



Fresh. Simple. Good.

Health Sheet

So, your concern is...

Breast or Prostate Cancer

Cancer statistics are never pretty. But the good news is research shows that 30 to 35 percent of all cancers can be prevented by eating well, being active and not being overweight.¹ Along with physical activity and not smoking, healthy eating is one of the cornerstones for helping to prevent cancer.

The Canadian Cancer Society recommends choosing 5 to 10 servings of vegetables and fruit every day to reap the benefits of their disease-fighting antioxidants and phytochemicals. As they are low in calories and fat, have very little carbohydrate and provide some fibre, fresh mushrooms are a delicious way to eat healthy. In addition, emerging research also suggests that mushrooms and mushroom extracts may have potent anticancer activity, against both breast and prostate cancer.

Fresh Mushrooms Can Help!

Altered aromatase activity

- Conjugated linoleic acid extracted from mushrooms may slow down the activity of aromatase, an enzyme that is needed for making estrogen. According to the Canadian Cancer Society, high levels of estrogen are associated with a higher risk of breast cancer in post-menopausal women.^{2 3}

Benefits of Beta-Glucans

- Beta-glucans, a type of carbohydrate, found in Maitake mushrooms (hen-of-the-woods) destroyed human prostatic cancers cells in a laboratory setting.⁴
- While this is good news, we need a lot more research before we can make any specific recommendations. In the meantime, it's a smart idea to enjoy a variety of mushrooms more often.

Strength in Selenium

- Researchers in the Netherlands found that men who ate the most selenium in their diet had a 31% lower risk of developing prostate cancer.⁵
- Eating foods rich in selenium may also lower the likelihood of developing prostate cancer and slow prostate cancer tumor progression according to results from the Physicians' Health Study.⁶

Mushrooms Make a Difference⁷

- Mix in ½ cup chopped crimini mushrooms into stuffing
Benefit: - *add 18 micrograms of selenium (26% of the Daily Value)*
- Add some pizzazz to chili or lasagna by adding 1 cup sliced white button mushrooms
Benefit: - *add 9 micrograms of selenium (13% of the Daily Value)*
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- Toss ½ cup sliced shiitake mushrooms into stir-fries
Benefit: - *add 18 micrograms of selenium (26% of the Daily Value)*

Make it with Mushrooms:

- Liven up stuffing for turkey or roast meats with chopped crimini or portabella mushrooms.
- Marinated mushrooms are a versatile ingredient and can be used as part of an appetizer platter or in any type of salad.
- Fresh enoki mushrooms are a must when you're making Thai spring rolls. Try crimini or shiitake in steamed dumplings.
- Add some sliced fresh white button mushrooms to corn or clam chowder.
- Serve steamed greens with garlic and your favorite sliced mushrooms.

Recipe Suggestion:

[Savoury Mushroom Stuffed Pork Tenderloin](#)

For more mushroom nutrition information, great tips and delicious recipes visit www.mushrooms.ca.

For more about cancer prevention visit the Canadian Cancer Society at www.cancer.ca.

Disclaimer: The provided information is not meant to replace the medical counsel of your Doctor. If you have further questions please consult with your Doctor or Registered Dietitian.

¹ Canadian Cancer society website at

http://www.cancer.ca/ccs/internet/standard/0,3182,3172_150407171_langId-en,00.html.

² Grube BJ, Eng ET, Kao YC, Kwon A and Chen S. White button mushroom phytochemicals inhibit aromatase activity and breast cancer cell proliferation. *J Nutr* 2001;131:3288-3293.

³ American Institute for Cancer Research e-newsletter March 2007 at

http://www.aicr.org/site/News2?abbr=pub_&page=NewsArticle&id=11331.

⁴ Fullerton SA, Samadi AA, Tortorelis DG et al. Induction of apoptosis in human prostatic cancer cells with beta-glucon (Maitake mushroom polysaccharide.) *Mol Urol* 2000;4(1):7-13.

⁵ van den Brandt PA, Zeegers MPA, Bode P and Goldbohm RA. Toenail selenium levels and the subsequent risk of prostate cancer: A Prospective Cohort Study. *Cancer Epidemiology, Biomarkers & Prevention*. 2003;12:866-871.

⁶ Li H, Stampfer MJ, Giovannucci EL et al. A Prospective Study of Plasma Selenium Levels and Prostate Cancer Risk. *J Natl Cancer Inst* 2004;96(9):696-703.

⁷ USDA National Nutrient Database for Standard Reference, Release 19, 2006 at

<http://www.ars.usda.gov/ba/bhnrc/ndl>.