Objective
The purpose of this prospective, randomized, double-blind, placebo-controlled study was to compare pre-operative host defense and post-operative outcomes in cardiac patients receiving an oral immune-enhancing nutritional supplement vs. a standard oral supplement prior to surgery.

Methods
All enrolled patients (n=50) were age ≥70 years or had an ejection fraction of ≤40%, or were scheduled for mitral valve replacement.

1) Treatment group- Consumed 1 liter of Oral IMPACT® Formula for at least 5 days prior to surgery. After surgery, patients who required tube feeding received IMPACT formula until extubation.

2) Control group- Consumed an isocaloric, isovolemic and isonitrogenous amount of a standard nutritional supplement for at least 5 days prior to surgery. After surgery, patients who required tube feeding also received an isocaloric, isovolemic and isonitrogenous formula until extubation.

Results:
- Patients fed Oral IMPACT Formula had significantly higher preoperative expression of HLA-DR epitopes on monocytes (109%) than those in the control group compared with baseline (p=0.02).
- Concentration of IL-6 was significantly lower in the Oral IMPACT Formula group (0.90 pg/L) vs. control group (1.94 pg/L) (p=0.032).
- Patients fed Oral IMPACT Formula had a significant reduction in total infectious complications (4 of 23 vs. 12 of 22), (p=0.01).
- Patients fed Oral IMPACT Formula had significantly fewer cases of pneumonia (p<0.05).

Conclusion:
Investigators concluded preoperative intake of an oral supplement enriched with arginine, omega-3 fatty acids and nucleotides for 5-10 days improved preoperative host defense, reduced the number of postoperative infections, and better preserved renal function in high-risk cardiac patients.

Summary prepared by Nestlé HealthCare Nutrition. For a complete copy of the study, please go to the following site:

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