

Histamine Protocol

Histamine-mediated issues such as allergies, atopy, histamine intolerance (HIT), and mast cell activation are on the rise. The array of symptoms and degree of discomfort these patients experience can leave you scratching your head. But a basic understanding of histamine sources and metabolism will equip you with the resources to make a difference.

When managing histamine, there are a number of factors to be addressed:

Reduce histamine load

- Identify and remove allergens
- Reduce dietary consumption of histamine
- Address microbial dysbiosis and restore optimal balance

Support histamine processing

- Targeted nutrient support for enzymatic function (Two major pathways metabolize most [>97%] of the synthesized histamine, histamine-N-methyltransferase [50 to 80%] and diamine oxidase)
- Supplemental Diamine Oxidase (DAO) until the gut is healed

Utilization of histamine and mast cell stabilizing botanicals

Traditional functional approaches include nutrients such as antioxidants, flavonoids, enzymes, and botanicals. Targeting the microbiome and gastrointestinal (GI) metabolism of histamine can provide additional support for proper histamine metabolism and powerful – even root cause – relief for the patient.

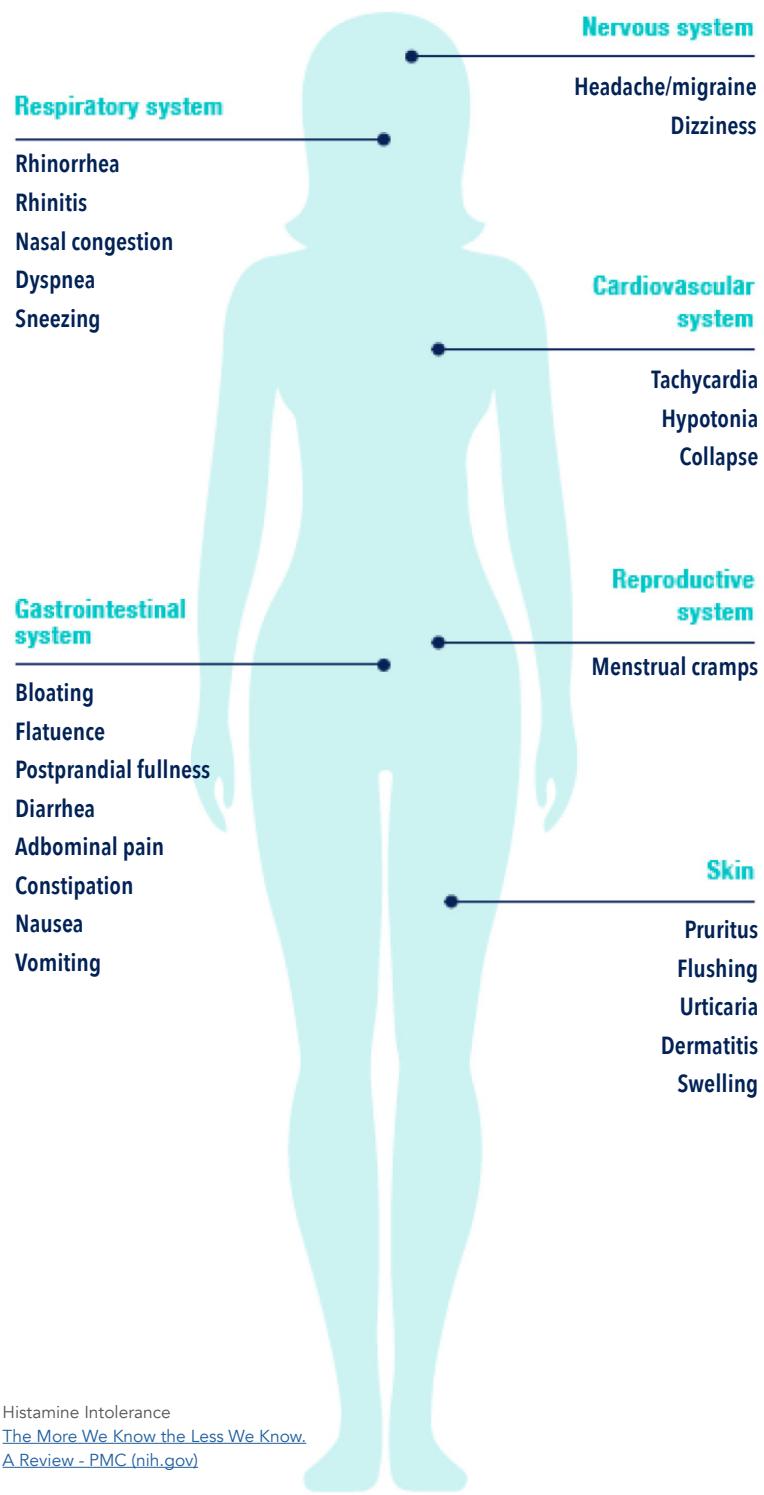
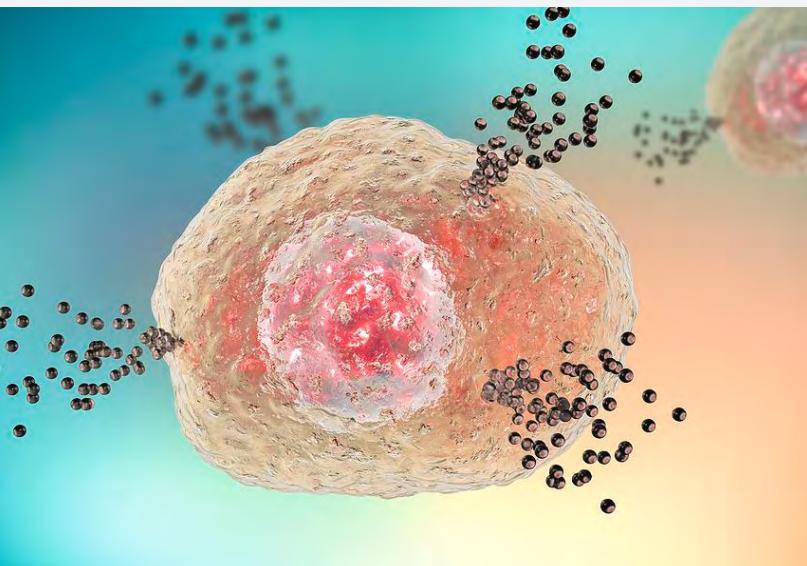


Histamine

WHAT IS IT?

Histamine is a powerful biogenic amine that binds to a family of receptors on target cells in various tissues, mediating numerous biological reactions. Most renowned is the constellation of symptoms associated with allergies – runny nose, cough, difficulty breathing, itching.

Histamine is produced in basophils and mast cells, which degranulate and release histamine and other metabolites in response to a trigger. In addition to its less pleasant effects, it serves vital physiological functions, including acting as a neurotransmitter and playing a key role in the body's inflammatory response.¹



¹ <https://www.ncbi.nlm.nih.gov/books/NBK557790/>

Gastrointestinal Metabolism of Histamine

Histamine is endogenously produced. However, outside of an allergic trigger, dietary consumption is the largest source of histamine. “Histamine intolerance” is similar to lactose intolerance, whereby lactase enzyme deficiency impairs lactose metabolism and absorption and causes GI symptoms. Histamine intolerance causes functional, nonspecific, non-allergic GI complaints and a wide variety of symptoms throughout the body. Often, this is due to a deficiency of the gastrointestinal enzyme DAO, which leads to food-based histamine not being metabolized and/or absorbed adequately within the GI tract.²

HIT Symptoms³

Bloating – most common and severe symptom (>90%)	Dermatological Complaints (acne, hives, eczema, psoriasis)
Postprandial Fullness (>70%)	Headache
Abdominal Pain (>65%)	Flushing
Constipation (55%)	Rapid Heart Beat
GERD / Dyspepsia / Heartburn	Profuse Sweating
Nausea	Asthma (classic and exercise-induced)
Irritability	Chest Tightness / Shortness of Breath
Seasonal or Food Allergies	Runny Nose / Bloody Nose
Insomnia	Urticaria or Prickly Heat
Menstrual Irregularities	

Histamine and the Microbiome

Research shows that the microbiome plays a role in histamine metabolism in several ways.

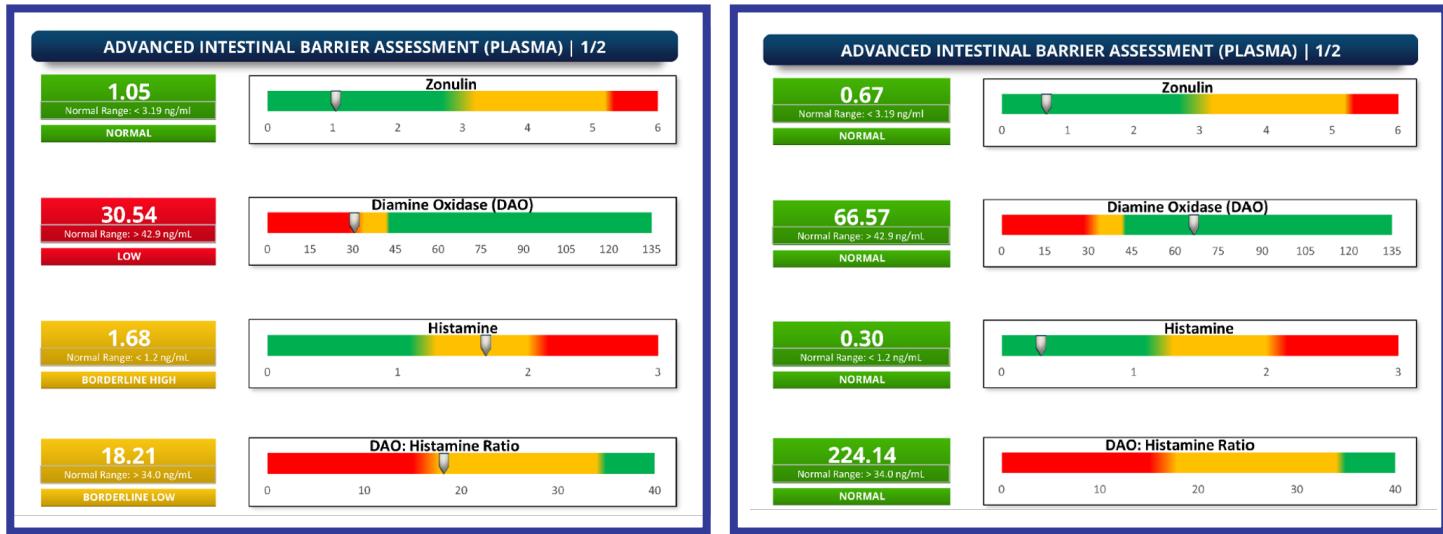
1. Damage to the intestinal lining (“leaky gut”) impairs the production of DAO and will result in a gradual increase in histamine pool, both in the gut and systemically.
2. Certain microbes produce histamine as part of their metabolism.⁴
3. Research has shown that patients with HIT are more likely to have dysbiosis.

Preliminary data from independent clinical research has shown promising results related to histamine. Below are test results from Precision Point Diagnostics, used to measure plasma zonulin, histamine, and DAO – markers that predict the health of the GI lining. The products used in this testing were Biocidin® Liquid and GI Detox™+.

²<https://pubmed.ncbi.nlm.nih.gov/33921522/>

³<https://pubmed.ncbi.nlm.nih.gov/32824107/>

⁴<https://pubmed.ncbi.nlm.nih.gov/33921522/>



Working with the microbiome and GI health offers novel targets that can be transformative.

Conventional Approach

When patients have histamine-related issues, treatment commonly includes the use of over-the-counter or prescription antihistamine medications. While these sometimes provide essential temporary symptomatic relief, they do nothing to address the underlying cause of the problem and can create long-term issues.

Botanicals for Natural Support

Research has shown botanicals and nutrients:

- Reduce histamine expression
- Show immunomodulatory activity
- Stabilize mast cells
- Offer anti-inflammatory and antioxidant support.

Ask your patients to follow lifestyle guidelines for basic, preventative healthcare as they implement your recommendations for supportive enzymes, herbs and nutrients. They will feel confident they are doing all they can to promote a healthy histamine response.



Lifestyle Recommendations

OPTIMIZE HISTAMINE TOLERANCE WITH THESE SIMPLE LIFESTYLE GUIDELINES:

- Eliminate alcohol (especially red wine and beer)
- Assess medications that may affect DAO function
- Follow a low-histamine diet: Avoid cured meats, bone broth, aged cheeses, fish and seafood (especially leftovers, smoked, or canned), leftover foods in general, fermented foods and drinks, vinegars, dried fruit, tomatoes, eggplant, spinach, tea (green, black, white, mate)
- Reduce/avoid food sensitivities via elimination diet (especially gluten and dairy) as they are proinflammatory and activate mast cells
- Balance the microbiome via probiotics and botanicals
- Maintain a balanced circadian rhythm and get adequate sleep
- Consume plenty of purified water daily
- Manage stress with deep breathing exercises
- Consider chiropractic, acupuncture, or other manual therapies.

Clinical Pearl #1

If you have identified food triggers and your patient is still experiencing GI and systemic symptoms, it is essential to evaluate HIT and dysbiosis as underlying causes. All three conditions can present with similar symptoms.

Clinical Pearl #2

Evaluate for mold. Mold exposure is a common underlying histamine trigger. See our [Mold and Mycotoxin Protocol](#) for more information.

Clinical Pearl #3

Histamine receptor type 2 (H2) blockers such as cetirizine, ranitidine, or famotidine also block the production of stomach acid, causing hypochlorhydria – a known contributor to GI dysbiosis. The resulting damage to the GI tract and DAO production can create a feedforward cycle of worsening histamine complaints. Supporting these patients with Betaine HCl supplementation is crucial.

Practitioners can support those with histamine intolerance to optimize histamine metabolism, modulate its release, and stabilize mast cells. This reduces the burden of histamine and helps manage complaints.

Therapeutic Plan Suggestions

Histamine Intolerance Support

CORE PROTOCOL

Biocidin® Liquid or Capsules	Titrate to 15 drops 2x/day	Titrate to 2 capsules 2x/day
G.I. Detox +®	1-4 capsules daily. 1 hour away from food, supplements, and medications. Temporarily increase dose to 2 capsules 2-3x/day if <u>Herxheimer reaction</u> observed/worsens.	
Proflora® 4R	1 capsule any time	
G.I. InnerCalm®	1 stick pack mixed in water, 1-2 times daily, taken any time	

ADDITIONAL SUPPORT

Liver GB+™	1 capsule 2x/day
Biotonic®	20 drops 2x/day

Questions?

For clinical questions, email clinical@biocidin.com



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These products are not intended to diagnose, treat, cure, or prevent any disease.