

Oats vs. Wheat: Is there a difference for Heart Health?

The cereal aisle at the local grocery store is filled with products claiming "heart healthy" and "proven to lower cholesterol".

These claims are based upon the cholesterol lowering effects of dietary fiber, which is a combination of both soluble and insoluble fiber. Neither type is truly absorbed by the gut.

Soluble fiber, found in oat cereal as well as many other foods, traps bile acids and carries cholesterol out of the body.

Insoluble fiber, found in many foods including wheat cereals, absorbs water and has a laxative effect. Both are part of a healthy diet. But might one be better than the other?

Davy and others from Colorado State University embarked on a study to determine exactly which type of fiber, soluble (oat cereal) or insoluble (wheat cereal) is best for the reduction of cholesterol. They enrolled 36 overweight men aged 50 to 75 to eat either oat cereal (oatmeal or ready-to-eat oat bran cold cereal) or wheat cereal (whole wheat hot cereal or ready-to-eat frosted mini-wheats) twice a day for 12 weeks in addition to their usual diet.

Each serving was 60 grams (approximately $\frac{3}{4}$ cup) and contained 250 calories including 7 grams of fiber.

Perhaps surprisingly, neither cereal had a marked effect on either total cholesterol or LDL cholesterol (the "bad cholesterol"). This lack of a reduction may have been because of the small number of patients studied. However, the researchers went on to examine the dietary effects of oat cereal vs. wheat cereal on two subtypes of LDL cholesterol. LDL cholesterol is made up of both large fluffy particles and small dense particles. It is the latter that is felt to contribute to the formation of plaque within heart arteries. Researchers found that oat cereal was more beneficial than wheat cereal in improving the LDL profiles. Oat cereal decreased the small dense LDL particles, while wheat cereal actually increased these particles and thus created a cholesterol profile more likely to promote the formation of plaque within the heart arteries. The exact reasons behind the beneficial effects of oat cereal and the negative effects of wheat cereal are unknown.

Perhaps it is the soluble fiber, beta-glucan, found in oats, but not wheat, which is thought to be important in reducing the risk of coronary heart disease. Oats also contain many anti-oxidants that may play a positive role in reducing the risk of heart disease.

Title: High-fiber oat cereal compared with wheat cereal consumption favorably alters LDL-cholesterol subclass and particle numbers in middle-aged and older men.

Authors: BM Davy, KP Davy, RC Ho et al.

Source: *American Journal of Clinical Nutrition*. 2002;76:351-358

The recommended daily intake of dietary fiber is 20 to 35 grams. Oat cereals are an excellent "heart healthy" choice. Two servings supply approximately half the daily recommended amount.