

## Diet Rich in Antioxidants Lowers Postop AF Risk, Suggests European Study

Michael O'Riordan | November 28, 2014

POZZILLI, ITALY – A diet rich in foods with antioxidants appears to provide protection against the development of atrial fibrillation (AF) following cardiac surgery, according to the results of a new observational study<sup>[1]</sup>.

Assessing the total antioxidant intake of diets using a food-frequency questionnaire, investigators found that patients with greater consumption of antioxidant-rich foods had a significantly lower incidence of postoperative AF compared with individuals who ate less of such foods.

"The food items that contributed the most to dietary [total antioxidant capacity] TAC variance in this population were wine, coffee, and fruit, which altogether explained more than 85% of the total antioxidant intake," write Dr Simona Costanzo (IRCCS Istituto Neurologico Mediterraneo Neuromed, Pozzilli, Italy) and colleagues November 21, 2014 in the *Journal of Thoracic and Cardiovascular Surgery*.

Red wine, they add, was the major contributor to dietary intake of antioxidants. "It indeed contains a wide variety of polyphenols with antioxidant and anti-inflammatory properties," they note.

The study included 217 consecutive Italian patients, average age 68 years, undergoing cardiac surgery (mainly CABG and/or valve replacement or repair). Total antioxidant levels of their diets were assessed using the European Prospective Investigation into Cancer and Nutrition (EPIC) food frequency questionnaire. The total antioxidant levels of individual foods was assessed using an antioxidant-capacity assay validated in previous studies.

The overall incidence of AF following surgery was 38.2%. In a multivariate-adjusted analysis that stratified patients into tertiles based on dietary antioxidant consumption, those in the highest tertile had a 54% lower risk of postoperative AF compared with the two lowest tertiles. The results were consistent when the analysis was restricted to patients undergoing CABG alone or CABG plus valve replacement/repair.

Researchers note the relationship between antioxidant consumption and postoperative AF was nonlinear; a lower intake of antioxidants was not associated with reduced risk.

"Recommendations on dietary habits in coronary artery disease patients at high risk to undergo an open-heart surgery are uncommon," write Costanzo and colleagues. "Considering our results, dietary habits may be of a particular relevance in preventing the arrhythmia, besides the traditional antiarrhythmic therapy."

### References

1. Costanzo S, De Curtis A, di Niro V, et al. Post-operative atrial fibrillation and total dietary antioxidant capacity in patients undergoing cardiac surgery: The Polyphemus Observation Study. *J Thor Cardiovasc Surg* 2014; DOI:10.1016/j.jtcvs.2014.11.035. Abstract

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