

# High blood cholesterol is overlooked

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High blood cholesterol, a serious hereditary disease, is far more common than previously recognised and not treated sufficiently. This is shown in new research from the University of Copenhagen and Herlev Hospital, and the results have recently been published in the well-reputed American scientific journal, *The Journal of Clinical Endocrinology & Metabolism*.

A group of scientists from the University of Copenhagen has recently shown that far more Danes than expected suffer from [high blood cholesterol](#). The study also shows that the serious [hereditary disease](#) is not treated effectively.

Dr Børge Nordestgaard, clinical professor at the Faculty of Health and Medical Sciences and senior physician at Herlev Hospital is surprised at

the findings.

"We have now investigated 69,000 Danes to see how many have hereditary high blood cholesterol and have undergone sufficient treatment for the disease. We can see that out of 137 people in Denmark 1 has hereditary high blood cholesterol. That corresponds to 40,000 people with the disease in the Danish population of 5.5 million," states Børge Nordestgaard.

The study also shows that very few families and individuals with this serious disease have been identified and treated effectively with statins, a type of drug for treating high cholesterol. In Holland, by comparison, early detection of patients and their families has almost eliminated the increased risk of coronary disease, because effective treatment to reduce cholesterol levels was implemented quickly.

"Never before anywhere in the world has the ordinary population been studied to see how many people and families with hereditary high blood cholesterol there actually are. It was previously assumed that only 1 out of every 500 people had it, so it was quite a surprise for us suddenly to find 3 ½ times as many people with this serious disease. At the same time, it was also startling to discover that a disease that can easily be prevented by treatment to reduce blood cholesterol has not been treated sufficiently," says Dr. Marianne Benn, senior physician, also from the University of Copenhagen.

## **Underdiagnosis and undertreatment**

Of those Danes shown to have hereditary high blood cholesterol, one-third already had coronary disease, and only half were being treated with statins. People with hereditary high blood cholesterol not undergoing treatment with statins have a 1,200 per cent higher risk of developing coronary disease. Even more surprising: people with hereditary high

blood cholesterol who are being treated with statins still have a 900 per cent higher risk of incurring coronary disease. In total, the study documents massive underdiagnosis and undertreatment of these high-risk individuals and their families in Denmark.

Researchers used the internationally recognised Dutch criteria for hereditary high blood cholesterol based on very high blood cholesterol level and early-onset coronary disease in the test person and his/her family, and on the finding of mutations that directly lead to hereditary high blood cholesterol. The increased risks appear even when figures are adjusted for several other factors that also contribute to coronary disease. Researchers use this method to eliminate biased results.

## **50 million people with hereditary high blood cholesterol**

These new figures mean that there are about 50 million people worldwide with hereditary high blood cholesterol. Today most of these people are undiagnosed, untreated and therefore at serious risk of dying early from coronary disease. According to the World Health Organization (WHO), coronary disease is the most common cause of death in adults worldwide. WHO estimates that at least 17 million people die from coronary disease annually. A considerable number of these deaths are due to hereditary high blood cholesterol.

"We have known for decades about high [blood cholesterol](#) and how to prevent it. Nonetheless the disease is massively underdiagnosed and undertreated. This means that many people unnecessarily develop early-onset [coronary disease](#) and die far earlier than normal," says Børge Nordestgaard.

Now scientists are continuing their work to determine how many of the

people with hereditary high blood [cholesterol](#) can be demonstrated to have a mutation that causes the disease, so that it will be easier to trace the families with this problem.

**More information:** Read the scientific article "Familial Hypercholesterolemia in the Danish General Population: Prevalence, Coronary Artery Disease, and Cholesterol-Lowering Medication" in the reputed journal, The Journal of Clinical Endocrinology & Metabolism: [jcem.endojournals.org/content/ ... c.2012-1563.abstract](http://jcem.endojournals.org/content/...c.2012-1563.abstract)

Provided by University of Copenhagen

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