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# Phytoene

National Cancer Institute

## Source

National Cancer Institute. *Phytoene*. NCI Thesaurus. Code C126901.

A 40 carbon dietary fatty acid produced by the conversion of two molecules of geranylgeranyl pyrophosphate by the enzyme phytoene synthase that is an intermediate in carotenoid biosynthesis in plants with potential to absorb ultraviolet radiation (UV), and potential antioxidant, chemopreventive, and anti-inflammatory activities in skin. Following ingestion and digestion, phytoene may accumulate in the epidermis where it may prevent UV-mediated sun damage and carcinogenesis. In addition, phytofluene may prevent carcinogenesis by protecting cells against DNA damage through its free radical scavenger effects.