

## **Common genetic variation is linked to substantial risk for heart attack**

May 4 2007

A common genetic variation on chromosome 9p21 is linked to a substantial increase in risk for heart attack, according to a new international research study. The findings are published in the online edition of *Science*, and will appear in an upcoming printed edition of the journal.

Researchers found individuals with the variation have a 1.64-fold greater risk of suffering a heart attack (myocardial infarction) and a 2.02-fold greater risk of suffering a heart attack early in life (before age 50 for men and before age 60 for women) than those without the variation. Approximately 21 percent of individuals of European descent carry two copies of the genetic variation (one from each parent), found on chromosome 9p21.

The research project was led by the Icelandic genomics company deCODE Genetics, along with U.S. researchers at Emory University School of Medicine, Duke University, and the University of Pennsylvania.

Myocardial infarction is the death of heart tissue that results when the blood supply to the heart is cut off. It is the leading cause of death in the industrialized world. Nearly half of men and one-third of women who reach the age of 40 will suffer a heart attack in their lifetime.

The study led by deCODE Genetics uncovered the first common variant found to be consistently linked to substantial risk of heart attack in



multiple case-control groups of European descent.

The researchers found a population-attributable risk for heart attack of 21 percent in general and of 31 percent for early onset cases. This means that were the gene variant not present, there would be 21 percent fewer heart attacks overall in the population and 31 percent fewer early onset heart attacks.

"The gene variant we have linked to heart attack points us to a major biological mechanism that substantially increases the risk," explains Emory cardiologist Arshed A. Quyyumi, MD, one of the study authors. "Discoveries like this one greatly heighten our understanding of the role genetics plays in heart disease."

Source: Emory University

Citation: Common genetic variation is linked to substantial risk for heart attack (2007, May 4) retrieved 28 April 2024 from <u>https://medicalxpress.com/news/2007-05-common-genetic-variation-linked-substantial.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.