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## Place of functional beverages in preventive treatment for cancer

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Functional beverages help us to maintain healthy conditions and to provide comfort just for general nutrition. For this reason, functional beverages play a significant role in our daily lives. It has been found that functional beverages have benefits in many areas of health such as cancer prevention, healthy digestive system, immunity defenses, body weight reduction, energy and hydration, improve overall health, show antioxidant activity, improve cardiovascular health. The positive effects of functional beverages on health are explained by different mechanisms. Reduce oxidative stress and help to prevent many chronic diseases, as well as strengthen the immune system of the individual. Besides water, the best known and most commonly used functional beverages are tea, coffee and fruit juices. Functional beverages contain antioxidant bioactive compounds and different nutrient including alkaloids, anthocyanins, carotenoids, flavonoids, glucosinolates, isoflavones, phenolic acids, tannins and terpenes, vitamins (vitamin C, folate and provitamin A), minerals (potassium, calcium, magnesium) and fibers that have been associated with reduced cancer risk. Reactive oxygen species damages many tissues such as lipids, proteins, especially DNA in living organisms. Free radicals mediate oxidative damage in cancer. The biological damage that occurs in this way is called oxidative stress, and the phenolic components involved in functional beverages have a vital role in removing oxidative stress. DNA is highly susceptible to free radical damage. Modification of DNA is the most important consequence of oxidative stress, and it can become permanent via the formation of mutations and other types of genomic instability. Excessive production of reactive oxygen species and lack of adequate antioxidant components (alkaloids, anthocyanins, carotenoids, flavonoids, glucosinolates, isoflavones, phenolic acids, tannins and terpenes) in the body trigger to formation of cancer. It is thought that phytochemicals in beverages and balanced diet can be a natural treatment method to improve the individual's health condition and to prevent the development of the cancer cell with the minimal toxicity. It has been found that functional components taken with beverages contribute approximately 30% to the prevention of cancer formation in industrial countries. Functional beverages (fruit juices, vegetable juices, caffeinated beverages, dairy and soy beverages, some fermented beverages) provide sufficient quantities of antioxidant component that reduces cancer formation by preventing DNA damage and reducing oxidative stress in the body.

### Biography

Gül Ögren has completed her Bachelor of Nutrition and Dietetic from Erciyes University and is currently enrolled in the Master programme in Department of Nutrition and Dietetic, Marmara University. She is also a Research Assistant at the same university.

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