

Growing Significance of High Fiber Diet in the Prevention of Some Chronic Diseases

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Abstract

The unhealthy lifestyle can result in the development of chronic diseases, and the bad lifestyle affects the gastrointestinal tract, cardiovascular system or other organ systems. Chronic diseases have been encountered throughout the world. The healthy eating (70%), and exercise (30%) are the part of a proper lifestyle. The daily intake fiber is recommended as part of a healthy diet. Consuming a varied *high-fiber diet* means that one is getting ample of vegetables, *fruits*, legumes, and whole grains. Fibers are indigestible plant polysaccharides that can be water-soluble or water-insoluble. The oats and barley are good sources of water-soluble fiber whereas whole-meal grains and whole-meal breads are significant sources of water-insoluble fiber. Cereals, fruits, and vegetables are important sources of fibers. A high fiber diet contains about 40 grams of fiber and it can reduce the development of chronic diseases, such as tumors, intestinal complaints, metabolic disorders (high cholesterol level, diabetes, and obesity), and cardiovascular problems. In addition, fiber supplementation can be used as part of nutrition therapy. The manuscript focuses on the characteristics of a high fiber diet. It is hoped that our manuscript will contribute to the expansion of knowledge in the scientific society, and also provide advice to protect their health.

Keywords: Chronic diseases; disease prevention; fiber intake; fruits; healthy lifestyle; high fiber diet; vegetables

Introduction

Improper lifestyle is one of the primary causes of the development of chronic diseases that are reported in both sexes, all age groups, rural and urban settings, and in developing as well as developed nations [1, 2, 3, 4]. The diet can reduce the development of chronic diseases, such as constipation, inflammatory bowel disease, obesity, type 2 diabetes, high blood pressure, increased cholesterol level, tumors, and so on by 70% [5,6,7,8,9]. Nutrition science has opened up the possibility of analyzing many active ingredients to this day. The dietary fiber is the indigestible plant polysaccharides in food of which there are two types, one water-soluble and another water-insoluble fiber [10]. For a high fiber diet consumption of about 40 grams of fiber is recommended. The water-soluble and water-insoluble fibers also help digestive processes and bowel movements. They have a beneficial effect on the carbohydrate and fat metabolism. The high fiber diet is recommended according to quantitative and qualitative rules defined by nutritionists. As part of our series of health promoting manuscripts, high fiber diet is the main focus. We hope to be able to explore useful knowledge for the scientific community as well.

Practical advice for a high fiber diet

The fibers main dietary sources include cereals, vegetables, and fruits [11,12,13,14, 15,16,17]. The barley and oats are mostly a source of water-soluble fiber. Whole-meal grains and whole-meal breads are rich sources of water-insoluble fiber. As part of the daily diet, it is recommended to consume them on all five meals, taking into account the specified amounts. Whole-meal flours may also contain about 10–15% fiber, while wheat bran may contain 40–50% [18]. It is important to mention that fruits are excellent sources of water-soluble fibers. Most of them contain 5-10% fiber. Several fruits like apples, strawberries, bananas, oranges, pears, avocados, and raspberries are excellent source of fibers. Oil seeds and nuts also play a significant role in fiber replacement. The consumption of fruits is also recommended five times a day [19]. Most vegetables, like fruits, also contain 5-10% fiber. Dry legumes contain a higher percentage (20-25%) of fiber. The vegetables including carrot, broccoli, corn, onions, beets, artichokes, peas, and green beans are good sources of water-soluble fiber. Among legumes, beans, lentils, and chickpeas are of outstanding importance for fiber consumption. Their consumption is also

recommended with each meal daily [20]. It is pertinent to mention that meats, fish, eggs, milk, cheese, ice cream, yoghurt, oils, fats and sweets are less important for fiber based nutrition. Therefore, these foods are not detailed in the present study. However, they are also part of a healthy diet.

More helpful tips for making quality high fiber dishes

It is pertinent to mention that sanitation in food establishments and personal hygiene in food plant play a pivotal role in the production of wholesome and safe food for the consumer [21,22]. Therefore, it is advised that all dishes making enterprises must strictly follow the rules of food hygiene during the preparation of food so that the consumers do not get any food borne infections, such as *Campylobacter jejuni*, *Listeria monocytogenes*, *Staphylococcus aureus*, *Aeromonas hydrophila*, *Vibrio parahaemolyticus*, *Escherichia coli* 0157: H7, *Cronobacter sakazakii*, *Yersinia enterocolitica*, *Salmonella* and others [21,23,24].

Conclusion

The daily consumption of high fiber diet is helpful to maintain good health. Water-soluble and water-insoluble fibers also play an important role in regulating carbohydrate and fat metabolism, and also maintaining the intestinal function. Fibers play a vital role to reduce the development of chronic diseases. The recommended daily fiber intake is 40 g, which is sourced from the cereals, fruits, and vegetables. In our manuscript, we present the high-fiber diet and the foods included in the diet. In addition, we provide quality preservation tips for these foods. We hope that through our study focusing on fiber rich nutrition, we can certainly help the scientific community to maintain their health and well-being. In addition, excellent enjoyable and safe food can be consumed by the people for maintaining good health.

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Contribution of authors

Both the authors contributed equally. They read the final version, and approved it for publication.

Conflict of interest

The authors declare that they do not have conflict of interest.

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