

Interactions of Medications, Food and Supplements

Compiled by Breast Cancer Options from a variety of sources

Small studies suggest that people who took antioxidant supplements before and during chemotherapy to treat breast cancer may have worse outcomes, including a higher risk of recurrence.

(Journal of Clinical Oncology. "Dietary Supplement Use During Chemotherapy and Survival Outcomes of Patients With Breast Cancer Enrolled in a Cooperative Group Clinical Trial)

Questions You Need to Ask About Supplements, Medications, Food and Drink

- Does my chemotherapy interact with any of my other medications?
- Does my chemotherapy interact with any foods or beverages, such as grapefruit, grapefruit juice, milk or soda?
- What herbal supplements, vitamins or over-the-counter medications can I take safely and which should I avoid with this medicine?

Food and Drink to Avoid During Cancer Treatment

CYP enzymes: A group of enzymes called cytochrome P (CYP) are an important part of the process of how drugs are broken down in the body after they've been absorbed into the blood. Certain ones affect how cancer drugs are broken down in the body.

(Effect of Fruit/Vegetable-Drug Interactions on CYP450-<http://dx.doi.org/10.4314/tjpr.v14i10.27>)

Foods That Affect CYP Enzymes:

- Grapefruit and Seville oranges. This includes juice and products made from these, ie. marmalade. Grapefruit has the potential to interact with many common drugs, from chemotherapy to heart medicines. *At least ten chemotherapy drugs can interact with grapefruit. So, avoid it until chemotherapy is completed.*
- Don't drink grapefruit juice if you're taking: Chemotherapy, Statins, antihistamines, blood pressure drugs, Valium, HIV drugs

Interactions of Dietary Supplements & Food With Medications

-Black Cohosh: Increase absorption and toxicity of Tamoxifen; May lower blood lipids

-Echinacea: May interfere with immune system-based anticancer therapies

-Essaic: Affects the liver's metabolic processes, possibly inhibiting the effectiveness of chemotherapy.

-Garlic: May increase bleeding when used with blood thinners. (aspirin, warfarin)

-Ginko Biloba: May increase bleeding when used with blood thinners. (aspirin, warfarin)

-St John's Wort: May cause toxicity with antidepressants; May reduce absorption of anticancer drugs

-Beer & Wine: Use of alcohol-containing beverages can increase the risk of hepatotoxicity.

-Curcumin, Valerian root, and Allium are examples of supplements that disrupt the toxicity-efficacy balance of chemotherapy.

Antidepressant Interactions

Antidepressants have caused a number of troubling interactions for chemotherapy patients. 1 in 8 Americans take an antidepressant, which is also the same percentage of women in the US who will develop invasive breast cancer over the course of her lifetime.

· *Studies have shown that women on Tamoxifen® who also take certain antidepressants have a much higher risk of death—91%, according to one study—than Tamoxifen patients not taking high-risk antidepressants.*

· *Women stay on Tamoxifen 5-10 years. It is possible that, somewhere along the line, another doctor might prescribe an antidepressant.*

(Risk of mortality with concomitant use of tamoxifen and selective serotonin reuptake inhibitors: multi-database cohort study-www.ncbi.nlm.nih.gov/pmc/articles/PMC5044871)

INTERACTION CHECKER WEBSITES

- **Drugs.com** –(Check Drug-drug interactions and Drug-food/beverage interactions.

www.drugs.com/drug_interactions.html

- **WebMD**- Enter two or more *drugs*, OTC's, or *herbal* supplements to *check* for *interactions*.

www.webmd.com/interaction-checker

- **Memorial Sloan Kettering Cancer Center**. Detailed information for over 200 herbs, including many uncommon supplements often used by cancer patients. Click on "Herb-Drug Interactions.

www.mskcc.org/cancer-care/diagnosis-treatment/symptom-management/integrative-medicine/herbs/search

- **Natural Medicines Comprehensive Database** –Provides a large number of evidence-based reviews, adverse reactions, interactions, and dosage. (*paid website*)

www.naturalmedicinesdatabase.com