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A Study on the Biophysical Mechanism of Antioxidant Protecting the Cell Wall SEONG HO YUN, ANDREW S. YOO, ELISE KANG, Choice Research Group — To achieve healthy aging, people should be encouraged to acquire healthy lifestyles that include diets rich in antioxidants as they age. The aim of this review is to highlight the main themes from studies on free radicals, antioxidants and co-factors, and to propose an evidence-based strategy for healthy aging. When our immune system fights against environmental toxins, viruses, and infections; free radicals inducing oxidative stress are produced. By terminating the chain reaction before vital molecules are damaged, antioxidants are involved in the prevention of cancer, diabetes, Alzheimers disease, and a variety of other diseases. The main antioxidants are Vitamin E; however, there are several enzymes within the body that scavenge free radicals. In this paper, the mechanism for the damage of the lipid portion of our cell membranes and cell proteins are presented. This paper also shows how the antioxidant vitamins donate their hydrogens or electrons to radical molecules to neutralize them. Thus, they become compounds that protect body cells from oxidative damage. The major function of radicals, such as thiol and hydroxyl, has been studied.

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