Understanding the Potential Carcinogenic Risks of Ranitidine (Zantac)

by PAULA CLARK

Does Zantac Cause Cancer?

Heartburn can be a minor downside of enjoying my favourite food and drink from time to time. As a cancer survivor, any ailment handled by a quick trip to the drug store doesn't seem like a big deal to me.

But is it?

Last fall, the U.S. Food and Drug Administration (FDA) started recommending the recall of products containing ranitidine, like Zantac. The first was issued on Sept 19, 2019.

Since then, 17 more recalls have been issued, with the Apr 1, 2020 notice specifically referencing Zantac, an over-the-counter heartburn remedy. The most recent warning was issued Apr 16, 2020 about another substance called nizatidine.

The potentially dangerous substance found in ranitidine and nizatidine is called N-Nitrosodimethylamine (NDMA). NDMA is listed as grade 2A (probably carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

The recall was issued because levels of NDMA can become toxic if products containing ranitidine are stored for too long, particularly in spaces higher than room temperature.

Currently the levels of NDMA in Zantac and other products are under investigation by the FDA.

What's Known About the Potential Risks of Zantac?

The FDA was notified by a third-party lab that NDMA levels can increase to dangerous levels in products containing ranitidine under normal storage conditions. The Sept. 2019 warning was issued and updated Nov. 1, 2019. Consumers were told to find an alternative product.

So how much NDMA does it take to be dangerous?

Right now, we already ingest low levels of NDMA found in some foods and water. According to the FDA, "... consuming up to 0.096 micrograms or 0.32 parts per million (ppm) of NDMA per day is considered reasonably safe for human ingestion based on lifetime exposure. FDA has set the acceptable daily intake limit for NDMA at 0.096 micrograms or 0.32 ppm for ranitidine."

Currently "FDA laboratory tests show that temperature and time generally raise the level of NDMA in some ranitidine products above the acceptable daily intake limit of 96 nanograms per day."

In plain language, that means using Zantac poses a risk similar to eating foods like grilled or smoked meats. So,

answering the question "does Zantac cause cancer?" is a complex issue, but these findings indicate that it may increase your risk to some extent.

What's Been Done as a Result of These Findings?

Manufacturers of products containing NDMA have been asked to conduct the same lab tests on their products while the FDA also continues to investigate and run tests.

They've recommended these products as a substitute because they "show no NDMA impurities in the medicines."

- Pepcid (famotidine)
- Tagamet (cimetidine)
- Nexium (esomeprazole)
- Prevacid (lansoprazole)
- Prilosec (omeprazole)

Conducting all the necessary tests will take time as each product needs to be tested according to how it's administered, for example, orally versus injection.

What You Can Do If You've Used Products Containing Ranitidine

With investigations ongoing and many questions unanswered, now is the time to play it safe.

If you take a prescribed drug containing ranitidine or nizatidine, Health Canada says you should continue taking your medication until you talk to your doctor about alternatives. The risk of not treating your health issue may be higher than the risk of exposure to NDMA. See your doctor as soon as possible.

You'll need to dispose of your ranitidine products safely. Read the instructions that came with the product, check your local waste management for options and guidelines, or call your local pharmacy for guidance.

Right now, it's impossible to know about the cancer risk for people who've been exposed to ranitidine or nizatidine for extended periods of time. If you have concerns, talk to your doctor.

In future, if companies can prove that NDMA levels remain stable in their products containing ranitidine, the recall may be lifted.

Myself, I'm going to be more careful about eating and drinking things that give me heartburn. The best way to mitigate this particular risk is to avoid needing a heartburn remedy in the first place!

How to Find Other Products That May Contain Carcinogens

While recalls are reported by the media, you can also be proactive when it comes to protecting yourself from carcinogens.

Regarding questions like "does Zantac cause cancer" and others, here are a few things you can do to stay up to date:

Know how your government notifies the public about recalled products.

The FDA website has a wealth of information about the safety of foods, drugs, medical devices and cosmetics, including consumer-friendly information and videos. Check out this page devoted to identifying recalled products. You can also follow their recall notifications on Twitter.

Check government websites in your area to find out how they notify the public.

Know trusted health reporters in your area. There are journalists who devote their careers to science, health and medicine.

Get to know journalists in your area looking out for your safety through the American Association of Health Journalists. They provide a searchable freelance journalist directory where you can filter by the specialty you're looking for.

Know and follow trusted cancer organizations. There are many organizations devoted to cancer research, care and information.