: GREEN TEA

Green tea is made from fresh leaves of the plant

green tea extract for 3 weeks followed by 3 weeks washout, while there was a statistically significant reduction in the levels of oxidative stress and an increase in the antioxidant reserve in the subgroup when 3 weeks of no treatment were followed by 3 weeks of green tea extract supplementation (10).

In another RCT, investigators explored the effect of green tea consumption (960mL decaffeinated green tea daily for 6 months) on select metabolic parameters and lipid profiles in overweight breast cancer survivors (11). Green tea intake was associated with elevated high-density lipoprotein (HDL) levels, resulting in positive shifts in the HDL/LDL ratio, in addition to a decrease in mean fasting insulin concentrations.

Several observational studies, in addition to a meta-analysis of data from observational studies, have been conducted to explore the relationship between green tea consumption and prostate cancer risk. Further intervention studies, including randomized controlled trials, have explored the effects of green tea consumption on biomarkers of prostate cancer carcinogenesis.

The meta-analysis included data from a total of 7 cohort and case-control studies (12). Accounting for heterogeneity across studies, the meta-analysis indicates a statistically significant decreased risk of prostate cancer incidence for the highest consumers of green tea compared to those with low or no green tea consumption (OR = 0.52; 95% CI: 0.35, 0.79). A dose response analysis conducted as part of the meta-analysis suggests an inverse but not statistically significant association for 2 cups/day increment of green tea consumption against prostate cancer risk (OR = 0.83; 95% CI: 0.64, 1.06). For Asian populations, high green tea consumption had a borderline significant decrease of 38% in prostate cancer risk.

Intervention research has focused on the effects of green tea consumption on cancer diagnoses, as well as biological markers of cancer development and progression. In one randomized, placebo controlthe 14(o)-5nasudnsu4

toxicities observed at this dose. No treatment effect was observed, however, and there was consistent development of progressive disease regardless of dosing level. Despite a very small sample size per dose, the authors concluded that green tea is unlikely to be an effective cytotoxic agent against existing tumors (23).

In a large cohort study, 50,221 people were followed for approximately 10 years to assess the relationship between green tea consumption and oral cancer incidence (24). The calculated hazard ratios suggest no association between green tea consumption and oral cancer incidence. A tendency towards a reduced risk was

One large case-control study suggests that drinking 5 or more cups of green tea per day is positively associated with an increased risk of developing pancreatic cancer (37). A separate Japanese cohort study explored the relationship between green tea consumption and the risk of death from pancreatic cancer (38). From this study, no inverse association was observed between cups of green tea consumed per day and the risk of death from pancreatic cancer in men and women combined. The adjusted RR of mortality was 1.23 (95% CI 0.84-1.80) for people who consumed 7 or more cups of green tea per day as compared with those who consumed less than 1 cup per day.

One meta-analysis explored the relationship between green tea consumption and colorectal cancer risk (39). Overall, data from 4 cohort and 4 case-control studies support a moderate reduction in risk with high green tea intake (OR = 0.86; 95% CI = 0.73–1.00); however, this inverse association was significant only in case–control studies (OR = 0.74; 95% CI = 0.63–0.86), but not cohort studies (OR = 0.97; 95% CI = 0.82–1.16). The overall results in women show a non-significant 50% reduction in colorectal cancer risk with high intake of green tea (OR = 0.52; 95% CI = 0.25–1.05), but no such effect was observed in men (OR = 0.89; 95% CI = 0.73–1.08).

In a randomized controlled trial, 136 people newly diagnosed with colorectal polyps underwent surgery to remove their adenomas and 1 year later confirmed a clean colon (40). People were then randomized to 1.5g/day green tea extract or no supplementation for 1 year. After 1 year, at least one colorectal adenoma was diagnosed in 31% of the patients in the control group but in only 15% of those who took the green tea extract (RR= 0.49; 95% CI: 0.24-0.99). The size of the

Other interactions associated with green tea are predominantly related to the caffeine content. Caution is therefore advised when taking other caffeinated agents concurrently with caffeinated green tea, for example coffee, colas, guarana, cola nut, and yerba mate. Concurrent use may increase the risk of stimulatory adverse effects. Other interactions are possible, for example with ACE inhibitors, antiypertensives and cardiovascular drugs, so caution is warranted when taking green tea in concentrated forms. Consultation with a naturopathic doctor and/or a pharmacologist with training in natural health products is recommended.

Cautions and Contraindications

Contraindications: Green tea should not be taken in any form by people with atrial fibrillation, or with a known allergy or hypersensitivity to tea (Camellia sinensis), its constituents, caffeine, tannins, or

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26.

Monograph Development Methodology

SEARCHING

Databases: Based on a systematic review of green tea for the treatment and prevention of lung cancer (Fritz et al., 2012), the search was limited to PubMed and EMBASE. For that systematic review, other databases were initially searched (e.g., CINAHL, Alt HealthWatch, Cochrane, and the National Library of Science and Technology) but relatively few studies of interest were identified.

Search terms: The following strategy was executed in PubMed and altered for EMBASE.

PubMed:
("Camellia sinensis"[Mesh] OR "green tea extract AR25" [Supplementary Concept] OR "epigallocatechin gallate" [Supplementary Concept) OR "Catechin"[Mesh] OR "peracetylated epigallocatechin-3-gallate" [Supplementary Concept] OR "epigallocatechin-3-O-(3''-O-methyl)-gallate" [Supplementary Concept] OR "theasinensin A" [Supplementary Concept] OR "polyphenon E" [Supplementary Concept])

(Green tea, camellia sinensis, egcg) TitI

Studies that examined synthetic catechins derivatives or black tea were excluded.

DATA EXTRACTION

Data were extracted using a standardized and piloted form that includes fields within each monograph section. Data were extracted independently by one reviewer.

DATA ANALYSIS

Data analysis differed by monograph section, but was primarily be descriptive.

A quality assessment of all included articles was not conducted.