Histamine Intolerance: Understanding Causes, Testing, Dietary Solutions, and the Role of Omega-3s and Polyphenols

By Robert Ferguson

Histamine intolerance occurs when the body struggles to break down histamine, a compound involved in immune responses, digestion, and neurological function. When histamine builds up, it can lead to symptoms like headaches, skin irritation, digestive issues, fatigue, and allergic reactions, even without a specific allergen trigger.

Understanding how histamine intolerance develops, how to get tested, and which foods to avoid or consume can help manage this condition. In addition to reducing histamine-rich foods, incorporating **omega-3 fatty acids** and **polyphenols** can offer added benefits by lowering inflammation and stabilizing histamine release.

How Histamine Builds Up in the Body

Histamine is both produced by the body and present in various foods. It plays key roles in immune responses, regulating stomach acid, and acting as a neurotransmitter. However, excess histamine must be broken down by enzymes such as **diamine oxidase (DAO)** and **histamine-N-methyltransferase (HNMT)**.

Histamine buildup can occur for several reasons:

1. **Enzyme Deficiency or Inhibition**: Genetic deficiencies or the use of medications like NSAIDs, antidepressants, or antibiotics can inhibit DAO activity, leading to histamine accumulation.
2. **Gut Health Issues**: Poor gut health (e.g., leaky gut, IBS) can impair DAO production, as the enzyme is produced in the intestinal lining.
3. **Chronic Inflammation or Allergies**: Persistent immune system activation due to chronic allergies, infections, or autoimmune diseases can lead to excessive histamine release from mast cells.
4. **Diet**: Consuming histamine-rich foods or those that trigger histamine release can overwhelm the body's ability to break it down.

Symptoms of Histamine Intolerance

Common symptoms of histamine intolerance include:

- Headaches or migraines
- Skin redness, hives, or itching
- Nasal congestion or runny nose
- Digestive discomfort (bloating, diarrhea)
- Fatigue or brain fog
- Rapid heartbeat or low blood pressure

Getting Tested for Histamine Intolerance

Several diagnostic approaches can help identify histamine intolerance:

1. **Histamine Levels**: Blood or urine tests can measure histamine levels. Elevated levels may indicate an intolerance.
2. **DAO Activity Test**: This test measures the DAO enzyme's activity in the blood, with lower activity indicating histamine intolerance.
3. **Elimination Diet**: Removing high-histamine foods for several weeks and reintroducing them to assess symptom changes is a common approach.
4. **Genetic Testing**: Testing for DAO or HNMT gene mutations can reveal genetic predispositions.

Foods and Beverages to Avoid

Certain foods and drinks are naturally high in histamine or stimulate histamine release. To lower histamine buildup, avoid the following:

1. **Histamine-Rich Foods**:
    - Aged cheeses, cured meats, fermented foods, vinegar, and alcoholic beverages.
2. **Histamine-Releasing Foods**:
    - Tomatoes, eggplants, avocados, strawberries, and citrus fruits.
3. **DAO Inhibitors**:
    - Alcohol, energy drinks, and black or green tea can inhibit the DAO enzyme.

Foods That Help Reduce Histamine Build-Up

1. **Fresh, Non-Aged Foods**:
    - Fresh meats, fresh fruits like apples and pears, and vegetables like zucchini and carrots.
2. **DAO-Supporting Nutrients**:
    - **Vitamin C** from bell peppers, kiwis, and broccoli.
    - **Vitamin B6** from chicken, chickpeas, and sunflower seeds.
    - **Copper** from lentils, mushrooms, and shellfish.
    - **Zinc** from pumpkin seeds and chickpeas.

The Role of Omega-3 Fatty Acids and Polyphenols in Reducing Histamine Build-Up

In addition to focusing on histamine-friendly foods, incorporating **omega-3 fatty acids** and **polyphenols** into your diet can significantly enhance the body’s ability to manage histamine levels, reduce inflammation, and stabilize the immune system.

Omega-3 Fatty Acids and Histamine Reduction

Omega-3s, primarily found in fatty fish like salmon, mackerel, and sardines, as well as plant sources like flaxseeds and chia seeds, are well-known for their **anti-inflammatory properties**. Since chronic inflammation is one of the key triggers for excessive histamine release, omega-3s can help by:

1. **Stabilizing Mast Cells**: Mast cells release histamine during immune responses. Omega-3s help regulate the activity of mast cells, reducing unnecessary histamine release.
2. **Lowering Inflammation**: Omega-3s reduce systemic inflammation by decreasing pro-inflammatory cytokines (immune system messengers) that can trigger excess histamine. This helps prevent histamine overproduction, particularly in individuals with inflammatory conditions.
3. **Supporting Gut Health**: Omega-3s contribute to maintaining the integrity of the gut lining, helping to prevent intestinal permeability, which can impair DAO production and histamine breakdown.

Including omega-3-rich foods like salmon, pasture raised eggs, sardines, grassfed butter and beef, flaxseeds, and walnuts, or taking the BalanceOil+ supplement, can be particularly beneficial for those managing histamine intolerance.

Polyphenols and Histamine Intolerance

Polyphenols are potent antioxidants found in a wide range of plant-based foods, including berries, apples, green tea, and certain vegetables. These compounds offer multiple benefits for individuals with histamine intolerance:

1. **Antioxidant and Anti-Inflammatory Properties**: Polyphenols neutralize free radicals and reduce inflammation, which can mitigate the inflammatory triggers of histamine release. This effect is particularly notable in polyphenols like **quercetin** and **resveratrol**.
2. **Mast Cell Stabilization**: Like omega-3s, polyphenols stabilize mast cells, preventing the excessive release of histamine. Quercetin, in particular, is a natural antihistamine found in foods like onions, apples, and capers. It helps reduce histamine's release from immune cells during allergic or inflammatory responses.
3. **Gut Health Benefits**: Polyphenols support the growth of beneficial gut bacteria, which can improve gut integrity and help regulate immune responses. A healthier gut environment can enhance DAO activity and histamine breakdown.

Polyphenol-rich foods such as berries, onions, apples, green tea, and dark chocolate can be beneficial in a low-histamine diet, helping to reduce histamine build-up while also offering a range of health benefits. And taking the BalanceOil+, which is rich in both polyphenols and omega-3 can prove quite helpful.

Managing Histamine Intolerance with a Balanced Approach

To manage histamine intolerance effectively, it is essential to:

- **Limit histamine-rich and histamine-releasing foods**.
- **Incorporate DAO-supporting nutrients**, such as vitamin C and zinc.
- **Consume omega-3-rich foods** like fatty fish and BalanceOil+, which can reduce inflammation and stabilize histamine levels.
- **Eat polyphenol-rich foods** like apples, berries, and green tea, which act as natural antihistamines and support gut health. The other option is taking the BalanceOil+, which is both rich in polyphenols and Omega-3s.

Conclusion

Histamine intolerance can be effectively managed by avoiding histamine-rich foods, supporting DAO enzyme activity, and addressing underlying inflammation through a balanced diet. Omega-3 fatty acids and polyphenols offer additional benefits by reducing inflammation, stabilizing histamine release, and improving gut health. Incorporating these foods into your daily routine, along with getting proper testing and guidance from healthcare professionals, can help significantly reduce the symptoms of histamine intolerance and improve overall well-being.

References

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