

The potential role of lycopene for human health.

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Lycopene is one of the major carotenoids in Western diets and is found almost exclusively in tomatoes and tomato products. It accounts for about 50% of carotenoids in human serum. Among the common dietary carotenoids lycopene has the highest singlet oxygen quenching capacity in vitro. Other outstanding features are its high concentration in testes, adrenal gland and prostate. In contrast to other carotenoids its serum values are not regularly reduced by smoking or alcohol consumption but by increasing age. Remarkable inverse relationships between lycopene intake or serum values and risk have been observed in particular for cancers of the prostate, pancreas and to a certain extent of the stomach. In some of the studies lycopene was the only carotenoid associated with risk reduction. Its role in cancer risk reduction still needs to be clarified. Patients with HIV infection, inflammatory diseases and hyperlipidemia with and without lipid lowering treatment may have depleted lycopene serum concentrations. Before embarking on large-scale human trials the distribution of lycopene and its biological functions need to be further evaluated.

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Il licopene è uno dei principali carotenoidi ed è contenuto quasi esclusivamente nei pomodori. Rappresenta circa il 50% di tutti i carotenoidi plasmatici.

Tra tutti i carotenoidi il licopene ha la più elevata capacità antiossidante.

Altra proprietà eccezionale è la sua elevata presenza nei testicoli, nelle ghiandole surrenali e nella prostata.

E' stata osservata una marcata relazione inversa tra il livello di licopene e il rischio di cancro, in particolare per prostata, pancreas e stomaco. In alcuni studi il licopene è risultato l'unico carotenoide associato ad una riduzione del rischio.

Pazienti con infezione da HIV, malattie infiammatorie e iperlipidemia potrebbero avere un impoverimento della concentrazione serica di licopene.