

Comparing Allergy, HIT and MCAD

A common question is: “What’s the difference between IgE food allergy, histamine intolerance and mast cell activation?” – because they symptoms often overlap.

Except for IgE food allergy, these conditions are poorly understood so it impossible to differentiate between them. Most clients with these symptoms don’t get an exact label. The following table highlights the similarities and differences between these conditions. The details are based on our current understanding. As we discussed in the [knowledge is like an iceberg video](#), this understanding will change with new research.

	IgE food allergy	IgE food allergy (cross reactions)	Non-allergic mast cell activation	Histamine Intolerance
Symptom onset after eating food	Quick (within minutes to a few hours). There are a few exceptions, such as alpha gal allergy.	Quick (within minutes to a few hours).	Varies. Symptoms can be immediate or delayed.	Varies. Symptoms can be immediate or delayed.
Symptom Severity	Ranges from mild to severe (anaphylaxis). Each reaction can be different.	Mild symptoms in most cases. Symptoms tend to be limited to the mouth/face.	Varies. Some patients experience anaphylactic-like symptoms and some experience milder symptoms.	Varies. Some patients experience anaphylactic-like symptoms and some experience milder symptoms.
Diagnosis	Can be definitively diagnosed by an allergist based on the patient’s history and food specific IgE testing.	Tests are not available, but an allergist can give a probable diagnosis based on history.	Mast cell disease can be diagnosed (although it is difficult). Food trigger identification is based on the patient’s observations.	No agreed upon diagnostic tests for histamine intolerance. Food trigger identification is based on the patient’s observations.
What’s happening in the body?	The immune system produces IgE antibodies to a food protein, which becomes a mast cell receptor. Ingestion of the food protein causes mast cells to activate.	The immune system produces IgE antibody to an environmental substance (e.g. pollen), which becomes a mast cell receptor. Similar proteins in food can also activate mast cells.	Uncertain. It is assumed that food directly triggers mast cell activation.	Theoretically, food histamine is not broken down in the digestive system and is absorbed into the blood. Also, “histamine releasing foods” directly trigger mast cell activation (which would overlap with the previous condition).
Number of Food Triggers	An individual is usually allergic to one or a few foods. A small list of priority or common allergens cause most reactions (nuts, milk, egg, fish, etc.).	Variable. The majority are plant-based foods and the typical food varies depending on the environmental allergen.	Variable.	High histamine foods include, fermented and aged foods. The list of histamine releasing foods varies on each website (because it is based on anecdotal reports).
Consistency of Reaction	Reaction occurs every time the food is consumed. However, heat may break down the allergenic proteins (e.g. not reacting to milk if it has been baked in a muffin).	Reactions are fairly consistent, but heat usually breaks the plant-based protein down.	Patients tend to have a few consistent food triggers and several inconsistent triggers (food is troublesome one day, but not the next)	Usually inconsistent. Many factors affect symptoms and food histamine levels are highly variable.
Food quantity needed for reaction	Minute allergen quantities trigger reaction.	In most cases, small quantities trigger reaction.	Variable. Some clients experience reactions with small amounts and others only react to larger quantities.	Usually the reactions are dose dependent. Patients rarely react to minute quantities of problematic food.