Atrophic Gastritis

Environmental metaplastic atrophic gastritis (EMAG) is stomach lining inflammation usually caused by H. pylori bacteria. Autoimmune atrophic gastritis (AAG) results from antibodies attacking stomach cells. People with these conditions may not have symptoms. Since both conditions may lead to cancer, you need regular monitoring.

What are atrophic gastritis and autoimmune atrophic gastritis?

Atrophic gastritis (AG) is a chronic inflammation and thinning of your stomach lining. In addition, the cells in your stomach lining mimic intestinal cells.

One type of atrophic gastritis, known as environmental metaplastic atrophic gastritis (EMAG), occurs when environmental factors cause chronic inflammation. Chronic infection with H. pylori (Helicobacter pylori) bacteria often leads to this condition. These bacteria disrupt the mucus that usually protects your stomach lining from acidic juices released during digestion. Over many years, this acid destroys the cells in your stomach lining, causing EMAG.

Autoimmune atrophic gastritis (AAG) is the second type of atrophic gastritis. It occurs when your immune system attacks your stomach lining cells. Healthcare providers may also call this condition autoimmune gastritis (AIG) or autoimmune metaplastic atrophic gastritis (AMAG).

Both EMAG and AAG can lead to an increased risk of developing small neuroendocrine tumors (NETs) in your stomach. NETs are usually non-cancerous (benign). EMAG and AAG also increase your stomach cancer (gastric cancer) risk.

Who might get environmental atrophic gastritis?

You're at higher risk of environmental atrophic gastritis if you:

- Are Asian or Hispanic.
- Are older than age 70.
- Eat a high-salt diet.
- Have an H. pylori infection.
- Live in crowded conditions.
- Smoke.

Who might get autoimmune atrophic gastritis (AAG)?

You're at higher risk of autoimmune atrophic gastritis if you:

- Were assigned female at birth (AFAB).
- Are African American or of northern European descent.
- Have a family history of AAG.
- Have a genetic mutation.
- Have other autoimmune diseases, including Addison disease, autoimmune thyroid disease (such as Hashimoto disease or Graves disease), Type 1 diabetes or vitiligo.

What causes environmental metaplastic atrophic gastritis?

H. pylori infection usually causes EMAG. People most often become infected with this bacteria during childhood. Causes of the infection include direct contact with contaminated:

- Feces (poop).
- Food.
- Saliva.
- Vomit.
- Water.

What causes autoimmune atrophic gastritis?

Antibodies are proteins that are part of your immune system and help fight bacterial and viral infections. In AAG, antibodies attack your healthy stomach cells.

Your antibodies may also attack a protein released by your stomach cells (intrinsic factor). Intrinsic factor usually helps to absorb vitamin B12. Without intrinsic factor, your body may not be able to make healthy red blood cells. This can lead to pernicious anemia. A lack of vitamin B12 may also cause nerve damage (neuropathy).

What are the signs and symptoms of environmental atrophic gastritis?

You can have atrophic gastritis and not have any signs or symptoms. When H. pylori causes atrophic gastritis, signs and symptoms may include:

- Upper abdominal pain.
- Iron-deficiency anemia.
- Loss of appetite.
- Nausea and vomiting.
- Peptic ulcers.
- Unexplained weight loss.

What are the symptoms of autoimmune atrophic gastritis?

You can have autoimmune atrophic gastritis and not have any signs or symptoms. If AAG causes a vitamin B-12 deficiency, you may have symptoms of anemia and nerve damage. These symptoms include:

- Chest pain.
- Dizziness, lightheadedness and weakness.
- Heart palpitations.
- Mental confusion (delirium).
- Nausea and vomiting.
- Pale skin.
- Rapid pulse.
- Ringing in your ears (tinnitus).
- Tingling and numbness in your limbs.

Diagnosis and Tests

Your healthcare provider will first ask about your symptoms and do a physical exam. They will gently press down on your stomach to check for tenderness.

If your provider suspects atrophic gastritis or autoimmune atrophic gastritis, they may suggest blood tests to check your levels of:

- Healthy red blood cells (a lack of healthy red blood cells can cause anemia).
- Iron.
- Antibodies.
- Gastrin, a hormone that promotes stomach acid production.
- Pepsinogen, a protein made by your stomach cells.
- Vitamin B12.

Your provider may also perform an upper endoscopy, where they:

1. Insert a thin instrument with a light on the end (endoscope) down your throat and into your stomach.
2. Take a sample of tissue (biopsy) to test for signs of atrophic gastritis and the H. pylori bacterium.
3. Look for the presence of small neuroendocrine tumors (NETs).

Management and Treatment

Your provider may treat environmental metaplastic atrophic gastritis with:

- Antibiotics to treat H. pylori infection.
- Medications to reduce your stomach acid.
- Routine endoscopic monitoring.

Your provider may treat autoimmune atrophic gastritis with:

- B12 injections to raise your vitamin levels.
- Iron infusions.

If an endoscopy shows the presence of small neuroendocrine tumors, your provider can remove them during the procedure (endoscopic mucosal resection). These tumors are usually non-cancerous (benign). Your provider will monitor you for these tumors every one to two years.

Prevention: How can I reduce my risk of atrophic gastritis?

You can reduce your risk of atrophic gastritis with good hygiene practices. You should wash your hands:

- After changing a diaper.
- After using the bathroom.
- Before eating.

How can I reduce my risk of autoimmune atrophic gastritis?

You can't reduce your risk of autoimmune atrophic gastritis. But you can look for the signs so you can get prompt monitoring and treatment if needed.

What is the outlook if I have atrophic gastritis?

Although there's no cure for atrophic gastritis, most people live a symptom-free life. Some people require lifelong supplementation of vitamin B12 and/or iron. A small percentage of people with advanced atrophic gastritis may require endoscopic surveillance, usually every three to five years. However, the risk of stomach cancer in this population, though present, is low. People with neuroendocrine tumors may also require surveillance; however, these are usually benign (noncancerous).

How do I take care of myself with environmental metaplastic atrophic gastritis?

You can help to reduce complications if you:

- Quit smoking.
- Start a sodium-controlled diet.
- Visit a gastroenterologist (healthcare provider focused on your digestive tract) on a regular basis to monitor your condition.

How do I take care of myself with autoimmune atrophic gastritis?

If you're low in vitamin B12, you can increase the amount of B12 in your diet by eating:

- Beef.
- Clams.
- Eggs.
- Fatty fish.
- Fortified cereal.
- Milk.
- Yogurt.

You should also see a gastroenterologist regularly to monitor your condition and adjust your treatments as needed.

A note from Cleveland Clinic

Atrophic gastritis (AG) is a chronic inflammation and thinning of your stomach lining accompanied by a change in your stomach lining cells to mimic intestinal cells. One type of atrophic gastritis, environmental metaplastic atrophic gastritis (EMAG), is usually caused by H. pylori infection. Atrophic autoimmune gastritis (AAG) happens when your autoimmune system attacks your stomach cells. Providers diagnose EMAG and AAG with blood tests and endoscopy. Treatments for EMAG include antibiotics and other medications. Treatments for AAG include vitamin B12 injections and iron infusions. You should see a gastroenterologist for a regular endoscopy to watch for any changes and adjust your treatments as needed.