



### Treatment Methods to Tackle Histamine sensitivity / Mast Cell Activation syndrome

Treating Histamine sensitivity can be complex and in some patients quite challenging. It's important to take a multi-factorial approach to the issue and try to understand the individual drivers for each person as an individual.

In particular, we have seen a rise in histamine sensitivity following the recent pandemic which has been triggered by Covid-19 infections. I suspect that the oxidant stress and perhaps also the increased anxiety caused by the infections, are the main triggers for the ongoing inflammation and mast-cell sensitivity following Covid.

While this is a complex topic, there are certain things which can help (or should be avoided), by most people with Histamine sensitivity and this information sheet provides an overview of the main methods employed in the clinic:

#### Diet:

**Low Histamine / caffeine / Tyramine diet** will help to control some of the symptoms. Those who are sensitive to these 'adrenaline-mimicking' chemicals (also known as neuro-biogenic amines), may also react to other chemicals found in food colourings, preservatives and artificial sweeteners. For some, glutamates (especially MSG), may also be a triggers. The low histamine diet sheets and further recommendations can be found here:

<https://drsarahdavies.online/document/low-histamine-diet-plan/>

<https://drsarahdavies.online/document/low-histamine-leaflet-from-sighi/>

Alcohol is particularly problematic as it acts as both a histamine releaser and also blocks DAO activity in the gut (an enzyme which would normally reduce histamine load). In addition, alcoholic drinks are fermented and contain high levels of histamine and other chemicals (especially red wine).

We sometimes see slow improvements in sensitivity over time in those on the AIP / Elimination diet (though perhaps not full resolution). This is because being grain and lectin free will allow any 'leaky gut' to heal and reduce the flow of unwanted undigested irritants and chemicals into the bloodstream. It also helps people to identify and avoid any foods which may be triggering ongoing immune responses.

Food sensitivities very commonly co-exist with chemical sensitivities / histamine sensitivity. This can make it challenging to decide why there are reactions to certain foods (especially high histamine nightshades such as tomato and aubergine). A tomato reaction could be a tomato sensitivity (delayed IgG type immune response), or a histamine reaction. It helps to keep a diet of food reactivity and timing to tease apart these issues. This is important as foods triggering immune responses should be completely avoided (as they can contribute to the development of autoimmune complex formation). On the other hand, high histamine foods can often be enjoyed in small amounts even in moderately sensitive individuals (especially if taken with a clay binder or antihistamine foods / supplements).

When considering diet, the contribution of antihistamine foods should also be considered (it's not just about what not to eat, but what to eat more of). Our diet plan details foods likely to help improve histamine processing.

Remember also the 'rainbow' of antioxidants to aid cell metabolism and healing (although lots of the 'red' / high histamine fruits and veggies can be a little 'triggering', they are usually OK in small amounts).

Reducing inflammation with an anti-inflammatory diet also works in the same way as reducing stress mentally. Both should help to reduce histamine reactions and allow the diet to become more inclusive and diverse.

There is a lovely site here which may help: <https://healinghistamine.com>

## Neural Reprogramming:

Breaking the 'wind-up' effect of anxiety on the effects of high histamine on the brain. This is not to say that the problem is 'in your head', but the limbic system in the brain is very responsive to 'threat'. When reactions to histamine are interpreted as 'bad / possibly serious', the adrenaline levels rise, sensitivity to the histamine heightens and the whole process spirals out of control.

The ability to break this cycle with positive affirmations and relaxation techniques is a curious one. However, I have seen the occasional patient make a very rapid recovery following the use of a Neural reprogramming techniques. Various programmes are available and are all aimed at reducing the 'fight or flight' response and up-regulating the healing / parasympathetic nervous system. We have seen good feedback from the following 3 programmes:

- **DNRS (Dynamic Neural Retraining System):** <https://retrainingthebrain.com>

While this would be my 1<sup>st</sup> line choice, it's not necessarily for everyone and does require a fair amount of homework.

- **ANS Rewire:** <https://ansrewire.com>

This programme is gentle and aimed mainly at patients with CFS/ME who need support with recovery.

- **Curable:** <https://www.curablehealth.com>

Mainly aimed at Chronic Pain sufferers, this is a fairly user-friendly app which encourages compliance and guides the user through a range of techniques to improve neural responses to stress and pain.

## Antihistamine Medication:

There are lots of options out there, and for many clinics this is the only mode of therapy offered. I think they can be useful when taken hand in hand with the healing process we have laid out in our FM treatment plans. The website <https://www.naughtylittlemastcells.com> has information on medications.

For those who are very sensitive to allergenic excipients, we are able to have very clean and chemical free versions compounded by the expert Pharmacy team at Roseway Labs.

Options include:

**Over the counter antihistamines (Cetirizine / Loratadine)** – these are helpful in a crisis sometimes but don't actually lower histamine burden (just temporarily block the receptors). We don't recommend regular or long term use if possible. If you accidentally eat something triggering or can't sleep due to palpitations, these can be a nice 'quick fix' temporarily. Long term / after a few days they will often stop working. If you are very reactive, you may be better getting hypoallergenic versions also.

- **Ketotifen** – slightly more advanced antihistamine is often used in MCAS and inhibits release of inflammatory mediators and is also thought to help reverse the receptor sensitivity to adrenaline.
- **Cromoglycate / Nalcrom** – Inhibits the release of chemicals from sensitised mast cells and can help to reduce severity and frequency of the 'allergic feeling' reactions experienced in MCAS.
- **Famotidine / Ranitidine** – H1 receptor antagonist which also has antihistamine activity but will also block stomach acid (which may cause other issues to flare).
- **Monteleukast** – A leukotriene inhibitor is also sometimes useful (especially in allergic-type asthma associated with MCAS).

## Green Pharmacy / Natural options:

- **Quercetin** – Acts by stabilising mast cells and reducing release of leukotrienes, histamine and prostaglandins which cause the typical allergic – type reactions / palpitations etc.
- **Vitamin C** – Helps to reduce blood histamine levels by inhibiting mast cell production, increasing diamine oxidase (the enzyme that breaks down histamine in the gut), and reducing mast cell degranulation.



- **DAO (Diamine Oxidase)** – This enzyme naturally breaks down histamine in the gut can be taken as a supplement prior to meals containing histamine. In some people, this allows the diet to be relaxed a little from time to time. Not always effective in my experience, but in mild cases may allow the diet to be relaxed a little on occasions.
- **Toxaprevent** – This is a Medical Grade Clinoptolite clay. It helps to reduce histamine loading by absorbing it (alongside ammonia, heavy metals and other toxins), from the digestive tract. This is simply an adjunct to therapy and works best if taken 20 minutes prior to a histamine containing meal (or straight away afterwards as a rescue measure). A regular night time dose can also help as a background leveller of histamine levels. However, it cannot remove histamine from the bloodstream once it has got in as the Toxaprevent is too large to cross the gut lining or enter the bloodstream.

### Up-regulating Methylation:

Once histamine / tyramine / caffeine and adrenaline are in the bloodstream they have to be de-activated and ultimately made water soluble for excretion through the urine by a process called methylation.

This process requires methyl groups (known as SAmE), to be produced from Vitamins B9, B12 (with assistance from magnesium, zinc and choline). Many of our patients in clinic are slow folate methylators genetically due to variants on the methylation cycle, and this reduces SAmE production to either a greater or lesser extent depending on their nutritional status.

On occasion, I have seen severe caffeine sensitivity reverse completely with B12 replacement therapy by injection – so this is often a good place to start in anyone with symptoms of B12 deficiency.

SAmE production can also be enhanced through:

- Good dietary choices (lots of green leafy vegetables for zinc and folate, eggs for choline, and animal products / organ meats for B12)
- Supplementation of B9 and B12 (we always give methylfolate if poor folate methylation is suspected and find B12 injections can be highly effective)
- Maintaining good mineral levels of Magnesium and zinc (again diet and supplementation).
- It is also possible to supplement SAmE directly (although I think it's a shame to miss out on the other benefits of correct diet and nutritional replacement where deficiencies are identified). In some people this is more effective than B vitamin replacement as the COMT enzyme is very impaired.

Once SAmE is produced it acts in the COMT and MAOB enzymes to break down the offending chemicals (as well as many others such as oestrogen which is primarily handled by COMT). Some patients have naturally slower processing in these enzymes. If you are interested in understanding the process for histamine breakdown there is more information from LifeCode Gx here:

<https://www.lifecodegx.com/methylation-report>

<https://www.lifecodegx.com/histamine-intolerance-report>

While we can support the enzymes involved with their natural co-factors (Zinc, Magnesium, B2, B3, SAmE, Copper, B6, Vitamin C etc.), we can't change their structure or speed easily (although there is some evidence that expression of better versions of the enzymes may occur when stress levels are reduced). However, in some patients, speed of processing can be improved by 'cleaning-out' the receptor sites in the enzymes through the process of detoxification.

### Detox:

In some patients, chemical processing is naturally slightly slow but works fine as long as the person is not overly stressed, has a healthy diet and doesn't 'flood themselves' with difficult to break-down chemicals (such as alcohol or excess oestrogen in medication), on a regular basis. However, over time, due to problems with detoxification issues on other pathways and over exposure to heavy metal and other environmental toxins, processing may slow down due to damage done to the enzymes by these toxins.

In patients with acquired toxin-based chemical processing problems, detoxification via a number of methods to 'clean out' the enzyme receptor sites, can be a valuable way to re-establish chemical



tolerance, reverse histamine sensitivity and get rid of the need for dietary restrictions and supplementation.

Do read our 'Detox' Advice sheet for more information on avoidance of toxins and methods for speeding up toxin elimination and release.

<https://drsarahdavies.online/document/detox-guide/>

