



Newson Health

Histamine Intolerance (HIT)

What is Histamine Intolerance?

Histamine Intolerance (HIT) is a condition that is generally very poorly understood by the medical profession and is rarely recognised or acknowledged. It is important to be aware of this condition in the setting of a menopause clinic as it does have implications for our hormonal health, and how we respond to our menopause and to HRT.

What is Histamine?

Histamine is an important chemical that is crucial to the body's functioning - especially the gut, the brain, the nervous system and the immune system. Everybody needs histamine to survive but problems can occur if we have too much of it. Ideally, we have a balanced process happening, where the amount of histamine we have entering our bodies is roughly equal to how much we get rid of. If this balance is altered and we have too much histamine and/or don't get rid of it as efficiently, then we can develop histamine intolerance.

Excess histamine can cause a variety of different symptoms which very often mimic allergic reactions. The most common symptoms are rashes (e.g. hives), itching, flushing, irritable bowel syndrome (IBS),

indigestion, breathlessness, palpitations, migraines, dizziness, anxiety/panic, joint aches and nasal congestion. Most people affected by HIT don't get all of these symptoms, some only have one or two symptoms, others may get far more. Symptoms can be very variable; you may be fine for short or long periods of time and then symptoms reoccur - either intermittently or continually. Symptoms are cumulative - the more excess histamine, the worse the symptoms are.

Current opinion is that HIT affects about 1 in every 100 people. However, as this is a condition that is so rarely correctly identified in sufferers, it may be far more common than this. It is more common in females and more often happens in mid-life.

Is HIT an allergy?

When a person is allergic to a specific trigger and is exposed to this - for example, eating peanuts - histamine is released inside the body very abruptly, in large amounts, and any (or all) of the above mentioned symptoms can occur within minutes of ingestion. In its severest form, this is called anaphylaxis and can be fatal. HIT differs from this in that there is no specific allergy; histamine builds up in the body gradually and is not broken down quickly enough.

The allergy-type symptoms therefore come on gradually and more insidiously. HIT is unpleasant but never fatal. Many sufferers of HIT have often thought they have been allergic or intolerant to things they are eating, but have rarely been able to pin down exactly what it is that upsets them. There is no 'one food' that is the culprit and symptoms can take hours to become apparent. In fact, HIT could be termed a 'pseudo-allergy'.

Some sufferers have had allergy tests for common allergens, but no specific allergy has been detected. Other sufferers have had investigations and/or treatments for their symptoms that have never particularly helped - for example, anxiety medications for panic attacks, nose sprays for a blocked

nose, or bowel investigations for unexplained diarrhoea or constipation. They sometimes feel their problems have never been adequately explained and they can, at times, be inadvertently made to feel like hypochondriacs or 'malingerers'.

How does histamine build up in our body?

Histamine comes from two main sources - from within us (our own cells, called 'mast' cells release it in response to certain stimuli) and from what we ingest in our diet. Many different types of food contain histamine and other foods cause us to release more of our own histamine from mast cells; some foods contain it and make us release it. Alcohol, for example, contains a lot of histamine and causes our bodies to release more histamine. Alcoholic drinks can therefore be quite a problem if you are histamine intolerant. To make things more

complex, it is not always about the type of food we ingest but how the food was prepared or how old it is. For example, a green tomato has very little histamine, but a red tomato has a lot. Freshly cooked chicken that is eaten promptly contains very little histamine, but chicken leftovers (kept in the fridge for a day or two) contains more histamine. Fermented foods e.g. yoghurt, kefir, and sauerkraut are rich in histamine and should be avoided if you are a HIT sufferer.

How does histamine leave our body?

We have two enzymes responsible for breaking down the histamine within our bodies. The enzyme that predominantly deals with histamine from the food we eat is called Diamine Oxidase (DAO). We all have a different amount of DAO depending mainly on genetics (we can't do much about this) but it also depends on the health of our gut (which we can do something about). As already mentioned,

some foods reduce the efficiency of this enzyme. In addition, many drugs can affect the activity of DAO, for example, some antidepressants and painkillers make histamine intolerance worse. Ironically, many patients may be prescribed these medications for symptoms caused by their HIT, if the intolerance has gone unrecognised.

What has HIT got to do with hormones?

Hormones and histamine have a very close link, especially in relation to estrogen. As a woman, your own estrogen (made predominantly by your ovaries) peaks at various times in your life, for example, when your periods first start, at the time of ovulation each month, and in the perimenopause when your levels of

estrogen can become erratic and very high. When your estrogen levels rise, you release more of your own histamine. Histamine then stimulates your ovaries to release more estrogen - thus setting off a vicious cycle. In addition, estrogen stops your DAO from working well. If you are intolerant to histamine, you will not

tolerate your own estrogen very well. You might notice that any symptoms get more noticeable at times in your life when your estrogen is highest. This is why those that develop HIT tend to start having problems either in their teens when their periods start, around the perimenopause or every month in a pattern, e.g. diarrhea or migraines each cycle or when it's a particularly heavy or painful period.

Interestingly, pregnancy is a time when women with HIT actually feel great and are usually completely free of their symptoms. This is because - although estrogen levels are very high in pregnancy - the body develops a way of protecting the fetus from excessive histamine. This is by increasing the amount of DAO by 500 times, hence breaking down histamine very efficiently. If a woman feels the best she ever has during pregnancy, this is a very helpful clue in a woman's history.

Around the perimenopause our hormones can become very variable. There will be times when our estrogen levels are low and

typical menopausal symptoms are problematic e.g. hot sweats and flushes, low mood and anxiety, joint aches and palpitations. And then at times when our estrogen levels are high, if our histamine levels are adequate, those symptoms will reduce. If we are histamine intolerant however, and our own estrogen is stimulating even more histamine, we can get symptoms of histamine intolerance and as you may have noticed, the symptoms can be almost identical.

For the vast majority of women who take HRT (especially body identical HRT), their menopausal symptoms reduce rapidly, and they feel significantly better, usually within 3-6 months. But for those women who take HRT and also have histamine intolerance, their symptoms may get worse as the estrogen being put into the body can be fuelling the HIT even further. This is why it is very important to consider the possibility of HIT in women who get additional symptoms or worsening of existing symptoms, after starting HRT.

How to diagnose HIT

There are blood tests which can look at levels of DAO activity, histamine levels and that of a substance called tryptase (related to mast cell activity). However, these blood tests are not widely available and not necessarily diagnostic - as our levels vary so much from day to day. The gold

standard way to diagnose HIT is to try and exclude histamine as much as possible from the diet for a period of approximately 4 weeks. This is likely to bring about an obvious reduction or elimination of symptoms in a HIT sufferer; thus essentially confirming the diagnosis.

How to treat HIT

There are a number of ways to try and tackle HIT and the most important by far is dietary modification.

Diet

The most important element of treating HIT is with dietary modification - the aim

being to keep your histamine load below excessive levels. This takes time to achieve as histamine-containing foods

and histamine-releasing foods are so widespread. You will need to do research into the foods in your diet and experiment with different foods and how you prepare them. A dietician or nutritionist knowledgeable about HIT can

be invaluable to help you make these changes. This will almost certainly involve

needing to cut out alcohol, many dairy products and fermented products at the very least. Some food typically considered healthy may actually not be good for histamine sufferers e.g. avocado and spinach.

You may find this table useful, to start looking at histamine levels in your diet:

Food Groups	Low Histamine	High Histamine	Note
Vegetables	All fresh vegetables except →	Avocado, eggplant, tomatoes, spinach, pickled & canned vegetables	The fresher the vegetables, the better
Fermented Vegetables & Pickles	No	Sauerkraut and other fermented vegetables, pickled vegetables	Including fermented vegetable sauces e.g. soya sauce, miso
Fruit	All fresh fruit except →	Strawberries, plums, citrus fruit, tropical fruit e.g. papaya, banana, pineapple, kiwi	
Dried Fruit	No	All dried fruit	Including all food made with dried fruit such as fruit mince
Grains, flour	Gluten free grains & flours e.g. rice, oat, buckwheat, quinoa, amaranth, millet	All gluten grains e.g. wheat, barley, rye, spelt, sourdough & yeast, usually found in breads	Avoid sourdough bread even if gluten free. Gluten free soda bread is ok
Legumes & Pulses	No	e.g. chickpeas, lentils	Including dips e.g. humus
Nuts	No	All nuts and peanuts	Including nut butters & spreads
Dairy	No	All dairy foods from cow, goat, sheep	Including fermented dairy e.g. yoghurt, kefir, cheese, sour cream
Dairy alternatives	Plant milks are ok, even if they are made from nuts or seeds	Fermented plant foods e.g. coconut yoghurt	
Fats	Extra virgin olive oil, ghee, coconut oil, rapeseed oil	Butter	
Non-plant Protein	Freshly cooked fresh meats, poultry, eggs (yolk & cooked whites), some freshly caught fish except →	Mackerel, mahi-mahi, tuna. All smoked fish. All canned fish e.g. anchovies, sardines. Cured or aged meat e.g. bacon, salami, hot dogs	Aged meat is also high histamine, fresh meat is ok

Food Groups	Low Histamine	High Histamine	Note
Sweets & Chocolate		Chocolate, cocoa, cacao	
Seasonings & Herbs	Fresh herbs	Vinegar; mayonnaise, pickles, olives, soy sauce, miso, fish sauce, tamara,	Including heavily salted food
Teas & Coffee, Drinks	Herbal tea	Green & black teas, Coffee, kombucha & other fermented drinks, energy drinks. All alcohol.	Any drinks with artificial colours, preservatives

Top tips

- It is really helpful to keep a food diary
- Download a food diary from here: <https://www.histamineintolerance.org.uk/wp-content/uploads/2012/03/food-diary.pdf>
- Freshness of your food is very important; if possible, buy little and often, so your food is always fresh
- Alcohol is high in histamine, so best to avoid.

Supplements and medications

There are no supplements or medications that can effectively treat with HIT without addressing your diet. But there are some additional treatments which may help:

Antihistamines - these can be brought over the counter (e.g. cetirizine and loratadine are examples of non-sedating ones). For HIT they need to be used twice daily (despite the leaflet advising once daily). These do not help to lower histamine levels but can 'mop up' any excess.

H2 Blockers - H2 are the type of histamine receptor in our stomach. Ranitidine is an example of an H2 blocker and it can be bought over the counter. This can reduce the amount of stomach acid made in response to histamine excess.

Vitamin C (low dose) - this acts a natural antihistamine. This should ideally be taken 3-4 times per day in small doses, such as 250mg each dose. This is to avoid the occurrence of loose bowels happening from single larger doses.

L-glutamine - this also acts as a natural antihistamine.

DAO supplements - these can be taken 30-60 minutes before a meal to try and reduce the amount of histamine that is ingested and absorbed. However, they are expensive. (They may have a role if you are eating out or have a social occasion where it would be impossible to avoid histamine foods).

Some HIT sufferers may be able to wean off some or all of their treatments if and when their diet is stable, but others may need to continue in the long term, to stay well.

It is necessary to consider the impact that any other prescribed medications might have and its important that you don't suddenly stop any prescribed medications without discussion with a doctor who is knowledgeable about HIT.

Lifestyle

Avoiding stress can be helpful at reducing histamine release. Meditation and yoga can be valuable. Exercise can have variable

effects on HIT sufferers. It is best to take regular exercise and see what type suits you as an individual.

Managing the menopause

The principles of managing the difficult symptoms of the menopause still apply in HIT sufferers. Hormone replacement therapy effectively treats menopausal symptoms and provides future health benefits such as lowering your risk of heart disease and osteoporosis. However, if HIT

is having an impact on your life, this needs to be factored in when discussing starting HRT with your health professional. Usually, once HIT symptoms are under control with an established histamine-restricted diet (with or without supplements), HRT can be gradually introduced.

Further information on this topic

SIGHI (Swiss Interest Group Histamine Intolerance). www.histaminintoleranz.ch

www.histamineintolerance.org.uk

www.drTinapeers.com

<https://youtu.be/em-BxplmE6A>

<https://thecommunality.com/hit-mcas-treatment>

This booklet has been written by Dr Sarah Ball, GP with a special interest in the menopause and a doctor at Newson Health and Wellbeing Centre in Stratford-upon-Avon. Nutritionist, Emma Ellice-Flint has contributed additional dietary information. For more information about Emma, visit www.emmasnutrition.com

For more information on Newson Health visit www.newsonhealth.co.uk



Newson Health

Dr Louise Newson is a GP and menopause specialist in Stratford-upon-Avon, UK. She has written and developed the website www.menopausedoctor.co.uk and is the founder of the 'balance' menopause app.

The website and app contain evidence-based, non-biased information about the perimenopause and the menopause. She created both platforms to empower women with information about their perimenopause and menopause and to inform them about the treatments available.

Her aim is for women to acquire more knowledge and confidence to approach their own GP to ask for help and advice.

The team at Newson Health are passionate about improving awareness of safe prescribing of HRT to ladies at all stages of the perimenopause and menopause and also offering holistic treatments for the perimenopause and menopause.

Louise is also the director of the not-for-profit company Newson Health Research and Education.

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Winton House, Church Street, Stratford-upon-Avon, CV37 6HB

Enquiries: 01789 595004 | Email: info@newsonhealth.co.uk | Web: www.newsonhealth.co.uk