Immune

FOUNDATIONS

In-Practice Guide

How to Successfully Implement the Immune Foundations Program in Your Practice

FIRST APPOINTMENT

Before you meet in the exam room:

Step 1: During the first appointment, the patient completes the **Immune Foundations Questionnaire** before you meet

In the exam room:

Step 2: While the patient is waiting to see you, the patient watches the Immune Foundations Patient Education Video as an introduction into how lifestyle impacts immune health

Step 3:

Using the Presentation Pads, discuss the gut-immune connection and the importance of dietary changes to address intestinal permeability. Also review the symptoms associated with immune dysfunction.

Review the questionnaire and determine the area most involved.

Begin the patient on 30-day dietary reset appropriate for their condition and begin comprehensive formulation to address intestinal permeability, inflammation, and mitochondrial function.

At checkout:

Step 4: Patient receives the Immune Foundations Patient Handbook. Instruct the patient to read the first 11 pages and the section corresponding to their largest component. The patient should implement the applicable lifestyle and nutritional recommendations and bring questions to the next appointment.

Step 5: The patient goes home with a stool test kit to assess GI function and/or a urine analysis to assess oxidative stress, as indicated. Schedule follow-up visit to increase compliance.

FOLLOW-UP VISIT (3-4 WEEKS)

In the exam room:

Step 6:

Review steps patient has taken to improve nutrition and implement lifestyle change along with any questions the patient has on integrating these steps based on information read in the patient handbook.

Review test results along with patient history to identify the patient's specific dietary needs and supplement protocols.

Although the nutritional supplementation protocol will likely improve patient symptomatology, it is important to set patient expectations by reinforcing that if no lifestyle change is implemented, improvement in immune dysfunction will be hindered.

At checkout:

Provide clear recommendations on length of each therapy.

Schedule follow-up based on patient's need for coaching and accountability.

FOLLOW-UP VISIT

Step 7: Within 4-6 months of implementing the initial protocol, the patient should be offered retesting, provided there has been some symptom change, as well as lifestyle change. During that time, schedule a group medical appointment in the **Essentials of Immune Health Group Visit** to follow up on 10-16 patients in a 90-minute block. Prescribe this as a required follow-up. Reinforcing the proper changes is crucial to improvement upon retesting. Consider waiting to retest until these steps have been properly implemented by the patient.

Initial In-Office Visit

STEP 1

Patient completes the Immune Foundations Questionnaire to highlight initial steps for treatment.

STEP 2

A. Clinician uses Immune Development Timeline, Mitochondrial and Gut-Immune Health presentation pads to illustrate factors affecting immune function throughout the lifecycle.

B. Clinician and patient review the questionnaire to identify key area(s) of focus to initiate treatment:

Immune FOUNDATIONS

Patient Name: _____

Date: _____

Questionnaire

Understanding key contributors to immune health will help identify the best course of action for recovery of immune function. After reviewing this questionnaire with your health care provider, please refer to the Immune Foundations Patient Handbook for dietary, lifestyle and nutrient therapy recommendations.

Please list your top 3 major health concerns in order of importance:

1. _____
2. _____
3. _____

Overall Immune & Inflammatory Balance

- Do you tend to catch cold easily or recover slowly from illness? Y N
- Have you been diagnosed with a recent or chronic infection (such as Lyme disease, Epstein-Barr, Candidiasis, herpes simplex)? Y N
- Do you suffer from chronic fatigue, chronic pain, fibromyalgia or migraine headaches? Y N
- Do you have unexplained rashes, redness or itching? Y N

Diet & Lifestyle

- Do you eat at least five servings of fruits and vegetables per day? Y N
- Do you regularly eat at restaurants or consume prepared foods from the grocery store? Y N
- Do you exercise at least five days per week? Y N
- Do you have any known allergies or sensitivities to foods or medications? Y N

Gastrointestinal Health

- Do you regularly have less than one or more than three bowel movements per day? Y N
- Do you experience frequent heartburn, burping, gas or bloating? Y N
- Have you used antibiotic medications within the past two years? Y N
- Do you consume alcohol, antacids or anti-inflammatory/pain killer drugs regularly? Y N

Stress

- Do you feel less able to handle stress or experience more stress now than in the past? Y N
- Do you experience mental fogginess or have trouble concentrating? Y N
- Do you have trouble falling or staying asleep? Y N
- Do you wake feeling unrested or depend on caffeine to keep yourself going throughout the day? Y N

Environmental & Toxic Exposures

- Do you have regular exposure to exhaust fumes, tobacco smoke, pesticides, commercial chemicals, paint, cleaning chemicals or volatile fumes? Y N
- Have you lived in a house or worked in an office environment with a history of water damage or known mold? Y N
- Are you sensitive to smells or fragrances? Y N
- Do you have seasonal allergies, asthma or an autoimmune disease? Y N

Testing: Nutrient status; mitochondrial function/organic acids; thyroid panel or other diagnostic tests as needed

Diet & Supplementation: Whole-foods diet; broad-spectrum support such as beta-glucans, fish oil, and vitamin D as needed

Testing: Nutrient status; food sensitivities

Diet & Supplementation: Elimination diet; foundation nutrition such as fish oil, probiotics, broad-spectrum multi-vitamin and vitamin D as needed

Testing: Comprehensive stool analysis; lactulose/mannitol assay; breath hydrogen

Diet & Supplementation: Low FODMAP or whole-foods diet; probiotics, colostrum/immunoglobulin concentrate, L-glutamine

Testing: 4-Point cortisol rhythm and DHEA; complete hormone panel

Diet & Supplementation: Address blood sugar regulation; utilize adaptogenic herbs or botanical sleep aids as needed

Testing: Heavy metals; toxic element exposure

Diet & Supplementation: 7+ day detoxification program; buffered vitamin C, immunoglobulin therapy (serum-derived or colostrum); upregulate mitochondrial function with essential micronutrients and antioxidant aids, such as glutathione, as needed

STEP 3

A. Patient receives the Immune Foundations Patient Handbook to review prior to the next visit.

B. Patient is supplied with any necessary testing kits, initial immune support supplements, and is encouraged to initiate positive lifestyle changes.

Immune Foundations Patient Education Video

The Immune Foundations patient education video can be used as an outreach tool for both new and existing patients. This video can be utilized to introduce key concepts to new patients or as a follow-up to the first visit to review important discussion points.

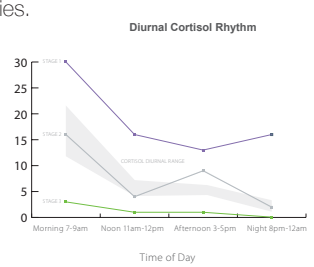
Follow-Up Visit (2–3 Weeks)

STEP 4

Review pertinent test results and diagnosis.
Initiate targeted therapies based on results.

Examples:

- Nutrient evaluation reveals low essential fatty acid and antioxidant status. Recommend targeted nutrient therapies and dietary modification to correct deficiencies.
- Stool analysis reveals dysbiosis and symptoms are suggestive of leaky gut. Initiate microbial balancing and gut healing protocol with an elimination or other therapeutic diet.
- 4-Point cortisol rhythm reveals hypo-cortisol pattern. Initiate hormone balancing protocol with sleep hygiene and stress reduction practices.



STEP 5

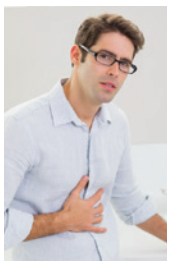
At this time, enroll patients in the
Essentials for Immune Health Group Visit.
SEE THE FOLLOWING PAGE FOR MORE DETAILS

Follow-Up Visit (12+ Weeks)

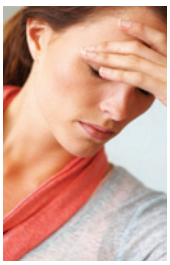
STEP 6

In 3-4 months, clinician can assess the patient to track progress and adjust treatment plan as necessary. Treatment focus may transition to another foundational area of immune health at this time.


Diet & Lifestyle


Gastrointestinal Health


Toxins & Environment


Stress Management

GVT GROUP VISIT TOOLKIT
BUILDING HEALTHIER PRACTICES +

TRANSFORMING MEDICINE WITH GROUP VISITS

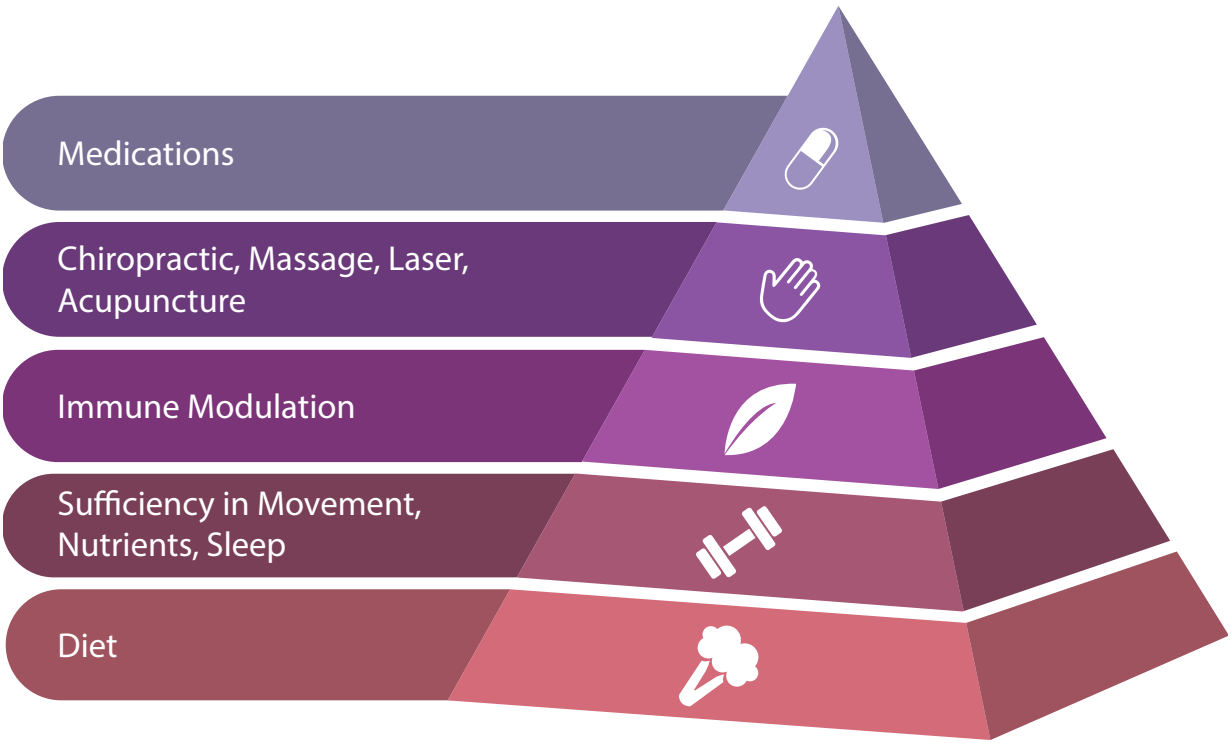
During the initial phase of care, implementing lasting lifestyle changes is essential for improvement of patient health outcomes. Group Visits are a great way to reinforce healthy lifestyle habits and keep patients motivated and accountable prior to one-on-one reassessments. In addition, Group Visits are an effective tool to create better practice efficiencies both financially and clinically. We recommend using the *Essentials for Immune Health* Group Visit Toolkit. You can find this and other Group Visit Toolkit resources at **TheLifestyleMatrix.com**

Lifestyle Matrix
RESOURCE CENTER

LifestyleMatrix.com

Treatment Priorities

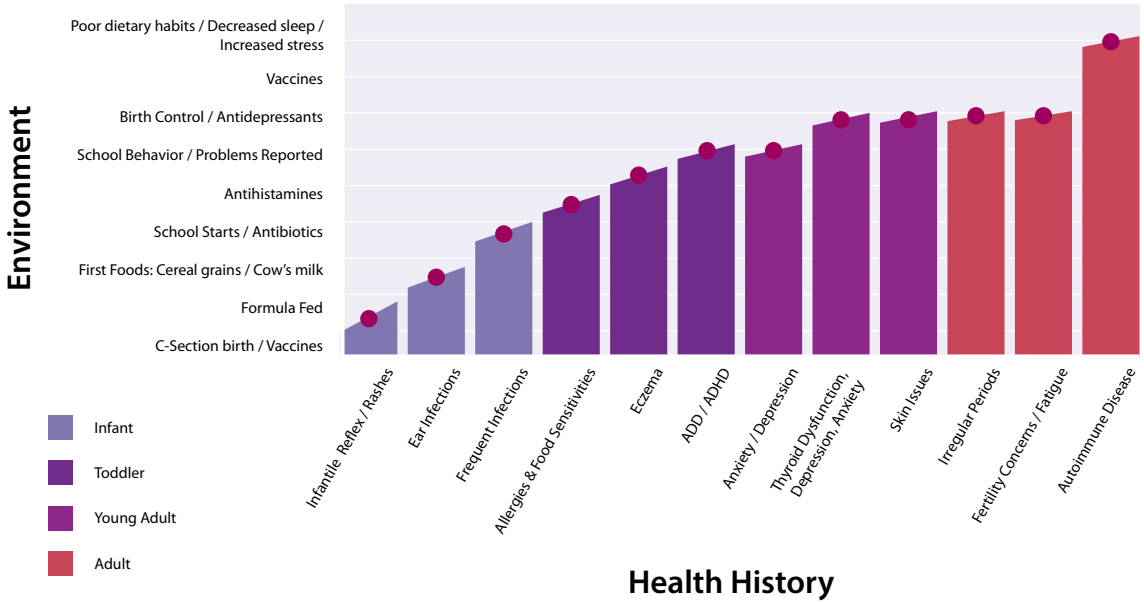
When approaching chronic immune challenges, even with the most complex treatment strategies, dietary considerations are extremely important. Once dietary considerations are addressed, patients should focus on creating sufficiency in areas such as exercise, sleep, and supportive nutrient supplementation. Immune modulation through therapies such as herbal compounds and targeted nutrients is an effective, less-invasive modality to work with the immune system. Therapies such as chiropractic care, acupuncture, and massage can be immensely beneficial due to the connection between the nervous system and the immune system, known as neuroimmunology. After all these therapies are considered, medications can be considered on a basis of need. Medications can be beneficial in some cases and an integral part of the overall treatment plan. However, they should be the tip of the iceberg when considering therapeutic options. Many patients can create a healthy internal environment without introducing synthetic chemicals that may have long-term effects on the immune system.



When using the case studies in practice, it is worth noting that there are similarities and trends in every chronic immune patient. Since many chronic immune diseases such as autoimmune conditions, chronic fatigue-centered syndromes, and allergenic responses have the same prior mechanisms of gut damage, mitochondrial decline, and inappropriate immune system activation, many of the protocols to address and treat these patients have similarities. Therefore, below is a great template for the patterns you will see within the diagnosis, testing, and symptoms of these cases, and the top nutraceutical recommendations to correct them. These recommendations will become very familiar if you focus on chronic immune dysfunction in practice, and they are safe, effective and critical to correcting the underlying factors contributing to immune system dysfunction.

Common Patterns and Protocols for All Autoimmune Patients

Many chronic immune patients seen in practice will have a similar story that starts with birth. It is very common to hear these patients were born via Cesarean section and breastfed for only a short time until they were transitioned to formula. Often, that formula-fed infant will experience reflux and rashes. These same children will then experience ear infections and go through much antibiotic use. A few years later, eczema presents and possibly allergies. These allergies are treated with antihistamines and infections addressed with more antibiotics. These same children often get diagnoses with ADD/ADHD which transitions to anxiety/depression in young adulthood. As young adults, these patients may experience skin issues or, for females, irregular menstruation. That is often addressed with oral contraceptives. In adulthood, fertility issues and fatigue can ensue. During pregnancy, women are vaccinated to protect them from immunosuppression and upon having the baby, thyroid dysfunction occurs accompanied by anxiety and depression. The women are treated with antidepressants and after a decade of poor lifestyle habits due to raising children, an autoimmune disease develops in middle age.



If these patient patterns can be stopped, addressed, and successfully reversed in infancy or childhood, these patients could avoid years of conditions such as indigestion, allergies, mood disturbance, and emotional fertility battles. This timeline of immune development has a few things that often go unaddressed and one is intestinal permeability. Intestinal permeability and dysbiosis are the first reasons patients start to get rashes, ear infections, eczema, etc. As hormones begin to have influence, we start to see the mental components, skin issues, and menstruation challenges. After years with the presence of intestinal permeability, dysbiosis, and medications to treat the symptoms, there is a depletion of metabolic reserve and mitochondrial health begins to decline. This shows up in the fertility and fatigue issues later in life. With a few more hormonal surges and years of more medications, stress, and lack of sleep, there is often a trigger of some sort to start the autoimmune cascade. This trigger can be a stressful event such as divorce, birth, family loss, a medication introduction, or an infection.

Not all aspects of the story will be similar and not every component is required to be present with chronic immune patients, but there will likely be a common thread. Wherever these patients present on the timeline when they arrive in the office, there are four things that need addressed:

- Intestinal permeability and dysbiosis
- Mitochondrial health and metabolic reserve
- Inflammation
- Poor lifestyle habits

FOUNDATIONAL NUTRIENT SUPPORT FOR AUTOIMMUNITY

Intestinal Permeability and Dysbiosis

Nutrient	Dosing	Mechanism of Action
Multi-strain probiotics	100 billion CFU/day for 30-90 days	• Maintains healthy gut flora, immune function
L-glutamine	4g/day for 30-90 days	• An amino acid used as a primary fuel source for enterocytes to maintain the gut barrier
IgG	SBI - 2g/day for 60 days Colostrum - 2g/day for 30 days	• Binds and eliminates pathogens • Contains growth factors that rebuild and repair the intestinal lining

Mitochondrial Health and Metabolic Reserve

Nutrient	Dosing	Mechanism of Action
N-acetyl cysteine	600 mg/day	• Increases the production of glutathione • Acts as an antioxidant • Activates T cells
Alpha lipoic acid	200 mg/day	• Recharges other antioxidants • Plays a role in detoxification • Minimizes oxidative damage
Acetyl L-carnitine	500 mg/day	• Supports the reproduction of lymphocytes • Increase flow of free fatty acids to fuel mitochondria
Multivitamin	As recommended	• Provides nutrient sufficiency for appropriate cellular function
Vitamin D	10,000 IU/day until levels reach 40-70 ng/mL	• Tightens gap junctions in the intestinal lining, which creates a strong GI barrier that protects the body • Higher blood levels of vitamin D have been shown to enhance immune function and soothe tissues of the GI tract

Inflammation

Nutrient	Dosing	Mechanism of Action
Omega-3 fatty acids	3-5 g/day	• Reduces inflammation • Has been extensively researched in rheumatoid arthritis
Turmeric (45-55% Curcuminoids, 3-8% Volatile Oil, 2-6% Turmerin Protein)	1 g/day	• Maintain normal inflammatory balance • Support microbiome diversity

Autoimmune Endocrine Profile:

- High TSH
- High TPO antibodies
- Recent pregnancy
- Persistent hypothyroid despite medication

Hashimoto's Thyroiditis

PATIENT SYMPTOMS

39-year-old female with weight loss resistance, dry skin and hair, constipation, cold intolerance. The patient is a working mother of two. She noticed difficulty losing weight after her second pregnancy and figured it was due to lack of time for exercise. She began working out at the local gym regularly and lost 5 to10 lbs in the past month, but has not lost any since. She began a healthier diet focusing on whole grains, vegetables, and less meat. Her mother has a history of thyroid dysfunction.

First Office Visit

The patient is placed on a Paleo diet with balanced macronutrients. She is scheduled for a full thyroid panel including antibodies. She is instructed to read the diet and lifestyle chapter in the **Immune Foundations Patient Handbook**.

Second Office Visit (2 weeks later)

The patient has been implementing dietary changes. When going over the patient test results, the patient learns about the presence of autoimmunity indicated by elevated TPO antibodies, and the importance of gastrointestinal health. She is instructed to read Chapters 3-5 in the **Immune Foundations Patient Handbook** to learn the importance of barrier function, stress management, and how environmental toxins can impair endocrine function. She receives the nutrient support necessary to heal intestinal permeability and support thyroid function.

Test Results	Abnormal in Bold	Units	Normal Range
TSH	7.25	µIU/ML	0.4-4.0
Free T4	0.7	µIU/ML	0.8-1.9
Free T3	1.9	PG/ML	1.8-4.2
Reverse T3	20.0	NG/ML	14.9-26.1
Anti-Thyroperoxidase (TPO) antibodies	251.0	IU/ML	<34
Anti-Thyroglobulin antibodies	14.0	IU/ML	<40

NUTRIENT SUPPORT FOR HASHIMOTO'S THYROIDITIS

Nutrient	Dosing	Mechanism of Action
L-glutamine	4 g/day for 30-90 days	• An amino acid used as a primary fuel source for enterocytes to maintain the gut barrier
IgG	**SBI** 2 g/day for 60 days **Colostrum** 2 g/day for 30 days	• Binds and eliminates pathogens • Contains growth factors that rebuild and repair the intestinal lining
Multi-strain probiotics	100 billion CFU/day for 30-90 days	• Maintains healthy gut flora, immune function
Omega-3 fatty acids	3-5 g/day for 6 months	• Decreases inflammation
Vitamin D	5,000-10,000 IU/day until levels reach 40-70 ng/mL	• Tightens gap junctions in the intestinal lining, which creates a strong GI barrier that protects the body • Higher blood levels of vitamin D have been shown to enhance immune function and soothe tissues of the GI tract
Selenium	100-600 mcg/day	• Required cofactor for the iodothyronine deiodinases that convert T4 to T3 • Required cofactor for the enzyme glutathione peroxidase; selenium-activated • Glutathione peroxidase in the thyrocyte protects the thyroid by protecting the gland from H2O2 • Helps modify inflammatory and immune responses which is crucial for reducing TPO antibodies in patients with autoimmune thyroiditis
Iodine	300-1,000 mcg/day	• Required for the formation of the thyroid hormones T4 and T3
Homework	• Read Chapters 3-5 in the Immune Foundations Patient Handbook • Focus on 8 hours of nightly sleep, perform low intensity exercise 5 days a week • Schedule Immune Foundations Group Visit within the next 30-45 days	
Dietary Recommendations	• Paleo Diet with balanced macronutrient profiles	

Follow-Up (90 days after prior visit)

The patient should retest thyroid panels to see trends of antibody production and can discontinue intestinal permeability protocol. The patient will continue to administer thyroid support, 22 billion CFU/day probiotics, omega-3 fatty acids, and vitamin D supplementation.

DISCUSSION

Hashimoto's thyroiditis is a common autoimmune presentation that reflects decreased function in thyroid output. In these patients, it is not sufficient to support thyroid hormone alone. To address the underlying reason thyroid function is suffering, the immune response of auto-antibody production needs to be halted. These patients may need some thyroid support, but they will also need intestinal integrity addressed in addition to inflammation levels. The results above show the typical lab presentation of Hashimoto's. In this lab presentation, TPO is elevated, but it is worth noting that clinicians must test both TPO and Thyroglobulin Ab. Often, a patient will have elevation in one and not the other; testing just one may miss this important finding. When considering dietary patterns in these patients, clinicians should not favor extremely low carbohydrate options because there is a necessity for adequate carbohydrates for the conversion from T4 to T3.

Appendix J

Sample Immune Foundations In-Practice Revenue Generation Model

The following tables provide a general model for revenue generation based on each patient that is run through the Immune Foundations Program for six months. This includes a first and second office visit, baseline and follow up stool testing, a group visit, as well as a six-month supply of supplements for chronic immune dysfunction. The revenue generation models below include an insurance-based model and a cash practice model. The indications for administering a test kit include fatigue, infection, food sensitivities, autoimmune diagnosis, or digestive complaints.

INSURANCE-BASED REVENUE GENERATION MODEL

First office visit	$150	$220 bill sent to insurance for new patient E&M code #99203 or established patient code #99214 billed on time, with roughly 70% gross collection
Approximate initial supplement sales profit	$155	Products may include but not limited to: EFAs, Vitamin D, intestinal healing protocol, mitochondrial support
Baseline testing	variable	Baseline testing assumes a CBC, blood chemistry, and A1C are already performed. Therefore, "baseline" refers to hsCRP, Vitamin D, ANA with reflex, IgE total, and thyroid function including TSH, free T3, and free T4.
Second office visit	$150	$220 bill sent to insurance for E&M code #99214 billed on time with roughly 70% gross collection
Group Visit	$60	Bill a level 3, 99213 CPT code. Billing is based on complexity, not time in a Group Visit. See figure for additional information regarding Group Visits
Supplement sales profit for 5-month refills	$775	Products may include but not limited to: EFAs, Vitamin D, intestinal healing protocol, mitochondrial support
Testing	variable	See decision tree and testing chart
Total profit from 6-month Immune Foundations Program per patient	$1,290 (w/o testing profits)	

Based on the insurance model, if, each week, the practice has one patient starting and adhering to a six-month Immune Foundations Program, the total revenue generated will be in $67,080 in 12 months.

CASH-BASED REVENUE GENERATION MODEL

First office visit	$220	Based on 30-minute office visit
Group Visit	$75	
Approximate initial supplement sales profit	$155	Products may include but not limited to: EFAs, Vitamin D, intestinal healing protocol, mitochondrial support
Baseline testing	variable	Baseline testing assumes a CBC, blood chemistry, and A1C are already performed. Therefore, "baseline" refers to hsCRP, Vitamin D, ANA with reflex, IgE total, and thyroid function including TSH, free T3, and free T4.
Supplement sales profit for 5-month refills	$775	Products may include but not limited to: EFAs, Vitamin D, intestinal healing protocol, mitochondrial support
Second office visit	$220	Based on 30-minute office visit
Testing	variable	See decision tree and testing chart
Total profit from 6-month Immune Foundations Program per patient	$1,445 (w/o testing profits)	

Based on the cash model, if, each week, the practice has one patient starting and adhering to a six-month Immune Foundations Program, the total revenue generated will be in $75,140 in 12 months.

Decision Tier	Test	
1	Baseline testing	These test options will vary based where a patient enters the Testing/Treatment Decision Tree (page 15)
2	Stool analysis	
2	Oxidative stress	
3	IgG/IgE	
3	Environmental toxins	
3	Cortisol/Hormones	

**Baseline testing assumes a CBC, blood chemistry, and A1C are already performed. Therefore, "baseline" refers to hsCRP, Vitamin D, ANA with reflex, IgE total, and thyroid function including TSH, free T3, and free T4.*

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