



A REVIEW

International Journal of Medical Sciences

Volume 6 | Issue 1 | April, 2013 | 14-22

The Role of Antioxidants in Human Health

■ MONICA RESHI, R.K. KAUL, ANJU BHAT AND PARMEET KAUR

See end of the paper for authors' affiliation

Correspondence to :

MONICA RESHI
Division of Post Harvest
Technology, Faculty of
Agriculture, Sher-e-Kashmir
University of Agricultural
Sciences and Technology
JAMMU (J&K) INDIA
Email: monika.reshi@gmail.
com

ABSTRACT : An antioxidant is a molecule capable of slowing or preventing the oxidation of other molecules or a substance that combines with or otherwise neutralizes a free radical, thus, preventing oxidative damage to cells and tissues. According to FDA, antioxidants are defined as substances used to preserve food by retarding rancidity and discoloration due to oxidation. Oxidation is a chemical reaction that transfer electron from a substance to an oxidizing agents. Oxidation reaction can produce free radicals, which start chain reactions that damage cells. Antioxidants terminate these chain reactions by removing free radicals intermediates and inhibit other oxidation by being oxidised themselves. As a result, antioxidants are often reducing agents such as thiols, ascorbic acid or polyphenes. Although, oxidation reactions are crucial for life, they can also be damaging, hence, plants and animals maintain complex system of multiple types of antioxidants, such as glutathione, vitamin C and vitamin E, as well as enzymes such as catalyses, superoxide dismutase and various peroxidases. Low level of antioxidants or, inhibition of the antioxidants enzymes, causes oxidative stress and may damage or kill cells. An oxidative stress might be an important part of many diseases; the use of antioxidants in pharmacology is intensively studied, particularly as treatment for stroke and neurodegenerative diseases. Antioxidants are also widely used as ingredient in dietary supplements in the hope of maintaining health and preventing diseases such as cancer and coronary heart disease. In addition to these uses of natural antioxidants in medicines, these compounds have many industrial uses such as preservation of food, cosmetics, preventing the degradation of rubber and gasoline.

How to cite this paper : Reshi, Monica, Kaul, R.K., Bhat Anju and Kaur, Parmeet (2013). The Role of Antioxidants in Human Health. *Internat. J. Med. Sci.*, 6(1) : 14-22.

Key Words :

Antioxidants,
Peroxidise,
Enzymes,
Free radicals,
Vitamins

Paper History :

Received : 19.01.2013;
Accepted : 01.04.2013