

POLYPHENOLS AND CANCER

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Polyphenols have widespread occurrence in nature and are consumed by humans through diet containing vegetables, fruits and beverages. Epidemiological studies have shown that flavonoids and isoflavonoids, two classes of polyphenols can prevent cancer. Polyphenols possess remarkable antioxidant property by virtue of which they can protect the body's tissues against oxidative stress and exhibit antimutagenic and antigenotoxic actions. Several polyphenols induce cell cycle arrest followed by apoptosis in various human tumor cells. They also induce detoxifying enzymes, inhibit tumor promotion and modulate cellular signaling. These mechanisms are responsible for cancer prevention by polyphenols.

Key Words : Polyphenols, flavonoids, catechins, chemoprevention, antioxidant, antimutagenic, antigenotoxic, apoptosis.