Title: Synergistic effects of carotenoids: Therapeutic benefits on human health.

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Abstract: Carotenoids are naturally occurring compounds that are abundant and possess synergistic properties, contributing to their potential health benefits. This review provides an analysis of synergistic relationships among carotenoid compounds. The concept of synergy is of utmost importance due to the ongoing emphasis on consumer safety issues related to botanical natural products. To date, there is a lack of scientific reports specifically investigating the experimental evidence of synergistic effects associated with carotenoids. The carotenoid compounds purported to exhibit synergistic actions have demonstrated significant efficacy in combating oxidation, neurological diseases, peptic ulcers, tumors, and various other ailments. Furthermore, there have been reports of cancer prevention through apoptosis and the presence of antimicrobial, anti-inflammatory, and estrogenic properties. In addition to the observed combined benefits of carotenoids, this review elucidates the various health advantages associated with carotenoids. Among carotenoids, a substantial amount of data has been reported concerning lycopene. This review also examined the clinical status of the concurrent utilization of carotenoids with other bioactive molecules. As mentioned above, the findings offer valuable insights into the potential advantages of carotenoid compounds when combined, thereby presenting a promising avenue for further investigation in future research activities..

Keyword: Carotenoids, Synergism, Pigments Lycopene, Anti-Cancer, Antioxidant.

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