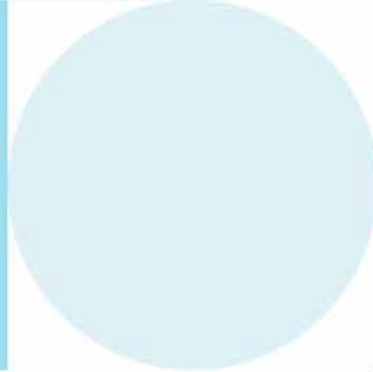
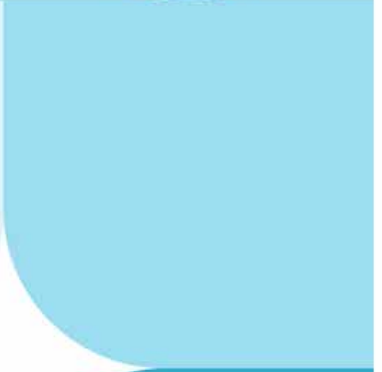
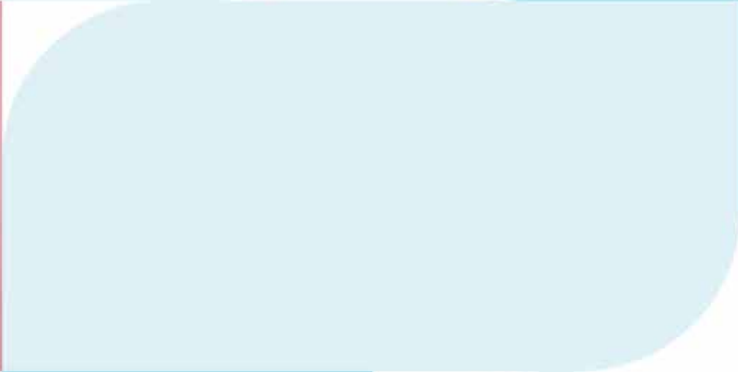





Test report



At-home test



# Histamine intolerance (DBS)

 Lab test


 Blood

Name: **Sample Report**    Date of test: **07/25/2022**    Analysis-ID: **DUMMY-19**

## Lab result

Our lab has tested your blood for the concentration of the enzyme diamine oxidase (DAO), which is needed to break down histamine from various foods.

## Your test results

Name	Your value	Reference value	Scale
DAO	5.70	<ul style="list-style-type: none"><li>&lt; 3 U/ml</li><li>3 - 5 U/ml</li><li>5 - 10 U/ml</li><li>&gt; 10 U/ml</li></ul>	

**Comment:** Your value is below the reference value. For more information, see 'Your Recommendations' below.

This test does not replace a medical consultation. Always seek medical care if you experience severe symptoms.

## Your Recommendations\*

Your levels of the enzyme diamine oxidase (DAO), which is needed to break down histamine, are low. They should be above 10 U/ml.

For histamine intolerance, quercetin can be used for preventive purposes:

**Quercetin:** Five capsules, 2-3 times daily in conjunction with a meal.

For general inflammatory issues, one can also supplement with curcumin (turmeric extract):

**Curcumin:** Five capsules, twice daily with a meal.

For issues with mucus formation, one can try NAC and serrapeptase, which may have a mucolytic effect:

**Serrapeptase:** Five capsules, 1-2 times daily between meals.

**NAC:** Five capsules, 1-2 times daily between meals.

## Possible causes of histamine intolerance

If you have received a result that indicates you have histamine intolerance, it may be a good idea to try to find the underlying cause. Common causes that can lead to histamine intolerance are:

Damaged intestinal mucosa, inflammation of the gut and the overgrowth of bacteria and fungi in the gut, impaired liver function and the endocrine system, which may lead to histamine intolerance.

Histamine intolerance is rarely congenital, but in many cases there is an intestinal imbalance as an underlying cause. For example, it may be due to inflammation - when the intestinal mucosa is disturbed and the intestinal epithelium is damaged, DAO is no longer produced in sufficient quantities.

Following histamine intolerance is a way for the body to try to defend itself against when the body sees an intruder. It can be, for example, bacteria, fungal overgrowth or viruses, but also undigested food and food intolerances.

By taking antihistamines or avoiding histamine-rich foods, you can reduce the burden on the body and thus also relieve your symptoms, but the goal should be to get rid of the underlying cause, which may mean having to restore the intestinal flora, heal the intestinal mucosa and support liver detoxification, in addition to general nutritional support.

## Need extra help?



Need help interpreting your results, understanding our recommendations, or with any health issues? You can book any of our fantastic team members for 15, 30, or 45-minute consultations.

Our team has experience with hormonal issues, gut problems, burnout, mental imbalances, nutrition and more. [You can book here.](#)

# In-depth

## About Histamine

Histamine is a biogenic amine (natural substance in the body) and helps the immune system defend itself against foreign substances. Histamine intolerance is due either to too much histamine in the body that cannot be broken down, caused by either overproduction (due to either allergies, bacteria, or bleeding in the stomach and intestines) or to an excessive intake of histamine from the diet. It can also be caused either by a deficiency of the enzyme diamine oxidase (DAO), or because the enzyme function is impaired. If so, the body cannot break down the high level of histamine that is in the body and histamine-intolerance is the result.

The DAO enzyme, which breaks down and neutralizes histamine in foods is found in the small intestine. Deficiency of the DAO enzyme may be congenital, due to poor intestinal flora, or caused by excessive alcohol consumption. It can also be caused by medications such as proton pump inhibitors, certain medications against asthma, blood pressure lowering medications or antidepressants.

## Common symptoms of histamine intolerance

The symptoms of histamine intolerance are often reminiscent of an allergic reaction, which makes it difficult to understand histamine intolerance. The symptoms usually occur immediately after eating foods rich in histamine, but it can sometimes take up to two hours before you get noticeable symptoms. Because histamine is found in cells throughout the body, histamine intolerance can also be experienced in many different parts of the body.

Examples of symptoms can be:

- Redness, itching and swelling
- Cramps, bloating and diarrhea in the stomach and intestines
- Cough, asthma, runny nose and difficulty breathing
- Changes in blood pressure and palpitations
- Headache, migraine and dizziness

## Histamine-rich foods

Histamine is formed all the time, both at room temperature and in the refrigerator. Therefore, it is important to always freeze leftover food immediately after cooking if you are sensitive to histamine. Histamine levels in foods also vary with the degree of age and maturity and you should therefore avoid eating aged, mature and fermented foods such as aged cheese, charcuterie, alcoholic beverages, products containing yeast and salt that are not completely fresh if you have problems with histamine. Avoid canned foods, some crushed products and ready-made meals. Below is a list of foods with high levels of histamine:

- Red wine and sparkling wine (champagne)
- Fish, shellfish and seafood - especially tuna, mackerel, codfish
- Sausage (including foods containing sausage such as dressing, mayonnaise, hotdog and mustard)
- Fats and soy sauce
- Beverages, soft drinks and alcohol apart products such as beer, whisky and liquor
- Cheese and fermented
- Pickled or canned food, including sauerkraut
- Nightshade vegetables (i.e. potatoes, tomatoes, peppers and aubergines as well as eggplants - although not a nightshade)

- Various fruits such as bananas, citrus fruits, pineapples and strawberries
- Beans, chickpeas, soybeans and peanuts
- Mushrooms and quinoa
- Bread, rice, nuts and seeds
- Yeast and yeast extract
- Baking powder
- Candy with grape extract and artificial colors
- Chocolate and other cocoa-based products

There are certain foods that block the enzymes histamine oxidase that are needed to metabolize the histamine and these are alcohol, beer, energy drinks and tea (black, green and white).

Keep in mind that if you are taking drugs, there are certain drugs that can increase the sensitivity to histamine, so in that case, consult your doctor.

## Histamine-releasing substances

There are also foods that are referred to as "histamine-releasing" which means that they release histamine in the small intestine upon exposure. Examples of such foods are alcohol (especially red wine and champagne), cheese, seafood, fish and fish roe, rice and smoked sausage and fruit (especially citrus fruits, kiwi, pineapple, mango, plum, papaya and strawberries). Additives such as benzoates, sulphites, nitrite, glutamate, food dyes and wheat germ oil are also histamine-releasing agents.



