

HERBACEOUS PLANTS AS NATURAL PROTECTIVE FOOD

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 **SCIENTIFIC**
PUBLISHERS (INDIA)

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Published by:

Scientific Publishers (India)
5 A, New Pali Road, P.O. Box 91
JODHPUR – 342 001 (India)

E-mail: info@scientificpub.com
Website: www.scientificpub.com

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ISBN: 978-81-7233-900-5
eISBN: 978-93-86237-38-5

Typeset by Rajesh Parihar
Printed in India

Preface

A diet that harmonizes with natural cycle enhances one's flow of energy and harmonizes the functional activities of all body organs, however, a diet, which is not in harmony with the movements of nature, drains one's energy and brings diseases. Hence, eating healthy food is fundamental to good health and vitality.

For the centuries, fruits and vegetables have been recognized as a good source of minerals and vitamins to which the body needs to perform a variety of functions suitably and keep healthy as they have the ability to prevent vitamins deficiencies in human body. Vitamin A helps to strengthen immune system, B vitamins help to process energy from food, vitamin C helps to keep body cells and tissues healthy, and vitamin D helps to maintain healthy teeth and bones. The steamed carrots and broccoli maintain a higher proportion of vitamins than boiled or fried vegetables. Fruits and vegetables eaten along with skin also contain high amount of fibre, which helps to maintain a healthy gut and digestive system. The vegetables containing starch, also known as carbohydrates, provide most of the energy. The body converts such vegetables into glucose, which is either used as energy immediately or stored for later use. Vegetables also contain iron, which is needed to make red blood cells to carry oxygen around the body, hence, eat five kinds of vegetable and two kinds of fruit every day for good health. The National Institutes of Health suggests a minimum of five servings per day of fruits and vegetables combined. To increase consumption of fruits and vegetables, people need motivation. Appropriate communication efforts can often provide motivation and sometimes improve a person's ability to increase consumption of fruits and vegetables.

Fruits and vegetables are part of a well-balanced and healthy eating plan. There are many different ways of losing or maintaining a healthy weight. To lose weight, it is not necessary to eat less food though it is necessary to consume low calorie versions of some of favourite dishes by substituting low calorie fruits and vegetables in place of high calorie food ingredients. It is true that fruits and vegetables are low in calorie. Water and fibre in fruits and vegetables add volume to the dishes, so same amount of food with low calorie can be eaten by consuming fruits and vegetables. Since most of the fruits and vegetables are naturally low in fat and calorie, *per se*, eating more fruits and vegetables helps in controlling weight. Consuming more fruits and vegetables along with whole grains, nuts and beans is safe and healthy since they contain antioxidants or phytochemicals, which help in protecting the body against diabetes, heart disease, cancers and other chronic diseases. Research of the past 20 years has shown that eating fruits and vegetables not only prevents malnutrition but also helps in maintaining optimum health through a host of chemical components that are still being identified, tested and measured. It has been noticed that a high intake of fruits and vegetables could lower the blood pressure in individuals with either high or normal blood pressure.

Scientific research suggests that the role of fruits and vegetables in preventing heart disease is a protective one. Risk reduction has been estimated as high as 20-40% among individuals who consume substantial amount of fruits and vegetables. People who are diagnosed with coronary heart disease are able to reduce blockage modestly through exercise and an extremely low fat, vegan-like diet rich in fruits and vegetables. A diet containing substantial and varied amounts of fruits and vegetables may prevent 20% or more of all cases of cancer. The strongest evidence relates to stomach, lung, mouth, pharynx, esophagus, colon and rectum cancer. Studies show that the patients who take dietary supplements in place of fruits and

vegetables die earlier due to a higher mortality rate among the supplement users since dietary supplements do not have the same positive effects as eating real fruits and vegetables.

Delayed development of cataracts is another beneficial effect of fruits and vegetables. A five folds reduction in cataract risk is found in individuals who consume a minimum of one and a half serving of fruits and vegetables each day. Carotenoid-rich fruits and vegetables containing zeaxanthin and lutein have been proved the most beneficial but not all carotenoids offer equal protection. Diets that are high in fibre may be able to help in the management of diabetes and may offer the best protection against diverticulitis. Soluble fibre delays glucose absorption from the small intestine and *per se* may help in preventing spike in blood glucose levels that follow a meal, however, the long-term effect may be insignificant due to many other factors that affect blood glucose. Asthmatics if consume fruits and vegetables more than once a day may have better lung function since higher intake of fruits and vegetables increases ventilation function of the lungs.

The life style diseases, especially cardiovascular diseases, cancer, obesity and type 2 diabetes mellitus, kill more people every year than any other cause of death. The reasons behind these overwhelming diseases are poor diet, physical inactivity, stress and use of tobacco and alcohol. However, fruit and vegetables are an important component of a healthy diet and if consumed daily in sufficient amount, may help in preventing these major diseases. World Health Organization estimated that low fruit and vegetable intake causes about 31% of ischemic heart disease and 11% of stroke worldwide. Overall, it is estimated that up to 2.7 million lives may potentially be saved every year if fruits and vegetables consumption is sufficiently increased. Recommendations in this direction tend to complement and reinforce other valid messages based on the long-known health benefits of consuming vegetables and fruits as dietary sources of fibre, vegetable proteins and protective micronutrients. The FAO/WHO nutrition experts recommended the intake of a minimum of 300 g of vegetables (excluding potatoes and other starchy tubers) and 100 g of fruits per day for the prevention of chronic diseases, such as heart disease, cancer, diabetes and obesity as well as for the prevention and alleviation of several micronutrients deficiencies, especially in less developed countries.

Considering the importance of fruits and vegetables in human diet in view, the author felt obligatory to prepare a book, which may sequentially help the teachers, scientists, graduate and postgraduate students, and of course, the common man to earn adequate knowledge about nutritional and therapeutic significance of fruits and vegetables in maintaining good health. The objective of preparing this book is to make the populace aware about health benefits of fruits and vegetables. This book containing very concise and precise information has been written in a very simple language, which can be explicable even to undergraduate students and common man. The information given in this book are truly based on scientific records of scientists working on particular aspects. In addition, this book may be user-friendly to others who have the concern to expand knowledge concerning human health through fruits and vegetable. Earning scientific knowledge will undoubtedly be rewarding to its users and finally to the nation.

Place: Hisar

–Author

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