

## Six new studies point to red raspberry's potential anti-inflammatory properties

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A flurry of new research on red raspberries is set to be presented this week at the 2016 Experimental Biology conference in San Diego. Initial findings from six animal model studies reveal the potential effects of red raspberry consumption on cardiovascular disease risk reduction, maintaining normal blood glucose levels and liver function as well as potential anti-inflammatory effects related to bone health.

Recently, the January issue of *Advances in Nutrition* published a comprehensive review of the available scientific literature on the potential role of red raspberries in helping to reduce the risk of metabolically-based [chronic diseases](#), including cardiovascular disease, diabetes mellitus, obesity, and Alzheimer's disease: all of which share critical metabolic, oxidative and inflammatory links.

"The new research being presented at Experimental Biology contributes to the growing body of nutrition research around the potential role of red raspberries in helping to reduce the risk factors associated with metabolically-based chronic diseases," said Tom Krugman, Executive Director of the National Processed Raspberry Council. "While further research in humans is needed, these animal studies provide important insights that will drive future research."

Red raspberries contribute a number of valuable essential nutrients, including providing an excellent source of vitamin C and nine grams of fiber per cup. They are also among the few plant foods that provide a source of ellagitannins and anthocyanins in the same package. While in vitro and animal studies suggests that these phytochemicals may help to reduce risk for some chronic diseases, additional research is needed to test similar hypotheses and possible effects in human metabolism.

Animal and in vitro (cell) research on red raspberries includes:

## **Cardiovascular**

Dr. Ara Kirakosyan of the University of Michigan investigated the potential effects of red raspberry intake on obesity-prone rats.

## **Metabolic Syndrome**

Dr. Neil Shay and colleagues from the Food Science and Technology department of Oregon State University, studied the effects of red raspberries in mice fed a high-fat, high-sugar Western diet.

Dr. Mei-Jun Zhu and colleagues at Washington State University looked at the potential effect of red raspberry consumption on [metabolic syndrome](#) in male mice with diet-induced obesity.

## Diabetes

Principal investigator Dr. Giuliana Noratto of the Department of Food and Nutrition Science at Texas A&M University studied the effects of red raspberry consumption on diabetes-related complications and heart disease in obese diabetic mice.

## Liver Function

Dr. Geoff Sasaki and colleagues at Oregon State University looked at the capacity for ellagic acid quercetin to bind to the peroxisome proliferator-activated receptor-alpha (PPAR $\alpha$ ).

## Inflammation and Bone Health

Dr. Amber Thomas, of the Department of Nutrition and Food Sciences at Texas Woman's University and colleagues, using mouse macrophage cells, studied the anti-inflammatory effect of polyphenols in red raspberries in the production of osteoclasts, the cells associated with the breakdown of bone.

**More information:** Kirakosvan, A., et al. Cardioprotective Effects of Red Raspberries in Obesity-prone Rats. *The FASEB Journal*, April 2016, vol. 30, no. 1 [www.fasebj.org/content/30/1\\_Su...0d-](http://www.fasebj.org/content/30/1_Su...0d-)

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Zhu, M.J., et al. Dietary raspberries ameliorate metabolic syndromes in diet-induced obese mice. *The FASEB Journal*, April 2016 vol. 30 no. 1 [www.fasebj.org/content/30/1\\_Su ... 14-834d-37561f9fc59a](http://www.fasebj.org/content/30/1_Su...14-834d-37561f9fc59a)

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