

# Why Does Your Stomach Growl?

Analysis by [Dr. Joseph Mercola](#)

✓ Fact Checked

January 04, 2023

## STORY AT-A-GLANCE

- › The rumbling sound in your stomach is the result of muscular contractions of your intestinal wall combined with the presence of liquid and gas
- › Stomach growling is a normal function and one that occurs most of the day, although most of the time you can't hear it
- › Your intestines tend to quiet down when you're sleeping but a complete absence of bowel sounds can be a sign of a medical emergency, especially if it's accompanied by severe abdominal pain

If asked why your stomach growls, many people would answer, "Because I'm hungry!" This is somewhat of a myth, however. Your stomach may make noise when you're hungry and lacking food in your stomach, but it can also growl when you're not hungry and your stomach is full.

The growling noise may not even be coming from your stomach at all but rather from your small intestines. Oftentimes, when your stomach (or bowel) makes noise, a phenomenon technically known as "borborygmi," you may not hear it at all.

The noises are loudest when your stomach is empty, which is why they're often associated with hunger.

## What Causes Stomach Grumbling?

The rumbling sound in your stomach is the result of muscular contractions of your intestinal wall combined with the presence of liquid and gas. It's a perfectly normal function and one that occurs most of the day.

Your intestines tend to quiet down when you're sleeping but a complete absence of bowel sounds can actually be a sign of a medical emergency, especially if it's accompanied by severe abdominal pain.

According to the International Foundation for Functional Gastrointestinal Disorders (IFFGD), here's what's really causing your noisy tummy:<sup>1</sup>

*"Within the intestines, ingested fluids and solids are mixed with the daily secretion of about eight liters (two gallons) of enzyme-rich fluid, most of which is subsequently absorbed. However, fluid moving through a tube is silent – it is only when there is air in the pipes that we hear the plumbing.*

*In the intestine ever-present gases originate from swallowed air and the release of hydrogen, carbon dioxide, and other gases by the bacterial fermentation of undigested food in the lower gut. Even when inaudible to the intestines' owner, characteristic sounds may be listened to by a doctor or nurse using a stethoscope.*

*While the noisy movement of fluid and gas occurs at all levels, the most audible sounds originate from the stomach. Whether audible or not, bowel sounds in the absence of other significant symptoms are normal phenomena of no medical significance."*

## **Growling Is Part of the Migrating Motor Complex (MMC)**

If you hear your stomach growling, it's likely because your stomach and intestines are engaged in a process called the migrating motor complex (MMC). This typically occurs when your stomach and intestines have been empty for about two hours.

Sensing the absence of food, receptors in the walls of your stomach cause waves of electrical activity in your enteric nervous system (which is like a second brain embedded in the wall of your gut).<sup>2</sup>

This, in turn, triggers hunger contractions that travel the entire length of your gut, helping to clear out stomach contents, mucus, food particles, bacteria and other accumulated debris between your meals. A poorly functioning MMC has been linked to abdominal pain, nausea, vomiting and indigestion.<sup>3</sup>

The hormone motilin is thought to be involved in triggering different phases of the MMC, but little is known about it because it's not expressed in mice and rats (and therefore hasn't been widely studied).

What is known is that motilin levels increase cyclically every 90 to 120 minutes between meals and its release is halted after you eat a meal. When motilin levels peak so, too, do contractions of muscles in your stomach and intestines.<sup>4</sup>

It's thought motilin may play a role in both obesity and hunger. Dr. Jan Tack, head of clinic in the department of gastroenterology at Belgium's University of Leuven, told TIME:<sup>5</sup>

*"We have shown that motilin-induced hunger signaling is altered in people experiencing unexplained weight loss and obesity," he says. Tack says a person's motilin levels also seem to change after bariatric procedures like gastric bypass surgery.*

*Motilin may also affect the ways you experience pleasure or a sense of reward after eating, he adds.*

*All of this research is very new. But manipulating motilin and the resulting MMC response may eventually emerge as a novel way to treat obesity, dyspepsia and other gut-related health issues, Tack's research suggests."<sup>6</sup>*

## **When Are Bowel Sounds a Problem?**

Most of the time, a noisy stomach is nothing to be concerned about. However, bowel sounds are known to increase if you have dyspepsia, irritable bowel syndrome, or if you're having a bout of diarrhea, due to increased muscle contractions and accumulation of fluid and gas (along with water stool in your gut).

Malabsorption conditions, such as celiac disease or lactose intolerance may also lead to what's known as hyperactive bowel sounds. IFFGD explained:<sup>7</sup>

*"... [R]educed small intestinal levels of the enzyme needed to digest the milk sugar lactose, permits that sugar to reach the colon intact where it is fermented by colon bacteria.*

*These organisms release hydrogen and products that attract fluids into the gut and stimulate its contractions. These amplify the three conditions that produce abdominal sounds: gut movement, gas, and fluid."*

In the more rare event of a mechanical obstruction of your gut, bowel sounds may also increase. In this case, the contractions in your intestines attempt to move solids, liquids, air, and gas through a narrowed intestine, leading to loud, often high-pitched noises.

If you're experiencing an obstruction, the noises will be accompanied by severe abdominal pain and illness, and emergency medical attention is needed.

## **Too Much Sugar Can Cause a Noisy Tummy**

If you find your stomach is embarrassingly noisy, it could be because you're eating too much sugar, particularly fructose and sorbitol (found in fruits and also used as an artificial sweetener in many sugar-free gums and candies).

"Excessive amounts of these sugars... may cause diarrhea, flatus, and increased intestinal noise," according to IFFGD.<sup>8</sup> Not to mention, eating an excess of fructose and other sugars is one of the worst things you can do for overall gut health – a noisy, gurgling stomach is the least of it (or perhaps a symptom of it).

Sugar, for example, is a preferred food source for fungi that produce yeast infections and sinusitis, whereas healthy probiotic-rich foods like fermented vegetables boost populations of health-promoting bacteria, thereby disallowing potentially pathogenic colonies from taking over.

Optimizing your gut flora is actually one of the most important steps you can take for your health. Not only could it help normalize your weight and ward off diabetes, but it's also a critical component for a well-functioning immune system, which is your primary defense against all sorts of disease.

It's even essential for your brain health. So, don't worry if you hear your stomach growling – it's typically totally normal. However, let it be a reminder of the complex processes going on to keep your gut, and your whole body, healthy. To support these processes and optimize your gut bacteria and microbiome as a whole, keep these recommendations in mind:

### Do

**Eat plenty of fermented foods** – Healthy choices include lassi, fermented grass-fed organic milk such as kefir, natto (fermented soy), and fermented vegetables.

If you ferment your own, consider using a special starter culture that has been optimized with bacterial strains that produce high levels of vitamin K2.

This is an inexpensive way to optimize your K2, which is particularly important if you're taking a vitamin D3 supplement.

### Avoid

**Antibiotics**, unless absolutely necessary (and when you do, make sure to reseed your gut with fermented foods and/or a probiotic supplement).

And while some researchers are looking into methods that might help ameliorate the destruction of beneficial bacteria by antibiotics, your best bet is likely always going to be reseed your gut with probiotics from fermented foods and/or a high-quality probiotic supplement.

## Do

**Take a probiotic supplement** – Although I'm not a major proponent of taking many supplements (as I believe the majority of your nutrients need to come from food), probiotics are an exception if you don't eat fermented foods on a regular basis.

**Boost your soluble and insoluble fiber intake**, focusing on vegetables, nuts, and seeds, including sprouted seeds.

**Get your hands dirty in the garden** – Germ-free living may not be in your best interest, as the loss of healthy bacteria can have wide-ranging influence on your mental, emotional, and physical health.

According to the hygiene hypothesis, exposure to bacteria and viruses can serve as "natural vaccines" that strengthen your immune system and provide long-lasting immunity against disease.

Getting your hands dirty in the garden can help reacquaint your immune system with beneficial microorganisms on the plants and in the soil.

## Avoid

**Conventionally raised meats** and other animal products, as CAFO animals are routinely fed low-dose antibiotics, plus genetically engineered grains loaded with glyphosate, which is widely known to kill many bacteria.

**Chlorinated and/or fluoridated water.**

**Processed foods** – Excessive sugars, along with otherwise "dead" nutrients, feed pathogenic bacteria.

Food emulsifiers such as polysorbate 80, lecithin, carrageenan, polyglycerols, and xanthan gum also appear to have an adverse effect on your gut flora.<sup>9</sup>

Unless 100% organic, they may also contain GMOs that tend to be heavily contaminated with pesticides such as glyphosate.

## Do

**Open your windows** — For the vast majority of human history the outside was always part of the inside, and at no moment during our day were we ever really separated from nature.

Today, we spend 90% of our lives indoors. And, although keeping the outside out does have its advantages, it has also changed the microbiome of your home.

Research shows opening a window and increasing natural airflow can improve the diversity and health of the microbes in your home, which in turn benefit you.<sup>10</sup>

**Wash your dishes by hand instead of in the dishwasher** — Recent research has shown that washing your dishes by hand leaves more bacteria on the dishes than dishwashers do, and that eating off these less-than-sterile dishes may actually decrease your risk of allergies by stimulating your immune system.

## Avoid

**Agricultural chemicals, glyphosate (RoundUp)** in particular.

**Antibacterial soap**, as they too kill off both good and bad bacteria, and contribute to the development of antibiotic-resistance.

## Sources and References

- <sup>1, 7, 8</sup> [International Foundation for Functional Gastrointestinal Disorders \(IFFGD\), A Noisy Tummy: What Does it Mean?](#)

- <sup>2</sup> Scientific American January 21, 2002
- <sup>3, 5</sup> TIME July 22, 2015
- <sup>4</sup> International Journal of Peptides, Volume 2010 (2010), Article ID 820794, 6 pages
- <sup>6</sup> Gut. 2015 May 18
- <sup>9</sup> Time February 25, 2015
- <sup>10</sup> ISME Journal 2012 Aug;6(8):1469-79