

## Introduction Module Application Guide

### Clinical Context

Your work with patients should be viewed as a series of cycles. You have an initial impression of the case. You choose targets to influence. You give the patient instructions for how to address those targets, typically with a combination of nutritional supplements, dietary changes, attention to stress, sleep, digestion, etc. They return with observations that help you understand the case better, modify/redeploy the plan in the next cycle. Every cycle is diagnostic. As many as possible are therapeutic. So, where do you typically start? At this first level, you want to focus on core factors that are most often involved in cases where autoimmunity, inflammation, fatigue, and other factors common in functional medicine practice are in play. In later Application Guides, we'll talk about more complicated considerations. But you'll see that as the material gets more advanced, the work still hinges on some core factors that almost always need skilled attention. And attending to the core factors is often enough to turn the tide of the case. Here are the steps. It's important to apply them in order, so that the immunological changes can go on in layers. The reasons are discussed in the videos.

#### **Step 1: Attend to T cell polarization issues. (Blue circles on the Road Map below)**

**Start by installing this step. After two weeks, keep this layer installed and install Step 2.**

Normalizing T cell polarization also addresses downstream effects. As you increase Th1 response, for example, you're also activating natural killer (NK) cells, M1 macs, and cytotoxic T lymphocytes (CTL's). This reduces viral burden, reducing the inflammatory effect of high viral burden. Th1 and NK cells make interferon gamma, which inhibits Th17 response, so support for adequate Th1 response tends to quiet Th17-mediated autoimmunity. For each factor you introduce, there are the effects you have in mind and there are additional useful effects that go to the patient's advantage.

#### Supplements to Consider:

**Th1 Support** (Pure Encapsulations) – 2 breakfast, 2 lunch. Support for adequate Th1 response.

Note: Because berberine increases AMPK, it can give the patient more energy. That's useful, but also means taking it late in the day might be something to avoid in some patients.

**Th2 Modulator** (Pure) – 2 BID. To downregulate excessive Th2 response.

**Innate Immune Support** (Pure) – 1 or 2 BID. Upregulate natural killer cell function as part of Th1.

If the patient has more significant Th2 dominance (asthma, atopy, dysbiosis, MCAS, etc.), consider:

**Perilla Extract** (Pure) – 2 or 3 BID. To downregulate IL-4, the cytokine driver of Th2 response.

**Step 2: Address the inflammation / autoimmunity co-activation, by addressing the NFkB-STAT3 Axis (Red circles on the Map)**

*Keep Step 1 installed.* Add this step. After two weeks with this step in place, keep this layer installed and install Step 3.

You change tissue inflammatory chemistry via additions and subtractions. The subtractions are inflammatory factors in diet and all the other things we talk about in the functional medicine inventory that can drive inflammation. These are the orange rectangles on the Road Map below. The core additions are the following:

**Supplements to Consider:**

**Balanced Immune** (Pure Encapsulations) – 2 or 3 BID. Note that, early in the process, doses may need to be higher, to adequately downregulate more significant inflammation. Once the level of inflammation is diminished, a lower dose may be adequate.

**EPA/DHA Essentials** (Pure) – 2 BID. In some patients, a higher dose on the order of four grams of fish oil taken for three months before reducing to 2 BID may be suitable. If CNS inflammation is of particular concern, a fish oil supplement emphasizing DHA, such as **DHA Ultimate**, may be suitable. It can take three months for this to shift the patient's biology enough to yield a change in symptoms. Don't expect a person to say they felt better in a week.

**Vitamin D** – Dose should be tailored to blood level of 25-hydroxy vitamin D, with the goal of bringing the blood level to the top quintile of the normal range without going out the top of the range. This means you need to test blood levels every month or two, until you've identified the steady dose that yields a steady blood level. This typically involves the patient taking 5,000 iu or in some cases 10,000 iu of D per day. Note that the difference between "just below the top of the range" versus "just above the top of the range" is not equal to "normal" versus "toxic." In other words, if the person goes slightly above the top of the range, do not imagine that they have vitamin D toxicity. Simply tell them to skip taking D for a week, then in an ongoing way, skip taking vitamin D on the weekends, so their blood level nudges down below the top of the range.

**Vitamin A and/or E** may also be useful here, again with the dose tailored to blood level.

Addressing inflammation can include, often most importantly, the other red circles on the map – dysbiosis, autoimmunity, and stress. You're already taking an important step in addressing autoimmunity by balancing T cell polarization in Step 1, so you're ahead of the game. In Step 3, we'll talk about dysbiosis and stress.

### **Step 3: Individualization**

*With Steps 1 & 2 installed, add this step.* Once this step is installed, you've got the core first part of the process in play. Now you can have the patient run with the ball for a month or two and report back with their observations. At that point, you'll apply your clinical skill and expertise to understand their feedback, modify the program by escalating doses of some supplements and perhaps scaling others back, and working to identify parts of your instructions that the patient may not yet have fully engaged, such as incomplete avoidance of problematic foods.

Supplements to consider, depending upon the particulars of the case:

Stress:

**Phyto-ADR** (Pure) – 2 at breakfast. If necessary, 2 at lunch as well. For the modulation of stress chemistry. It's often not useful to tell the patient that they should have less stress. Patients are often already doing all they can in that regard with yoga, mindfulness, etc. But it can be useful to explain that, for however much stress you have, the body can be helped to make less stress chemistry.

Dysbiosis:

*Use whatever approach to addressing dysbiosis you've found to be useful. In addition:*

**Epi-Integrity** (Pure) – 1 or 2 scoops BID. GI inflammation drives Th2 polarization. Epi-Integrity contains glutamine to repair GI epithelial gap junctions so the gut is not leaky, arabinogalactan that functions as a fiber source and also supports natural killer cell function, and perilla and astragalus to downregulate Th2.

**Hist Reset** (Pure) – 2 BID. In many patients, GI epithelial inflammation drives enough mast cell degranulation to yield significant release of histamine and mast cell mitochondrial DNA fragments (mtDNA's) that are themselves inflammatory. Inhibiting mast cell histamine release can be important in these patients.

Low WBC count:

**Coriolus Versicolor** (Pure) – 2 BID.

Increased viral burden or tendency to get sick easily:

Increased doses of **Th1 Support, Innate Immune Support, Vitamin C**. If the patient has persistent Th2 dominance, it may be useful to focus on support for epithelial repair (**Epi-Integrity**), reduction of stress, and especially downregulation of IL-4 (**Perilla Extract**).

Histamine / Mast Cell Issues:

**Hist Reset** (Pure) – 2 or 3 BID. Downregulate mast cell histamine release, support histamine clearance, and degrade inflammatory mtDNA's released by mast cells.

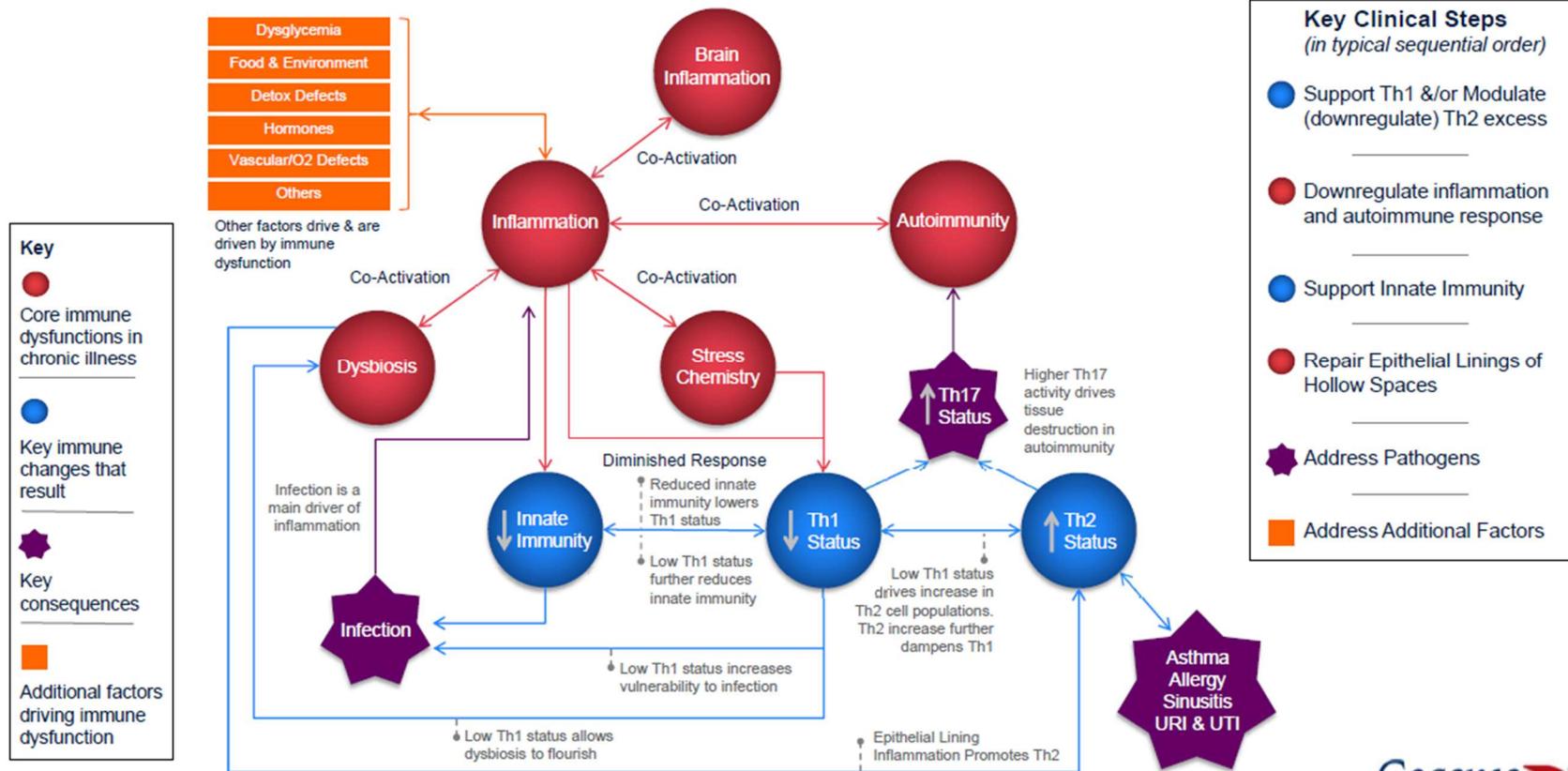
Brain Fog / Fatigue:

**Brain Reset** (Pure) – 2 or 3 BID, up to 3 TID if needed. Improve CNS circulation, support neurotransmitter production, support neuronal repair.

**Hist Reset** (Pure) – 2 or 3 BID, up to 3 TID if needed. Downregulate CNS mast cell activity.

**Energy Xtra** (Pure) – 1 or 2 at breakfast and/or lunch, as needed.

## Identifying the Primary Drivers of Chronic Illness



© Cogence, LLC, 2022. All rights reserved.

As with everything you learn in Cogence Immunology, your use of this information should be guided by your expertise, in the context of your training and your license to practice. These approaches are in addition to, rather than instead of, conventional approaches to care. Interactions between supplements and medications, as well as the effect of patient improvement on their responses to current doses of medications, need to be considered by the clinician. Cogence, LLC member terms of use apply to this document.