

Which grains you eat can impact your risk of getting heart disease earlier

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In one of the first studies to examine the relationship between different types of grain intake and premature coronary artery disease in the Middle East, researchers found a higher intake of refined grain was

associated with an increased risk of premature coronary artery disease in an Iranian population, while eating whole grains was associated with reduced risk. The study will be presented at the American College of Cardiology (ACC) Middle East 2022 Together with the 13th Emirates Cardiac Society Congress, taking place in Dubai, United Arab Emirates, October 7-9, 2022.

According to the researchers, previous epidemiological studies have reported an association between different types of grain intake with the risk of coronary artery disease. The current study evaluated the association between refined and whole grains consumption and risk of PCAD in an Iranian population.

Premature coronary artery disease (PCAD) refers to atherosclerotic narrowing of coronary arteries in males under 55 years old or in females under 65 years old. It is often asymptomatic early in the course of the disease but may lead to chest pain (angina) and/or heart attack with progressive development of narrowing (stenosis) or plaque rupture of the arterial wall. Risk factors for PCAD include smoking, high cholesterol, high blood pressure and diabetes.

"There are many factors involved in why people may be consuming more refined grains as opposed to whole grains and these cases differ between people, but some of the most important factors to consider include the economy and income, job, education, culture, age and other similar factors," said Mohammad Amin Khajavi Gaskarei, MD, of the Isfahan Cardiovascular Research Center and Cardiovascular Research Institute at Isfahan University of Medical Sciences in Isfahan, Iran, and the study's lead author. "A diet that includes consuming a high amount of unhealthy and refined grains can be considered similar to consuming a diet containing a lot of unhealthy sugars and oils."

Whole grains are defined as containing the entire grain, while refined

grains have been milled—ground into flour or meal—to improve shelf life but they lose important nutrients in the process. The 2019 ACC/American Heart Association [Guideline on the Primary Prevention of Cardiovascular Disease](#) recommends a diet that emphasizes the intake of vegetables, fruits, legumes, whole grains and fish to decrease heart disease risk factors.

The study recruited 2099 individuals with PCAD from hospitals with catheterization labs in different cities and ethnicities throughout Iran who underwent coronary angiography (women aged ≤ 70 and men ≤ 60). In total, 1,168 patients with normal coronary arteries were included in the control group, while 1,369 patients with CAD with obstruction equal or above 75% in at least a single coronary artery or $\geq 50\%$ in the left main coronary artery made up the case group.

Participants were given a food frequency questionnaire for dietary assessments to evaluate dietary behaviors and evaluate the association between whole grain and refined grain intake and the risk of PCAD in individuals without a prior diagnoses of heart disease. After adjusting for confounders, a higher intake of refined grains was associated with an increased risk of PCAD, while whole grain intake was inversely related to reduced risk of PCAD.

"As more studies demonstrate an increase in refined grains consumption globally, as well as the impact on overall health, it is important that we find ways to encourage and educate people on the benefits of whole grain consumption," Khajavi Gaskarei said. "Tactics to consider include teaching improved dietary choices in schools and other public places in simple language the general population can understand, as well as on television programs and by continuing to do high level research that is presented at medical conferences and published in medical journals. Clinicians must also be having these conversations with each other and their patients."

More information: Learn more about ACC Middle East 2022 Together with the 13th Emirates Cardiac Society Congress at [ACC.org/MiddleEast2022](https://acc.org/MiddleEast2022).

Provided by American College of Cardiology

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