

Antibiotics Increase Bowel Cancer Rates

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August 14, 2024

STORY AT-A-GLANCE

- › Research shows women who had used antibiotics for two months or more were at an increased risk of developing colon polyps, which can be a precursor to colorectal cancer
- › Those who used the drugs for a total of at least two months in their 20s and 30s had a 36% increased risk of polyps compared to those who did not
- › Among women who used the drugs long-term in their 40s and 50s, the risk of polyps increased by 70%
- › Even taking antibiotics for 15 days or more, at any age range, was associated with an increased risk of polyps

Editor's Note: This article is a reprint. It was originally published April 18, 2017.

When you take antibiotics, there are both short- and long-term risks, the latter of which may not become evident until long after you've stopped taking the drugs (making it next to impossible to connect the two). One of their greatest risks is also their mechanism of action – wiping out the bacteria in your gut.

When this occurs, the infection-causing bacteria should be eliminated, but so, too, are all of the other bacteria making up your microbiome. In 2014, researchers linked antibiotic use to a slightly increased risk (8% to 11%) of developing colorectal cancer, also known as bowel cancer, possibly because of alterations to the gut microbiome.¹

Likewise, past research has also shown that people with less bacterial diversity in their gastrointestinal tracts are more likely to develop colon cancer.² A 2017 study further suggests altering your microbiome via antibiotics also reduces your resistance to bacteria that could increase the development of precancerous growths in your colon, known as polyps.

Long-Term Antibiotics Use May Increase Colon Polyps

Colon polyps are small masses of cells that can develop on the lining of your colon. While typically harmless, colon polyps can be precursors to colorectal cancer, which includes both cancers of the colon and rectum, and may lead to cancer development if left untreated.

A 2017 study published in the journal *Gut*³ used data from more than 16,600 women aged 60 years and older, spanning 2004 to 2010. Women who had used antibiotics for two months or more were at an increased risk of developing colon polyps. Specifically, those who used the drugs for a total of at least two months in their 20s and 30s had a 36% increased risk of polyps compared to those who did not.

Among women who used the drugs long-term in their 40s and 50s, the risk of polyps increased by 70%.⁴ Even taking antibiotics for 15 days or more, at any age range, was associated with an increased risk of polyps. Medical News Today reported:⁵

"[W]hen women who had not taken antibiotics in their 20s to 50s were compared with individuals who had taken them for more than 15 days between the ages of 20 and 59, there was a 73% increased risk of adenoma diagnosis."

While the study only addressed prescription antibiotics, there's also a chance that consuming antibiotics via your food, such as [meats from concentrated animal feeding operations \(CAFO\)](#), could also be involved.

Accumulating Research Suggests Antibiotics May Influence Colon Cancer Risk

The researchers pointed out that not only do antibiotics "fundamentally alter the gut microbiome by curbing the diversity and number of bacteria, and reducing the resistance to hostile bugs," but bacteria that may require antibiotics treatment may also be inflammatory, another risk factor for colon cancer development.⁶

Lead researcher Dr. Andrew Chan, an associate professor of medicine at Harvard Medical School, told CBS News:⁷

"This suggests that alterations in the naturally occurring bacteria that live in one's intestines caused by antibiotics might predispose individuals to colorectal cancer ... More research needs to be done to understand the interaction between alterations in one's gut bacteria and future risk of colorectal cancer."

As mentioned, this isn't the first time antibiotics have been implicated in colorectal cancer. In 2016, another study found increasing use of antibiotics was associated with an increasing risk of colorectal cancer, especially when used frequently.⁸

As the study noted, "Microbiological dysbiosis induced by a Western diet seems to be associated with an increased risk of developing colorectal cancer," so why, too, wouldn't antibiotics usage, which also affects microbiota?

What to Know Before Getting a Colonoscopy

Health officials in the U.S. recommend anyone over the age of 45 at average risk of colorectal cancer be screened via [colonoscopy](#) every 10 years or by flexible sigmoidoscopy every five years.

The primary tools used to test for colon cancer are flexible sigmoidoscopes and colonoscopes. Neither of these expensive pieces of equipment is disposable. This means they must be thoroughly cleaned inside and out and sterilized before each use, and therein lies the problem. However, the disinfection process used may not properly sterilize these tools, posing a risk of illness.⁹

In early 2017, another medical scope, a duodenoscope used in the treatment of cancer, gallstones and bile and pancreatic duct problems, was also tied to at least 25 outbreaks with drug-resistant bacteria, which sickened 250 people.¹⁰ This is particularly concerning since the scope was recalled in 2016 after it was found a small mechanism on the scope could spread bacteria between patients.

The company reportedly fixed the problem, which led Sen. Patty Murray, D-Wash., to ask for proof that the scope can be properly disinfected between patients, as the company suggested.¹¹

Colonoscopy Prep May Also Contribute to Gut Imbalances

The tools used in most colonoscopies cannot be autoclaved (heat sterilized), and testing reveals the disinfection techniques and agents used 80% of the time are grossly inadequate. As a result, the tools can spread all manner of infections from one patient to another.

With multidrug-resistant bacterial infections on the rise, this is a tremendous concern. The good news is you can protect yourself and dramatically reduce your risk of infection by asking the right questions before you schedule your appointment:

- How is the endoscope cleaned between patients?
- Specifically, which cleaning agent is used?
 - If the hospital or clinic uses peracetic acid, your likelihood of contracting an infection from a previous patient is slim.
 - Glutaraldehyde, or the brand name Cidex (which is what 80% of clinics use), does NOT properly sterilize these tools. If glutaraldehyde is used, cancel your appointment and find a clinic that uses peracetic acid.
- How many of your colonoscopy patients have had to be hospitalized due to infections?

Another consideration is the prep for the procedure, which typically involves flushing out your intestinal tract with harsh laxatives. Like antibiotics, this, too, has the potential to lead to dysbiosis and other gut imbalances.¹² It's just one more fact to be aware of when weighing the benefits and risks of colonoscopy for colon cancer screening.

Protecting Your Colon Health Starts With Protecting Your Gut Health

The health of your gut affects that of your entire body, which is why protecting your colon health shares many of the same principles as protecting your gut health. For instance, according to one study, **dried plums** (i.e. prunes) may lower your risk of colon cancer by building your gut bacteria.¹³

Adequate fiber is also important. For every 10 grams of fiber you add to your daily diet, your risk of colon cancer decreases by 10%.¹⁴ Well-cooked vegetables are your best source of fiber. Overall, I believe about 25 to 50 grams of fiber per 1,000 calories consumed daily is an ideal amount to aim for.

Fermented foods are also gaining recognition as an important tool for both gut health and disease prevention, including colon cancer. For example, butyrate, a short-chain fat created when microbes ferment dietary fiber in your gut, has been shown to induce programmed cell death of colon cancer cells.¹⁵

In short, eating a high-vegetable, **fiber- and fermented food-rich diet** is key for preventing colon cancer, and the reason for this is directly related to the way it affects your gut microbiome. According to one study, "intestinal bacteria can act in concert with diet to reduce or increase the risk of certain types of colorectal cancer."¹⁶

Keep in mind, though, that while fiber can nourish your microbiome, it can also feed the endotoxin-producing gut bacteria unless your gut health is optimal, so it's important to properly introduce fiber-rich foods into your diet. Learn how to set up a strong foundation for your gut to benefit from fiber-rich foods [here](#).

Avoid Antibiotic-Laden CAFO Meats and Processed Meats

Both processed meats and red CAFO meats have been linked to colon cancer, and it's important to understand that many of these contain antibiotic residues as well as other compounds that may influence your cancer risk.

Processed meats, such as bacon, ham, pastrami, salami, pepperoni, hot dogs and some sausages, are those preserved by smoking, curing, salting or adding chemical preservatives. The nitrates found in processed meats are frequently converted into nitrosamines, which are clearly associated with an increased risk of certain cancers.

A 2007 analysis by the World Cancer Research Fund (WCRF) found that eating just one sausage a day may raise your risk of bowel cancer.¹⁷ Specifically, 1.8 ounces of processed meat daily – about one sausage or three pieces of bacon – was found to raise your likelihood of cancer by 20%.

Research also suggests that people who eat the most red meat (in one study this was 5 ounces a day) have a 24% greater risk of colorectal cancer than those who eat the least.¹⁸ Red meat is likely not the problem in and of itself, however; the way it's cooked, and the source it comes from, likely play a role. Grass fed beef, for instance, contains cancer-fighting compounds.

When it comes to meats, I recommend eating organically raised grass fed meats only and cooking them only lightly (rare, not well-done). For the record, I believe most people need some animal protein to be optimally healthy, but **most eat far more protein than is necessary** (or healthy).

What Else Can Lower Your Risk of Colon Cancer?

Colorectal cancer is the third most common cancer in the U.S., aside from skin cancers, as well as the fourth leading cause of cancer-related deaths in women, and the third in men.¹⁹ More than 95,500 cases of colon cancer were expected to be diagnosed in 2017, according to the American Cancer Society, so taking steps to prevent it is important.

It's important to avoid the [unnecessary use of antibiotics](#), not only due to their potential link to colon cancer but also for a myriad of other reasons. Be mindful of choosing organic, antibiotic-free meats and dairy products as well. In terms of other methods to lower your colon cancer risk, there are many lifestyle-based changes you can make, including:

1. **Eat more vegetables** — Vegetables contain an array of antioxidants and other disease-fighting compounds that are very difficult to get anywhere else — like magnesium. Results from one meta-analysis indicated that for every 100-milligram increase in [magnesium intake](#), the risk of colorectal tumor decreased by 13%, while the risk of colorectal cancer was lowered by 12%.²⁰

Beyond magnesium, plant chemicals called phytochemicals can reduce inflammation and eliminate carcinogens, while others regulate the rate at which your cells reproduce, get rid of old cells and maintain DNA.

2. **Optimize your vitamin D levels** — Vitamin D deficiency is a risk factor for colorectal cancer. In one study published in the journal *Gut*, people with higher blood levels of vitamin D were less likely to develop colorectal tumors.²¹ This may be because vitamin D is beneficial for your immune system, which in turn may help to limit the growth of cancerous tumors.
3. **Exercise** — There is convincing evidence that regular exercise can significantly reduce your risk of colon cancer.²² One study revealed that physically active men and women have about a 30% to 40% reduction in the risk of developing colon cancer compared with inactive persons, for instance.²³
4. **Limit your alcohol intake and quit smoking** — Both excessive alcohol intake and smoking are associated with an increased risk of colorectal cancer. When it comes to alcohol, I generally define "moderate" alcohol as a 5-ounce glass of wine, a 12-ounce beer or 1 ounce of hard liquor, with a meal, per day. I do recommend eliminating all forms of alcohol. If you're a smoker, you can find [tips for quitting here](#).

5. Maintain a healthy weight and control belly fat — A number of studies have linked obesity to an increased risk for about a dozen different cancers, including cancer of the colon. In a 2014 study that analyzed data from more than 5 million people over the age of 16, every 11-pound increase in body weight was associated with an increased risk for 10 types of cancer.²⁴

If you're overweight or obese, even **small amounts of weight loss** can lead to significant benefits for your health. In terms of cancer prevention, **losing excess belly fat** is particularly important, as belly fat is linked to an increased risk of colon cancer regardless of your body weight.

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