

**IMPORTANT ROLE OF FOOD RICH IN ANTIOXIDANTS IN DISEASES****Ishtiaq Ahmed\****Department of Surgery, Al-Nafees Medical College, Islamabad, Pakistan*

Free radicals are highly reactive chemicals which are produced in body during metabolism. They are neutralized in the body by antioxidants, preventing damage to cells. In other words, antioxidants can neutralize the process of oxidation and cellular damage which contributes to aging and disease. The body produces some of the antioxidants indigenously to neutralize the free radicals. To cater the need of other antioxidants, the body relies on exogenous sources like diet and they are known as dietary antioxidants. Vegetables, fruits, and grains are rich source of dietary antioxidants whereas some dietary antioxidants are also available as supplements from market (Valko and Leibfritz, 2007; Bouayed and Bohn, 2010). Dietary antioxidants include vitamins (A, C and E), selenium, lycopene, lutein, zeaxanthin and beta-carotene (Davis and Tsuji, 2012).

Studies conducted in laboratory and animals have proven that the increased levels of exogenous antioxidants are helpful in preventing the damage caused by free radicals to body cell especially which are associated with cancer development. In human, different observational studies, including case-control and cohort studies also supported to some extent that the antioxidants are helpful in lowering the risk of cancer development or mortality from cancer in humans (Qiao and Dawsey, 2009; Wright and Virtamo, 2007). To delay the signs of aging and help prevent various disease processes like cancer, cardiac diseases and hypertension, use of foods rich in antioxidants is recommended on a regular basis. Oxidant rich foods such as berries, broccoli, garlic, tomato, red grapes, spinach, carrots, kiwi fruit, grape fruit, bran, corn, sea food, whole grains and green tea should be made a part of daily food (Shulman, 2015).

There is good evidence that taking a diet that includes plenty of vegetables and fruits is healthier and may be used as preventive medicine. People eating more vegetables and fruits have shown lower risks of several diseases; however, it is not clear whether these are related to the amount of antioxidants in vegetables and fruits, other components of these foods, other factors in people's diets or other lifestyle choices (Valko and Leibfritz, 2007)

In our country, majority of these fruits and vegetables are not grown and also not part of the common man's routine diet. It is recommended that public awareness should be increased regarding healthy diet that is rich in antioxidants. Also cultivation of such vegetables and fruits should be encouraged.

**REFERENCES**

- Bouayed J and T Bohn, 2010. Exogenous antioxidants-double-edged swords in cellular redox state: health beneficial effects at physiologic doses versus deleterious effects at high doses. *Oxid. Med. Cell. Long.* 3(4): 228-37.
- Davis CD, PA Tsuji and JA Milner, 2012. Selenoproteins and cancer prevention. *Annu. Rev. Nutr.* 32:73-95.
- Qiao YL, SM Dawsey and F Kamangar F, et al., 2009. Total and cancer mortality after supplementation with vitamins and minerals: follow-up of the Linxian general population nutrition intervention trial. *J. Nat. Cancer Inst.* 101(7): 507-518.
- Shulman J, 2015. The 5 best antioxidant-rich foods. Canadian living. Website: [[http://www.canadianliving.com/health/nutrition/the\\_best\\_5\\_antioxidant\\_foods\\_you\\_should\\_be\\_eating](http://www.canadianliving.com/health/nutrition/the_best_5_antioxidant_foods_you_should_be_eating)].
- Valko M, D Leibfritz and J Moncol et al., 2007. Free radicals and antioxidants in normal physiological functions and human disease. *Int. J. Biochem. Cell Biol.* 39(1): 44-84.
- Wright ME, J Virtamo AM Hartman, et al., 2007. Effects of alpha-tocopherol and beta-carotene supplementation on upper aerodigestive tract cancers in a large, randomized controlled trial. *Cancer.* 109(5): 891-898.

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