

The Study of Natural Antioxidants in Human Health and Diseases

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Abstract: *This study delves into the multifaceted world of natural antioxidants, exploring their pivotal role in preserving Cellular health by neutralizing harmful free radicals. The investigation emphasizes the definition of Antioxidants as compounds instrumental in combating oxidative stress and elucidates their profound Significance in safeguarding overall well-being. Throughout the research, a comprehensive analysis of the various facets of antioxidants unfolds. It investigates The sources of these compounds, illuminating the rich reservoirs of antioxidants found abundantly in fruits, Vegetables, nuts, seeds, and other natural sources. The exploration further categorizes antioxidants into Vitamins, minerals, and polyphenols, unveiling their diverse forms and functions. The project scrutinizes the implications of antioxidant deficiencies, highlighting the potential health hazards Associated with inadequate levels of these protective compounds. Diseases and conditions linked to such Deficiencies are underscored, emphasizing the criticality of maintaining optimal antioxidant levels for disease Prevention. Additionally, this study sheds light on the broad spectrum of uses and applications of antioxidants. From their Role in preserving skincare products to their utility in food preservation and enhancement, the versatility and Importance of antioxidants in various industries are delineated. The investigation does not shy away from examining the potential adverse effects of excessive antioxidant Intake. It carefully weighs the advantages against the risks, providing a balanced perspective on the Supplementation of antioxidants. Ultimately, this study accentuates the paramount importance of a balanced diet rich in antioxidant-packed Foods for reaping the myriad benefits these compounds offer. It serves as a comprehensive guide, emphasizing The necessity of integrating natural antioxidants into daily dietary habits to fortify cellular health, prevent Disease, and support optimal well-being*

Keywords: Antioxidants, Oxidative Stress, Free Radicals, Disease Prevention

REFERENCES

- [1]. "Molecular Biology of the Cell" by Bruce Alberts, Alexander Johnson, Julian Lewis, et al.
- [2]. "Cellular and Molecular Immunology" by Abul K. Abbas, Andrew H. Lichtman, and Shiv Pillai.
- [3]. "Biochemistry" by Jeremy M. Berg, John L. Tymoczko, and Lubert Stryer.
- [4]. "The Antioxidant Miracle" by Lester Packer and Carol Colman.
- [5]. "Antioxidants in Food, Vitamins and Supplements: Prevention and Treatment of Disease" by Amitava Dasgupta and Kimberly Klein
- [6]. "Antioxidants and Functional Components in Aquatic Foods" edited by Hordur G. Kristinsson and Semih Otles:
- [7]. "Biochemistry of Foods" by N.A. Michael Eskin and Fereidoon Shahidi
- [8]. "Antioxidants in Food, Vitamins and Supplements: Prevention and Treatment of Disease" by Amitava Dasgupta and Kimberly Klein.
- [9]. "The Antioxidant Miracle: Your Complete Plan for Total Health and Healing" by Lester Packer and Carol Colman.
- [10]. "Antioxidants: The Real Truth About Natural Antioxidants" by Helen Saul Case.
- [11]. "Antioxidants Against Cancer" by Ralph Moss.

- [12]. "Feed Your Face: Younger, Smoother Skin and a Beautiful Body in 28 Delicious Days" by Jessica Wu.
- [13]. "Antioxidants: The Ultimate Guide" by Michael R. Evans.
- [14]. "Oxidative Stress and Antioxidant Defenses in Biology" edited by Enrique Cadenas and Lester Packer.
- [15]. "Handbook of Medicinal Plants" by Zohara Yaniv and Uriel Bachrach.
- [16]. "The Truth About Antioxidants" by Dr. Robert Smith.
- [17]. "Antioxidants Against Cancer" by Ralph Moss.
- [18]. "Antioxidants in Disease Mechanisms and Therapy" edited by Istvan Boldogh and Helmut Sies.