

# Whole-Grain Cereal May Lower Heart Failure Risk

BY MITCHEL L. ZOLER  
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ORLANDO — Regularly eating a bowl of whole-grain cereal was linked to a significant drop in the risk for heart failure in a study with more than 20,000 men.

"It's not just breakfast cereal, but the whole-grain concept, including whole-grain bread, pasta, and rice," Dr. Luc Djoussé said at a conference on cardiovascular disease epidemiology and prevention sponsored by the American Heart Association.

Regular consumption of whole-grain cereal probably cuts the risk for heart failure by supplying fiber, nutrients, and phytoestrogens, added Dr. Djoussé, who is a physician and epidemiologist at Harvard University and Brigham and Women's Hospital in Boston. He added that he be-

lieves the study to be the first of its kind.

The study used data collected prospectively from 21,410 men who participated in the Physicians' Health Study. Their average age at entry was 54 years (range, 40-86 years). The analysis excluded men with heart failure at the study's start, and those who failed to provide data on their consumption of breakfast cereal. Diet data were collected regularly during up to 24 years of follow-up. Whole-grain breakfast cereal was defined as a formulation that contained at least 25% oats or bran.

Over an average follow-up of 19.6 years, 1,018 men developed heart failure. The risk of heart failure was correlated with the frequency of eating whole-grain breakfast cereal. The men were divided into four categories of consumption: none (33%); one or fewer servings per week but more than none (23%); two to six servings



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**Seven or more servings of whole grain cereal a week led to a 30% reduced risk of heart failure.**

per week (24%); and seven or more servings per week (19%). (The total is less than 100% because of rounding.)

In an analysis that controlled for baseline levels of potential confounders—in-

cluding age, body mass index, smoking history, alcohol use, multivitamin use, diabetes, hypertension, and valvular heart disease—men who ate seven or more servings of whole-grain cereal a week had about a 30% reduced risk of developing heart failure, compared with men who did not eat whole-grain cereal. Men who ate two to six servings a week had about a 20% reduced risk. Both of these differences were statistically significant. No significant change was seen in men who ate one serving a week

or less, and no link was seen between the consumption of refined breakfast cereals and heart failure risk.

The study did not receive any commercial funding. ■

## Major Adverse Events Hit 25% In Peripartum Cardiomyopathy

BY SHERRY BOSCHERT  
San Francisco Bureau

SEATTLE — One-fourth of 182 women with peripartum cardiomyopathy developed major adverse events, half of which were death or heart transplantation, Dr. Sorel Goland reported in a poster presentation at the annual meeting of the Heart Failure Society of America.

Women with peripartum cardiomyopathy who had very low ejection fractions of 25% or who were not white were most likely to develop major adverse events, 50% of which occurred before the diagnosis of peripartum cardiomyopathy was made, said Dr. Goland of the department of cardiology at Cedars-Sinai Medical Center, Los Angeles, and associates. A diagnostic delay of a week or more raised the risk for death or heart transplant fivefold.

"Early diagnosis and aggressive therapy, including treatment of heart failure, anticoagulation, and sudden death prevention, should improve the outcome of patients," the investigators stated.

The clinical profile of peripartum cardiomyopathy and risk factors for complications have not been well characterized

due to its low incidence. Peripartum cardiomyopathy occurs during pregnancy or the postpartum period for unknown reasons and can cause severe complications.

The retrospective review of 182 patients found that 25% died, had a heart transplantation, developed cardiopulmonary arrest, required temporary circulatory support by an intra-aortic balloon pump or a left ventricular assist device, developed pulmonary edema or thromboembolic complications, or received a pacemaker or implantable cardioverter defibrillator. Of the 46 major adverse events, 36 (78%) occurred within 6 months of the diagnosis of peripartum cardiomyopathy.

Of the 182 patients, 24 (13%) died or underwent heart transplantation; 16 of the 24 deaths or transplants happened within 6 months of diagnosis.

Patients with ejection fractions of 25% or less had quadruple the risk for major adverse events in general and for death or heart transplant, compared with patients with higher ejection fractions. Nonwhites were three times as likely to develop major complications and four times likely to die or need a heart transplant, compared with whites. ■

## Peripartum Cardiomyopathy, Though Fairly Common, Can Be Hard to Spot

BY SHERRY BOSCHERT  
San Francisco Bureau

SAN FRANCISCO — Maternal peripartum cardiomyopathy, seen in 1 in 3,000 live births, generally carries a good prognosis, Dr. Michael Crawford said at a meeting sponsored by the California chapter of the American College of Cardiology.

Diagnosis of peripartum cardiomyopathy—or of other heart diseases during pregnancy—often is delayed because the symptoms of pregnancy are alike, said Dr. Crawford, professor of medicine at the University of California, San Francisco.

A majority of women with peripartum cardiomyopathy recover after delivery, but 10%-20% require heart transplantation and 1%-2% die, data suggest. The patient's ejection fraction 2 months after diagnosis appears to be the best prognostic factor, he said at the meeting, also sponsored by the university.

Treatment differs for pregnant women compared with nonpregnant patients because some drugs shouldn't be used until after delivery. ACE inhibitors and warfarin are teratogenic, and  $\beta$ -blockers can lead to fetal bradycardia. "You get by with diuretics, digoxin, and hydralazine during pregnancy," Dr. Crawford said.

In a recent study at a large medical center, ejection fractions improved at least 15% in 62% of women with peripartum cardiomyopathy, remained unchanged in 25%, and declined in 13% (Am. Heart J. 2006;152:509-13).

Ejection fractions returned to normal in 45%. Ten percent of patients required transplantation. No patients died during an average 43-month follow-up. The initial echocardiogram, obtained between 1 month prepartum and 5 months post partum, did not predict which patients required transplantation, nor which had final ejection fractions below or above 50%. "Don't get discouraged with the first echo," Dr. Craw-

ford said. Echocardiograms 2 months later predicted outcomes in that study.

Patients with ejection fractions below 20% probably are headed for transplant. Those with ejection fractions between 20% and 50% should see some improvement but are unlikely to return to normal. If the 2-month ejection fraction is above 40%, the patient is likely to recover fully (defined as an ejection fraction greater than 50%), he said.

Shortness of breath and decreased exercise capacity—symptoms of cardiomyopathy—also are symptoms of a normal pregnancy. Fatigue, orthopnea, and dizziness or syncope, which might be symptoms of other heart disease, can also be caused by pregnancy.

Electrocardiograms in normal pregnancies often detect sinus tachycardia, and may show nonspecific ST-T changes. As the pregnancy advances, the heart's axis shifts more to the left. Physical findings in normal pregnancies may include jugular venous distention, an enlarged left ventricle apex, right ventricle heave, a palpable pulmonary artery pulse, third heart sounds, systolic ejection murmurs, venous hums, or a mammary soufflé noise if you listen over the breast.

The most common peripartum cardiovascular problem is venous thromboembolism, which is the leading cause of death in pregnancy, he added. Consider prophylactic medication in women with risk factors.

Coronary artery disease during pregnancy is more common than one might think, perhaps because more women are having children later in life, he added. Maternal MI occurs in 6 out of 100,000 deliveries, three to four times more common than is expected in age-matched nonpregnant women.

Elevated troponin levels are abnormal in pregnancy, and are a red flag. Thrombolytics can be used without causing a lot of fetal complications. Around 5% of women with peripartum MI die. ■

### Risk Factors for Serious Complications in Peripartum Cardiomyopathy

Patient characteristics (n = 182 patients)	No major adverse events (n = 136)	Major adverse events (n = 46)
Age	30 years	27 years
Twin pregnancy	19%	4%
Baseline EF	31%	24%
Baseline EF of 25% or less	31%	63%
EF at 6 months	47%	29%
EF at last follow-up	48%	31%
Baseline LVDD	57 mm	61 mm
LVDD at 6 months	52 mm	68 mm
Achieved left ventricular recovery	45%	18%

Notes: EF = ejection fraction; LVDD = left ventricular diastolic diameter.  
Source: Dr. Goland