

Apple pectin, apple juice extracts shown to have anticarcinogenic effects on colon

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The apples and apple juice you consume may have positive effects in one of the most unlikely places in the body – in the colon. New research has demonstrated that both apple pectin and polyphenol-rich apple juice components actually enhance biological mechanisms that produce anticarcinogenic compounds during the fermentation process.

Using human fecal matter as the test substance, German researchers Dr. Dieter Schrenk, M.D. and his colleagues hypothesized that the compound butyrate could be increased in the presence of apple pectin and apple juice extracts.

Butyrate has been suggested to be a chemopreventative metabolite that might prevent the occurrence of colorectal cancer, which is very common in Western industrialized countries. It is a short chain fatty acid which is seen as a major factor contributing to healthy colon mucosa. The research notes, “Butyrate not only serves as a major nutrient for the colon epithelia but is also thought to play an important role in the protective effect of natural fiber against colorectal cancer.”

So how do apple pectin and apple juice extracts play a role in increasing amounts of butyrate" The laboratory tests performed by Shrenk found that by the increased production of butyrate via the addition of apple components, histone deacetylases (HDAC) were inhibited. With slowed production of HDAC, there would be significantly less growth of precancerous and tumor cells.

The research, published in the April 2008 issue of *Nutrition*, notes, “apples are a major source of natural fiber and of low molecular weight plant polyphenols in the Western diet.” The researchers conclude, “Pectin-rich apple products can thus be expected to exert anticarcinogenic effects in the colon.”

Source: U.S. Apple Association

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