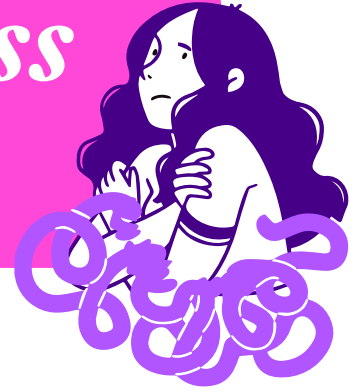


Morning Sickness Guide



Morning sickness is a typical condition faced by pregnant women, characterized by symptoms such as:

- * **Nausea**
- * **Vomiting**
- * **Heartburn or Reflux**
- * **Food aversions**
- * **Motion sickness**
- * **Overall discomfort throughout the digestive system**

Despite its misleading name, "morning sickness" can occur at any time of the day, not just in the morning. Affecting approximately 70% of pregnant women, it becomes particularly challenging during the first trimester. Symptoms generally begin around the 6th week, intensifying between the 8th and 10th weeks, leaving many women simply enduring the discomfort. Thankfully, relief is typically on the horizon as they near the end of the first trimester or transition into the second. While uncomfortable, morning sickness is generally not harmful to either the mother or the baby.

What Causes Morning Sickness?

Morning Sickness results from an overproduction of histamine and a reduced ability to break it down. The sources of histamine come from a few different locations during pregnancy:

MOTHER	BABY
Increased histamine production due to elevated hormones during pregnancy	The placenta produces 1000x more histamine than any other organ in the body.
Reduced clearance of histamine from the gut via the DAO enzyme	A hormone called GDF15 is also made by the placenta, which increases inflammation and oxidative stress, leading to higher histamine levels.

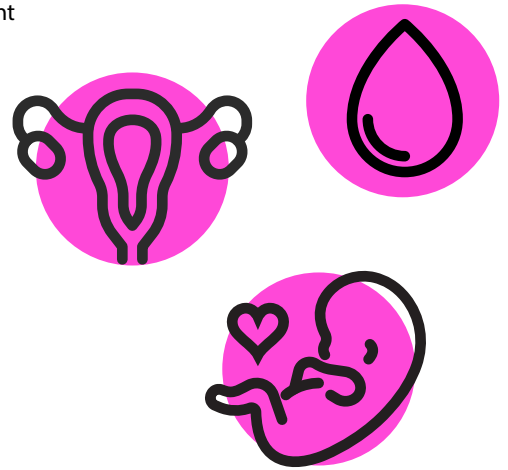
A Hidden Ancestral Benefit

Morning sickness might have given us an evolutionary edge by acting as a protective measure. This condition triggers aversions to specific foods, especially those potentially harboring harmful pathogens, including meat, eggs, dairy, and strong-flavored vegetables. Such aversions likely reduced the risk of foodborne illnesses during the crucial early stages of pregnancy, thereby enhancing survival rates.

As histamine is the problem here, it's no surprise that doctors frequently turn to antihistamines as their go-to treatment for managing morning sickness during pregnancy.

What is Histamine's Role During Pregnancy?

- * **It acts as a messenger between the baby and the uterus**
assisting in the development of cells essential for the placenta to implant successfully and start growing.
- * **Enhances blood flow**
crucial for nourishing and supporting the growing baby.
- * **Helps keep the mother's immune system in check**
balancing everything so that the mom's body can safely support both her health and the baby's.
- * **Boosts hormonal production,**
important for maintaining a healthy pregnancy.
- * **Influences uterine contractions**
which are really important when it's time for the baby to be born!



Histamine is very important during pregnancy. However, *it is essential to maintain balanced histamine levels.* If these levels get thrown off balance, it could lead to significant issues for both the mother and the baby.

What are the potential dangers of high histamine levels during pregnancy?

Excessive histamine levels during pregnancy can sometimes lead to serious complications, such as:



*** Extreme Pregnancy Sickness (Hyperemesis Gravidarum)**
much more severe than typical morning sickness. Women experiencing this feel intense nausea and vomiting, affecting about 0.5 to 3% of pregnancies. It's not just an inconvenience—it can threaten the well-being of both mother and baby by causing dehydration and poor nutrition. Proper care is crucial to ensure the best outcomes for both mother and child.

*** Pre-eclampsia**
Identified by high blood pressure and potential harm to organs, this condition often is linked to the maternal spiral arteries embedded in the placenta not developing well in early pregnancy. The poor development is probably due to high histamine and/or low DAO enzyme levels.

*** Miscarriage and Early Birth**
High histamine levels may increase the chance of miscarriage and going into labor earlier than expected, mainly due to their effects on contracting blood vessels and the smooth muscles in the uterus.

Key Enzymes Associated with Morning Sickness Severity

1

DAO

A very important enzyme during pregnancy and for supporting histamine levels is the DAO enzyme. The DAO enzyme's job is to break down histamine that is found outside cells.

The placenta produces its own DAO enzyme in high amounts. The problem is the placenta doesn't really start making DAO in sufficient levels until the 2nd trimester - which is exactly when most women's morning sickness abates. Another factor is the placenta also makes a tremendous amount of histamine itself!

GESTATIONAL WEEKS	TRIMESTER	DAO ACTIVITY
1-7	1 ^o	DAO levels not yet increasing, yet histamine is.
7-12	1 ^o	DAO levels start to increase sharply.
12-24	1 ^o and 2 ^o	The peak activity of DAO is generally reached between 12 and 24 weeks. Levels can increase by 500 to 1000 times compared to non-pregnant states during this period.
24 and on	2 ^o and 3 ^o	Following the peak, DAO levels do not continue to rise significantly but instead enter a plateau phase.
Postpartum	-	After delivery, DAO levels decline rapidly to normal non-pregnancy levels within approximately 10 to 15 days.

2

GDF15

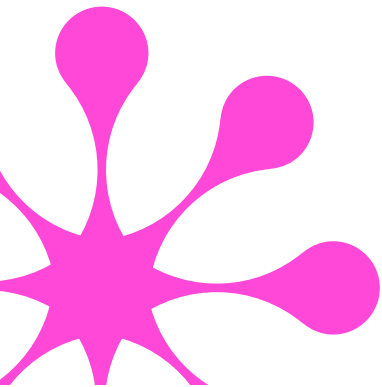
The developing placenta produces another enzyme called GDF15. This enzyme produces a particular hormone that may contribute to symptoms such as taste aversion, nausea, and vomiting during pregnancy. GDF15 can also be released by other organs that are under stress.

Dirty Genes and Morning Sickness

A significant factor is a Dirty DAO. If a woman has a dirty DAO gene, her ability to break down histamine is significantly reduced. This leads to higher histamine levels. These higher histamine levels increase the risk for morning sickness. Not only that, the higher histamine levels further increase inflammation and oxidative stress, which then increases GDF15 levels and, thus, further worsens her symptoms.

A Dirty DAO Gene is Caused by:

- * **Common genetic variations**
which may significantly reduce its ability to function
- * **Nutrient deficiencies**
especially vitamin B1, B6, calcium, glutathione
- * **Mental stress**
as this increases mast cell activation
- * **Physical stress and high-intensity exercise**
as this increases histamine production
- * **Gut inflammation**
parasites, infections, food allergies and food intolerances
- * **Food and drinks**
high-histamine food, high-histamine drinks
- * **Gallbladder issues**
are mainly caused by choline deficiency and hormone excesses. Choline is a nutrient needed for bile production and flow. When bile isn't functioning optimally, it can disrupt the balance of the gut microbiome, potentially leading to inflammation caused by an overgrowth of bacteria and fungi. These may produce more histamine.
- * **Medications**
metformin, antidepressants, ibuprofen and aspirin
- * **Histamine-producing probiotics**
L. fermentum, L. casei, L. bulgaricus, Streptococcus
- * **Dirty ALDH gene:**
The DAO enzyme breaks down histamine into a toxic aldehyde. This toxic aldehyde must be eliminated by the ALDH enzyme. If it's not functioning properly, symptoms of high histamine occur. The ALDH enzyme must also be supported by vitamins B1, B3, and zinc, avoiding low smoke point oils and using Ghee or avocado oil.



Clean your DAO Gene by:

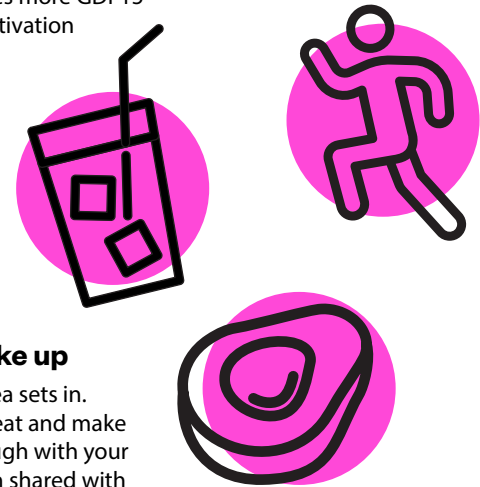
- * **Avoiding allergens**
which may significantly reduce its ability to function
- * **Limiting high-histamine foods and drinks**
leftovers, fermented and aged foods such as aged cheeses, kefir, chocolate, kombucha, aged meats, condiments, and sauces are best avoided as they can exacerbate histamine issues.
- * **Hydrating**
to support overall bodily functions, including the metabolism of histamine. Support potassium intake by incorporating coconut water, a variety of fruits, vegetables, beans, and dairy products (when tolerated) into the diet for a well-rounded approach.
- * **Implementing stress-reduction techniques**
such as meditation, walks, time in nature, yoga, or deep breathing exercises. Stress can worsen histamine intolerance symptoms, so managing it effectively is crucial.
- * **Moderating physical activity**
as excessive, especially intensive exercise, may trigger an overproduction of histamine. Balancing your exercise routine with adequate rest and incorporating other forms of physical activity, such as flexibility exercises, can help manage histamine responses more effectively.
- * **Ensuring adequate sleep**
as poor sleep can exacerbate inflammation and histamine intolerance symptoms.

A Dirty DAO Gene is Caused by:

- * **High blood sugar**
stimulates more GDF15 production
- * **High insulin**
stimulates more GDF15 production
- * **Fat tissue**
produces more GDF15 than other tissues.
- * **High histamine**
as this increases stimulates further inflammation and oxidative stress which further stimulates more GDF15 production mast cell activation

Clean your GDF15 Levels by:

- * **Maintain a healthy weight**
which keeps adipose levels at a healthy level.
- * **Eat protein, healthy fat and lower carbs**
to support healthy insulin and blood sugar levels.
- * **Go for walks after eating**
to support healthy glucose and insulin levels. Just 10 minutes of walking supports healthy glucose and insulin levels after a meal.
- * **Eat when you wake up**
and again before nausea sets in. Don't wait too long to eat and make sure you're eating enough with your meals. This tip has been shared with me by women. They said it makes a huge difference.
- * **Do not fast or skip meals**
This may increase your risk of nausea.



Supplements to Use

Genes produce enzymes. Enzymes require nutrients in order to function. Thus, by supporting yourself with specific nutrients, you are directly supporting healthy enzyme function.†

Here are specific supplements designed to support DAO and GDF15 enzymes for a healthy pregnancy and healthy histamine levels:†

1

Histamine Digest

includes the patented DAOgest® enzyme, which helps break down histamine in the gut and is safe during pregnancy in cases of excessive production and poor histamine clearance. You may take this on an as needed basis. Utilize it more frequently if you are experiencing more severe nausea associated with your pregnancy, taking it before bed and taking it during the day as needed. This may help with comfort by supporting the proper regulation of histamine levels in the body.

2

Optimal Prenatal MF

is a comprehensive prenatal multivitamin with a potent amount of vitamin B6 designed to promote a healthy pregnancy while also aiding in histamine metabolism. The added ginger, PQQ, CoQ10 and lutein further support healthy levels of GDF15. This uses folinic acid and hydroxocobalamin as methylfolate and methylcobalamin may increase histamine in some cases. The chromium and trace minerals support healthy blood sugar levels. Consider taking 2-3 capsules with a protein-based breakfast, 2-3 capsules with lunch, and, if needed, 2 with an afternoon snack.

3

Histamine Nutrients

provides all the nutrients and bioactive compounds needed to support healthy histamine breakdown throughout the whole body. Use it during pregnancy only when Histamine Digest and Prenatal Essentials MF are not helping enough with metabolizing histamine. Utilize it more frequently in cases of more severe pregnancy nausea, taking it before bed and as needed during the day as it may help support comfort by regulating histamine levels in the body.

4

ProBiota HistaminX

is a probiotic specially formulated to exclude strains known for high histamine production. Supports a balanced microbiome and promotes a healthy gut response to dietary histamine.

5

Fish Oil

assists in the stabilization of mast cells, thereby reducing the unnecessary release of histamine. Omega-3 supplementation during pregnancy is also essential for the well-being of both the mother and her developing baby. It plays a crucial role in fostering optimal growth and can significantly increase the chances of a healthy pregnancy.

6

Optimal Electrolyte

supports healthy hydration, potassium, magnesium and creatine levels during pregnancy. It is especially important for women with Hyperemesis gravidarum because it helps replenish lost electrolytes and fluids, as they often experience significant fluid loss due to persistent vomiting, leading to dehydration. Drink 1 to 3 servings a day as needed and best to sip them over time vs drinking all at once.

† These statements have not been evaluated by the Food and Drug Administration (FDA).
This product is not intended to diagnose, treat, cure, or prevent any disease.

Supplements to Use Continued

7

Glutathione Plus Lozenge

low glutathione is associated with increased inflammation. Given that GDF15 increases inflammation and oxidative stress, glutathione levels become reduced. Take ½ to 1 lozenge upon waking in the morning and another ½ to 1 lozenge later in the day if needed to support healthy inflammation levels.

8

Acetyl-L-Carnitine

by taking 1 capsule of this in the morning upon waking, you're supporting healthy blood sugar levels and healthy fat metabolism.

9

Vitamin B1 (thiamin)

crucial for women with more severe nausea because they are at a higher risk for thiamine deficiency due to prolonged vomiting and poor nutritional intake. Vitamin B1 deficiency can lead to serious conditions such as Wernicke encephalopathy, which is characterized by neurological symptoms and can be life-threatening.[†]



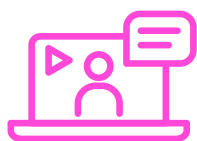
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