

Diet High in Fruits and Vegetables May Reduce Asthma Exacerbations

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You've certainly heard of antioxidants. They are a favorite term of health marketers everywhere, touted as a powerful element with numerous health benefits. Antioxidants are believed to protect our cells from damage by blocking harmful free radicals. These antioxidants are abundant in our foods such as fruits and vegetables. They are also sold as supplements or "healthy" additives to many foods. Unfortunately, most studies in humans have not shown a clear link between antioxidants and our overall health benefits or disease prevention.

Researchers in Australia wanted to investigate the effect of eating fruits and vegetables high in antioxidants, or taking an antioxidant supplement (lycopene), in adults with asthma. The randomized trial, published in *American Journal of Clinical Nutrition*, found that a diet high in fruits and vegetables was associated with fewer asthma exacerbations in adults.

About the Study

The [randomized trial](#) included 137 adults with an average age of 56 years who had asthma. The participants were randomized to one of two groups:

- High-antioxidant diet (5 servings vegetables and 2 servings fruit daily)
- Low-antioxidant diet (\leq 2 servings vegetables and 1 serving fruit daily)

After 14 days, an antioxidant supplement (lycopene) was added to half of the participants in the low-antioxidant diet group. The other half

received placebo (sugar pill). The participants in the high-antioxidant group received a placebo pill also.

The participants were followed for 14 weeks and assessed for any exacerbation of their asthma symptoms. Exacerbation events were noted in:

- 19.6% of participants who had high fruit and vegetable diet vs. 27.5% of participants who had low fruit and vegetable diet

In the low-antioxidant group, there was no difference in inflammation of airways in participants that had the antioxidant supplement compared to those that had placebo.

How Does this Affect You?

A randomized trial is considered one of the most reliable methods of research. However, problems during the study that can effect the reliability of the results. In this study there was a high drop out rate. In this trial it means that the participants did not continue to be followed due to the diet not being suitable or for other reasons. The researchers did make statistical changes to account for the lost participants but this step does decrease the reliability of the results. It may mean the effect of the diet was over- or under-estimated. An additional factor to consider is that fruits and vegetables have many health benefits besides antioxidants. There may be other factors or a combination of factors that provided the asthma benefits.

Whole fruits and vegetables showed benefit but a supplement version of antioxidants didn't. Although one study can't provide a definitive link you may consider whole foods over supplements when possible. A diet rich in fruits and vegetables is often linked to many health benefits and no harmful side effects. Unfortunately, most Americans do not meet minimum standards of at least 5 servings of fruits and vegetables. To increase your intake, gradually add fruits and vegetables into your diet. They should be a significant part of your meals, but be careful about adding fats on your vegetables like salad dressing or butter. Use fruit or vegetables for snacks instead of processed snacks. The good news is that most fruits and vegetables are low in calories and fat so feel free to fill

up. It won't only satisfy your hunger but may also keep you breathing a little easier.

- Reviewer: [Brian Randall, MD](#)

Review Date: 12/2012 -