

Phytonutrients: Natural compounds found in plants that have numerous health benefits.

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Introduction

Phytonutrients are natural compounds found in plants that have numerous health benefits. These compounds are not essential nutrients, but they play an important role in maintaining optimal health. Phytonutrients are responsible for the color, aroma, and taste of plants. They are also responsible for protecting plants from various environmental stressors like UV radiation, pests, and diseases. These natural compounds are classified into different categories based on their chemical structure, and each category has its unique health benefits. In this article, we will discuss the importance of phytonutrients and their benefits [1].

Plants are an essential part of our diet, providing us with nutrients like vitamins, minerals, and fiber. However, there is much more to plants than just the nutrients they provide. Phytonutrients, or plant-based nutrients, are natural compounds found in plants that are responsible for their color, aroma, and taste. These compounds have been found to have numerous health benefits, from preventing chronic diseases to improving overall health and wellbeing. In recent years, research into phytonutrients has exploded, and there is growing evidence to suggest that these compounds play a crucial role in our health. In this article, we will explore the importance of phytonutrients, their benefits, and how to incorporate them into our diet [2].

Importance of Phytonutrients on human health

Phytonutrients are essential for maintaining good health. These natural compounds have antioxidant and anti-inflammatory properties that protect our body from various chronic diseases like cancer, heart diseases, diabetes, and obesity. The antioxidant property of phytonutrients helps in neutralizing the harmful free radicals that damage our cells and DNA. Phytonutrients also have anti-inflammatory properties that reduce the inflammation in our body, which is a root cause of various chronic diseases [3].

Cancer Prevention

Phytonutrients like carotenoids, flavonoids, and polyphenols have anticancer properties that prevent the growth of cancer cells in our body. These natural compounds also protect our body from the harmful effects of carcinogens. Phytonutrients are natural compounds found in plants that have numerous health benefits, including cancer prevention. Cancer is a

complex disease that is caused by a variety of factors, including genetics, lifestyle choices, and environmental factors. While there is no surefire way to prevent cancer, research has shown that consuming a diet rich in phytonutrients can reduce the risk of developing the disease. Here are some of the ways that phytonutrients can help prevent cancer: Phytonutrients are powerful antioxidants that can protect our cells from damage caused by free radicals. Free radicals are unstable molecules that can damage our DNA and increase the risk of cancer. Chronic inflammation is a risk factor for many types of cancer, and phytonutrients have been shown to have anti-inflammatory properties that can reduce inflammation in the body. Modulation of cancer cell growth: Some phytonutrients have been shown to inhibit the growth of cancer cells and induce apoptosis (programmed cell death) in cancer cells. Phytonutrients can help repair damaged DNA, which is a critical factor in cancer prevention. Some phytonutrients can regulate hormone levels, which can reduce the risk of hormone-related cancers like breast and prostate cancer [4].

Some examples of phytonutrients that have been shown to have anti-cancer properties include:

Carotenoids in foods like carrots, sweet potatoes, and leafy greens, carotenoids are powerful antioxidants that can protect against a range of cancers, including lung, prostate, and breast cancer. Flavonoids in foods like berries, citrus fruits, and tea, flavonoids have anti-inflammatory and antioxidant properties that can reduce the risk of cancer. Polyphenols in foods like nuts, berries, and dark chocolate, polyphenols have been shown to have anti-inflammatory and antioxidant properties that can protect against cancer.

Overall, consuming a diet rich in fruits, vegetables, whole grains, and other plant-based foods is one of the best ways to get a variety of phytonutrients and reduce the risk of cancer. While there is no guarantee that a phytonutrient-rich diet will prevent cancer, it is a critical component of a healthy lifestyle and can help reduce the risk of many chronic diseases.

Phytonutrients like flavonoids, resveratrol, and quercetin are known to improve heart health by reducing the risk of heart diseases. These natural compounds have antioxidant properties that prevent the oxidation of LDL cholesterol, which is a major risk factor for heart diseases. Phytonutrients like fiber, flavonoids, and polyphenols improve digestive health by promoting the growth of beneficial gut bacteria. These

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natural compounds also reduce the risk of digestive disorders like constipation, bloating, and diarrhea. Phytonutrients like carotenoids, flavonoids, and polyphenols protect our skin from the harmful effects of UV radiation. These natural compounds also reduce the risk of skin aging and skin diseases like acne, eczema, and psoriasis [5].

Conclusion

Phytonutrients are natural compounds found in plants that have numerous health benefits. These compounds are not essential nutrients, but they play an important role in maintaining optimal health. Phytonutrients are responsible for the color, aroma, and taste of plants. They are also responsible for protecting plants from various environmental stressors like UV radiation, pests, and diseases. Phytonutrients have antioxidant and anti-inflammatory properties that protect our body from various chronic diseases like cancer, heart diseases, diabetes, and obesity. Therefore, it is essential to include a variety of plant-based foods in our diet to ensure that we get enough phytonutrients for good health.

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