

## Health Research Advantages of Polyphenols and Bioactive Peptides

Katrina Nueva\*

Department of Pharmacy, University of Jimma, Ethiopia, Oromia Region, Ethiopia

## ABOUT THE STUDY

Healthcare benefits of polyphenols and bioactive peptides are a subject of growing interest in the field of nutrition and health research. These compounds, found in a variety of foods and beverages, have been associated with several potential health advantages. Polyphenols are well-known for their potent antioxidant properties. They help neutralize harmful free radicals in the body, reducing oxidative stress and the risk of chronic diseases like cancer, cardiovascular diseases, and neurodegenerative disorders.

Consumption of polyphenol-rich foods such as red wine, tea, and dark chocolate has been linked to improved cardiovascular health. Polyphenols may lower blood pressure, improve endothelial function, and reduce the risk of heart disease. Polyphenols possess anti-inflammatory properties that may help reduce inflammation-related diseases, including arthritis and inflammatory bowel diseases. Some research suggests that polyphenols can support brain health by enhancing cognitive function and reducing the risk of cognitive decline and neurodegenerative diseases like Alzheimer's. Polyphenols, particularly those in green tea and berries, have been associated with weight management and improved metabolic health. They may help regulate appetite, boost metabolism, and support weight loss efforts. Certain polyphenols, such as those found in green tea and grapes, may protect the skin from UV radiation and oxidative damage, potentially reducing the risk of skin cancer and premature aging.

Bioactive peptides derived from sources like milk, fish, and soy have been shown to have antihypertensive properties. They can help lower blood pressure by inhibiting enzymes responsible for blood vessel constriction. Some bioactive peptides have immunomodulatory effects, enhancing the immune system's response to infections and promoting overall immune health. Bioactive peptides derived from milk proteins can have positive effects on the gut, including promoting the growth of beneficial gut bacteria and potentially alleviating digestive issues like irritable bowel syndrome. Certain bioactive peptides may aid in muscle recovery and reduce muscle soreness after exercise. This can be beneficial for athletes and individuals engaged in regular physical activity.

Like polyphenols, some bioactive peptides also possess antioxidant properties, helping to combat oxidative stress and reduce the risk of chronic diseases. Bioactive peptides derived from collagen and other sources may support bone health by promoting bone formation and preventing bone loss.

Certain bioactive peptides also possess antioxidant capabilities, contributing to the protection of cells and tissues from oxidative damage. Consumption of polyphenol-rich foods, like red wine and dark chocolate, has been linked to improved heart health. Polyphenols can help lower blood pressure, reduce LDL cholesterol levels, and improve endothelial function, ultimately reducing the risk of heart diseases. Some bioactive peptides derived from fish, milk, or plant sources have been shown to have antihypertensive properties, promoting healthy blood pressure levels. Polyphenols possess anti-inflammatory properties that can help mitigate chronic inflammation, which is a key factor in the development of various diseases. They can alleviate symptoms of conditions like arthritis and inflammatory bowel disease. Bioactive peptides derived from proteins can induce feelings of fullness, potentially helping with appetite control and weight management. Certain polyphenols, such as flavonoids found in berries, have shown potential in improving cognitive function and reducing the risk of age-related cognitive decline. Some bioactive peptides may have neuroprotective properties, potentially contributing to brain health. Polyphenols like resveratrol in red wine and Epigallocatechin Gallate (EGCG) in green tea are known for their potential to enhance skin health by protecting against UV damage and promoting collagen production. Collagen peptides, a type of bioactive peptide, are used in skincare products to improve skin elasticity and hydration.

## CONCLUSION

In conclusion, both polyphenols and bioactive peptides offer a wide range of healthcare benefits. Their antioxidant, antiinflammatory, and other bioactive properties make them valuable components of a balanced and health-promoting diet. Incorporating a variety of polyphenol-rich foods and bioactive peptide sources into one's diet can potentially contribute to improved overall health and reduced risk of various chronic

Correspondence to: Katrina Nueva, Department of Pharmacy, University of Jimma, Ethiopia, Oromia Region, Ethiopia, E-mail: nueva126@gmail.com

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diseases. However, it's essential to consult with healthcare professionals or registered dietitians for personalized dietary

recommendations and to ensure that any supplements or specific foods fit into an individual's overall healthcare plan.