRY	
adzuki beans	kidney beans	almond	hemp	butter	ghee
black beans	lentils	brazil	macadamia	cheese	milk
black-eyed	lima beans	cashew	pecan	cream	yogurt
peas	peanuts	chestnut	pine	cream cheese	
chickpeas	soybeans	chia	pistachio		
fava beans		coffee	pumpkin		
		cocoa/	sesame		
		chocolate	sunflower		
		flax	walnut		
		hazelnut			
EGGS		MEAT		OILS	
chicken eggs		commercially grown meat		anything hydrogenated	
duck eggs		farm raised fish		soybean	
goose eggs		lunch meats		canola	
		bacon		safflower	
		pork		sunflower	
ALCOHOL					
all alcohol					



## FOODS THAT MAY CROSS-REACT WITH GLUTEN

(BASED ON CYREX LABS CROSS REACTIVITY BLOOD TEST)

Dairy	Amaranth
Chocolate	Quinoa
Sesame	Yeast
Hemp	Tapioca
Buckwheat	Teff
Eggs	Oats
Soy	Coffee
Sorghum	Rice
Millet	Whey
Spelt	



## CUSTOMIZED PLAN

### FOODS TO INCLUDE

### FOODS TO AVOID



## Pattern-Specific Thyroid Nutrition Chart

Nutrients	Primary Hypo Thyroid	Pituitary Hypo Thyroid	Auto Immune Hypo Thyroid	Auto Immune Hyper Thyroid	Under Conversion T4 to T3	Over Conversion T4 to T3	High Thyroid Binding Globulin	Low Thyroid Binding Globulin	Thyroid Resistance
Antioxidants: Glutathione, SOD and precursors: NAC, Protandim, Oxidicell	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ashwagandha	✓								
Beet							✓		
Betaine HCl							✓		
Bugleweed				✓					
Cabbage juice				✓					
Choline							✓		
Dandelion							✓		
Enzymes: bromelain, protease 250 - 500 mg 3x/day between meals			✓	✓					
Essential fatty acids	✓	✓	✓	✓	✓				✓
Gamma oryzanol (rice bran)		✓							
Goto kola							✓		
Guggulu	✓				✓	✓		✓	
Iodine	✓								
Iron	✓								
L-arginine		✓							
Lemon balm				✓					
Magnesium		✓							
Manganese		✓							
Milk thistle							✓		
Molybdenum							✓		
Motherwort				✓					



## Pattern-Specific Thyroid Nutrition Chart

Nutrients	Primary Hypo Thyroid	Pituitary Hypo Thyroid	Auto Immune Hypo Thyroid	Auto Immune Hyper Thyroid	Under Conversion T4 to T3	Over Conversion T4 to T3	High Thyroid Binding Globulin	Low Thyroid Binding Globulin	Thyroid Resistance
MSM, Trimethylglycine							✓		
Panax ginseng							✓		
Phosphatidylcholine 2000mg/day							✓		
Phosphatidylserine		✓			✓	✓		✓	
Sage leaf		✓							
Sea vegetables: laminaria digitata kelp, bladderwrack	✓								
Selenium	✓				✓	✓			✓
Taurine							✓		
Turmeric and ginger			✓	✓					
Tyrosine/phenylalanine	✓								
Vitamin A	✓								
Vitamin B Complex	✓	✓		✓					✓
Vitamin B6		✓							
Vitamin C 1,000 mg per day			✓	✓			✓		
Vitamin D	✓	✓	✓						
Zinc	✓	✓			✓				
Adrenal Support		✓	✓	✓					✓
Balance Blood Sugar			✓		✓		✓		
Leaky Gut Repair			✓	✓					
Liver Detoxification						✓	✓	✓	
Support T-regulatory cells: TH1 and TH2 -- See details below			✓	✓					



## The Incredible Health Benefits of Sea Vegetables

Sea vegetables are generally under-utilized and under-appreciated in our Western Culinary regime. For those who frequent Japanese restaurants, sushi and seaweed salad may be familiar menu items, but few -- save for those on a macrobiotic diet, a raw foods diet, or of Asian origin -- serve these gems from the sea at home.

**Sea veggies are simple to prepare and serve and can add fun and diversity to your daily culinary repertoire.**

I have to admit...the thought of eating a plate of slimy green stuff from the ocean just does not usually get people jumping for joy and anticipation! Too bad! Sea vegetables are amongst the most powerful foods on the planet. And with a bit of creativity and experimentation, wonderfully delicious dishes can be prepared from them!

Food manufacturers often use processed sea vegetables as thickeners or stabilizers in a variety of common products, from instant pudding to toothpaste. As "hidden" ingredients, sea vegetables are not of significant nutritional value. Served as part of main meals, and in salads, soups, and wraps, sea vegetables offer an abundance of otherwise hard to get nutrients.

Sea vegetables are very rich in nutrients and phytochemicals. They are loaded with chlorophyll, fiber, and minerals, including significant amounts of sodium, potassium, calcium, phosphorus, magnesium, iron and many other trace minerals naturally found in the ocean. When reconstituted, sea vegetables expand three to seven times their original volume, so **small amounts go a long way.**





## Using Sea Vegetables

Available in dried form year-round, most sea vegetables are re-hydrated before adding to dishes. Some, like kelp, dulse, nori, and sea palm are delicate enough to eat dry. Others, like arame, wakame, and hijiki become more tender and appealing when they are soaked in water to soften. Irish moss can be soaked and used as a thickener in puddings, pies, and gravies. Still others like kombu are usually not eaten by themselves (because they are tougher), but are either ground and used as a seasoning or used whole as a flavoring in soups and stews.

**To make a basic sea vegetable salad, simply soak the sea vegetables in water to soften. Drain, reserving the soak water for future use.**

I usually do equal amounts of sea and land vegetation, like carrots or cucumbers. Kale, collard greens and cabbage make great additions as well. Combine the sea vegetable with the land vegetable and pour a sauce or marinade over them. Let it stand at least 15 minutes to absorb flavor. One of my favorite marinades contains ginger, garlic, sesame oil, lime juice, cayenne and salt. In cooking, dried sea vegetables can be added directly to soups or stews and to the cooking liquid of beans or rice.

While there are thousands of different types of sea vegetables, a small handful are most commonly used. The sweet, mild flavors of arame, dulse, and bullwhip kelp make them perfect choices for the novice.





## Nutritional Aspects of Sea Vegetables

The following nutritional chart is courtesy RISING TIDE SEA VEGETABLES P.O. Box 1914 Mendocino, CA 95460 707-964-5663 <http://www.loveseaweed.com>

PER 100 GRAM SERVING (100 grams = ~3.5 ounces)	KOMBU	WAKAME	DULSE	NORI	ARAME	HIJIKI
CALORIES	241.0	262.0	264.0	318.0	267.0	236.0
PROTEIN (g)	7.3	12.7	21.5	35.6	12.0	10.0
FAT (g)	1.1	1.5	1.7	0.7	1.3	0.8
CARBOHYDRATES (g)	55.0	48.0	44.6	44.3	51.8	47.3
FIBER (g)	3.0	3.6	1.3	4.7	7.0	17.0
ASH (g)	22.0	18.0	22.0	8.0	-	-
CALCIUM (g)	800.0	1300.0	213.0	260.0	830.0	1400.0
POTASSIUM (g)	5300.0	7500.0	7820.0	510.0	3760.0	44000.0
SODIUM (mg)	3000.0	1100.0	1700.0	600.0	2900.0	14000.0
MAGNESIUM (mg)	760.0	950.0	271.0	380.0	-	1980.0
PHOSPHORUS (mg)	240.0	260.0	408.0	400.0	-	59.0
IRON (mg)	15.0	13.0	33.1	12.0	12.0	29.0
IODINE (mg)	150.0	13.0	5.2	1.4	98-564	40.0
NIACIN (mg)	5.7	10.0	1.89	10.0	2.6	4.6
VIT.A (I.U.)	430.0	140.0	663.0	11000.0	50.0	150.0
VIT.B-1 (mg)	0.08	0.11	0.073	0.25	0.02	0.01
VIT.B-2 (mg)	0.32	0.14	1.91	1.24	0.02	0.2
VIT.B-12 (mcg)	5.0	6.0	6.6	17.5	-	0.57
VIT.C (mg)	15.0	29.0	6.34	20.0	0	0

KOMBU = LAMINARIA DENTIGERA  
WAKAME = ALARIA MARGINATA  
DULSE = RHODOMENIA PALMATA

NORI = PORPHYRA PERFORATA  
ARAME = EISENIA BICYCLIS  
HIJIKI = HIZIKIA FUSIFORME

Sources for chart: U.S. Dept of Agriculture; Japan Nutritionist Assoc., Composition and Facts About Foods, Ford Heritage Health Research, Mokelumne Hill, CA 95245, 1698; Seaweeds and Their Uses, V.J. Chapman, Methuen & Co., Ltd., London, 1950; "Kelp", Roseann C. Hirsch, Bestways, "Food from the Sea", Mary Schooner, East/West Journal, Vol 1, No. 6.; "Sea Vegetable Celebration" Erhart, Shep and Cerier, Leslie, Book Publishing Company, Summertown, TN 154-155; "Japanese Book of General Nutrition". **Nutritional assays vary according to maturity of plant at time of harvest, drying techniques, storing techniques, etc.**



## Minerals and Trace Elements in Sea Vegetables

Sea vegetables provide all 56 minerals and trace elements required for the human body's physiological functions in quantities greatly exceeding those of land plants.

According to Dr. Ryan Drum, noted herbalist and sea vegetable gatherer and an international expert on sea vegetables, **3-5 pounds of sea vegetables will fully mineralize an adult human for one year!** He claims his personal consumption to be about 10 pounds a year.

### Examples:

- About 1/3 cup (1/4 oz.) serving of dulse or kelp gives up to 30% of the RDA, 4 times the iron in spinach, and more than kidney beans, apricots, and peas
- Magnesium is twice as abundant in kelp and alaria as in collard greens, and exceeds walnuts, bananas, potatoes, oatmeal, and even sockeye salmon.
- Sea vegetables present these essential nutrients to your body in a chelated, colloidal optimally balanced form so they are bio-available. Examples are:
  - Calcium (for skeletal health, healthy heartbeat, nervous system function)
  - Magnesium (activates enzymatic activity, essential for healthy heartbeat)
  - Potassium (naturally prevents high blood pressure, provides cellular energy)
  - Sodium (essential for the correct balance of body fluids - our internal "ocean")
  - Iron (as hemoglobin, transports and distributes oxygen to all your cells)
- Trace elements are especially essential to the countless enzymatic functions constantly occurring in your body. Examples are:
  - Chromium (works with insulin to regulate blood sugar)
  - Iodine (thyroid health)
  - Copper (protects nerve sheaths, builds supple arteries, required for iron absorption)
  - Also includes Lithium, Manganese, Selenium, Vanadium, and Sulfer



## Sea Vegetables and Iodine

Sea vegetables are the best natural food sources of iodine. According to Dr. Drum, since no land plants are reliable sources of dietary iodine, you'd have to eat about 40 lb. of fresh vegetables and/or fruits to get as much iodine as you would from 1 gram of whole leaf kelp! In *Therapeutic Use of Seaweeds* (Proceedings of the 2001 Pacific Northwest Herbal Symposium), "Seaweeds, eaten regularly, are the best natural food sources of biomolecular dietary iodine... no land plants are reliable sources of dietary iodine."

Unfortunately, not all iodine is good for us and the human thyroid cannot distinguish between life sustaining iodine-127 and radioactive iodine-131. Dr. Drum warns, "The real reason for making sure that iodine consumption is at the high end is to ensure a full body complement of iodine at all times as preventative medicine against the next nuclear disasters [whether from intentional radioactive pollution as the result of armed conflict or terrorism, nuclear power plant failures, or industrial contamination]. A full body load of iodine-127 from seaweeds (or any source) will tend to allow the body to reject topical and air and food source iodine-131." In general, brown sea vegetables (kelps) offer more bio-available organic iodine than red sea vegetables (dulse, laver, and nori).

We need between 150 and 1,100 micrograms in our daily diets to keep our thyroids healthy and prevent uptake of radioactive iodine.

Healthy thyroids will "spill" unneeded iodine. But some people with sensitive thyroids, particularly nursing mothers, postmenopausal women, or anyone with an unusual thyroid dysfunction may have adverse reactions to excess dietary iodine (most often if you decrease the intake of dietary iodine the condition goes away). Consult with your health care practitioner if you have any questions about your consumption of iodine.





## **Sea Veggies and Vitamins**

Most sea vegetables are excellent sources of 13 known vitamins (A, B's, C, D, E, and K). Sea vegetables contain significant amounts of vitamins, especially the B vitamins. A serving of dulse (about 7g, or 1/3 cup) provides about 10% of the RDA for Vitamin B2 (Riboflavin) and about 42% of the RDA for Vitamin B6. Nori is very rich in Vitamins A and C.

## **Sea Veggies and Protein**

The protein content of sea vegetables ranges from 16% to 28%. The red sea vegetables - dulse and laver - are higher than the browns - kelp and alaria. The amino acid composition of these sea veggie proteins is generally well balanced and contains all or most of the essential amino acids (the ones your body can't produce by itself). Thus the sea veggies provide higher quality protein than certain grains and beans that are lacking one or two essential amino acids, although the sea vegetables provide less quantity per serving. One of the more important amino acids found especially in kelp is glutamic acid, the basis for synthetic MSG. This amino acid naturally enhances flavors and tenderizes high protein foods like beans while aiding in their digestion. Glutamic acid also improves mental and nervous system activity; provides energy, and is thought to help control alcoholism, schizophrenia and the craving for sugar.

## **Sea Veggies and Fats**

Sea vegetables, while low in fat, have significant amounts (1-3%) of omega-3 fatty acids. Nori, in particular, has 3% omega-3 fatty acids. The ratio of omega-6 and omega-3 essential fatty acids in sea vegetables is between 1.5 and 2 to 1. This is an ideal ratio, as the NIH suggests an optimal ratio of between 2 and 3 to 1. In addition, sea veggies contribute the minerals, vitamins, and trace elements needed for the optimum utilization of the omega-3 and omega-6 fatty acids. Powdered bladderwrack mixed with olive oil has been shown to be a safe and effective alternative to cod liver oil.

## **Sea Veggies and Fiber**





Sea veggies have their own unique fiber with interesting medicinal properties. For instance, alginic acid in kelp has been shown to be an important detoxifier for radioactive isotopes and heavy metals.



## Sea Vegetable Characteristics and Photos

<p><b>Agar Agar</b></p> <p>Agar Agar is a clear, tasteless alternative to gelatin and comes in opaque flakes. It is also called kanten. It can be used to firm jellies, moulds, pies, and puddings. It dissolves into hot liquid then thickens at room temperature.</p>	
<p><b>Arame</b></p> <p>Arame is thin, black and wiry black. Dried, it is stiff and brittle. When rehydrated, it resembles spaghetti strands, only black. Arame is a good source of calcium, iodine, potassium, vitamin A and dietary fiber. Arame should be rinsed thoroughly then soaked in warm water for 10 to 15 minutes before using in recipes.</p>	
<p><b>Dulse</b></p> <p>Dulse is a reddish brown color, available in whole stringy leaves or powdered. It has a mild slightly salty taste and a chewy texture. It is a good source of potassium and protein. When pan-fried in sesame oil, dulse becomes light and crispy that some people say resembles bacon. Dulse can also be eaten straight from the package like a jerky or torn and tossed into salads, or mixed into coleslaw with shredded cabbage, carrots, scallions and olive oil.</p>	
<p><b>Kombu</b></p> <p>Kombu is a dark purple to black color, and usually comes in strips. The strips are tough and hard, and are generally eaten in soups and stews. It is an excellent source of iodine, calcium, magnesium and iron.</p> <p>The main way Kombu is usually used is by adding it, unsoaked or rinsed, in the cooking liquid for rice, beans and soups. The addition of kombu enhances the flavor of the dishes, and makes them more digestible. Kombu doubles its volume and readily soaks up water. I used Kombu as a teething aid for my youngest son. It is too tough to easily break apart, and provided a healthful alternative to conventional teething biscuits.</p>	
<p><b>Nori</b></p> <p>Nori is dark purple to marine green in color, and usually comes in square sheets; either toasted or untoasted, and is typically used for sushi rolls. Raw nori is dark purple to black in appearance, while toasted nori is dark green. Nori is a good source of iodine and vitamin C. It is probably the most widely used sea vegetable, popularized for its use in sushi. It can also be used as a condiment for rice, soups, salads, casseroles or grains when crushed into flakes or cut into strips.</p>	



<b>Sea Palm</b> Brownish-green, ribbon shaped sea palm resembles a miniature palm tree. It has a sweet and salty taste and supplies vitamins A and D. Sea palm is delicious raw or sautéed and added to soups or salads. It can also be marinated and used alone or combined with other sea vegetables like arame and wakame and land vegetables, like carrots, daikon and cucumber in a sea vegetable salad. Sea palm can also be eaten dried.	
<b>Wakame</b> Deep grayish-green in color, about a fourth of an inch wide, wakame is the tenderest of sea vegetables when rehydrated. It is a good source of Potassium. When soaked for 10 minutes, wakame expands to seven times its original size. After being soaked then cooked, the long fronds of wakame become silky, almost melting in your mouth. Its mildly sweet flavor is a good addition to vegetable dishes. Wakame can even eaten raw as an easy snack right out of the bag.	
<b>Hijiki</b> Hijiki is probably the strongest tasting of the commonly used sea vegetables. In its dry form, it is very hard and brittle, but it softens when soaked. It has a similar look and feel to arame, but the strands are thicker and stronger tasting. It has the highest calcium content of all the sea vegetables. It is also abundant in iron, iodine, Vitamin B2, and Vitamin B3. It is known to regulate blood sugar levels and aid in weight loss.	
<b>Algae</b> Algae are single celled plants that are packed with easy to assimilate nutrients. Spirulina, wild blue green algae and chlorella are considered by many researchers to be among the best sources of protein, beta carotene, nucleic acids and chlorophyll of any plant or animal food on the planet. According to Paul Pritchard, author of Healing with Whole Foods, some forms of algae are thought to contain every nutrient required by the human body. They are high in essential amino acids, the building blocks of protein.	



## Healing Properties of Sea Vegetables

Sea vegetables have been studied and used in clinical practice and shown to have many health benefits. For example, the effects of regular kombu consumption can contribute to the resolution of coronary artery disease, healthier liver function, higher metabolic rate, faster food transit time, lower LDL cholesterol, and higher HDL cholesterol blood levels.

What follows is a summary of some of the healing effects that have been attributed to sea vegetables. Many sea vegetables contain powerful healing benefits.

- **Anti-Microbial Function:** Sea vegetables are powerfully antiviral and anti-parasitic. Various red algae (dried, powdered and encapsulated) have been used as effective genital herpes and shingles suppressants.
- **Lung Function:** Hijiki and Sargassum, brown algae, seem to improve lung capacity. 3-5 grams of powdered kelp daily has been effective in treating asthma. Irish Moss gel is an effective long-term treatment for damaged lungs, especially after pneumonia, smoking, emphysema, and chronic bronchitis.
- **Erectile Dysfunction:** Tropical species of red seaweed are used to prepare a male virility drink in the Caribbean.
- **Tissue Repair:** Dr. Ryan Drum uses a broth of powdered Sargassum unpasteurized 3 year old Barley Miso paste for cancer, radiation, chemotherapy, post-surgical, and whole body impact trauma patients. Pre surgical treatment with 3-5 grams of brown seaweed containing Fucoidan significantly reduces blood loss and shock risk afterwards.
- **Nervous Disorders:** Attention Deficit Disorder (ADD), Insomnia, Depression, Hostility and Schizophrenia have improved greatly with regular daily consumption of 3-5 grams of powdered kelp.
- **Cardiovascular Disorders:** Regular consumption of Kombu tends to result in lowered blood pressure and decrease in arterial plaque.
- **Cancer:** Regular dietary consumption of Wakame and other brown algae may prevent breast cancer. One of the constituents of brown algae, Fucoidan, shows strong antitumor activity by enhancement of inflammatory responses.
- **Thyroid Disorders:** Fucus species of brown seaweeds, also known as Bladderwrack, have been used as treatment for thyroid disorders because they contain DIT, a weakly active thyroid hormone. Two DIT molecules combine to produce T4, Thyroxine. 3-5 grams daily of powdered Fucus, results in similar effects to thyroid medication. Up to 10% of the iodine found in brown seaweeds, especially laminaria species of Kombu and Sargassum has been found to be in the preformed thyroid hormones, T4 and T3. This is exciting news for those who have been on synthetic thyroid hormone and told that they needed to stay on it for life. Daily consumption of sea vegetables has the potential to restore thyroid functioning.



- **Male Pattern Baldness:** Daily Nori consumption is recommended in Japan as a preventative for male pattern baldness.
- **Joint Pain:** Used topically, extended soaks with powdered Fucus (bladder wrack) can be very helpful to improve joint pain.

Other conditions that have been found to respond favorably with the use of sea vegetables are anemia, arthritis, diabetes, chronic fatigue, yeast infections, ulcers, and prostate problems.





## Concluding Comments

If I haven't yet convinced you to incorporate sea vegetables into your daily food plan, perhaps you need to learn more. I encourage you to experiment.

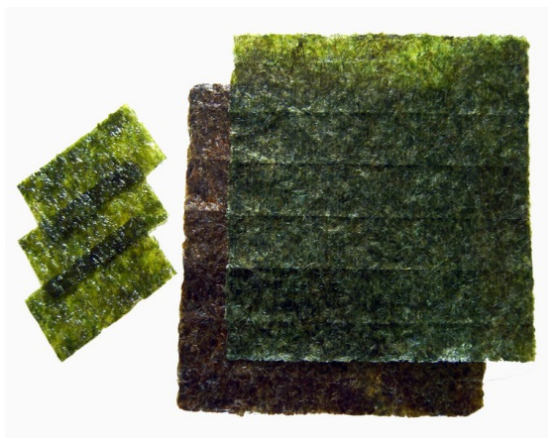
### Easy Sea Veggie Starting Ideas:

- Irish moss makes a great pudding.
- Nori makes a great wrap.
- Dulse and bullwhip kelp are easy to eat as a snack.
- Arame makes a great salad.
- Add a handful of soaked sea vegetables to a nut or seed pat  , cracker, or dehydrated veggie burger recipe.
- Put some into a blended soup or smoothie.

**Target to eat one half to one ounce a week of sea vegetables to start.** If you have any of the problems listed above, it may benefit you to increase your consumption to 5 grams a day.

Experiment with the recipes included here. Vary the seasonings and vegetables to your taste. Google search "sea vegetable recipes" for ideas.

Get to know these wonderful friends from the sea. You will soon find yourself including them as a regular part of your diet when you discover how you feel when you eat them!





## Recipes

All recipes are gluten-free, sugar-free, dairy-free, and use low-glycemic ingredients for those with insulin resistance/diabetes.

### Arame Carrot Salad

#### Ingredients:

- 1 cup arame sea vegetable
- 2 cloves garlic, crushed
- 2 tablespoons grated ginger
- 1 bunch basil, chopped
- 1 bunch cilantro, chopped
- 1 tablespoon olive oil
- 1 medium lime, juiced
- 1 medium lemon, juiced
- 1/4 cup water, from soaking arame
- 1 large or 2 small cucumbers, very thinly sliced
- 1 cup carrot, shredded (omit if they spike your blood sugar or replace with daikon)
- 1/4 teaspoon sea salt

#### Directions:

1. Soak arame for at least 10 minutes in enough water to cover, until it softens.
2. Combine garlic, ginger, basil and cilantro.
3. Juice lemon and lime.
4. Drain arame.
5. Combine lemon and lime juice with chopped garlic, ginger, cilantro and basil, sesame oil and enough soak water from the arame to make a salad dressing consistency.
6. Toss dressing over arame and shredded carrots. Serve as a side salad or over a bed of lettuce.



## Asian Land & Sea Slaw

### Ingredients:

- 2 cups shredded kale
- 1 cup romaine lettuce, chopped thin
- 1/2 cup arame or hijiki, soaked
- 1 handful dulse, torn or cut into bite sized pieces and soaked
- 1 carrot, julienne or shredded (about 2/3 cup)
- 1 cup shiitake mushrooms, julienned
- 1 red bell pepper, julienne (about 2 cups)
- 1/4 bunch of cilantro, rough chopped (about 1/2 cup)
- 1 cucumber, seeded and sliced
- 3 green onions, sliced thin
- 1/4 head small cabbage (purple, Napa, or green)
- 1 tablespoon sesame seeds to garnish

### Marinade Ingredients:

- 1/4 cup water
- 1/2 teaspoon sea salt
- 2 cloves garlic, minced
- 1/2 serrano chili pepper minced
- 2 teaspoons sesame oil (toasted)
- 1 tablespoon ginger minced

### Directions:

1. Make marinade.
2. Soak dulse and arame separately in warm water to cover, add salted water and toasted sesame oil to soaking sea weed (optional to add chili flakes, garlic and ginger).
3. Place the kale in a bowl with 2 tablespoons of marinade. Massage until softened.
4. Add remaining vegetables. Toss to combine.
5. Add additional seasoning, spice, or salt as desired.
6. Garnish with sesame seeds.



## Deep Green Pesto

### Ingredients:

- 3 cloves raw garlic, raw
- 1/4 cup pine nuts
- 2 cups kale
- 1/3 pound spinach
- 1/8 cup olive oil
- 1 cup fresh basil or 1/4 cup dried basil
- 1 cup kelp or other sea vegetable, soaked in water until soft
- 1/2 teaspoon unrefined Celtic, Himalayan, or pink sea salt

### Directions:

1. Soak kelp in water while preparing the remainder of the ingredients.
2. Put the remaining ingredients in the food processor (add in small batches if necessary depending on the capacity of the food processor).
3. Squeeze the liquid out of the kelp and add to processor.
4. Process until smooth.
5. Adjust salt and basil to desired taste.



## Land and Sea Slaw

### Ingredients:

- 1/2 cup wakame
- 1/2 cup arame
- 1/2 cup sea palm
- 1/2 cup hijiki
- 1/2 cup grated daikon radish
- 1/2 cup grated cabbage
- 1/2 cup grated carrot
- 1/2 cup grated beet
- 1/4 cup lime juice
- 1/4 cup lemon juice
- 1/4 teaspoon toasted sesame oil
- 1/2 teaspoon sea salt
- 4 cloves garlic
- 1 pinch cayenne (optional: use up to 1/2 teaspoon)

### Directions:

1. Soak sea veggies at least 10 minutes in enough water to cover, until they soften.
2. Drain.
3. Grate land vegetables.
4. Combine remaining ingredients in a small bowl to make dressing.
5. Combine land and sea ingredients into a large bowl and toss with dressing.
6. Adjust seasonings to taste.



## Nori Rolls (Sushi)

### Ingredients:

- nori sheets
- a nut or seed pat , pesto, chopped veggie salad, or avocado
- any combination of the following ingredients chopped, sliced, diced, shredded or julienned: cucumber, carrot, avocado, celery, field greens, romaine lettuce leaves, sprouts, or veggies of your choice

5.

### Directions:

1. Lay a sheet of nori shiny side down on a dry bamboo sushi mat (available inexpensively at most Asian markets) or on a cutting board.
2. **Option 1:** Place a large lettuce leaf on the nori sheet. Place a strip of pat  over the lettuce leaf, being sure to go all the way to the side edges. Add desired toppings and roll and cut as directed below.
3. **Option 2:** Place field greens and other vegetables on the nori sheet. Put a few dollops of pat  or a sauce over the vegetables. Season with salt or other herbs, and roll and cut as directed below.
4. **Option 3:** Place a thin layer of pat  on the nori sheet. Spread to within 1 inch of the edge at the bottom and 2 inches at the top and all the way to the edge at the sides. On top of the pat , layer a handful of field greens, vegetables, avocado and any desired toppings. For additional flavor, I sometimes use a pinch of umeboshi plum paste and a few slices of pickled ginger or a small amount of miso (not 100% raw, but a living food with live cultures). Roll and cut as directed below.
5. **To Roll:** Grip the edges of the nori sheet and the sushi mat together with your thumbs and forefingers and press the filling back towards you with your other fingers. Using the mat to help you, roll the front edge of the nori completely over the filling. Squeeze gently with the mat, then lift the mat and continue rolling. Tap the roll gently and open the mat. Just before closing the roll, dip index finger in water and run along the far edge of the nori sheet. This will seal the seam of the roll.
6. **To Cut:** To cut rolls, use a pointed sharp knife, cutting in a see-saw motion slicing through the roll. For uniform pieces, cut in half, then each half in half. For variety in presentation you can also cut at a 45-degree angle.



## Sea Delight Crackers

### Ingredients:

- 1 cup arame sea vegetable, soaked in 4 cups of water for 15 minutes to soften
- 2 cups almonds, soaked 6 hours or overnight and drained
- 1 cup sunflower seeds, soaked 4 hours or longer and drained
- 4 stalks celery
- 1 red bell pepper
- 1/2 small onion
- 1 - 2 cloves garlic
- 2 or more tablespoons kelp powder, finely ground
- 1/2 teaspoon sea salt
- 1/2 lemon, juiced

### Directions:

1. Rinse almonds and sunflower seeds and drain excess water.
2. In a food processor, thoroughly grind almonds, sunflower seeds, celery, bell pepper, and onion and garlic until smooth and well combined. Place in a bowl.
3. Add kelp, arame, salt, and lemon juice.
4. Blend with hands until mixture holds together.
5. Spread evenly on Paraflexx™ sheet to about 1/4-inch thick.
6. Score into desired sized pieces.
7. Leave to dehydrate at 105°F until crispy. After several hours, the Paraflexx™ sheet will be easy to remove. Turn it over onto a mesh tray and gently peel off the Paraflexx™ sheet. If it sticks or leaves chunks behind, dehydrate longer before attempting to do this.

**Personal Note:** Different seasonings and kinds of nuts can be substituted for a variety of flavors. Add a teaspoon of tahini for a flakier texture. Add chia seeds to hold together into a firmer cracker.



## Sea Palm Salad

### Ingredients:

- 1 cup sea palm
- 1/2 cup grated daikon radish
- 1/2 cup grated carrot (omit and double the daikon if your blood sugar is sensitive to carrot)
- 2 green onions, chopped into small pieces
- 1 teaspoon flax oil
- 1 teaspoon coconut oil
- 1/4 cup lime juice
- 1/4 teaspoon sea salt
- 1/2 cup sesame seeds
- 1 pinch cayenne

### Directions:

1. Soak sea palm at least 10 minutes in enough water to cover, until it softens.
2. Drain.
3. Toss with remaining ingredients.



## Sesame Ginger Kelp Noodles

### Ingredients:

- 1 bag kelp noodles
- 1-inch slice of ginger
- 2 tablespoons raw sesame tahini
- 1/4 teaspoon whole, unrefined sea salt (to taste)
- 1 teaspoon sesame oil (optional)
- 1 clove garlic (optional)
- 2 - 3 tablespoons of lemon (or more to taste)
- 1/4 - 1/2 cup water (to desired consistency)
- sesame seeds (optional)
- chopped greens, scallions, or other veggies

### Directions:

1. Rinse kelp noodles and place in a bowl with water to cover.
2. In a blender, combine remaining ingredients until smooth. Adjust water as needed to achieve a thick, creamy sauce.
3. Adjust salt to taste.
4. Drain kelp noodles. Shake colander to remove excess water.
5. Pour sauce over noodles and massage gently with hands to help the noodles soften.
6. Add chopped veggies if desired.
7. Sprinkle with sesame seeds (optional). Can be eaten immediately or saved for later since the noodles continue to soften as they sit in the sauce.

**Personal Note:** This recipe is a delicious way to get lots of calcium. Did you know that 24 calories of kelp noodles contain 70% of your daily calcium requirement?



## Wakame Cucumber Salad

### Ingredients:

- 1 cup wakame seaweed, soaked
- 2 large cucumbers, quartered and sliced
- 1 medium tomato, chopped
- 1/2 cup basil, fresh, finely chopped
- 1/2 medium lemon, juiced
- 1/2 medium lime, juiced
- 2 cloves garlic, minced
- 1 tablespoon flax oil
- 1/8 teaspoon toasted sesame oil (for strong flavor, omit if you prefer)
- 1 teaspoon sea salt

### Directions:

1. Soak wakame for 5 to 15 minutes in pure water.
2. Chop the tomato and quarter and slice the cucumber thinly.
3. Slice the wakame.
4. Place cucumber, wakame, and tomato in a bowl.
5. In a separate small bowl, combine the basil, lemon and lime juice, garlic, flax and sesame oils.
6. Toss with the vegetables, sprinkle with salt to taste, and serve.



## The Functional Approach to Balancing the Adrenals and Thyroid

	General Guidelines	Notes	✓	✓	✓	✓	✓	✓	✓
			M	Tu	W	Th	F	Sa	Su
Nutrition	1/2 your body weight in fluid ounces of water								
	Gluten-free								
	Grain-free								
	Sugar and all sweetener free except for stevia and zero calorie sweeteners (not artificial)								
	Dairy-free								
	2 lbs. a day greens								
	Protein in morning - i.e. green smoothie, protein shake, nut milk, large portion of greens with sprouts, sprouted legumes, cooked legumes								
	Daily essential fats								
Exercise	Aerobics 5 times a week (30-40 min)								
	Strength training 2-3 week								
	Bursts 3 times a week, 4-8 x day								
Stress Management	HeartMath before getting out of bed, <b>before eating</b> , and in bed at night, minimum 5 x day								
	Meditation or HeartMath "Heart Lock-in" 3 x week								
	Tapping (EFT) - listen to recordings, do on your own								
	Listen to soothing music								
Sleep	8-10 hours in bed each night								
	Plan a sleep vacation								
	In bed by 10 pm most nights								
Timing	First meal within an hour of getting up. Include protein at this meal (greens, nuts, seeds, protein powder) and very little carbohydrates to balance hormones like leptin, insulin, growth hormone, and cortisol								
	Space meals 4-6 hours apart - no snacking								
	Last meal 3 hours or more before bedtime								
	Intermittent fasting - Optional (1 x week)								
General	Daily sunshine as often as possible - 20 minutes without protection for Vitamin D								



The Functional Approach to Balancing the Adrenals and Thyroid

CAFE 30-Day Adrenal Reboot - Schedule			Days 1-10										Days 11-20										Days 21-30									
Schedule		Notes	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
Before Getting Out of Bed	Appreciations and HeartMath in bed before getting up																															
	Set positive intentions for the day in bed before getting up																															
	Stretch and decide when you will do your exercise for the day																															
Variable Time	Exercise																															
	Outdoor time	Find time in your schedule for these. They may vary from day to day and week to week. Jot down the time you plan to do them in the checkboxes to keep yourself on target.																														
	Fun																															
	Relaxation																															
Right After Getting Up	Bathroom, teeth brushing, general hygiene																															
	5 minutes of sunshine in your eyes																															
	Start drinking AM Energy Uplifter Shake (8 ounces or more)	See "Jumpstart Your Day Energy Drinks" from the CAFE Recipe Collection for recipe																														
Morning Supplements	Liquid Vitamin / Mineral Cocktail																															
	Zinc if taking liquid																															
	B-Complex if taking liquid																															
	Vitamin D3/K2	These are best absorbed when taken alone; however, you may add to your smoothie or elixir if need be.																														
	Vitamin C powder																															
	Other liquid minerals (if taking)																															
	Omega-3 fats - if taking as liquid																															
	Tinctures																															
	Pregnenalone and DHEA if taking	Sublingual - Best not to mix with other things.																														
	Capsule supplements																															
	Omega-3 fats if taking as capsules	Cross off what you are not taking. Write in what you're taking, based on charts in 30-Day Protocol.																														
B-Complex if taking capsules																																
Pantothenic Acid 500 mg (Vitamin B5)																																
Adaptogens and herbs if capsules	List all the herbs you are taking in capsule form.																															
Pre Meal	Bitters or apple cider vinegar 15 minutes before breakfast to aid digestion																															
	Appreciations and HeartMath																															
Breakfast	Digestive Enzymes - between 1 and 3	(Depends on digestive strength)																														
	Green Drink: Green smoothie, soup, or juice from CAFE Recipe Collection. If in a rush, Green Protein Shake made from protein powder and green powder - see CAFE Recipe Collection	You can make ahead the night before if desired. Add chia seeds if you aren't having a chia porridge or a chia beverage.																														
	Chia porridge from CAFE Recipe Collection	Be sure to include chia in smoothie or protein shake if not eaten as porridge.																														
	Elixir if still not satiated. Otherwise make elixir now if time to take with you for lunch	You can make ahead the night before if desired.																														
30 Min. after Meal	Drink remaining AM Energy Uplifter Shake or 8-16 ounces of water																															
90 Min. after Meal	8-16 ounces of water																															
30 Min. before Meal	8-16 ounces of water																															
Before Lunch Supplements	Liquid Vitamin / Mineral Cocktail																															
	Zinc if taking liquid	These are best absorbed when taken alone; however, you may add to your smoothie or elixir if need be.																														
	B-Complex if taking liquid																															
	Vitamin C powder																															
	Tinctures																															
	Pregnenalone and DHEA if taking	Sublingual - Best not to mix with other things.																														
	Capsule supplements																															
	B-Complex if taking capsules	Cross off what you are not taking. Write in what you're taking, based on charts in 30-Day Protocol.																														
	Pantothenic Acid 500 mg (Vitamin B5)																															
Adaptogens and herbs if taking capsules (list)																																
Pre Meal	Bitters or apple cider vinegar 15 minutes before breakfast to aid digestion																															
	Appreciations and HeartMath																															
Lunch	Digestive enzymes - between 1 and 3	(Depends on digestive strength)																														
	Lunch - from "Adrenal Nourishing Lunch" menu planner in the CAFE Recipe Collection	Include ***probiotic-containing foods and lots of greens, sprouts, healing herbs, and spices																														
	Elixir and chia if desired																															
30 Min. after Meal	Drink 8-16 ounces of water																															
90 Min. after Meal	8-16 ounces of water																															
30 Min. before Meal	8-16 ounces of water																															
Before Dinner Supplements	Liquid Vitamin / Mineral Cocktail																															
	Vitamin C powder	These are best absorbed when taken alone; however, you may add to your smoothie or elixir if need be.																														
	Tinctures																															
	Pregnenalone and DHEA if taking	Sublingual - Best not to mix with other things.																														
	Capsule supplements																															
	Pantothenic Acid 500mg (vitamin B5)																															
	Adaptogens and herbs (list)	List all the herbs you are taking in capsule form																														
Pre Meal	Bitters or apple cider vinegar 15 minutes before breakfast to aid digestion																															
	Appreciations and HeartMath																															
Dinner	Dinner - from "Adrenal Nourishing Dinner" menu planner in the CAFE Recipe Collection																															
30 Min. after Meal	Drink 16 ounces water, or as much as you need to complete your recommendation of 1/2 your body weight in fluid ounces.																															
Bedtime Supplements	Stage 1 calming supplements and sleep herbs if needed	Write in or cross off.																														
Before Bed	Evening bedtime routine - shower if you do, teeth brushing and flossing, bathroom																															
In Bed	Appreciations and HeartMath in bed after lights out																															
	Set intentions for peaceful sleep and healing energy during sleep																															



## Adrenal Herbal Formulas and Supplements

If you prefer to take a simple adrenal formula rather than experimenting with a variety of herbal powders, there are a few you may try. Keep in mind you won't be able to customize as well, and if you do not respond well to any ingredients in a formula, you'll have to stop and try things individually.

My approach is typically to do individual herbs in combination, adjust the dosages to particular needs, and then try the formula once it's established that you tolerate each individual component. **This is not an exhaustive list** – just some of the formulas I have used successfully with my clients over the years.

### Herbalists & Alchemists - David Winston's Adrenal Balance Compound™

- Eleuthero root (Eleutherococcus senticosus)
- Schisandra fruit (Schisandra chinensis)
- Devil's Club root bark (Oplopanax horridus)
- Holy Basil herb (Ocimum sanctum)
- Oat milky seed (Avena sativa)
- Sarsaparilla root (Smilax ornata)

Available at: <http://www.drritamarie.com/go/HerbalistAlchemist>

### Herb Pharm – Adrenal Support Tonic

- Eleuthero root (Eleutherococcus senticosus)
- Licorice root (Glycyrrhiza glabra)
- Oat "milky" seed (Avena sativa)
- Sarsaparilla root (Smilax (ornata regelii)
- Prickly ash bark (Zanthoxylum clava-herculis)

### Gaia Herbs Adrenal Health

- Ashwaganda
- Holy basil
- Rhodiola
- Schisandra
- Wild oats



## Apex Energetics

These are available at Amazon.com, Pure Formulas, and other online suppliers. Google for best prices.

**Adrena Calm:** <http://www.drritamarie.com/go/AEAdrenaCalmCream>

For stage 1 and for 2 hours before high cortisol readings on stage 2 and 3 – most likely at night before bed to help with sleep. It's available as a topical cream.

### Ingredients:

- Pyridoxal 5-Phosphate (Vitamin B6)
- Thiamine HCl (Vitamin B1)
- Ubiquinone (CoQ10)
- Riboflavin (Vitamin B2)
- Phosphatidylserine
- Lemon Balm
- Milk Thistle
- St. Johns Wort
- Valerian Root
- Hazel bud extract
- Juniper bud extract
- Silver Linden/Lime
- Bitter Apple/Gourd/Cucumber
- Marking Nut
- German Chamomile
- Elm Flower Water
- Gorse Flower Water
- Olive Flower Water
- Red Chestnut Flower Water
- Vervain Flower Water
- Impatiens Flower Water
- Magnesium phosphate
- Black seed oil
- Essential Oil Blend of:
  - ---Lemongrass
  - ---Orange
  - ---Lavender
  - ---Juniper Berry
  - ---Pine

### Adrenal Stim:

For stage 2 and 3 and stage 1 if there are periods of low cortisol. Topical cream applied about 2 hours before the low cortisol readings. Not a good idea to take past dinner time.

### Ingredients:

- Tyrosine
- Licorice Root Extract
- Phosphatidylserine
- Siberian Ginseng
- Avena Sativa (Oat)
- Adenosine Triphosphate (ATP)
- Arnica Montana
- Medicago Sativa (Alfalfa)
- German Chamomile
- Black Current Fresh Bud Extract
- Betula Pubescens (White Birch)
- Quercus Robur (English Oak)
- Sequoia Giganteum
- Holly Flower Water
- Impatiens Flower Water
- Clematis Flower Water
- Oak Flower Water
- Olive Flower Water
- Elm Flower Water
- Hornbeam Flower Water
- Vervain Flower Water
- Nigella Sativa (Black Seed) Oil
- Essential Oil Blend of:
  - ---Lemongrass
  - ---Orange
  - ---Lavender
  - ---Pine

[www.DrRitamarie.com](http://www.DrRitamarie.com)



### **Adaptocrine:**

For all stages – if you prefer a pill form to tincture and for when it's not convenient to make an elixir.

#### **Ingredients:**

- Vitamin C (as ascorbic acid) 100mg (167%DV)
- Panax Ginseng extract (root) 200mg
- Ashwagandha extract (root) 200mg
- Holy basil extract (leaf) 100mg
- Rhodiola extract (root) 75mg
- Eleutherococcus extract (root) 50mg
- Pantethine 50mg
- Proprietary Blend: 78mg
  - ---Boerhavia (whole plant)
  - ---Betaine HCl
  - ---Cellulase (plant enzyme)
  - ---Peptidase (plant enzyme)



## Premier Research Labs

Available at Amazon, Natural Healthy Concepts, and other online retailers. Google for best prices.

**Tranquinol:** <http://www.drritamarie.com/go/PRLTranquinol>

For any stages where cortisol is high at night and insomnia is present.

### Ingredients:

- Sleep Pro Blend™ (784mg) of:
  - ---Magnesium Glycinate
  - ---L-theanine
  - ---Valerian root (Valeriana officinalis)
  - ---Noni (fruit, seed) (Morinda citrifolia)
  - ---Amylase
  - ---Maltase
  - ---Apple Cider Vinegar
  - ---Protease
  - ---Pepsin
  - ---Lipase
  - ---Lactase
  - ---Invertase
  - ---Cellulase
- Seditol™ 366mg (a proprietary blend of patented extracts from Magnolia officinalis (bark) and Ziziphus spinosa (root))

**AdrenaVen:** <http://www.drritamarie.com/go/PRLAdrenaVen>

For all stages to nourish adrenals, liver and digestion.

### Ingredients:

- Cordy-Pro™ (150mg):
  - ---Opunta Cactus (pad) (Opuntia ficus indica)
  - ---Cordyceps Sinensis (fermented mycelial extract)
  - ---Cordyceps sinensis (mycelia, fruiting body)
- Adrenal Pro™ (140mg):
  - ---Arabinogalactan
  - ---Bladderwrack (whole) (Fucus ves.)
  - ---Saccharomyces Cer.
  - ---Skullcap Root (Scutellaria baic.)
  - ---Burdock Root (Arctium lappa)
  - ---Dandelion Root (Taraxacum off.)
  - ---Lovage (root) (Ligusticum wall.)
  - ---Guggul (resin) (Commiphora mukul)
- Nano-Gest™ (Plant Enzymes/Botanical Blend):
  - ---Noni (fruit, seed) (Morinda cit.)
  - ---Amylase
  - ---Maltase
  - ---Apple Cider Vinegar
  - ---Protease
  - ---Plant-source Pepsin
  - ---Lipase
  - ---Lactase
  - ---Invertase
  - ---Cellulase
- Carbon-matrix Humate
- Other Ingredients: Stabilized rice bran, vegetable cellulose capsule

[www.DrRitamarie.com](http://www.DrRitamarie.com)



**Adaptogen R3 (formerly Adaptogen Complex):**

<http://www.drritamarie.com/go/PRLAdaptogenR3>

**Ingredients:**

- Nopal Pro Blend (190mg):
  - ---Nopal Cactus (pad) (*Opuntia ficus-indica*)
  - ---Apple Cider Vinegar (Fulvic and Humic Acids)
  - ---Thyme (leaf) (*Thymus vulgaris*)
  - ---Calcium-based Montmorillinite
  - ---Noni (fruit, seed) (*Morinda citrifolia*)
  - ---Amylase
  - ---Maltase
  - ---Protease
  - ---Pepsin
  - ---Lipase
  - ---Lactase
  - ---Invertase
  - ---Cellulase
- Rhodiola Pro Blend (140mg):
  - ---Rhodiola Rosea extract (root)
  - ---Rhodiola Crenulata (root)
  - ---Maral extract (root) (*Rhaponticum cathamoides*)
- Fo-Ti Blast (60mg):
  - ---Fo Ti (root) (*Polygonum multiflora*)
- Ecko-Boost (55mg):
  - ---Ecktonia Cava (Sea grass)



## Restorative Formulas

This company has a variety of good adrenal formulas. They are organic, free of all allergens, use vegetarian capsules, and the herbs are high quality:

<http://www.drritamarie.com/go/Restorative>

**Register and give my number as referring doctor – 5123499677**

Here are some of their formulas:

### Stress Calm PX

- Ashwaganda
- Pulsatilla
- Catnip
- Lavender
- African snake root

### Sleep

- Valerian
- Hops
- Skullcap
- Passionflower
- Chamomile
- California poppy
- Melatonin

### Adaptogen

- Ashwaganda
- Eleuthero
- Astragalus
- Codonopsis
- Fo-Ti (he shou wu)
- Devil's club

### Adrenal PX Balance Capsules

- Vitamin C
- Eleuthero
- Hawthorne berry
- Alfalfa juice
- Sarsaparilla
- Rhodiola
- Holy Basil

### Adrenal PX Syrup

- Same as capsules except no Rhodiola

### Adrenal PX L-BP Capsule or Syrup

- Same as **Adrenal PX** with added licorice to support stage 3 with low blood pressure



## Dragon Herbs

This company makes many traditional Chinese medicine formulas. The products I have used from them are excellent: <http://www.drRitamarie.com/go/DragonHerbs>

## Goji and Schisandra Drops

- Goji Berries
- Schisandra Berries

## 8 Immortals Tincture

- Ginseng
- Reishi
- Rhodiola
- Cordyceps
- Schisandra
- Goji
- Snow lotus
- Polygonum

## Spring Dragon Drops

- Gynostemma
- Lyceum
- Astragalus
- Eleuthero
- Luo han
- Schizandra

## Ginseng Sublime

For all stage, during day, especially good at times of low cortisol.

- American Ginseng roots (cultivated)
- Chinese Red Ginseng roots
- Chinese White Ginseng roots
- Chinese and “North Korean Style” Chinese Red Ginseng roots

## American Ginseng

Best for Stage 2 and before times of low cortisol. Do not take in the evening. It is energizing, but not stimulating in general, although some people might find it too stimulating.

- American Ginseng (*Panax quinquefolium*)



## Fun Foods and Magical Elixirs for Adrenal Support: Recipe Guide

### Habits, Foods, and Herbs that Nourish Your Adrenals

#### Lifestyle Choices

- Avoid a high carbohydrate breakfast
- Avoid food allergens
- Avoid refined foods
- Chew your food thoroughly
- Drink plenty of pure water
- Eat an alkalizing diet
- Eat organic foods
- Eliminate caffeine, alcohol, sugar,
- Exercise
- Give your body an “oil change”
- Go gluten-free
- Keep blood sugars balanced
- Load up on fresh foods
- Load up on Vitamin C rich foods
- Tame your sweet tooth





## **Foods**

- Coconut
- Fresh fruits and vegetables
- Garlic and onions
- Green leafy vegetables
- Low-glycemic fruits
- Medicinal mushrooms: maitake, chaga, reishi, shitake, cordyceps
- Omega-3 rich foods: Hemp seeds, chia seeds, flax seeds, algae, and deep ocean fish
- Probiotic and prebiotic rich foods: Kefir, rejuvelac, sauerkraut, coconut yogurt, seed yogurt, Jerusalem artichoke, chicory
- Sea vegetables: kelp, bladderwrack, dulse, nori, and more
- Sunflower lecithin

## **Herbs and Spices**

- Ashwaganda
- Astragalus
- Chamomile
- Codonopsis
- Ginger
- Ginseng
- Ho Shou Wu
- Holy Basil (Tulsi)
- Hops
- Lemon Balm
- Licorice
- Maca
- Rhodiola
- Sarsaparilla
- Schizandra
- Turmeric

## **Nutrients**

- Chromium
- Essential Fatty Acids
- Magnesium
- Pantothenic Acid (Vitamin B-5)
- Phosphatidyl Serine
- Pyridoxal-5-Phosphate (Vitamin B-6)
- Trace Minerals
- Tyrosine
- Vitamin C
- Vitamin E



## Meal Planning

### Adrenal Nourishing Breakfast

- Start your day with greens: low carb, moderate protein and fat breakfast and an omega-3 fat source
  - Green smoothie
  - Green juice
  - Green powder
  - Protein powder
  - Chia pudding
  - Hemp milk shake
  - Dehydrated grain-free bread with flax/coconut butter
- Adrenal support herbal tea: licorice, ginseng, lemon balm -- No caffeine

### Adrenal Nourishing Lunch

- Large veggie salad with omega-3 rich salad dressing and seed toppings
- Green blender soups
- Cut up vegetables with dips made with healthy fats – coconut, avocado, omega-3 rich seeds, raw nuts (soaked and sprouted)
- Wraps using green leaves and nori/sea vegetable and filled with greens, sprouts, sauerkraut and topped with an omega-3 rich dressing or spread

### Adrenal Nourishing Dinner

- Veggie salad with omega-3 rich salad dressing and seed toppings
- Green blender soups
- Wraps using green leaves and nori/sea vegetable and filled with greens, sprouts, sauerkraut and topped with an omega-3 rich dressing or spread
- Steamed vegetables
- “Big Bowl” – filled with steamed and/or raw veggies and a blended vegetable sauce, made from the steam water, vegetables and a fat to thicken: chia seed, avocado, tahini, nut butter, coconut or raw nuts or seeds



## Adrenal Supporting Recipes

### Chia Gel

**Ingredients:**

- 1/2 cup chia seeds
- 2 1/2 cups water

**Directions:**

1. Put chia and water into a quart sized Mason jar or a glass bowl that can be covered.
2. Shake or mix well.
3. Allow to stand at room temperature for 8 hours or overnight or for 12 or more hours in the refrigerator. Store up to a week in the refrigerator.



## Chia Porridge

### Ingredients:

- 1/4 recipe *Chia Gel*
- 1/4 cup shredded unsweetened raw coconut
- 1 tablespoon pumpkin seeds
- 1 tablespoon hemp protein powder (or your favorite)
- 1 teaspoon spirulina
- 1/2 teaspoon cordyceps mushroom powder
- 1 tablespoon maca powder (**Healthforce Nutritionals Vanilla Maca** goes well)
- 1/2 dropper trace minerals (optional)
- 1/2 dropper zinc (optional)
- 4 drops flavored Stevia
- cinnamon essential oil

### Directions:

1. Put *Chia Gel* in a bowl.
2. Sprinkle in ground flax seeds and stir well.
3. Stir in remaining ingredients and stir well.
4. Check sweetness and add stevia if desired.



## Healing Elixir Base Recipe Guidelines

### Ingredients:

- **Liquid base:** 2 cups herbal tea, nut or seed milk, fresh juice or water
- **Fat source:** (Only if not made with nut milk as the liquid base) 2 tablespoons nut butter, 1/2 - 1 avocado (depending on size), *Chia Gel*, 1 handful of nuts (preferably soaked), 1/2 cup coconut meat, or 2 tablespoons coconut butter
- **Herbs:** a variety of powdered herbs, mushroom powders, and/or green powders – quantity varies depending on the herb from several teaspoons to several tablespoons
- **Flavorings:** a few drops of essential oils, a dropper full of flavor extracts, up to 2 teaspoons or more of carob powder, vanilla, or raw cacao powder
- **Sweetener (low-glycemic):** green leaf stevia or flavored stevia (chocolate, vanilla, English toffee, orange, raspberry), xylitol, or erythritol (**Zero**), or **Lakanto**.  
**Sweetener (high-glycemic):** higher glycemic sweeteners like dates, raisins, coconut nectar and raw honey are **only recommended if** you are not over weight, do not experience blood sugar imbalances, and are free of candida infections.
- **Salt:** a pinch of sea salt or sea kelp powder

### Directions

1. If you're using a tea base, boil water and allow herbs to steep 10 minutes or longer to get to full flavor and strength.
2. Put water, fat, herbs, flavorings, sweetener and salt in blender.
3. Blend until smooth, then adjust flavorings and sweeteners to taste.



## Energize Me Elixir

### Ingredients:

- 1 tea bag of **Spring Dragon Longevity Tea**
- 1 tea bag of **Organic India Tulsi Licorice Spice Tea\***
- 16 ounces purified water
- 4 large Brazil nuts
- 1 tablespoon pumpkin seeds
- 2 heaping teaspoons coconut powder
- 1/2 cup *Chia Gel*
- 1/2 teaspoon cordyceps mushroom powder
- 1 teaspoon ashwaganda powder
- 1/4 teaspoon rhodiola powder
- 1 heaping tablespoon schisandra berries
- 1/4 teaspoon Eleuthero aka Siberian ginseng
- 1 teaspoon **Healthforce Nutritionals Vanilla Maca**
- 2 heaping teaspoons cinnamon
- 1 pinch of sea salt
- 1 handful macadamia nuts
- 6 drops **Omica Organics Butterscotch Stevia** for sweetener
- 6 drops **dōTERRA Wild Orange** essential oil

### Directions:

1. Boil water and steep tea bags for 10-15 minutes.
2. Combine all ingredients in blender and blend until smooth.
3. Adjust sweetness and flavor with essential oils as desired.

**\*Important:** Be careful with licorice if you have high blood pressure.



## Adrenal and Immune Boosting Elixir

### Ingredients:

- 1 tea bag of **Spring Dragon Longevity Tea**
- 16 ounces purified water
- 4 large Brazil nuts
- 1 tablespoon raw organic walnuts
- 1 tablespoon hemp seeds
- 1 teaspoon chaga mushroom powder
- 1 teaspoon maca powder
- 1/2 teaspoon reishi mushroom powder
- 1/2 teaspoon cordyceps mushroom powder
- 1/4 teaspoon astragalus powder
- 1/2 teaspoon ashwaganda powder
- 2 tablespoons raw carob powder or raw cacao powder (or 1/2 and 1/2)
- 1 tablespoon **Artisana Coconut Butter** or 2 tablespoons dried coconut
- 1/4 teaspoon stevia green leaf powder, or 3-4 drops your choice flavored **Sweet Leaf Stevia**, or 1 teaspoon **Lakanto**

### Directions:

1. Boil water and steep tea bag for 10-15 minutes.
2. Combine all ingredients in blender and blend until smooth.
3. Adjust sweetness and flavor with essential oils as desired.



## Cashew Yogurt

### Ingredients:

- 1 cup water
- 1 heaping cup raw cashews
- 1 teaspoon probiotic powder

### Directions:

1. Blend the cashews and water in a high speed blender until smooth.
2. Add the probiotic powder and blend at low speed just until it is incorporated.
3. Pour mixture into a clean glass jar and just rest the lid on top to keep mixture clean but to allow air in.
4. Let mixture sit at room temperature in a warm location for 24 hours.
5. Close lid and refrigerate.



## Arame Konjac Noodles with Energy Recharge Sauce

### Ingredients:

- 1 cup arame
- 2 packages of konjac noodles (these have calcium)
- soak water – enough to cover arame twice

### Sauce Ingredients:

- 2 tablespoons almond butter (you can make it with tahini, cashew butter, coconut butter, etc.)
- 1 lemon, juice of
- 1/2 - 3/4 cup of the arame soak water (it's full of minerals)
- 1 pinch of sea salt
- 1/2 teaspoon kelp powder
- 1 tablespoon protein powder
- 1 tablespoon shitake mushroom powder
- 1/4 teaspoon cordyceps mushroom powder
- 1 tablespoon maca powder (plain, unflavored)
- 1 tablespoon Thai seasoning
- 1/2 teaspoon **Thai Kitchen Green Curry Paste** (available at most supermarkets)
- 1/2-inch piece of ginger

### Directions:

1. Soak arame in a large bowl in enough water to cover it twice for 15 minutes.
2. Drain arame, retaining the water.
3. Rinse and drain the konjac noodles (discard the rinse water).
4. Mix konjac noodles and arame in a large bowl.
5. Make sauce.
6. Pour sauce over arame and noodles and stir.

**Personal Note:** You can also add extra veggies if desired, i.e. red peppers, green onions, shredded carrots, etc.



## **Adrenal Energizing Candy – General Guidelines**

### **Ingredients:**

- 2 heaping tablespoons nut butter
- 1 scoop protein powder
- 1 tablespoon green powder
- 2-3 teaspoons of a variety of herbs and medicinal mushroom powders
- 2 tablespoons coconut oil
- 1 teaspoon flavor extract (vanilla, almond, etc.)
- 2 tablespoons finely shredded coconut
- 4 drops essential oil, or to taste (cinnamon, peppermint, lemon, orange, etc.)
- Low-glycemic sweetener: stevia drops or powder, erythritol, lo han
- 2 tablespoons finely shredded coconut (optional)

### **Directions:**

1. Put all ingredients except coconut oil in a bowl and stir until well combined.
2. Add coconut oil and stir until smooth.
3. Add shredded coconut and stir well (if desired).
4. Add stevia or other sweetener if desired for extra sweetness.
5. Spoon into candy molds or ice cube trays or spread into a baking dish lined with wax paper.
6. Freeze until solid, about half an hour.



## Adrenal Tonic Chocolate Mints

### Ingredients:

- 2 tablespoons almond butter
- 1 scoop of protein powder
- 1 tablespoon green powder
- 1 teaspoon ashwaganda
- 1 teaspoon cordyceps mushroom powder
- 2 teaspoons chaga mushroom powder
- 1 tablespoon coconut oil
- 1 teaspoon almond extract
- 2 tablespoons finely shredded coconut
- 4 drops peppermint oil

### Directions:

1. Put all ingredients in a bowl and stir until well combined.
2. Add stevia if desired for extra sweetness. I found it to be fine without stevia.
3. Spoon into candy molds or ice cube trays or spread into a baking dish lined with wax paper.
4. Freeze until solid, about half an hour.



## Adrenal Support Chocolate Mints

### Ingredients:

- 3 - 4 tablespoons almond butter
- 1 teaspoon cordyceps mushroom powder
- 2 teaspoons maca powder
- 1 teaspoon astragalus powder
- 1/4 teaspoon licorice root
- 1 heaping teaspoon HealthForce Nutritionals Elite Green Protein Cool Green
- 1 teaspoon HealthForce Nutritionals Warrior Core Foundation
- 1 pinch of salt
- 2 tablespoons coconut oil
- 1 pinch of Ultimate Superfoods Raw Shilajit Powder
- 2 teaspoons carob powder
- 1 teaspoon cacao powder
- 6 drops liquid chocolate stevia
- 4 drops peppermint essential oil

### Directions:

1. Put all ingredients in a bowl and stir until well combined.
2. Spoon into candy molds or ice cube trays or spread into a baking dish lined with wax paper.
3. Freeze until solid, about half an hour.

**Personal Note:** If you are a hyper adrenal person, it's probably not a great idea to use too much chocolate because it's going to make you more hyper. If you tend to have sluggish adrenals, a little bit of chocolate is not going to hurt you. It will give you a little bit of a boost, but don't get addicted to it. You can switch off a coffee addiction to a chocolate addiction. That's still a stress on your adrenals. It's better to use carob and chocolate extract or chocolate stevia. Then you get the chocolate flavor without the stimulating effects. You could put a little bit of chocolate because it's a great source of magnesium.

Astragalus is really supportive to your immune system! It is a bit bitter, so use according to taste.



## About Dr. Ritamarie Loscalzo, MS, DC, CCN, DACBN



**Dr. Ritamarie Loscalzo,**  
MS, DC, CCN, DACBN

Dr. Ritamarie Loscalzo is passionately committed to transforming our current broken disease-care system into a true health care system where each and every practitioner is skilled at finding the root cause of health challenges and using ancient healing wisdom married with modern scientific research to restore balance.

As the founder of the ***Institute of Nutritional Endocrinology***, Dr. Ritamarie specializes in using the wisdom of nature to restore balance to hormones with a special emphasis on thyroid, adrenal, and insulin imbalances. Her practitioner training programs empower health and nutrition practitioners to get to the root cause of health issues by using functional assessments and natural therapeutics to balance the endocrine system, the master controller.

Dr. Ritamarie is a licensed Doctor of Chiropractic with Certifications in Acupuncture, Nutrition, Herbal Medicine, and HeartMath®. She's also a certified living foods chef, instructor, and coach, and she has trained and certified hundreds of others in the art of using palate-pleasing, whole fresh food as medicine.

A best-selling author, speaker, and internationally recognized nutrition and women's health authority with 30 years of clinical experience, Dr. Ritamarie offers online courses, long-distance coaching and counseling, and deeply empowering and informative live events.