



DR. BEN LYNCH

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# DIRTY GENES

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## THE HISTAMINE WORKBOOK

A comprehensive workbook  
that guides you through  
cleaning your histamine genes.

Dr. Ben Lynch, Elizma Lambert, Angela Archer





# Dirty Genes:

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## **The Histamine** Workbook

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Elizma Lambert  
Angela Archer

This book contains advice and information relating to healthcare. It should be used to supplement rather than replace the advice of your doctor or another trained health professional. If you know or suspect you have a health problem, it is recommended that you seek your physician's advice before embarking on any medical program or treatment. All efforts have been made to assure the accuracy of the information contained in this book as of the date of publication. This publisher and the authors disclaim liability for any medical outcomes that may occur as a result of applying the methods suggested in this book. Names and identifying characteristics of many of the individuals described in this book have been changed to protect their privacy, and some are composites.

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**FIRST DIRTY GENES LLC PAPERBACK EDITION PUBLISHED IN 2022**

Designed by Evelyn Werner.

ISBN 979-8-218-11298-1

## Preface

You need histamine.

Countless moments each day, histamine is made, and used, everywhere in your body.

How much histamine you make, and use, is key. If your histamine levels are too high, you're experiencing symptoms. If your histamine levels are too low, you're experiencing symptoms. The only way you don't experience symptoms with histamine is if your histamine levels are optimized.

Imagine a bucket that carries histamine to various parts of your body. An empty bucket isn't good. You don't have any histamine when you need it. On the contrary, when your bucket overflows with histamine, you deliver too much histamine to those areas of your body.



This **Dirty Genes: The Histamine Workbook** is truly a workbook. This workbook helps you optimize the levels of histamine in your bucket.

Optimizing your histamine levels requires your active participation. Since your histamine levels are always changing, you should plan on revisiting this workbook as often as you need. The more you use it, the more benefit you'll get out of it. The more worn your workbook is, the less worn you are!

## Meet Julia.

Julia could eat anything and loved it. She never understood why some people were so rigid with their food choices. It got to the point that she didn't like hosting friends due to all their food restrictions.

Then, things changed. Julia got a stomach bug and needed antibiotics.

The infection cleared up but she felt messed up. Bit by bit, she realized she wasn't the same person. New symptoms started appearing so fast she couldn't keep track of them all. Julia noticed eczema on her neck, a faster heart rate after eating and even nosebleeds happening. Falling asleep was now difficult. That was new. She always fell asleep quickly. Headaches and irritability became the norm. The ringing in her ears was so annoying.

Desperate for solutions, Julia started reading. She learned on a forum that bone broth and eating more probiotic-rich foods was really good for your gut health, especially after antibiotic treatment. Lots of people shared how much better they felt after implementing the changes. She modified her diet: more sauerkraut, yogurt, apple cider and slow-cooked bone broths. Instead of feeling better, she felt worse. Her eczema flared even worse and her headaches became migraines.

She was at a loss.

What was wrong with Julia? Her histamine levels are way too high. She was making more histamine than her body could eliminate. In short, her histamine genes were dirty.

It's time for Julia to refer to **Dirty Genes: The Histamine Workbook**.

It's time for you to join her.

In the following pages, you're going to learn so much interesting, empowering, and actionable information. You're going to repeatedly blurt out, "I wish I knew this 20 years ago!" The good news, no, the great news, is that you're learning it now. No more secrets.









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# Introduction

## What is a Dirty Gene?

A dirty gene is a gene that doesn't function at its best.

**There are two types of dirty genes.** A 'Got Dirty' gene and a 'Born Dirty' gene.

A **'got dirty' gene** does not have any genetic variations. A 'got dirty' gene gets dirty throughout life from lifestyle choices, unhealthy foods, chemicals in the environment and use of medications. Genes can even get dirty In Utero. How?! Lifestyle choices made by your mother and father can dirty your genes before you're even born.

When a gene gets dirty, symptoms often occur.

**Important:** 'Got dirty' genes are the *primary* reason you're struggling with histamine. Many think they're struggling with histamine because of their 'born dirty' genes. That's rarely the issue.

A **'born dirty' gene** is a gene that is genetically altered from its typical function in some way. Oftentimes, people with 'born dirty' histamine genes do not have histamine symptoms. The function of their histamine-related gene is just not ideal.

**Important:** a 'born dirty' gene can get dirtier by 'getting dirty' from lifestyle, foods, chemicals, medications and supplements.

If you have a combination of ‘born dirty’ and ‘got dirty’ genes, then you for sure are experiencing symptoms. In *Dirty Genes*, I discussed the DAO gene. Your DAO gene makes a DAO enzyme which breaks down histamine. What I didn’t mention, for the sake of simplicity, is that there are many other genes involved with histamine besides DAO. While supporting the DAO gene is definitely helpful, it is not the only histamine gene you need to clean. If you’re having a number of histamine-related symptoms, then you, without a doubt, have a number of dirty histamine genes.

The question is: where is the dirt? There are so many places to look. You likely have been looking for some time.

**Dirty Genes: The Histamine Workbook** helps you identify where the dirt is. Once you know where the dirt is, we provide you the tools to clean it up. How will you know if you’re actually cleaning up the dirt? Easy. Your histamine-related symptoms will reduce and you start feeling better!

In short, **Dirty Genes: The Histamine Workbook** shows you 3 things:

What may be dirtying your histamine genes.

What actions are cleansing for your histamine genes.

Which supplements are supportive for your histamine genes<sup>†</sup>.

### Do You Need Genetic Testing?

I actually encourage you to **not** look at your histamine genetics. At least not until you have done the majority of the work in this workbook. Focusing too much on histamine SNPs means you may fail to address the underlying issues. If you focus on the SNPs versus the underlying issues, you will not get long term results. For a short period of time, you may get lucky by swallowing a supplement recommended for a particular SNP. However, that honeymoon period will come and go.

Is there ever a good time to look at your histamine genetics? Yes, there is. After you put the work in, clean up your histamine genes and desire to know more, then, absolutely, you should evaluate your histamine genetics.

Knowing your histamine genetics can be incredibly insightful, fun and rewarding. It also may save you tons of time and frustration. How? By knowing which genetic variations increase *susceptibility* to histamine, you know which specific genes to clean first. Testing helps you focus and direct your attention.

*Susceptible* means: ‘likely or liable to be influenced or harmed by a particular thing; capable of.’

Many people don’t use the word ‘susceptible’ when they are referring to their genetic variations. Instead, they say ‘I can’ or ‘I can’t’.

For example, you may hear someone say, “My dad has terrible allergies. I got my genetics from him. That’s why mine are terrible, too. There’s nothing I can do.”

That’s wrong.

So, what is right?

<sup>†</sup>These statements have not been evaluated by the Food and Drug Administration (FDA). This product is not intended to diagnose, treat, cure, or prevent any disease.

This lemon will demonstrate what is right.

Look at this nice lemon.



Lemon. A nice, yellow, ripe, juicy, sour lemon.

What is happening in your mouth right now?

Your mouth is much wetter than it was 1 second ago. How'd that happen? What's happening is a thing called "Epigenetics". Your actions, exposures, and thoughts drive what happens in your body. This is epigenetics. Epigenetics is the study of how the environment and your behaviors influence how your genes work.

In this same way, your histamine response is driven by your actions, exposures, and thoughts. The problem is you don't know which actions, exposures or thoughts are driving your histamine response. Of course, you know that spring brings increased pollen. But why are you sensitive to pollen and your friend isn't? Something else must be making you more sensitive and them less sensitive. But what is it?

Before we reveal the many reasons why you may be struggling with histamine, let's see how dirty, or clean, your histamine genes are.





# Section 1

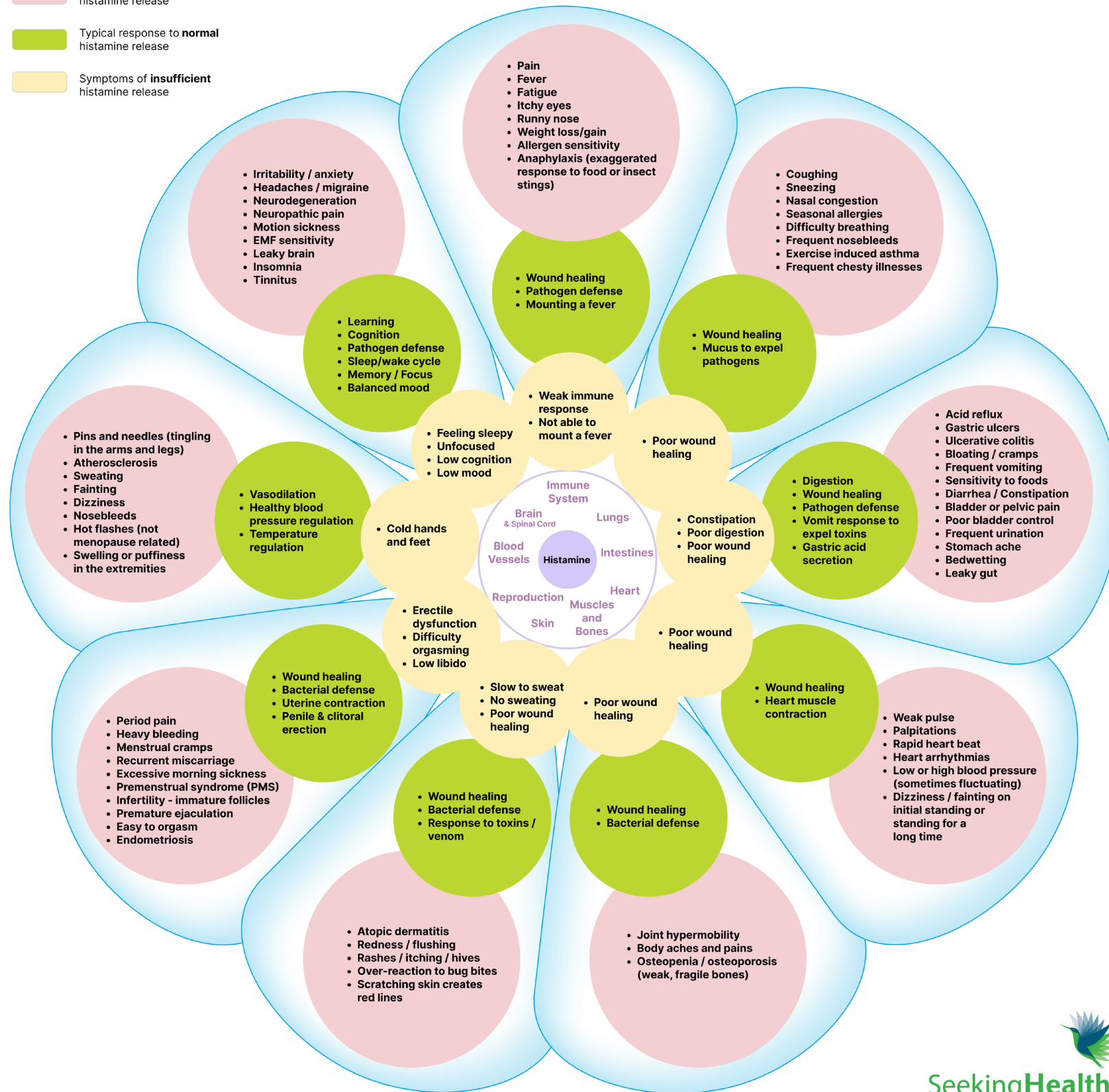
## **Your Histamine Signs & Symptoms**

## Actions of Histamine

When histamine is low, you have symptoms. When it's high, you have symptoms.  
When it's just right, you're just right.



- Symptoms of **excess** histamine release
- Typical response to **normal** histamine release
- Symptoms of **insufficient** histamine release



**Score your Histamine Symptoms:** How dirty are your histamine genes? Check the box for each symptom you're *currently* experiencing. Each checkbox is one point. The higher your score, the dirtier your histamine genes are likely to be.

## High Histamine Symptoms

### General

- ☐ Symptom-free moments becoming shorter
- ☐ Relief by taking antihistamines
- ☐ Often get illnesses which go to lungs or sinuses
- ☐ Fatigue
- ☐ Weight loss

### Intestinal & Urinary

- ☐ Sensitive to high histamine foods (avocado, tomato, eggplant, cured meats, cheese, leftovers, some fish)
- ☐ Sensitivity to fermented foods (kombucha, sauerkraut, kimchi)
- ☐ Leaky gut
- ☐ Burning abdominal pain
- ☐ Cramping, spastic abdominal pain
- ☐ Loose bowel movements or diarrhea
- ☐ Nausea with or without vomiting
- ☐ Bloating within minutes of eating
- ☐ Acid reflux (especially nighttime)
- ☐ Gastric ulcers
- ☐ Ulcerative colitis
- ☐ Frequent urination
- ☐ Bladder or pelvic pain
- ☐ Bedwetting
- ☐ Frequent vomiting

### Brain

- ☐ Significant anxiousness
- ☐ Easily irritated
- ☐ Difficulty falling asleep
- ☐ Frequent one-sided or cluster headaches
- ☐ Migraines
- ☐ Seasickness and car sickness
- ☐ Ringing in the ears (tinnitus)
- ☐ EMF sensitivity
- ☐ Poor response to SSRIs
- ☐ Leaky brain

### Heart

- ☐ Heart arrhythmias
- ☐ Fast heart rate (tachycardia)
- ☐ Low or high blood pressure (depends)
- ☐ Pins and needles, tingling in arms or legs
- ☐ Light headed from exercise
- ☐ Syncope (fainting especially after exercise)
- ☐ Dizziness or fainting (upon standing)
- ☐ Increased atherosclerosis under inflammatory conditions
- ☐ Hot flashes (2-5 minutes long) with nausea (not menopause related)
- ☐ Weak pulse

### Blood Vessels

- ☐ Fainting
- ☐ Dizziness
- ☐ Atherosclerosis
- ☐ Low or high blood pressure (depends)
- ☐ Hot flashes (not menopause related)
- ☐ Pins and needles
- ☐ Tingling in the arms
- ☐ Swelling or puffiness in the extremities
- ☐ Sweating

### Eyes, Ears, Nose, Throat & Lungs

- ☐ Hay fever and allergy symptoms
- ☐ Eyes itchy, gritty, burning, or red
- ☐ Itchy, runny nose
- ☐ Asthma or wheezing
- ☐ Exercise-induced asthma
- ☐ Frequent nosebleeds

### Skin

- ☐ Acne
- ☐ Rosacea
- ☐ Eczema
- ☐ Redness or flushing of the skin, especially face to upper body
- ☐ Hives
- ☐ Itchy skin
- ☐ Hemangiomas (blood sponges)
- ☐ Reddish-brown spots
- ☐ Scratching skin creates red lines
- ☐ Exaggerated wound response
- ☐ Swollen, itchy bug bites
- ☐ Excessive sweating
- ☐ Prolonged redness in face from exercise
- ☐ Sweaty palms and/or feet

### Reproductive

- ☐ Period pain
- ☐ Pregnancy complications
- ☐ Recurrent miscarriage
- ☐ Excessive morning sickness
- ☐ Heavy menstrual bleeding
- ☐ Infertility - immature follicles
- ☐ Premenstrual syndrome (PMS)
- ☐ Easy to orgasm
- ☐ Premature ejaculation

### Muscles and Bones

- ☐ Body aches and pains
- ☐ Osteopenia
- ☐ Osteoporosis (thinning of the bones)

## Your Histamine Symptoms Score

My Symptom score: \_\_\_\_\_ / 80

**My score interpretation is:**

☐ Clean ☐ Dirty ☐ Very Dirty

### Interpreting Your Score

#### Clean | 0 - 8 points

Based on your score, it appears you have a pretty balanced level of histamine in your body. You have only a few histamine-related symptoms. Currently, if histamine-related SNPs are present, they are being supported quite well by your lifestyle, diet and environment.

#### Dirty | 8 - 18 points

Based on your score, it appears your diet, lifestyle and environment are contributing to a higher level of histamine in your body. There may be histamine-related SNPs contributing to your sensitivity.

#### Very Dirty | > 18 points

Based on your score, it appears your diet, lifestyle and environment are significantly contributing to a higher level of histamine in your body. You may also have histamine-related SNPs contributing to your sensitivity.

**Important note:** This scoring is not a one time thing. Do the Symptoms scoring again in a month.

Your histamine genes are constantly working for you. Each day, often without knowing it, you're constantly dirtying and cleaning your genes.

Your ability to produce, and breakdown, histamine changes from moment to moment. Some days you make more histamine and other days you make less. Some days you break down histamine better than others. Histamine symptoms are simply telling you that you're making more histamine than your genes can break it down. In other words, you're experiencing dirty genes when having histamine symptoms.

Using **The Histamine Workbook** on a monthly basis will significantly help steer you in the right direction. I've no doubt that each time you visit the workbook, you'll discover something new and useful.

## Low Histamine Symptoms

Everyone talks about high histamine, histamine intolerance or MCAS.

Hardly anyone talks about low histamine symptoms. Low histamine levels are an issue as well. Here are some low histamine symptoms:

## Low Histamine Symptoms

### Intestinal

- ☐ Low stomach acid
- ☐ Constipation
- ☐ Poor digestion
- ☐ Acid reflux - due to low stomach acid

### Brain

- ☐ Feel sleepy
- ☐ Feel unfocused
- ☐ Low mood
- ☐ Low cognition

### Reproductive

- ☐ Low libido
- ☐ Erectile dysfunction
- ☐ Difficulty orgasming

### Skin

- ☐ Poor wound healing
- ☐ Slow to sweat or no sweating

### Immune System

- ☐ Weak immune response
- ☐ Not able to mount a fever

### Heart

- ☐ Higher blood pressure
- ☐ Cold hands and feet

## Scoring your Low Histamine

It's not possible to accurately score low histamine. There are not as many symptoms associated with low histamine. Thus, it's easier to sway one way or the other.

Use the checklist in the obvious manner: If you checked hardly any, then it's unlikely you're struggling with low histamine. If you checked nearly all of them, then seriously consider if low histamine is a problem for you. Make adjustments as needed with your healthcare professional.

If you're making too little histamine, work on supporting healthier levels of histamine. It sounds crazy but you may need to actually increase your histamine levels.

## Improve Low Histamine Levels

- increase protein intake
- eat more histamine-containing foods and drinks (see page 23)
- add histamine-producing probiotic strains
- slow the elimination of histamine. If using supplements or over-the-counter antihistamines, and are experiencing low histamine symptoms, talk with your doctor about adjusting your treatment plan.

**Important:** Histamine levels are dynamic. They change rapidly and often.

After making adjustments to increase your histamine, be mindful every day of how you're feeling.

Increasing histamine levels can happen quickly. It's not like you need to eat histamine foods and drinks daily for the rest of your life. You may only need to do it for a day, or a few days a week, to maintain healthy levels of histamine.

## High and Low Histamine Symptoms

Are you experiencing *both* high and low histamine symptoms?

If so, there are a couple of things to consider.

- **Histamine acts locally.**

For example, you may have high histamine in your brain and sinuses while having lower histamine in your intestines and stomach.

- **It likely is not only histamine.**

Symptoms of high and low histamine are typically related to something deeper. Perhaps it's hormonal, or environmental, with a blend of nutrient deficiencies. This workbook guides you through the various reasons for histamine imbalance - including hormonal, environmental, lifestyle and nutritional.



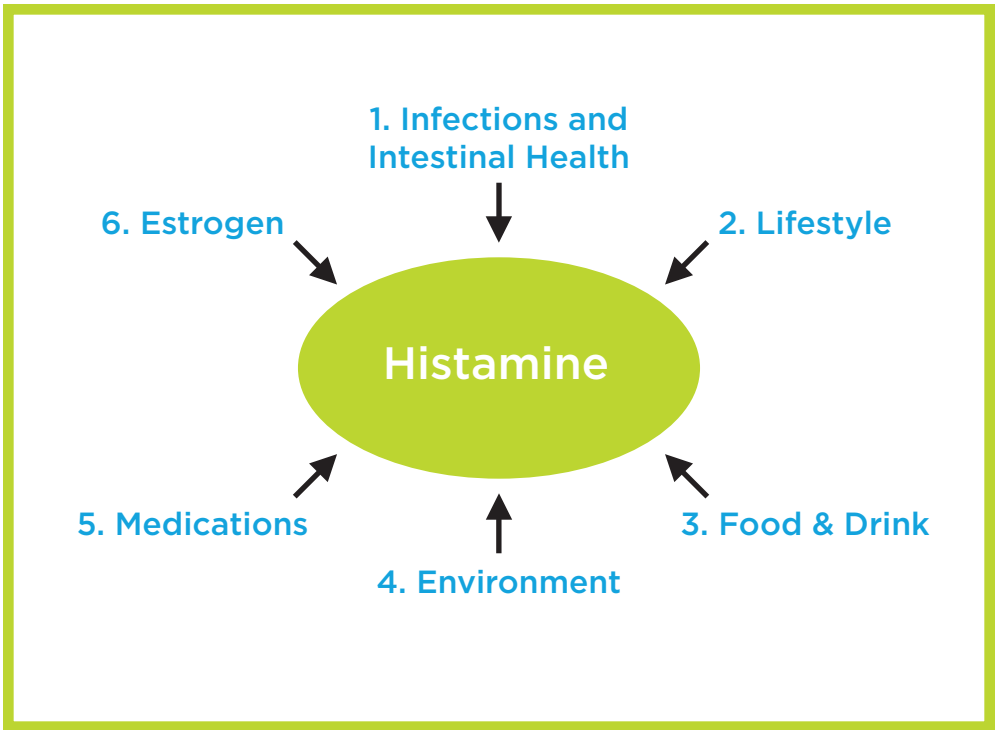


## Section 2

### **What Dirties Your Histamine Genes**

What makes your histamine bucket overflow? It's really pretty straightforward.

There are only Six Factors which dirty your histamine genes:



Which of these are the *main* causes of your dirty histamine genes?

Let's find out!

**Score your Six Factors.**

Learn which food, environmental and lifestyle factors are contributing to your histamine symptoms.

Each one of these below dirties your histamine genes. Dirty histamine genes lead to histamine symptoms. Each checkbox is one point. The higher your score, the dirtier your histamine genes. The dirtier your histamine genes, the more histamine symptoms you have.



# Six Factors Which Dirty Your Histamine Genes

## 1. Infections and Intestinal Health

- ❑ Chronic infections (viral, bacterial, parasitic, fungal, Lyme disease)
- ❑ Gut dysbiosis
- ❑ Sinus, ear, oral, nasal or throat infections
- ❑ SIBO (Small Intestinal Bacterial Overgrowth)
- ❑ SIFO (Small Intestinal Fungal Overgrowth)
- ❑ Candida overgrowth
- ❑ Gut inflammation (Leaky gut)

## a. Histamine Producing Probiotics

- ❑ *Lactobacillus bulgaricus*
- ❑ *Lactobacillus fermentum*
- ❑ *Lactobacillus casei*
- ❑ *Lactobacillus delbrueckii*
- ❑ *Lactobacillus helveticus*
- ❑ *Streptococcus thermophilus*

## 2. Lifestyle

- ❑ Frequent high stress events
- ❑ Alcohol - a few times a week or more
- ❑ Poor sleep quality
- ❑ Obesity (BMI > 30)
- ❑ Exercising pretty intensely most days
- ❑ High caffeine intake
- ❑ Smoking
- ❑ Poor hydration
- ❑ Over 60 years old - as you age, enzymes work less efficiently and histamine symptoms become more prevalent

## 3. Food and Drink

- ❑ Eating known food sensitivities at times (particularly dairy and gluten)
- ❑ High protein meals 3x daily (GAPS, Paleo, Carnivore, Atkins)
- ❑ Grilling or frying increases histamine more than boiling

## a. Higher Histamine Content Foods

- ❑ Fermented foods (sauerkraut, tofu, yeast spreads (marmite), tempeh, miso, tamari, yogurt)
- ❑ Aged foods (cheese, overripe fruits, leftovers)
- ❑ Leftovers - the longer in the fridge, the higher the histamine content
- ❑ Bone broth
- ❑ Ready meals
- ❑ Pickled or canned foods
- ❑ Sardines and tuna
- ❑ Cured, smoked or processed meats (salami, ham, sausages)
- ❑ Shellfish
- ❑ Beans and pulses (chickpeas, soy flour)
- ❑ Dried fruits
- ❑ Shelled nuts (esp. in plastic bags)
- ❑ Rice vinegar
- ❑ Chocolates and other cacao-based products
- ❑ Eggplant
- ❑ Avocado
- ❑ Spinach

## b. Higher Histamine Content Drinks

- ❑ Fermented drinks (alcohol, kombucha, kefir)
- ❑ Alcohol
- ❑ Wine
- ❑ Beer
- ❑ Spirits
- ❑ Ciders
- ❑ Champagne

## c. Histamine Releasing Foods

- ❑ Citrus fruits (lemons, limes, oranges)
- ❑ Nectarines
- ❑ Strawberries
- ❑ Papaya, pineapples, plums, kiwi, bananas
- ❑ Tomatoes (ripe)
- ❑ Walnuts, peanuts
- ❑ Most vinegars
- ❑ Chocolates and other cacao-based products
- ❑ Legumes
- ❑ Wheat germ
- ❑ Additives (benzoate, sulphites, nitrites, glutamate, food dyes)

## d. Histamine Releasing Drinks

- ❑ Citrus juice (orange, pineapple, lime)
- ❑ Tomato juice

## e. DAO Enzyme Inhibitors

- ❑ Alcohol
- ❑ Energy drinks
- ❑ Black tea
- ❑ Green tea
- ❑ Mate tea
- ❑ Yeast extract

## 4. Environmental Exposures

- ❑ Exposure to pet dander
- ❑ Seasonal allergic sensitivity to pollens from trees, grasses, weeds, or to autumn mold
- ❑ Exposure to dust mites - carpeting, bedding, etc
- ❑ Mold exposure currently or in the past
- ❑ Exposure to air pollution, diesel exhaust - city living, daily commute
- ❑ Personal care products - perfume, hair spray, other cosmetics
- ❑ Household products - scented laundry detergents, cleaning solutions, pool chlorine, scented candles, air fresheners, dryer sheets
- ❑ Herbicides, glyphosates
- ❑ Gas fumes - from heating or cooking stoves
- ❑ Bisphenol A (BPA) - from canned foods, plastic packaging, and plastic bottles
- ❑ Formaldehyde from building materials
- ❑ Metals - aluminum, mercury, cadmium
- ❑ EMF exposure

#### 5. Medications

- ☐ Metformin
- ☐ Aspirin
- ☐ NSAIDs
- ☐ Vancomycin (antibiotic)
- ☐ Adenosine
- ☐ Morphine
- ☐ Muscle relaxants

#### 6. High Estrogen

- ☐ PMS
- ☐ Breast tenderness
- ☐ Taking an OCP (Oral Contraceptive Pill)
- ☐ On HRT (Hormone Replacement Therapy)
- ☐ Slow COMT on StrateGene® report (Slower estrogen metabolism and thus higher estrogen)

## Your Six Factors Dirty Score

My Six Factors Dirty score: \_\_\_\_\_ / 94

**My score interpretation is:** ☐ Clean ☐ Dirty ☐ Very Dirty

### Interpreting Your Score

#### Clean | 0 - 15 points

Based on your score, it appears that your diet, lifestyle and environment are supporting clean histamine genes!

If your Symptom score was Dirty or Very Dirty, it may be a sign that your genetics are playing a significant role.

#### Dirty | 16 - 34 points

Based on your score, it appears your diet, lifestyle and environment are contributing to higher levels of histamine in your body.

This can make 'clean' histamine genes dirty. Symptoms will occur even if you score 'Clean' in the Genetic section.

#### Very Dirty | 35+ points

Based on your score, it appears your diet, lifestyle and environment are significantly contributing to a higher level of histamine in your body.

Your Symptoms score is likely Dirty or Very Dirty. Regardless of how you score in the Genetics section, there is a lot of opportunity here to clean up your genes.



## Section 3

### **Your Histamine Genetics (optional)**

Skip this section if you have not done, or don't want to do, genetic testing. Regardless of the genetics you inherited, you can still significantly improve your histamine symptoms.

Your StrateGene® Report shows which of your genes were 'born dirty'. This report shows your *genetic propensity* to histamine. Genetically, you may be more, or less, sensitive to histamine.

Want to score your histamine genetics? Order your StrateGene® Report at [www.strategene.me](http://www.strategene.me) All you need is your raw data from 23andme or Ancestry. We recommend Ancestry if you need to order testing. Your report is generated within minutes once you upload your raw data.

## Your Genetic Histamine Susceptibility Score

According to research, histamine intolerance is *most associated with the reduced ability to breakdown, and eliminate*, histamine. The genes below support the breakdown, and elimination, of histamine.

Using your results from StrateGene®, check the appropriate boxes:

Gene	Genetic Histamine Susceptibility			
	0 Points	1 Point	2 Points	4 Points
<b>ALDH Family</b>	<input type="checkbox"/> Nothing found		<input type="checkbox"/> Slow without Slow MAOA	<input type="checkbox"/> Slow combined with slow MAOA
<b>MAOA</b>	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Fast	<input type="checkbox"/> Slow without Slow ALDH	<input type="checkbox"/> Slow combined with slow ALDH
<b>MOAB</b>	<input type="checkbox"/> Nothing found	<input type="checkbox"/> Fast		
<b>HNMT</b>	<input type="checkbox"/> Nothing found	<input type="checkbox"/> Slow		
<b>DAO</b>	<input type="checkbox"/> Nothing found		<input type="checkbox"/> Slow haplotype	
<b>NAT2</b>	<input type="checkbox"/> Fast haplotype	<input type="checkbox"/> Intermediate haplotype	<input type="checkbox"/> Slow haplotype	
<b>HRH1</b>	<input type="checkbox"/> Nothing found			<input type="checkbox"/> Fast
<b>Score</b>				

**Note:** Certain gene combinations have a higher score than individual genes. When combined, genes can have a much greater impact than adding them up individually. For example,  $1 + 1 = 2$ , but when it comes to some gene interactions,  $1 + 1 = 4$ .

# Your Six Factors Dirty Score

My 'Born Dirty' Genetic score: \_\_\_\_\_ / 18

My score interpretation is: ☐ Clean ☐ Dirty ☐ Very Dirty

## Interpreting Your Score

### Clean | 0 - 3 points

Based on your score, it appears that your genes support a pretty balanced level of histamine in your body. You have only a few histamine-related gene issues. You were born with genes that have the ability to process histamine smoothly.

If you're experiencing histamine symptoms, your histamine genes 'got dirty' in life versus being 'born dirty'. Look carefully at your 'Six Factors Dirty' score to see where the dirt might be coming from.

### Dirty | 4 - 7 points

Based on your score, it appears your genes may be contributing to a higher level of histamine in your body.

If you're free of histamine-related symptoms, this means that although your histamine genes may have been 'born dirty', you have kept them clean through healthy living. Congratulations! Keep in mind that you are prone to histamine symptoms so keep up what you're doing.

### Very Dirty | 8+ points

Based on your score, it appears your genes are significantly contributing to a higher level of histamine in your body.

If you're free of histamine-related symptoms, this means that although your histamine genes may have been 'born dirty', you have kept them clean through healthy living. Congratulations! Keep in mind that you are quite prone to histamine symptoms so keep up what you're doing.

# What Do All Your Scores Mean?

You've just completed two, and possibly, three different quizzes: 1) Symptoms, 2) Six Factors, and 3) Genetics (optional).

Check the box that matches your score interpretation for each quiz. Why? The result gives you an *overall understanding* of how the *combination* of your *genes, diet, and lifestyle factors* are contributing to your histamine symptoms.

Regardless of your score, **The Histamine Workbook** gives you, and your healthcare professional, tools to clean your histamine genes.

Symptom Score	Six Factor Score	Genetic Score (optional)	What does it mean?
<div><input type="checkbox"/> Dirty</div> <div><input type="checkbox"/> Very Dirty</div>	<div><input type="checkbox"/> Dirty</div> <div><input type="checkbox"/> Very Dirty</div>	<div><input type="checkbox"/> Dirty</div> <div><input type="checkbox"/> Very Dirty</div>	Genetics, along with food, environment and lifestyle, are contributing to your histamine symptoms.
<div><input type="checkbox"/> Dirty</div> <div><input type="checkbox"/> Very Dirty</div>	<div><input type="checkbox"/> Clean</div>	<div><input type="checkbox"/> Dirty</div> <div><input type="checkbox"/> Very Dirty</div>	While you seem to have your food, environment and lifestyle dialed in, your genetics seem to be playing a significant role in your histamine symptoms.
<div><input type="checkbox"/> Dirty</div> <div><input type="checkbox"/> Very Dirty</div>	<div><input type="checkbox"/> Dirty</div> <div><input type="checkbox"/> Very Dirty</div>	<div><input type="checkbox"/> Clean</div>	Genetically, you have been born with 'clean' genes. However, you are over-burdening your genes through lifestyle factors, environmental exposures and/or dietary choices.
<div><input type="checkbox"/> Clean</div>	<div><input type="checkbox"/> Clean</div>	<div><input type="checkbox"/> Dirty</div> <div><input type="checkbox"/> Very Dirty</div>	<p>Genetically, you're more susceptible to histamine, but your symptoms are low. Congratulations! This is because you're doing a great job keeping your genes clean!</p> <p>Be aware that your genes could become 'dirty' quickly.</p>
<div><input type="checkbox"/> Clean</div>	<div><input type="checkbox"/> Dirty</div> <div><input type="checkbox"/> Very Dirty</div>	<div><input type="checkbox"/> Clean</div>	<p>Genetically, you're more susceptible to histamine, but your symptoms are low. Congratulations! This is because you're doing a great job keeping your genes clean!</p> <p>Be aware that your genes could become 'dirty' quickly.</p>



## Section 4

### **Antihistamine Medications**

We all want the fastest, easiest and most economical way to improve our symptoms. Totally understandable. Key point: Improving your symptoms does not necessarily mean you're improving your health!

While antihistamine medications can be life-saving, and wonderfully effective, chronic use of them *does not solve any histamine issue*. Ever.

## How do Antihistamines Work?

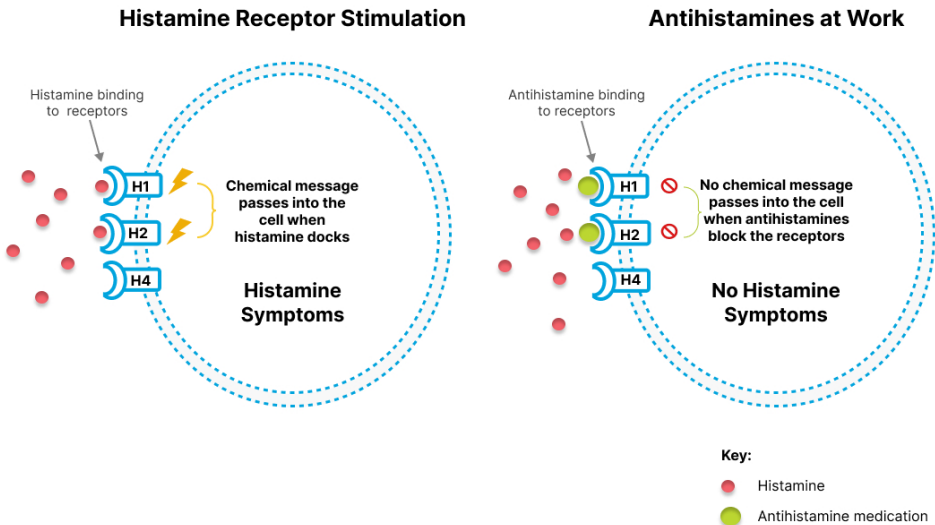
Histamine *must* bind to a receptor to trigger an effect. Antihistamines prevent histamine from binding to histamine receptors. Thus, no symptoms *while using* antihistamines.

### Antihistamines do not reduce histamine

Incredibly important: *histamine levels* in the body are not reduced by antihistamines.

No antihistamine stops the production of histamine. No antihistamine increases the elimination of histamine. No antihistamine reduces the release of histamine. The moment you stop taking an antihistamine, symptoms come back.

A picture is worth a thousand words:





### **Once you start, you can't stop**

Once you start taking an antihistamine to support your high histamine symptoms, it's almost impossible to stop. This is because antihistamines only reduce the symptoms. Antihistamines do not actually solve the root cause. This is why you become reliant on them.

### **Look for the root cause**

Instead, what you need to do is look for the *causes* of high histamine. There are likely multiple. Take steps to resolve each one. With each contributing cause identified and resolved, you're improving your histamine tolerance.

At some point, you may clean up your histamine genes so much that you may no longer need antihistamines!

As always, talk with your prescribing doctor before adjusting your medications.

Let's dive into how you can clean your histamine genes!



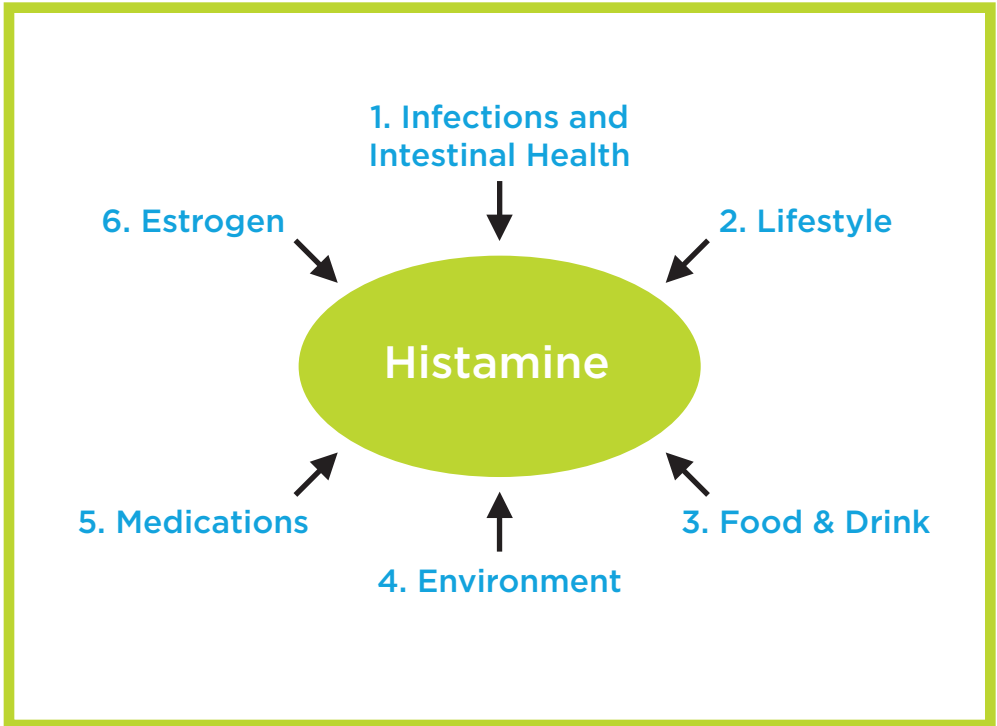


## Section 5

### **What Cleans Your Histamine Genes**

Now that you know what dirties your histamine genes, it's time to look at the things you can do to clean them. Clean genes mean healthy histamine levels. Healthy histamine levels means no more histamine symptoms!

The same Six Factors which can dirty your histamine genes, are the same Six Factors which must be cleaned.



### Which of your Six Factors are the dirtiest?

Revisit what you checked on pages 23 and 24.

Pay special attention to these really dirty areas. As you clean each area, your histamine genes thank you. Your genes want to help you. By limiting the amount of workload they have, the less histamine they have to break down. The less histamine they have to break down means the less histamine symptoms you experience.

Let's begin the process of cleaning your histamine genes!

# High Histamine Symptoms

## 1. Infections and Intestinal Health

Absorption of histamine from *the gut is the largest source of excess* histamine in the body.

- ❑ **Infections:** Infections trigger the release of histamine and increase the production of histamine via the HDC enzyme. Identify possible infections and treat each one. Infections can be anywhere. Your nose, mouth, ears, throat, digestive system, skin, reproductive system, bladder and others. Find each one.
- ❑ **Leaky gut (Gastrointestinal permeability):** is a known risk factor for increased sensitivity to food and drink. This is because intestinal permeability (leaky gut) allows histamine to be absorbed from the gut into the systemic blood system. Since blood flows everywhere, *you can have high histamine symptoms everywhere* that are caused from leaky gut.
  - ❑ Support leaky gut with probiotics, soothing herbs and glutamine.<sup>†</sup>
- ❑ **H. pylori Infection:** Pay particular attention to intestinal infections which may exacerbate leaky gut. H. pylori infection is very common. The older you are, the higher the odds you have H. pylori.
- ❑ **Candida dysbiosis:** Intestinal dysbiosis (especially Candida) generates a lot of internal aldehydes. These aldehydes dirty the genes that breakdown and eliminate histamine. Thus, Candida blocks histamine breakdown.
- ❑ **Healthy liver and gallbladder function:** Healthy liver and gallbladder function helps you digest food and obtain nutrients needed by your histamine genes. Bile helps maintain intestinal health and reduce intestinal infections/parasites. Consider digestive enzymes, ox bile, liver nutrients and gallbladder supportive nutrients.<sup>†</sup>
  - ❑ Support healthy liver and gallbladder function with digestive enzymes, liver nutrients and gallbladder nutrients.<sup>†</sup>

<sup>†</sup>These statements have not been evaluated by the Food and Drug Administration (FDA). This product is not intended to diagnose, treat, cure, or prevent any disease.

## High Histamine Symptoms

### 2. Lifestyle

- Emotional stress:** Stress promotes both the production and release of histamine. This is useful for short-term situations. Histamine helps us focus and deal with the situation. However, running on this “emergency response” is not good long term.

  - Employ coping mechanisms such as breathing techniques (breathe through your nose, not your mouth), guided meditation, journaling, reframing techniques, NTF, tapping, yoga nidra.
  - Speak to a trusted friend or professional counselor.
  - Turn off the ‘news’ (stressors, doom/gloom).
  - Ensure you give yourself some “me time.” Find ways to relax and unwind.
  - Take a vacation. A real one. To a place you want to go, not have to.
  - Support a healthy stress response with adaptogenic herbs, vitamin C, vitamin D, zinc, B vitamins, lithium and electrolytes such as sodium and potassium.<sup>†</sup>
- Alcohol:** Stop drinking all alcohol until you feel better. If you drink, be mindful that alcohol really dirties your histamine genes.

Alcohol causes many significant histamine-related problems including:

  - Alcohol stimulates release of histamine from storage cells. This may cause an immediate, and progressively worse, “flushed, itchy” feeling or “shortness of breath” when drinking alcohol.
  - Alcohol disrupts the gut microbiome. An unhealthy microbiome creates higher probability of a leaky gut.
  - Alcohol reduces histamine breakdown in the gut by slowing the DAO enzyme. This is a big deal as poor DAO activity is a main reason for excess absorption of histamine from the gut.
  - Alcohol slows down histamine elimination. Aldehydes generated from the breakdown of alcohol are processed by the ALDH family of enzymes. If your ALDH enzyme is busy processing aldehydes from alcohol, then they cannot process aldehydes from histamine. They’re too busy. This causes a build up of histamine in the body.
  - While drinking alcohol is not encouraged, if occasional alcoholic beverages are consumed, then low-histamine beverages such as gin, vodka, rum or bourbon are better choices. Avoid high-histamine beverages such as wine, beer and champagne.

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# High Histamine Symptoms

## 2. Lifestyle (continued)

- Sleep:** Focus on good sleep. A lack of sleep has been shown to directly increase histamine production. Sleep helps reduce fatigue and anxiety and also gives your body the opportunity to rest and repair.

  - Nutrients to support the onset and duration of deep, restful sleep include: 5-HTP, phosphatidyl serine, magnesium, niacin, vitamin B6 and calming herbs.<sup>†</sup>
- Caffeine:** Reduce your caffeine intake. Caffeine increases stress neurotransmitters which trigger the release of histamine. Caffeine also directly inhibits the activity of MAOA and MAOB enzymes. These enzymes break down histamine.
- Stop Smoking:** Smoke can trigger histamine release. It's also important to avoid second-hand smoke.
- Balance blood sugar:** High blood sugar can reduce the breakdown of histamine. Maintain balanced blood sugar by limiting sugar and highly processed foods. After a meal, go for an easy 5 minute walk. This helps balance blood sugar right away.
- Exercise:** If you're exercising intensely, reduce the intensity. Histamine is produced, and released, during exercise. High histamine is the primary trigger for exercise-induced asthma. Use electrolytes during exercise as hydration is important for healthy histamine levels.<sup>†</sup>
- Hydration:** Hydration is incredibly important for maintaining a healthy histamine balance. The more hydrated you are, the less concentrated histamine is in your blood. Make sure you are adequately hydrated. Hydration is not just about drinking water, it's about getting water inside your cell. For this you need adequate energy as ATP and a healthy electrolyte balance. 40% of your body's energy at rest is used to pump electrolytes into your cells. Electrolytes inside your cells is true hydration because water flows into cells to balance the concentration. Drinking just water does not ensure water gets into your cells.<sup>†</sup>
- Sun exposure:** Healthy sun exposure helps maintain sufficient vitamin D levels. Vitamin D helps support healthy amounts of histamine release from mast cells. Vitamin D also supports the immune system's ability to handle pro-allergic responses.<sup>†</sup>

  - Get safe sun exposure. Expose your skin to sunlight but do not allow your skin to burn.
  - The free phone app dminder uses your location, and current time to determine how much sun exposure is needed to generate sufficient vitamin D.
  - Avoid sunscreens that contain toxic chemicals. Use organic coconut oil which has a natural SPF of 7. Once time is up, cover up with natural fabrics to avoid over exposure.

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## High Histamine Symptoms

### 3. Food

- ☐ **High histamine foods:** Avoid foods that contain histamine or promote its release. See the list on page 23 of this workbook for details.
- ☐ **Food allergens:** Be 100% diligent in avoiding your known food allergens. Identify allergens by doing an elimination diet or consider IgE food allergy testing, IgG4 food sensitivity testing or the skin prick test.
- ☐ **Fermented foods:** Fermented foods, such as sauerkraut and kimchi, are often high in histamine.
- ☐ **Very ripe fruit:** May contain higher levels of histamine as they begin fermenting.
- ☐ **Leftovers:** Bacteria on food generate histamine. The longer food stays above freezing, the more bacteria there are. The more bacteria there are, the more histamine they produce. Consume cooked food quickly and freeze any left-overs.
- ☐ **Rinse raw meat:** In particular, bacteria on the surface of meat generate histamine the longer the meat is stored above freezing. Rinsing raw meat prior to cooking is not recommended by food safety guidelines as it may spread bacteria in the kitchen. However, carefully doing so may wash off surface histamine produced by bacteria. Raw fish has the highest histamine.
- ☐ **Deli meat:** Rinsing off the 'slime' from lunch deli meats may reduce surface histamine. Pat dry prior to making a sandwich or eating.  
 Avoid Gluten: Gluten is well known to cause intestinal permeability (also known as "leaky gut"). Leaky gut allows histamine to leak out of the gut and into your bloodstream. To make matters worse, gluten also decreases activity of the DAO enzyme. Your DAO enzyme breaks down histamine in the gut.  
 Avoid Aspartame: Avoid foods and drinks that contain aspartame. Aspartame converts into an aldehyde in the body. Aldehydes slow down the breakdown of histamine.
- ☐ **Excess protein:** Histamine is generated in the body from the protein we eat. Adequate protein is essential for health but excess protein is detrimental. If you're eating high protein (more than 1 gram of protein per 2 pounds of body weight), consider reducing your intake. If you suffer from histamine symptoms at night, reduce the protein content of your evening meal.
- ☐ **Frying and grilling:** These increase the level of histamine in meat. Consider stewing, braising, or boiling, as these generate less histamine.
- ☐ **Eat pea sprouts that have been sprouted in the dark:** Pea sprouts are high in DAO enzymes. This is the enzyme that breaks down histamine in the gut. Pea sprouts grown in the dark tend to have the highest levels of DAO. Blend them in juice or smoothies as this increases absorption.



# High Histamine Symptoms

## 3. Food (continued)

- ☐ **Healthy oils:** Unhealthy, rancid oils damage cell membranes. Weak cell membranes allow histamine to leak out and cause issues. Cell membranes are more robust and flexible when the diet is high in the omega 3 oils: EPA and DHA.
  - ☐ Increase intake of healthy omega 3 oils such as: oily fish (salmon, mackerel, anchovies, sardines, herring), avocados, olives and good quality olive oil.
  - ☐ Keep oils in dark containers, stored in the fridge, or dark cabinets.
  - ☐ Avoid high intake of unhealthy oils such as cheap cooking oils or old, rancid oils. These oils weaken cell membranes and allow histamine to leak out.
  - ☐ Avoid cooking at high temperatures. Particularly avoid using low smoke point oils as heat damages oils. The best high smoke point oils for cooking are ghee and avocado oil.
- ☐ **Phosphatidylcholine:** is a primary component of strong, healthy cell membranes. Healthy cell membranes are a must for healthy histamine storage.
  - ☐ Supplement with phosphatidylcholine directly or with choline (the compound phosphatidylcholine is made from)<sup>†</sup>.
  - ☐ Eat choline-rich foods such as eggs, meat and fish.
  - ☐ Increase production of phosphatidylcholine by supporting the PEMT gene. Read the PEMT chapter in *Dirty Genes*.
- ☐ **Uncooked leafy green vegetables:** These are high in folate. Adequate levels of folate are needed to generate adequate levels of the compound S-Adenosylmethionine (SAM). SAM is the cofactor which helps to break down histamine. SAM also supports the PEMT enzyme to generate phosphatidylcholine for healthy cell membranes - and thus, keeps histamine stored safely inside the cell.
- ☐ **Colorful fruit and vegetables:** These contain polyphenols. A diet rich in polyphenols helps reduce cell membrane damage and enriches the gut microbiome.
- ☐ **Vitamin C:** Consume foods high in vitamin C. Vitamin C supports the maintenance of healthy levels of histamine inside storage cells. (Do not consume high amounts of vitamin C if you're struggling with oxalates.)
- ☐ **Antioxidant herbs and spices:** Consume antioxidant herbs and spices such as EGCG and theanine (in green tea), curcumin (turmeric), quercetin, rutin, urtica (nettles) and astragalus. These work well with vitamin C.
- ☐ **Eat local raw honey:** Raw honey helps stabilize mast cells by reducing elevated levels of IgE.

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## High Histamine Symptoms

### 4. Environmental Exposure

- ☐ **Pet dander:** Histamine is released in response to allergens such as pet dander and pollen. Use an IgE skin-prick test to identify which allergens you are most sensitive to. SLIT (sublingual immunotherapy can work wonders for supporting one's responses to allergens. Talk with your doc).
- ☐ **Dust and dust mites:** Dust mites can cause histamine release. Consider replacing carpets with hard flooring (especially in sleeping areas), use dust mite covers for bedding and use a hepa filter to improve air quality. Keep humidity lower than 55% as dust mites prefer humidity at 60% and above. Use a dehumidifier in humid areas to maintain 50% humidity.
- ☐ **Mold:** Mold increases the production of histamine by upregulating the HDC enzyme. Mold also triggers the release of histamine. Find the source of mold and have it professionally remediated. Moving to a more arid climate may be required for those very sensitive.
- ☐ **Air pollution and smoke:** These trigger histamine release. They also slow the elimination of histamine by the slowing down the HNMT enzyme. Take steps to avoid air pollution where possible.  
Check 'Shopping Resources' on page 58 for Dr. Lynch's preferred air purifier.  
Scented products: Perfumes and scented products promote release of histamine. Avoid scented candles and highly-perfumed cleaning or personal care products. Anything scented is a trigger for histamine.  
Yes, this is researched. You now have proof to have others finally listen!
- ☐ **Plastics and BPA:** Plastics contain compounds that act like estrogen. These are known as "xenoestrogen" compounds. These compounds trigger the release of histamine from storage cells.
  - ☐ Minimize the use of flexible plastic packaging and exposure to Bisphenol A (BPA) from tin can linings and till receipts.
  - ☐ BPS (that replaced BPA) is just as bad, or worse, than BPA. Use glass, metal or silicone for cooking and storing food.
- ☐ **Formaldehyde and other aldehydes:** Breakdown of these compounds causes additional workload for the ALDH enzyme. The additional workload reduces the enzyme's capacity for breaking down histamine. Common sources are vehicle emissions, smoking (especially secondhand), cooking fumes, formaldehyde from new carpets and building materials, disinfectants, drugs, perfumes, fungicides and pesticides, dry cleaning and many other environmental chemicals.
- ☐ **Indoor air quality:** Pollution triggers histamine release.
  - ☐ When cooking, always turn on your extraction hood.
  - ☐ Keep your office, car and rooms well ventilated.
  - ☐ Change your furnace filters regularly. Set a reminder.
  - ☐ Have your forced air ducts professionally cleaned.
  - ☐ Turn on the 'recycle' option in your car during traffic.

# High Histamine Symptoms

## 5. Medications

- ☐ **Pain killers:** Numerous pain killing medications may increase histamine: codeine, morphine, pethidine and metamizole.
  - ☐ If you suspect your pain killing meds may be exacerbating your symptoms, talk with your doctor about alternatives.
- ☐ **Aspirin and NSAIDs:** Try to limit the use of aspirin and non-steroidal anti-inflammatory drugs (NSAIDs). These medications slow down the activity of ALDH enzyme. ALDH helps eliminate histamine from your body.
  - ☐ Curcumin (turmeric) and omega 3 fish oils naturally support healthy inflammatory processes.<sup>†</sup>
- ☐ **Metformin:** This reduces the breakdown of histamine in the intestines. It does so by slowing down the DAO enzyme. If you need metformin:
  - ☐ Address intestinal pathogens or bacterial dysbiosis that may histamine release in the gut.
  - ☐ Be particularly careful to minimize the amount of histamine-containing foods you consume.
  - ☐ Talk with your doctor about an alternative to Metformin.
  - ☐ Consider supplementing with a DAO enzyme to support a healthy response to histamine.<sup>†</sup>

## 6. Estrogen

- ☐ **Estrogen and stress hormones:** Estrogen dominance and stress neurotransmitters increase histamine release.
  - ☐ Support the breakdown of stress neurotransmitters. Read chapters COMT and MAOA in *Dirty Genes*.
  - ☐ Support the breakdown of estrogen.
  - ☐ Consider DIM (Diindolylmethane) supplement to support healthy estrogen balance<sup>†</sup>.
  - ☐ Talk with your doctor about using progesterone to balance estrogen.
  - ☐ Oftentimes progesterone is low and estrogen is high.
  - ☐ Avoid xenoestrogens (artificial estrogens) found in plastics and personal care products.

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## High Histamine Symptoms

### Vitamins & Minerals<sup>†</sup>

- **DAO enzymes:** DAO breaks down histamine in the gut. Consider directly supplementing with DAO enzymes. Use DAO enzymes when eating or drinking to help break down histamine from foods and drinks. Use DAO enzymes away from food to help break down histamine from the microbiome.
- **Glutathione:** Glutathione acts as the body's most important antioxidant. Glutathione supports healthy cell membranes. Healthy cell membranes keep histamine from leaking out of their storage cells. Glutathione also helps support the methylation cycle so the HNMT enzyme can properly use SAM as a cofactor to break down histamine.
  - Eat cruciferous vegetables, eggs or broccoli sprouts to support glutathione production.
  - Supplement with liposomal glutathione, S-Acetyl-L-Glutathione (capsule) or its precursor N-acetylcysteine (NAC).
  - *Important:* Use liposomal glutathione or S-Acetyl-L-Glutathione (capsule) instead of NAC if you are exposed to mold. Mold has the ability to inhibit the conversion of NAC to glutathione.
- **Antioxidants:** These support the healthy storage of histamine: quercetin, PQQ (pyrroloquinoline quinone), bioflavonoids.
- **Thiamine (B1):** B1 is especially important as acetaldehyde (from alcohol and candida) damages enzymes that are B1 dependent.
- **Riboflavin (vitamin B2):** B2 is often deficient in the presence of fungal organisms such as candida overgrowth or mold.
- **Niacin (Vitamin B3):** B3 supports the final stage of histamine elimination.
- **Vitamin B12:** B12 is critical for making the main methyl donor, SAM.
- **Vitamin D:** Vitamin D controls the release of histamine from mast cells. Vitamin D supports the immune system and supports healthy autoimmune responses. Maintain adequate vitamin D levels throughout the year. During the winter months, the body's ability to generate vitamin D is lower. Supplementing with vitamin D during winter may be useful.
- **Zinc:** Zinc is a cofactor for the elimination of histamine. Zinc also supports a healthy immune system and a healthy gut lining.
- **Copper:** Copper is a cofactor for the DAO enzyme.
- **Magnesium:** Magnesium is needed for the production of SAM.
- **SAM:** S-Adenosylmethionine (SAM) supports the HNMT enzyme and the COMT enzyme. The HNMT enzyme breaks down histamine. The COMT enzyme helps support healthy levels of stress neurotransmitters and healthy levels of estrogen. Make sure your Methylation pathways (Folate and SAM) are clean. Read *Dirty Genes* for more details. Supplementing with SAM can be effective but it can be problematic for some people.

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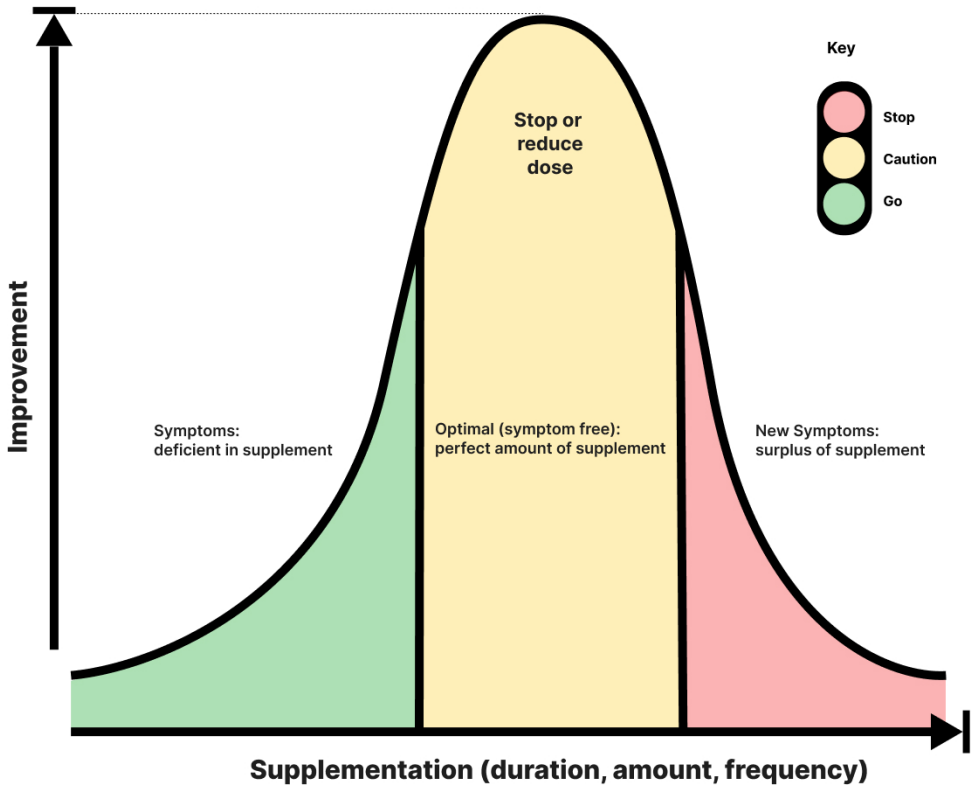
## Section 6

### **Histamine Support Supplements<sup>†</sup>**

**IMPORTANT:** Before taking any supplement, implement Dr. Lynch's Pulse Method. This method has helped people reduce side effects, optimize outcomes and save money.

## The Pulse Method

What is the Pulse Method? This is Dr. Lynch's method for starting, pausing, or stopping a supplement based on how you're feeling.



*Supplement:* literally means 'to add to or enhance'.

You take a nutritional supplement to add to, or enhance, how you're feeling. You must tune in to how you're feeling, before, during and after you supplement.

**Symptoms:** Nutrients are used by thousands of enzymes in your body. If nutrients are deficient, symptoms happen. Why? Enzymes perform specific functions requiring specific nutrients. No nutrients means no function. If you know which enzyme is struggling, then you know which supplement is needed.

Ideally, start with one supplement. This way, you can truly monitor how it is affecting you.

Note how you're feeling *before*, and *after*, you take any supplement.

Every supplement has specific functions. If the supplement has properly targeted the right enzymes, then symptoms go away.

Some supplements act quickly and you feel great fast. Some take a week, or more, to feel something. If you feel worse from the supplement, it may be because you took too much, too frequently, and/or at the wrong time. Or perhaps it could be the wrong supplement.

**Optimal (symptom free):** You've taken the supplement and feel significant improvement. Why? You provided the necessary nutrients the enzymes needed. It may have taken 10 seconds to feel better or it may have taken 10 days.

The next day, you wake up. Ask yourself, has the symptom gone away? If yes, great! *Do not* take the supplement right now. Why? Your body still has enough of the nutrients the enzymes require. If you feel that the symptoms are still there or coming back, then take the supplement. The amount you take depends on how significant your symptoms are. Take less if your symptoms are mild. Consider more if symptoms are significant.

New Symptoms: How can a supplement that helped you feel symptom-free now create new, undesirable symptoms?

It's like eating a meal. If you eat the right amount, you feel comfortably full and happy. If you eat too much, you're uncomfortable.

Enzymes are the same way. They can only use so much of a nutrient. Essentially, if you provide too much of a nutrient, it will act on additional enzymes that you did not intend to support. Now you are in new territory. Lost. It's best to stop taking the supplement.

Remember, *supplement* is defined as 'to add to or enhance'. It does not mean swallow it every day regardless of how you feel.

### **Bottom Line:**

What symptoms are you struggling with? Ideally, you learn what enzymes are associated with creating those symptoms. Then, you introduce nutrients which support those enzymes.

The question should not be, 'What supplement do I need?'

The ideal question is, 'What enzyme do I need to support?'

The concept of *Dirty Genes* helps you learn this approach to supplementation. Supplementing using the 'dirty gene' concept is extremely targeted which is why it's so effective - and so fast.

People get results so fast with Seeking Health supplements because they are specifically designed to clean certain enzymes.

The 'suggested use' you see on a supplement label is simply the amount of nutrients contained in one serving. That's all. The suggested use is not the amount that you need to take. I repeat. Suggested use is not the amount you need to take.

***Take your supplements on your terms: at the frequency, at the time and at the amount that works well for you.***

***Important point: the amount of a supplement that works well for you one day may be different the very next day.***

Why? Some days you dirty your genes more than others. Some days you clean your genes more than others.

Every moment is a new moment. Your enzymes are constantly adapting to the environment.

Health is constantly in motion. You'll never figure out 'the perfect dose' of a particular supplement. The perfect dose doesn't exist. It changes. Well, it *should* change if you're listening to your body properly.

Do you always drink the same amount of water each day?

Do you always eat the same amount of food each day?

You shouldn't supplement the same amount of each supplement every day - unless specifically prescribed by your healthcare professional. Even then, you should have a conversation with them.

### **The Pulse Method in Action**

You wake up and the grasses and flowers are in full bloom. Your nose is running, eyes itching and you're sneezing like crazy. You take 1 serving of HistaminX to support healthy histamine release along with 1 serving of Histamine Block Plus to support healthy histamine breakdown<sup>†</sup>. You notice within a short period of time that your sneezing and runny nose has stopped.

The next day, you wake up hearing the rain pouring outside. The air is fresh and no pollen is flying about. You're not sneezing and your nose is not running. You do not need to take any histamine support supplement right now.

But, let's say you do...

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You take a serving of Histamine Block Plus even though your nose is just fine. Thirty minutes later, you begin feeling quite tired and need a nap. This didn't happen yesterday when you took it. In fact, you just felt great.

What happened?

You took too much Histamine Block Plus. Higher histamine levels increase mucous production, sneezing and itchy eyes. Low histamine levels can negatively affect alertness and concentration.

Know your supplements.

HistaminX supports healthy storage of histamine within the cell so it won't affect concentration or focus. HistaminX is a supplement that can be used daily to support a healthy response to seasonal change.<sup>†</sup>

Histamine Block Plus can be used daily as well as long as symptoms of high histamine are present. If you don't have symptoms, you may not have high histamine in your system today. Therefore, you don't need to support the breakdown of histamine today.<sup>†</sup>

Apply the Pulse Method with every supplement you use. By doing so, you will experience more stability. You'll also save money!

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## Essential Histamine Supplement Recommendations<sup>†</sup>

Each supplement below works on a targeted area of histamine metabolism. If you need significant histamine support, consider all four supplements. Otherwise, select which histamine support supplement is best for you based on how many boxes you check.<sup>†</sup>

Talk with your health professional before using any supplement. Ages 4 and up may use. Pregnant, breastfeeding or young children? Talk with your doctor.

Hydration is an issue for nearly everyone. If you are dehydrated, histamine concentration increases. Hydration is not just drinking water. Proper cellular hydration requires electrolytes. Consider **Optimal Electrolyte** daily in your water bottle combined with filtered water. Helpful for pregnancy and breastfeeding women as well.

### I need support for healthy<sup>†</sup>:

- ☐ response to seasonal irritants
- ☐ response to pets
- ☐ breathing
- ☐ histamine levels

#### Consider:

##### Histamine Block Plus

May be used when breastfeeding. Not vegan or vegetarian. Capsule may be opened and mixed in food if needed.

Take anytime of day or night with or without food. Taking before bed may help healthy onset of sleep.

##### HistaminX:

May be used when breastfeeding. Capsule may be opened and mixed in food if needed. Take anytime day or night with or without food.

**Trick:** Create synergy. HistaminX may enhance the other histamine supplements<sup>†</sup>.

### I need support for healthy<sup>†</sup>:

- ☐ histamine-containing foods
- ☐ histamine-containing drinks
- ☐ leaky gut
- ☐ high-histamine microbiome
- ☐ irregular bowel movements

#### Consider:

##### Histamine Block (soon to be: Histamine Digest)

May be used when pregnant or breastfeeding. Not vegan or vegetarian. Capsule may be opened and mixed in food if needed. Take anytime of day or night when needed.

**Trick:** Take away from food if wanting to support healthy microbiome histamine levels in your gut<sup>†</sup>.

##### ProBiota HistaminX (capsules) - 10 billion or

##### ProBiota HistaminX Powder - 25 billion

May be used if pregnant or breastfeeding.



### Game Changer

"This product has made a huge difference in my son's histamine tolerance. We struggle with PANS. Who knows what could send him into a flare; but with **Histamine Block Plus** (HBP), he seems to be mellowed out through any unknowing food mistakes we make. We eventually added the **ProBiota HistaminX** just to complement the HBP. I feel like this pair also supported a healthy seasonal response and have noticed his morning breath and flares seem to be supported in a good way as well."<sup>†</sup>

-S.J.L

<sup>†</sup>These statements have not been evaluated by the Food and Drug Administration (FDA). This product is not intended to diagnose, treat, cure, or prevent any disease.

Histamine Block and Histamine Block Plus are NOT EFFECTIVE for symptoms of immune-related food allergies, such as peanuts, shellfish, etc., or for gluten intolerance due to sensitivity or celiac disease. DAO is not absorbed and does not have systemic activity. Histamine Block does not manage or address antibody-related or IgE-related food allergies.

## Additional Histamine Supplement Recommendations<sup>†</sup>

While targeting histamine breakdown directly is helpful, it may not address the underlying causes of your high histamine. Stress, anxiousness, gut issues, oxidative stress, estrogen and inadequate sleep are major contributors of high histamine. Consider additional supplements which support histamine production, release, or breakdown.<sup>†</sup>

Talk with your health professional before using any supplement.  
Pregnant, breastfeeding or young children? Talk with your doctor.

### I need support for healthy<sup>†</sup>:

- ☐ response to stress
- ☐ sleep patterns

Healthy adrenal function is important to support stress tolerance and sleep patterns. High stress can contribute to poor sleep, histamine production and release as well as poor breakdown. Healthy sleep patterns protect against excessive production of histamine.

#### Consider:

##### Adrenal Nutrients

If you want to support<sup>†</sup>:

- ☐ healthy response to stressful situations

May be used when breastfeeding.

Take anytime of day or night with or without food.

##### Adrenal Cortex

If you need support for<sup>†</sup>:

- ☐ healthy sleep duration
- ☐ waking up feeling sufficiently rested

May be used when breastfeeding.

Take in the morning with breakfast. Take only if feeling tired.

##### Optimal Sleep<sup>†</sup>

If you want to support<sup>†</sup>:

- ☐ healthy duration of sleep

May be used when breastfeeding.

Take 20 minutes before bed if you want to support sound sleep throughout the night<sup>†</sup>.

##### Optimal Sleep II<sup>†</sup>

If you also seek to support healthy<sup>†</sup>:

- ☐ onset of sleep

May be used when breastfeeding.

Take 20 minutes before bed if you feel you need support to fall asleep.

### I need support for healthy<sup>†</sup>:

- ☐ bowel movements
- ☐ microbiome

A healthy gut supports healthy histamine production and release. Improved digestion of food, reduced microbial numbers in the small intestine, and a healthy gut lining all contribute to balanced intestinal and systemic histamine<sup>†</sup>.

#### Consider:

##### Optimal GI (capsules)

##### Optimal GI Plus (powder)

If you want to support<sup>†</sup>:

- ☐ healthy gut lining (leaky gut)

May be used if breastfeeding.

Take after dinner.

##### Digestion Intensive (capsules or chewables)

If you want to support<sup>†</sup>:

- ☐ digestion of food
- ☐ food sensitivities

May be used if breastfeeding.

Take anytime of day or night when needed, usually with food.

##### Ox Bile 125 or Gallbladder Nutrients (vegan)

If you want to support normal<sup>†</sup>:

- ☐ digestion of fats
- ☐ healthy bile flow
- ☐ gallbladder function

May be used if breastfeeding. Ox Bile 125 is not vegan or vegetarian.

Take anytime of day or night when needed, usually with food.

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I need support for balanced<sup>†</sup>:

- detoxification
- histamine levels

Glutathione supports healthy levels of oxidative stress\*. Too much oxidative stress increases histamine production, increases histamine release and reduces histamine breakdown.

**Optimal Liposomal Glutathione Plus (liquid) or Optimal Glutathione Plus (capsule)**

May be used when breastfeeding. Take anytime of day except within 3 hours of bedtime, on an empty stomach.

**Trick:** Hold the liquid (diluted if you wish) in your mouth for 30 seconds before swallowing for better effect.

I need support for healthy<sup>†</sup>:

- Estrogen levels
- Mood before menses

Estrogen influences the release of histamine. Estrogen also influences the levels of serotonin and dopamine - potentially to excessive amounts. Supporting healthy estrogen levels supports healthy histamine levels and healthy moods.\*

**DIM+I3C**

May be used when breastfeeding.  
May be used any time of day with or without food.

Some individuals are sensitive to methylfolate, SAME or methylcobalamin. If this sounds like you, consider the supplements below to support healthy histamine levels.\*

**B Complex MF or Multivitamin Sensitive**

May be used if pregnant or breastfeeding.

Take anytime of day or night when needed, usually with fatty foods.

**Trick:** Since **Histamine Block Plus** contains SAME, use **Histamine Block** (soon to be: Histamine Digest) instead.

Visit [www.seekinghealth.com](http://www.seekinghealth.com) to learn more.



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# Histamine Products Comparison Chart

	Histamine Block (Histamine Digest)	Histamine Block Plus	HistaminX	ProBiota HistaminX	ProBiota HistaminX Powder
<b>Who is it for?*</b>	Those who are sensitive to histamine-rich meals. <sup>†</sup>	Those who want to support a healthy total body histamine response, including histamine from meals. <sup>†</sup>	Those who want to support a healthy inflammatory and histamine response to environmental compounds. <sup>†</sup>	Those who want to support gut health and healthy histamine response. <sup>†</sup>	Those who want to support a healthy inflammatory and histamine response to environmental compounds. <sup>†</sup>
<b>What's in it?</b>	DAO.	DAO + histamine pathway cofactors.	Plant-compounds and herbs.	Histamine-Friendly Probiotic species.	Histamine-Friendly Probiotic species.
<b>How to Use</b>	Take 1 capsule no more than 15 minutes before the consumption of histamine-rich foods, or take as directed by your healthcare professional.	Take 2 capsules no more than 15 minutes before consumption of histamine-rich foods, or use as directed by your healthcare professional.	Take 2 capsules without food or as directed by your healthcare professional.	Take one capsule any time of day with or without food or as directed by your healthcare professional.	Take 1 scoop any time of day with food. You may sprinkle or mix in food or drink. Use as directed by your healthcare professional.
<b>Vegetarian /Vegan?</b>	NOT suitable for vegetarians or vegans (DAO is porcine-derived).	NOT suitable for vegetarians or vegans (DAO is porcine-derived).	Suitable for vegans and vegetarians.	Suitable for vegans and vegetarians.	Suitable for vegans and vegetarians.
<b>Allergens?</b>	FREE OF Milk, Egg, Fish, Shellfish, Tree Nuts, Peanuts, Wheat, Soy.	FREE OF Milk, Egg, Fish, Shellfish, Tree Nuts, Peanuts, Wheat, Soy.	FREE OF Milk, Egg, Fish, Shellfish, Tree Nuts, Peanuts, Wheat, Soy.	FREE OF Milk, Egg, Fish, Shellfish, Tree Nuts, Peanuts, Wheat, Soy.	FREE OF Milk, Egg, Fish, Shellfish, Tree Nuts, Peanuts, Wheat, Soy.
<b>Which dirty genes are supported?</b>	Supports a dirty DAO. <sup>†</sup>	Supports a dirty DAO, HMNT, ALDH2, ADH1B, NAT2, HRH1, HRH2, HRH3, HRH4. <sup>†</sup>	Supports a dirty HRH1, HRH2, HRH3, HRH4. <sup>†</sup>	Supports a dirty DAO. <sup>†</sup>	Supports a dirty DAO. <sup>†</sup>



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## Section 7

**I'm Cured!**

Cure is defined as 'to relieve a person of the symptoms of a disease or condition.'

There's an inherent problem with this definition. People think cure means that whatever disease or condition they once had is now permanently gone.

That's not the case.

Health is a dynamic moving target.

Think about your kitchen counters or your car's windshield. You washed all the dishes and wiped off the counters. Are your counters cured? You washed your windshield of dead bugs. Is your windshield now forever clean? Just like your counters and windshield, your histamine genes always gets dirty.

Histamine intolerance is not cured.

It's managed.

Why?

You use your body all day, every day.

Some days you consume more histamine foods. Some days are more stressful. Some days are beyond your control. Some days everything just happens all at once!

Keep this workbook handy. Revisit it when you're experiencing undesirable symptoms. Go through the checklists to see if there's an 'A-HA!' moment. If you checked a few boxes of things which dirty your histamine genes, clean them up. Most likely it's your lifestyle, environment or food and drink. Use a few histamine supplements if needed.†

Then you'll feel great again. You'll feel 'cured'.

Remember that in a few hours, your histamine genes can get dirty again. It's ok. That's how it is. It's nothing to be mad about or ashamed of. Are you upset when your socks and underwear are dirty at the end of the day? Not at all. That's how it is. You just toss them in the wash.

You'll be cleaning your histamine genes daily just like your socks and underwear.



## Your Biggest Takeaway and Thank You.

What is the #1 thing that **The Histamine Workbook** provided you that nothing else has in your health journey?

Hop onto your favorite social media account and share.

- take a photo of the part in the workbook that excited you the most
- explain why it excited you the most
- use this hashtag: **#thehistamineworkbook**

Then, tag **@drbenlynch** and **@seeking.health**

As researchers, writers and fellow humans, we love reading how our toiling behind a computer screen for countless months has tremendously benefited you.

Thank you for your trust, your effort and your desire to learn.

*Dr. Ben Lynch*

*Elizma Lambert*

*Angela Archer*







# Appendix

## **Shopping Resources**

Cleaning your genes requires tools.  
These tools can last a lifetime.  
Invest in them wisely.

- Sauna
- Water purifiers
- Air purifiers
- Humidifiers
- EMF mitigation
- Sleep hygiene
- Non-toxic personal care products
- Quality food

Recommendations for the above are found below.

- Visit **[www.drbenlynch.com](http://www.drbenlynch.com)** and then click 'Resources'

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Notes

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# Dirty Genes:

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## THE HISTAMINE WORKBOOK

### About the authors

#### Dr. Ben Lynch

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For my first 35 years of life, I struggled with many different symptoms... and I had no idea they were all related to histamine. Irritability, headaches, frequent nose bleeds and eczema plagued me. Working out always made me dizzy, my ears ring, my face bright red and extremely sweaty. Now these are all behind me as long as I keep my histamine genes clean. I'm excited for you. You have the tools needed to support healthy histamine levels. Author of Dirty Genes, founder of Seeking Health, father of three amazing boys, Tasman, Mathew and Theodor, and married to one lovely lady, Nadia. We live in Kirkland, WA with two rescued cats and two rescued pups.

#### Elizma Lambert

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I see many clients who struggle with symptoms related to histamine that are not the expected sinus or hay fever symptoms. Instead, it may be something seemingly far removed such as period pain or difficulty sleeping. Educating clients, and practitioners, on the link between histamine and common conditions has become important for me, as people, maybe even you, struggle to get better. It's been an honor being part of this workbook. Here, you can find the tools, not only for managing histamine symptoms, but also for finding the root cause.

Naturopathic practitioner in clinical practice, educator, mother of two exceptional young men, Ethan and Tyler, and married to my soul mate, David. We live in sunny Australia, on top of a mountain, surrounded by bushland with two rescue dogs and beehives.

#### Angela Archer

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I've had the privilege of being part of Dr Ben's fabulous team for 5 years. I'm absolutely fascinated by how the body is an amazing, intricate machine that is hard-wired to be well. If we have symptoms, especially histamine symptoms, it's fascinating to see how the right nutrients and environment can make such a difference. I love researching the enzymes, nutrients and chemical pathways to help support people on their journey to optimal health. Providing information that matters for people who care. What a privilege!

I have a degree in Chemistry and a diploma from the College of Naturopathic Medicine. I live in the UK with my wonderful partner, also called David.



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