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REPORT

Should Cancer Patients Take Guarana?

Over the years there has been much debate over the use of caffeine in general. Since guarana is an herb that contains a form of caffeine called guaranine, one would have to postulate the questions, Does guarana pose a health risk? Is it safe for cancer patients to include it in their nutritional regimen? In 1987 the U.S. Food and Drug Administration found no evidence that normal caffeine intake produced any increased risk to health. The American Medical Association came to a similar conclusion in relation to the health and safety of ingesting caffeine. A published study in the Annals of Epidemiology (Michels, et al 2002) found no relationship between coffee intake and cancer risk, confirming the stance of the American Cancer Society that there does not seem to be any relationship between caffeine and occurrence of cancer.

Surprisingly, there are many published studies supporting the use of caffeine in the treatment of cancer. The Journal of Nutrition And Cancer (Lou, et al 1999) published a study in which SKH-1 mice, who were at high risk of developing malignant and nonmalignant tumors, received oral ad`ministration of caffeine alone as their sole source of drinking fluid for 18 to 23 weeks. The study revealed that not only did the caffeine inhibit the formation and decrease the size of nonmalignant tumors but malignant tumors as well.

In cancer cells, p53 gene mutations are the most common alterations observed (50% to 60%) and a factor in carcinomas and sarcomas. Caffeine has been shown to potentate the killing of p53 defective cells by inhibiting the growth signal (G2) and thus kill dividing cancer cells. Caffeine serves as a model compound in establishing the principle agents that override DNA-damage checkpoints that can be used to sensitize cells to the killing effects of genotoxic drugs. This effect has been demonstrated by several independdent research studies and reported in the International Journal of Oncology (Jiang, et al 2000); Radiotherapy And Oncology (Valenzuela, et al 2000); Current Biology (Blasina, et al 1999); International Journal of Radiation Biology (Sakurai, et al 1999).

Further, caffeine has been shown to enhance the cytotoxicity of chemotherapy drugs, cisplatin and camptothecin, in human brain tumor cell lines according to Experimental Cell Research (Janss, et al 1998). Anticancer Research (Tsuchiya, et al 2000) reported that caffeine-assisted chemotherapy has been shown to minimize tumor excision for nonmetastatic osteosarcoma by enhancing tumor necrosis. Interestingly, caffeine potentiated radiochemotherapy sensitizing cells to the killing effects of genotoxic drugs with a mutant-type p53 gene. This was not the case after irradiation in combination with caffeine in cells with a mutant-type p53 through a p53-independent pathway, acording to a study published in the Cancer Letters (Higuchi et al 2000). Further, Radiation Research: A Twentieth Centure Perspective (Qi et al 2002) reports that caffeine not only induced p53-independent arrest and enhanced radiation-induced apoptosis (cell death), but caffeine in a dose dependent manner induced apoptosis independent of any other factors.

Numerous studies have demonstrated caffeine's potential to provide cancer-preventive protection by inhibiting the formation and decreasing the size of both malignant and nonmalignant tumors. Further, caffeine has also been shown in studies to enhance the cytotoxicity of chemotherapy and radiochemotherapy drugs by sensitizing cells to the killing effects of these genotoxic durgs. However, the most compelling finding was caffeine's ability to induce apoptosis independent of any other factor. While the debate over the use of caffeine continues, clearly, these findings are significant and would suggest a closer examination of the fole of caffeine in the prevention and treatment of cancer.

CLA is a popular dietary supplement used by cancer patients. Based on evidence indicating caffeine's potential anticancer benefit, cancer patients may consider using a new CLA supplement that is fortified with guarana.

Find out more about Super CLA with Guarana

Caution: While caffeine may prove beneficial as a potential adjuvant cancer therapy, some sensitive individuals might not be able to tolerate caffeine's stimulating effects on the central nervous system. Caffeine may produce a variety of symptoms including restlessness, nausea, headache, tense muscles, sleep disturbances and tachycardia. Therefore, caution should be used when including caffeine in any nutritional program.

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