

Fight Cancer with Phytoestrogens

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Abstract:

60-75% of women who have breast cancer have estrogen-dependent tumors. The estrogen-dependent cancer cells have estrogen receptors on their cell membranes. When estrogen is bound to the receptor, the cancer cell divides and the tumor grows. This means that the tumor grows more rapidly because of estrogen produced by the woman or consumed in pharmaceuticals. However, in order to prevent and contain breast cancer, women should consume compounds that block the tumor receptors - phytoestrogens. Phytoestrogens are hormones found only in fruits and vegetables. There are more than a thousand different kinds of phytochemicals. There are studies that were made both on people and rats that prove that getting phytoestrogens is one of the best ways to fight cancer by prevention and containment.

Introduction:

Cancer occurs when certain cells in a part of the body start growing out of control. While normal cells stop dividing at some point, cancer cells keep dividing (3). That is exactly what happens in breast cancer. After lung cancer, breast cancer is the leading cause of cancer death among women. There are currently over 2 million women in America who have been diagnosed with breast cancer. About 40,970 of those women will probably die as a result of that this year. The chance for a woman to get breast cancer is 1 in 8(3). However, there has been a decline in the number of deaths caused by breast cancer. The reason is mainly because of improved treatment and earlier diagnosis. However, instead of developing breast cancer, women could reduce the risk of getting breast cancer by Improving their diets.

Method:

My method was to review published scholarly literature.

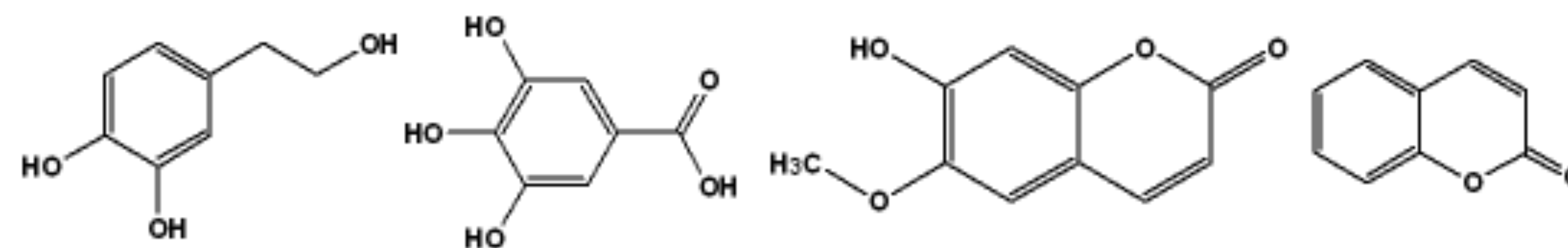
Results:

So how can the intake of phytoestrogens influence the spread of breast cancer? One of the actions made by phytoestrogens is the interference with DNA replication. These phytoestrogens interfere with the replication of cell DNA, thereby preventing the multiplication of cancer cells. By doing this, phytoestrogens are containing cancer and preventing the cancer cells from spreading. On the right are some phytochemical structures.

Figure 1: Foods rich in phytoestrogens



Figure 2: Structures of some phytoestrogen molecules



Results (cont'd):

A study was performed to test this theory. This study was made using phytoestrogens in grapefruit. Mice were implanted with breast tumor cells. It was found that the intake of phytoestrogens reduced the growth rate of the cancer cells and had a great effect on the size of the tumors. To be more specific the study found that the tumors implanted in mice fed with a very small amount of grape fruit juice ended up being one third the size of the tumors implanted in the mice not given grape juice(2).

In another study a 30% reduction in breast cancer risk was found amongst women with high intake of phytoestrogens (1).

Phytoestrogens can be found in a myriad of plants. As mentioned above, grapefruit is one of them. Other examples of plants high in phytoestrogens are: garlic, broccoli, olives, oranges, wild strawberries, pomegranate, and blackberries. They can be found in medicinal plants such as passion fruit, broom, and valerian. There are also many common herbs rich with phytoestrogens. A few examples would be Aloe Vera, tea, and wild carrots. And finally, phytoestrogens can be found in beans such as soy and cocoa. (4)

Discussion:

It is evident that by eating the right food one can reduce the risk and even contain cancer. The scientific studies have proven how intake of phytoestrogens stops the spread of cancer. We are in a world where people are dying of cancer all the time, and scientists are trying to find a cure. What we need to realize is that we have a cure right in front of us. The cure is in the food that is available to us. It is food that we can make the choice to eat, not only because it is generally good for our health, but also because it is our weapon against cancer.

References

1. Zeigler, Regina G. "Phytoestrogens and Breast Cancer", The American Journal of Clinical Nutrition. p1-9 2004
2. Chen, Shiuan. "Breast Cancer Prevention with Phytoestrogens in Grape Juice", California Breast Cancer Research. P23-31 2003
3. American Cancer Society, <<http://www.cancer.org/docroot/CRI/content/>>, 2006
4. No author, "What are Phytochemicals" <www.phytochemicals.info>, 2006.