

A man with a beard and long hair, smiling and holding a bowl of fruit salad. The background is a blurred outdoor setting with greenery.

Learn About
**Low
Histamine
Diet**

FLCCC[®]
A L L I A N C E



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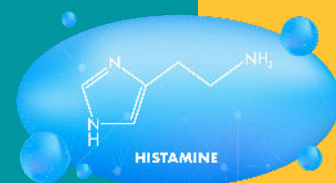
Introduction

The American Academy of Allergy, Asthma, and Immunology defines a food intolerance (or sensitivity) as an event that affects the digestive system after eating a particular food, whereas a food allergy involves the immune system, produces a repeatable response, and can be confirmed with a series of tests. Histamine intolerance is also known as enteric histaminosis and is estimated to affect 1% of the population (typically in middle-aged people).

A true histamine intolerance remains difficult to diagnose as symptoms can vary or seem similar to an allergic reaction, and affect multiple organs and/or systems in the body. Commonly reported symptoms include itching or hives, sneezing, watery eyes, asthma, headaches, abdominal pain, flatulence, diarrhea, tachycardia, and hypotension.

What is histamine?

Histamine (a biogenic amine) is released from mast cells within the immune system when an allergen is detected by the body. An inconsistent amount of histamine is suspected to result from either an allergic response, ingestion of a large quantity of histamine-containing foods or beverages, consumption of foods or other substances that cause histamine to be released, or an impaired ability for enzymes in the body to break it down.





NOTE:

BECAUSE EXPOSURE TO HISTAMINE EXISTS BEYOND DIET ALONE, COMPLETE AVOIDANCE OF HISTAMINES IS NOT ATTAINABLE.

PEOPLE WITH A HISTAMINE SENSITIVITY DUE TO MAST CELL ACTIVATION SYNDROME (MCAS) MAY REQUIRE FURTHER DIET RESTRICTION WITH EMPHASIS PLACED ON HISTAMINE LIBERATORS, AS MAST CELL ACTIVATION DISORDERS ARE OFTEN MISTAKEN FOR HISTAMINE INTOLERANCE.

When is a low-histamine diet prescribed?

When a person displays signs/symptoms that may be caused by a histamine intolerance (and after food allergies have been ruled out), a low-histamine diet is often recommended. That said, a favorable response to a low-histamine diet can help aid in the diagnosis of a histamine intolerance.

Additionally, a low-histamine diet may be appropriate for people with a DAO degradation disorder who have to avoid histamine, other biogenic amines, and DAO inhibitors.

When trialing a person on a low-histamine diet, the compatibility of included foods and tolerance is highly dependent on the individual's sensitivity and the amount of histamine-containing food consumed. Additionally, tolerance can be affected by many factors such as stress and hormones. Note: 'Trial and error' is often necessary in the diet prescription process (i.e. what is tolerated and in what quantities).



Histamine Containing Foods



NOTE:

NOTE: BECAUSE EACH PERSON'S LEVEL OF TOLERANCE TO HISTAMINE IS UNIQUE TO THEM AND EVOLVES OVER TIME, THE APPROACH TO REDUCE DIETARY SOURCES OF HISTAMINE NEEDS TO BE INDIVIDUALIZED.

SCROMBOID POISONING

(SCROMBOTOXIC FISH POISONING OR HISTAMINE TOXICITY)

RESULTS FROM INGESTING SPOILED FINFISH THAT CONTAIN HIGH AMOUNTS OF HISTAMINE THAT HAVE BEEN PRODUCED FROM BACTERIAL OVERGROWTH.



Histamine is formed in perishable food, during fermentation and maturation processes, and in the ripening of fruit. Even some fresh vegetables are naturally histamine-containing.

The amount of histamine from dietary sources can vary greatly. However, common dietary sources high in histamine include certain aged and fermented foods and beverages (e.g. cheeses, yogurt, processed meats, alcoholic beverages, sauerkraut, soy), fish (e.g. frozen, smoked, and canned varieties), fruits (including strawberries and cherries), vegetables (e.g. spinach, tomatoes, and eggplant), and seasonings (e.g. chili powder, cinnamon, cloves, and vinegar).

Generally speaking, minimally-processed foods are encouraged on a low-histamine diet (even skin/peel removal on produce can increase histamine content). Certain foods, beverages, additives, and drugs are also thought to either aid in the release of histamine or inhibit the enzymes needed to break it down (e.g. citrus fruits, nuts, alcoholic beverages, teas, egg whites, food additives, some preservatives, and medications such as aspirin and nonsteroidal anti-inflammatory drugs (NSAIDs) or isoniazid and doxycycline). Additionally, internal levels of histamine may be elevated as a result of the amino acid conversion of histidine (found in protein) to histamine by large intestinal bacteria. Finally, higher amounts of histamine are found in some spoiled foods (especially fish) as similar microorganisms exist in other sources.



GENERAL

histamine foods



least tolerated

- Fermented or microbially ripened products (e.g. alcoholic products, vinegar, yeast, bacteria)
- Perishable fresh produce with inadequate/uncertain freshness or interrupted cooling chain
- Canned, finished or semi-finished products
- Kept warm or reheated food (especially fish, meat and mushroom dishes)
- Products with a long storage time/shelf life



moderately tolerated

- Meals from restaurants, canteens, snack bars, etc.



well tolerated

- Fresh, unprocessed or little-processed, basic foods
- The more perishable and protein-rich it is, the more important is freshness
- Must be refrigerated uninterruptedly from the producer to the consumer
- Perishables never left unrefrigerated
- Thaw quickly and consume immediately
- Prefer vitamin-preserving methods

MEAT & EGGS

histamine foods



least tolerated

- Canned, cured, dried, marinated, smoked, or otherwise preserved meat/meat-preparations:
 - Dry-cured ham
 - Bacon
 - Bone-matured or dry aged meat
 - Long-hung meat (mainly certain pieces of beef)
 - Finely chopped/pureed meat (e.g. meatloaf, spreads, cold cuts)
 - Almost all sausages (e.g. salami, liverwurst)
 - Offal, innards (especially liver)



moderately tolerated

- Fresh meat sold over the counter (no date on it)
- Pre-packed minced meat
- Pre-cooked sausages, venison, game (ripening of meat)



well tolerated

- Natural, fresh meat (poultry, sheep, goats, cattle, pork, wild boar), as fresh as possible
- Packaged and dated meat (e.g. cutlet, fillet, chicken legs, turkey breast, etc.)
- Frozen meat, thawed rapidly
- Cooked ham (in slices, without yeast extract or glutamate)
- Eggs (chicken, quail, etc.)



Note:
Histamine content tends to rise with grinding foods.

FISH, SEAFOOD, CRUSTACEANS, & SHELLFISH

histamine foods



least tolerated

- Canned fish
- Marinated, salted, dried, smoked or pickled fish and seafood
- Certain fish species (Scombroidae family):
 - Tuna
 - Mackerel
 - Herring
 - Sardines
 - Anchovies
 - Mahi mahi
- Fish sauces
- Shellfish (mussels, lobsters, crabs, shrimps, prawns)



moderately tolerated

- Fresh fish (from the shop shelf, over the counter, from fish markets or in restaurants)
- Seafood



well tolerated

- Freshly-caught fish (anglers, fishermen, fish farm)
- Frozen fish (no long-time storage)
 - Thaw quickly and use immediately
 - Do not allow to thaw slowly in the refrigerator (e.g. pollock, cod, trout, whitefish, perch, organic pangasius)

DAIRY

histamine foods



least tolerated

- Matured cheese:
 - Hard cheese
 - Semi-hard cheese
 - Soft cheese
 - Processed cheese (e.g. prepared cheese, cheese product, plastic cheese)
 - Blue cheese
 - Mold cheese
 - Fondue
 - Aged Gouda



moderately tolerated

- Raw milk
- Yogurt
- Kefir
- Sour milk products:
 - Acidified buttermilk
 - Sour cream
 - Crème fraiche
 - Feta cheese



well tolerated

- Fresh dairy products:
 - Raw milk
 - UHT-milk (shelved milks such as canned milk)
 - Pasteurized milk
 - Butter
 - Cream
 - Whey
- Cream cheese (mozzarella, curd cheese, cottage cheese, mascarpone, ricotta, goat cream cheese)
- Young gouda
- Butterkäse
- Schichtkäse

CEREALS & PASTRY



least tolerated

- Yeast and sourdough bakery produced*
- Very fresh, still almost warm pastries*



moderately tolerated

- Malt
- Wheat germ
- Canned corn*
- Buckwheat, unpeeled*



well tolerated

- Potatoes
- Corn
- Rice
- Any kind of grain in different forms:
 - Granules
 - Flakes
 - Semolina
 - Middlings
 - Flour
 - Pasta
 - Bakery products
 - Sauces
 - Etc.

VEGETABLES & MUSHROOMS

least tolerated

- Sauerkraut
- Spinach
- Tomatoes (including ketchup, tomato juice, etc.)
- Eggplant
- Avocado
- Olives
- Legumes (lentils, beans)
- Soy
- Soy products (e.g. tofu)
- Pickled vegetables
- Ceps
- Morels
- Agaricus



moderately tolerated

- Green bush beans, peas*
- Unfermented olives
- Mushrooms



well tolerated

- All other vegetables, fresh or frozen (except those listed under 'avoid' and 'limit')



FRUITS, NUTS, & SEEDS

histamine foods

least tolerated

- Strawberries
- Raspberries
- Lemons
- Oranges
- Other citrus fruits
- Banana
- Pineapple
- Kiwi
- Pears
- Papaya
- Guava
- Nuts (walnuts, cashews, peanuts)



moderately tolerated

- Overripe fruits
- Rotten fruit parts



well tolerated

- All other fruits (except those listed under 'avoid' and 'limit')
- Fresh, frozen or canned:
 - Apples
 - Peach
 - Apricot
 - Melon
 - Mango
 - Persimmon
 - Lychee
 - Cherries
 - Sour cherries
 - Black cherries
 - Blueberries
 - Cranberries
 - Currents
 - Cassis
 - Jostaberry
 - Coconut
 - Coconut milk
 - Coconut water
 - Macadamias
 - Chestnuts



FATS & OILS

moderately tolerated

- Walnut oil*



well tolerated

- Vegetable oils
- Vegetable fats
- Animal fat
- Fish oil



histamine foods

SPICES & HYDROLYSATED PROTEINS

histamine foods

least tolerated

- Vinegar (especially wine vinegar, balsamic vinegar)
- Yeast extract
- Flavor enhancers (glutamate, sodium glutamate)
- Bouillon
- Broth
- Soy sauce
- Hot spices



well tolerated

- Table salt
- Garlic (fresh or dried)
- Mild spices
- Spirit vinegar (distilled white vinegar, apple cider vinegar)
- Culinary herbs (fresh or dried)
- Binders (starch; cornstarch, potato starch)



SWEETS

least tolerated

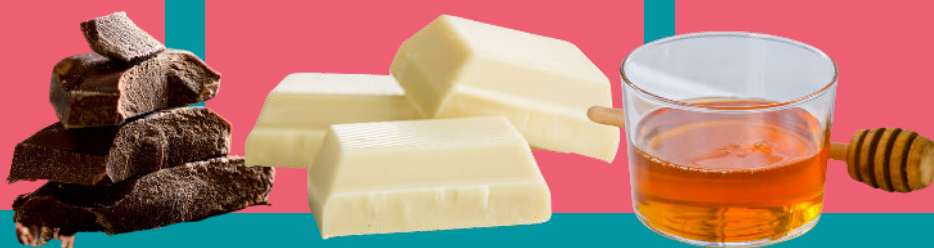
- Cocoa
- Cocoa mass
- Brown and dark chocolate
- Carob

moderately tolerated

- White chocolate

well tolerated

- Sugar
- Agave syrup
- Honey
- Stevia
- Jams from acceptable fruits



BEVERAGES

least tolerated

- Alcoholic beverages
- Soy milk
- Energy drinks (theobromine)
- Juices with incompatible ingredients
- Sodas with incompatible ingredients
- Nettle tea

moderately tolerated

- Rice milk
- Oat milk
- Clear spirits
- Black tea
- Coffee
- Green tea
- Espresso

well tolerated

- Water
- Herbal teas
- Rooibos nature
- Juices from/with acceptable ingredients
- Sodas from/with acceptable ingredients
- Almond milk



OTHER

moderately tolerated

- Additives (possibly)





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