

What You Want to Know About Nutrition and Bladder Cancer



Part IV | Dietary Supplements and Bladder Cancer and Q&A

Presented by

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SUPPLEMENTS & BLADDER CANCER

In the segment we're going to talk a little bit about dietary supplements. There were several questions about dietary supplements. You may have seen on the AICR infographic dietary supplements are not recommended to prevent cancer. However, there's a lot of interest in dietary supplements.

Really, the take home message here is for cancer prevention, try to get your nutrients from food rather than dietary supplements. It's important to know that nutrient and herbal supplements can interact with medications and can have adverse reactions.

Dietary supplements

- For cancer prevention, aim to get all of your nutrients from food, rather than dietary supplements.
- Nutrient and herbal supplements can interact with medications or have other adverse reactions.
- Discuss use of any supplements with your healthcare team
- Certain nutrient supplementation has been associated with increased risks of other cancers, particularly antioxidant supplementation in bladder cancer (Al-Zalabani 2016).
- Higher blood levels of certain nutrients, such as vitamin D, beta-carotene, vitamin A, and lutein have been associated with lower risk of bladder cancer (Ros 2012 and Al-Zalabani 2016).
- Iron and vitamin D deficiencies have been associated with increased risk of bladder cancer (Hung 2015 and Zhao 2016).

If you want to use supplements, it's important to talk about that with your healthcare team. There are some nutrient supplementation that have shown increased risk of cancers, particularly antioxidant supplementation in bladder cancer. This [Al-Zalabani article](#) is a long read but it is helpful because its bladder cancer specific in looking at diet, exercise, and lifestyle factors, and bladder cancer risk. There are some suggestions that certain nutrients such as vitamin D, vitamin A, people that have higher blood levels of those nutrients have lower risks of bladder cancer. Vitamin D, in particular, is a nutrient and Americans tend to become deficient and especially during the winter months or especially if they have darker pigmentation of the skin or are inside a lot. Iron and

vitamin D deficiencies have also been associated with increased risk of bladder cancer.

Here I have a picture of Goldilocks and you may wonder why. Really, in my way of thinking about dietary supplements, I don't think of them as all good or all bad, but our nutrients, there's a range for which the nutrient intake is health for us. We don't want it to be too little or too much, so kind of like Goldilocks, not too hot, not too cold, not too soft, not too hard.

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May they benefit?

- Supplements should be taken under the directive of a healthcare provider
- Consider asking your provider to monitor the following nutrients:
 - Vitamin D
 - Vitamin B12
 - Iron
- Following cystectomy, you may also ask your physician about monitoring your bone health through a DEXA scan



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With supplements, we want our patients to be in an optimal range. There are some nutrients that might be particularly important for you to monitor. Vitamin D would be one, vitamin B12 and iron might also be very relevant to people that have had a cystectomy. It's documented in the literature that patients with cystectomy may have some issues with bone health long-term and so following cystectomy you may want to ask your physician or your care provider about monitoring your bone health and you can do that with different kinds of scans. I mention a DEXA scan but if that's not available there are other ways to determine that.

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Herbals and other supplements

- Currently, evidence is not sufficient for conclusions on supplements like curcumin, green tea, or broccoli sprout pills for the treatment of bladder cancer. These foods should be consumed in whole-food form
 - Curcumin during BCG treatment has shown to significantly reduce bladder tumor size in mice compared to BCG alone (Kamat 2009)
 - Broccoli sprout extract has shown to inhibit bladder cancer growth in vitro (Tang, 2006) and in mice (Abbaoui 2012)
- The use of probiotics, particularly during antibiotic treatment, may be advisable for gut health, particularly in reducing antibiotic-associated diarrhea
 - Small clinical trials have shown an increase in recurrence-free survival rates with the addition of lactobacillus casei in combination with conventional treatments (Aso 1992 and Naito 2008)

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HERBALS AND OTHER SUPPLEMENTS

There were several questions about specific supplements. Really, there's not sufficient evidence to give you any conclusions for supplements like curcumin, green tea, broccoli sprout pills. Many of these things you can get from food form but it is interesting that curcumin during BCG treatment has been shown to reduce bladder cancer tumor size in mice, not humans. Broccoli sprout extract has also been shown

to inhibit bladder cancer growths in vitro, and that just in cells themselves, and in mice. Then another kind of interesting supplement is the use of probiotics. Particularly during antibiotic treatment or after antibiotic treatment, it may be important to recall colonize the gut with health bacteria. There are some small clinical trials that have shown an increase in recurrence-free survival rate with the addition of lactobacillus casei in combination with some conventional treatments for bladder cancer.

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What supplements should I take?

- TAKE HOME MESSAGE:
 - Nutrients are important for your health, but these are best obtained from your food
 - No supplement has been shown effective in reducing bladder cancer risk
 - Any supplements consumed should be at the advice of your medical provider

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The take home message from this last section is that nutrients are important for your health. If you're going to prioritize things, of what you're ready to start first, it's advisable to start first with getting your diet in order and following a healthy diet. There aren't any supplements that have been shown effective in reducing the risk of bladder cancer and any supplements consumed should be at the advice of your medical provider.

In conclusion, for the whole webinar, there are many myths about nutrition and cancer that unfortunately cause unwanted fear and stress. The hope message is that emerging research has been really discovering how we can use food as our medicine. We already know that nutrients are needed for a body to run optimally so this is really your call to use food, to nourish you during your fight against cancer by choosing more nutrient-rich foods.

This is a [link](#) to my lab's website. We're called the Edge Lab, Exercise, Diet, Genitourinary and Endocrinology Research Lab, and our vision is really to test diets and physical activity regimens to give patients a competitive edge when they're fighting bladder cancer.

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Conclusion

- Many myths about nutrition and cancer can cause unwarranted fear and stress.
- Emerging research is discovering how we can use food more as our medicine.
- We already know nutrients are needed for our body to run optimally.
- Use your food to nourish you during your fight against cancer by choosing more nutrient-rich foods.

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Stay tuned as we test diet and physical activity regimens to give patients a competitive EDGE when they are fighting bladder cancer.



Exercise, Diet, Genitourinary, & Endocrinology (EDGE) Research Laboratory.
<http://www.kumc.edu/school-of-health-professions/dietetics-and-nutrition/research/edge-research-laboratory.html>

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Questions & Answers About Nutrition and Bladder Cancer

How would people find out, or are there many clinical trials about nutrition and the effect of nutrition on bladder cancer, say for recurrence or in optimizing treatment?



Yeah, that's a great question and that's something that thanks to the work of BCAN and their Think Tank, I think there's a lot of interest and I'm hoping that we'll get some momentum going in this field. There's a group of physicians and urologists and medical oncologists that are keenly interested in this topic and so we had one of our first face-to-face kind of meetings at the BCAN Think Tank and we hope to follow up more on that. As far what's going on right now, there is a website called clinicaltrials.gov and you can type in search words, much like you would do a google search and it can find trials that would have those features, so you could put in bladder cancer and diet, or bladder cancer and ketogenic, or something that you might be interested in to see if there's something ongoing. For our lab here, this is a major focus of what our team wants to explore and we brought some big names in bladder cancer research to our institution in order to do that, so you could also look at my website, reach out to me, if you have interest in some of our trials and then, of course, if we know people we could also refer people to different regions if we need to do more of a grassroots kind of matchmaking to connect people.

Somebody is drinking only alkaline and hydrogenized water, and wanted to know what your thoughts were about that?



That's a great question. I'm going to take off my bladder hat and put on my kidney hat. Alkalized water is probably pretty good for your kidneys but as far as for cancer therapy again, they are really pointed more to the tumor causing the acid environment rather than the acid environment. I mean an alkaline environment changing the acidity around the tumor. I think as far as kidney function, though, the less stress you put on your kidney by putting extra hydrogen into the system then your kidney doesn't have to work as hard to clear that. I hope that answers your question. For the kidney, I don't think we really have any data one way or the other for bladder but if you enjoy it and you like it and you think it works, then that's great.

Regarding consuming enough vitamins through natural foods to help fight cancer, I know you talked about a diverse diet and making sure that you're looking at the proper plate proportions between your vegetables and your proteins. Could just do a quick summary statement for that I think that will wrap things up.

Working with a dietitian can also really help get to know what you're eating because we can help you measure that and then give you feedback on ways that you can tweak what your regular diet habits are to make sure that you have a wholesome diet. There are a lot of apps where you can self-monitor too.

They don't always give you all the nutrients that you need but there are ways to get that data. I did also want to mention, there was a question about arsenic in food and I really want to make sure that I answer that question. Consuming water that's contaminated with arsenic is a known risk factor for bladder cancer and one participant had asked a question about arsenic and food and I think that's a very legitimate question. Arsenic and water might be a problem if you live in New Hampshire, Maine, Michigan. There's some regions in the southwest or the Rockies, so getting a water filter may be a good idea so that you could filter that out. For the food, just in 2013 the FDA changed the allowable content arsenic in juice. Apple juice is known to have some arsenic contaminants in it so limiting your fruit juice consumption each day to about a half a cup would probably be a good idea.

The last food source that is kind of problematic with arsenic content is rice. There's quite a bit of data out there on the internet about this and I would point that person, and if there are others interested, to the Dartmouth, that's a university out east, they have a lab dedicated to independently testing foods for arsenic. If that's a concern, please look to them.



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