

Growing Importance of Fruits and Vegetables in Human Health

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Abstract

Humans are blessed with a wide variety of fruits and vegetables by the nature. Fruits and vegetables are significant sources of several vitamins and minerals that play vital role for the maintenance of good health. The manuscript provides a useful overview of the beneficial effects of fruits and vegetables, and their vitamins content that support the immune system. It discusses fat and water-soluble vitamins in fruits and vegetables with outstanding care and their role in maintaining the body's balance, preventing disease such as malnutrition and in adjunctive therapy. Among the fruits and vegetables that can be considered as functional foods because of their useful physiological effect, the most important content evaluation of the grapes, apples, bananas, carrots, beetroots, onions, and lemons is the main goal of the manuscript. These fruits and vegetables were selected for their useful components and their role in international gastronomy, among others. We hope to contribute to both the knowledge of readers and the protection of their health.

Keywords

Vegetables, Fruits, Vitamins, Healthy Diet, Functional Foods, Healthy Life

1. Introduction

Fruits and vegetables possess many important nutrients that are required for keeping good health. Immune system support and vitamin supplementation (A, B, E, C, D vitamins) also play a prominent role during the COVID-19 pandemic [1]. The water- and fat-soluble vitamins contribute to the balanced functioning of the body. Among the water-soluble vitamins, vitamin C and vitamin B have a prominent role [2, 3]. Among the fat-soluble vitamins, vitamins A, D, E, and K are also important in preventing the infections and helping the body's defence mechanisms [4]. The consumption of vitamins requires careful attention. Their intake is mostly recommended in the form of food consumption. This also makes them easier to absorb in the body. Due to their useful properties, in addition to supporting the immune system, they also stimulate the functioning of organ systems and organs, thus contributing to the achievement of normal equilibrium. The most common source of vitamins is fruits and vegetables, which contain many other useful ingredients in addition to vitamins, minerals, water, and fibre. The fruits and vegetables are part of everyday nutrition and can be considered as functional food because of their useful biological active components. They have a beneficial effect on, among others, the body's hydration, the prevention and treatment of gastrointestinal, cardiovascular, nervous and metabolic diseases and increase the body energy balance as well [5]. The present manuscript focuses on the presentation of grapes, apples, bananas, carrots, beets, onions, and lemons among the fruits and vegetables and their useful vitamin contents also used in international gastronomy. We considered it important to describe the content features and the most important physiological effects. We hope to contribute to the health of the readers and to the knowledge of fruits and vegetables in a healthy diet and healthy life.

2. Evaluation of the vitamins and minerals and other useful components of some fruits and vegetables

Grapes: Grapes are available in many countries of the world; and are richest in vitamins A, B, C and K. In addition, its potassium, iron, folic acid and selenium contents are outstanding. Grapes play a role in maintaining mental and physical balance. Furthermore, due to its flavonoid content, it has an antioxidant effects. The grapes fluid and fibre contents are also remarkable. Grape seed is also an ingredient used to prevent cardiovascular disease [6].

Apples: Apples are available in many regions of the world, and contain several vitamins including A, C and B. In addition, it has a useful source of various minerals like potassium, selenium, zinc, calcium, and iodine. The fibre content of apple has a beneficial effect on intestinal complaints. Flavonoid content, like grapes, protects the immune system, prevents cancer and reduces the inflammation [7].

Bananas: Bananas are one of the most widely consumed nutritious snack food [8]. It is rich in several vitamins, such as A, B and C, as well as significant source of many minerals like calcium, potassium, iron, magnesium, copper, manganese, and phosphorus [8]. Like most fruits, its flavonoid content is health-protective and disease preventing. The carbohydrate content of bananas, which it contains mostly in the form of starch, helps the body replenish energy [9]. Banana contains antioxidants that help to boost immunity [8]. Several health benefits are associated with the consumption of banana in our daily diet [8, 10].

Carrots: Carrots are very popular vegetable as eaten worldwide; and it contain the most vitamins (vitamin B group, vitamins C, E, K, A). It also has outstanding β -carotene content. The consumption of carrots, therefore, has a good effect on the immune system and on the health of the eyes and skin as well [11].

Beetroots: Beetroots are also a well-known vegetable in international gastronomy. Due to its vitamin content (vitamins A, B, C), it has many useful physiological roles. In addition, it is rich in potassium, stimulates the nervous system, improves blood circulation and it is also useful in anaemia. Thanks to the flavonoids in beetroots, it also has an excellent effect on the functioning of the immune system [12].

Onions: Onions are known worldwide and contain many vitamins and minerals, outstanding in vitamin B, C and E. It also contains many minerals (calcium, phosphorus, potassium, sodium, iron, magnesium). Onions are also rich in flavonoids and can be eaten as a vegetable, spice and herb as well [13].

Lemons: Lemon is a versatile fruits with many health benefits and is widely consumed by people throughout the world [14]. It is flooded with many vitamins, such as riboflavin, ascorbic acid, thiamine, panthothenic acid, choline, and niacin and also rich in several minerals like magnesium, calcium, iron, phosphorus, copper, zinc, manganese, and potassium [14]. It is a wonderful source of vitamin C that plays an important role in immunity and helps to neutralize free radicals and thus minimize the risk of cardiovascular disease [14]. Detailed information on the nutritional and health benefits of lemon is mentioned in an article authored by Pal [14].

3. Conclusion

During the COVID-19 pandemic, it became increasingly important to protect the immune system to prevent disease. Fruits and vegetables are consumed as part of a healthy diet offer an excellent opportunity to supplement vitamins while stimulating the immune system. They also prevent many diseases, have a good effect on digestion, well-being and increase the body's energy levels. Vitamins found in fruits and vegetables, which can also be fat- and water-soluble vitamins, play an important role in maintaining the body's balance and fighting disease. The manuscript focuses on the contents of grapes, apples, bananas, carrots, beetroots onions, and lemons. We discussed their vitamins and minerals contents and their effect on the body as well.

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Contribution of authors

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

Conflict of interest

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

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