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File • Garlic *(Allium sativum)*
• Cancer
• Chemoprevention

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RE: **Raw and Cooked Garlic Lowers Colon and Stomach Cancer Risk — Meta–analysis**

Fleischauer AT, Poole C and Arab L. Garlic consumption and cancer prevention: meta-analysis of colorectal and stomach cancers. *Am J Clin Nutr* 72:1047-52, 2000.

Garlic has been reported to have an anti-cancer effect for several different cancer types. This paper provides a meta-analysis of studies assessing the effect of raw and cooked garlic on cancer risk.

Studies were gleaned from the Medline database and study bibliographies. Only human epidemiological studies in English that reported a relative risk were included. This yielded 22 out of the original 300 studies. Several different meta-analyses were performed based on cancer type and dosage form of garlic. The mean intake of raw or cooked garlic across all studies was 18.3 g/wk, or about 6 cloves of garlic, with the highest consumption at 28.8 g/wk, or 9-10 cloves. Several papers reported on the effect of garlic supplements.

Though there was considerable heterogeneity among the studies, high consumption of raw or cooked garlic was shown to reduce the relative risk of both colorectal and stomach cancers by about 50%. There was no association for users of garlic supplements. However, following an analysis of the collection of studies, the authors concluded that there is a high probability of publication bias in this field, that is, a failure to publish papers with negative results. This leads to an overestimation of effect. Furthermore, some studies did not adequately control for confounding factors such as total vegetable consumption or known risk factors. The authors suggest that the consistent effect seen over heterogeneous studies could be explained by high total vegetable consumption rather than high garlic consumption. Garlic tends to be positively correlated with high vegetable consumption as it is rarely eaten as a single food, but in combination with other vegetables. They further note that the results of this meta-analysis cannot be extrapolated to cancers other than colorectal and stomach, though there were encouraging trends for prostate, breast and laryngeal cancers.

–Risa N. Schulman, Ph.D.

Enclosure: The American Botanical Council was unable to secure permission from the publisher for the original article to be enclosed wiht this HerbClip review. Bin # 188