

Jacobs Journal of Epidemiology and Preventive Medicine

Editorial article

Chemoprevention of Cancer: Quench Inflammation

Ashok K. Vijh¹*

¹Institut de recherche d'Hydro-Québec 1800, Blvd. Lionel-Boulet, Varennes, Québec Canada.

*Corresponding author: Dr. Ashok K. Vijh, Ph.D, D.Sc, F.R.S. Canada, Institut de recherche d'Hydro-Québec, 1800, Blvd. Lionel-Boulet, Varennes, Québec Canada J3X 1S1, Fax: 1-450-652-8424; Tél: 1-450-652-8234; E-mail: ashok@ireq.ca

Received: 05-22-2016

Accepted: 05-23-2016

Published: 10-14-2016

Copyright: © 2016 Ashok K. Vijh

Perhaps the most dreaded disease of old age is cancer: actually, it is a family of diseases that can attack various organs and cancer of a particular organ can manifest itself in multiple forms. A number of genetic changes can cause cells to become cancerous. Predicting those changes and who will get them is incredibly difficult.

The process of carcinogenesis can be very slow. It is believed that her cancer begins 20 years before a woman feels a lump in her breast. Most cancers do not yet have reliable bio-markers which might indicate their presence especially in the initial stages. More often than not, a cancer is discovered at a stage at which it can only be managed but not cured - this depends, of course, on the type of cancer. Taking drugs or supplements to prevent cancer, rather than to treat it, is called chemoprevention. Many researchers in this area of science have concluded that perhaps the best way to block the initiation of cancer is to target inflammation at the organ, tissue and cellular level. Much evidence shows that chronic inflammation encourages tumours by prompting the growth of new blood vessels ("angiogenesis") and a remodeling of the extra-cellular matrix, thus creating an ideal setting for normal cells to become malignant.

Parentetically, inflammation can also be the root cause of a host of other serious ailments from diabetes to cardiovascular diseases and, most likely, also some neuro-degenerative diseases.

There are many substances which when consumed tend to quench inflammation. The most common of these, which are easily available, harmless and of proven efficacy are the following:

- Aspirin: from 80 -150 mg per day
- Curcumin (from turmeric): to increase its bio-availability it must be taken in combination with black pepper
- Metformin: this anti-diabetic medication reduces incidence of cancer probably through its anti-inflammation effect
- Olive oil: extra virgin first cold pressed
- Broccoli: a source of sulforaphane
- Poly-unsaturated fatty acids (PUFAs) from fatty fish such as Salmon, Herring, Mackerel, Sardines and Trout etc.; also from Omega 3 capsules or fish oil
- Resveratrol from red grapes and red wine
- Phytonutrients, which are constituents of all coloured vegetables, fruit and herbs; turmeric, broccoli and red grapes have already been mentioned. Other anti-cancer phytonutrients are available in pungent and bitter vegetables (onions, garlic, mustard greens), cabbage family of vegetables (*bok choy*, cabbage, Brussels sprouts); also, in berries and melons of all sorts
- Fasting or at least calorie reduction (CR) as a strategy to minimize the production of free radicals and thus inflammation.

In conclusion, reducing inflammation through the chemoprevention strategies outlined above can reduce or delay the onset of processes that result in cancer.