

Role of Plant-based Whole Foods in the Prevention of Chronic Diseases

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Summary

Cancer and cardiovascular disease have a large economic impact on industrialized nations. Regular consumption of fruits and vegetables is associated with reduced risks of these and other chronic diseases in many epidemiological studies. The Five-a-Day program was developed as a tool to increase public awareness of the health benefits of fruit and vegetable consumption and promote adequate intake s of known vitamins. It may be more effective and economically feasible to use dietary modifications as a primary prevention strategy to combat chronic diseases, than to rely solely on secondary medical treatments. The actions of the antioxidant nutrients alone do not explain the observed health benefits of diets rich in fruits and vegetables because when taken alone, the individual antioxidants studied in clinical trials do not appear to have consistent preventive effects. Dietary supplements containing large amounts of phytochemicals and antioxidants, beyond the nutritional dose, may even be harmful. Phytochemical extracts from fruits and vegetables have strong antioxidant and antiproliferative activities, likely due to the additive and synergistic effects of phytochemicals in fruits and vegetables. The health benefits of a diet rich in fruits and vegetables are attributed to the complex mixture of phytochemicals present in these whole foods, not any one compound. This explains why no single antioxidant can replace the combination of natural compounds in fruits and vegetables to achieve health benefits. Therefore, we believe that antioxidants are best acquired through whole food consumption, not from expensive dietary supplements.