



# Cardiovascular disease in people with HIV

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## What is the background of this research?

Cardiovascular diseases such as myocardial infarction or stroke are more common in people with HIV compared to people without HIV. The reason is not very clear. We do know that people with HIV smoke more often, have elevated cholesterol levels and elevated blood pressure. Stop smoking is therefore very important, as well as a good blood pressure and good cholesterol levels.

## What did we want to investigate?

Atherosclerosis of the arteries in the neck may predict the development of cardiovascular disease. We measured this with an echo device. We investigated which factors are associated with atherosclerosis in the neck arteries. We also analyzed how many participants in our study used a cholesterol-lowering drug and how many high-risk participants were still smoking. This part of the research focusses on following questions:

1. How many people with HIV have atherosclerosis in the neck arteries?
2. What factors are associated with the presence of atherosclerosis in the neck arteries?
3. How many participants with a high risk to develop cardiovascular disease use a cholesterol lowering agent and how many participants still smoke?

## What did we do?

With an ultrasound we analyzed whether atherosclerosis of the neck vessels (a so-called

plaque) was present. We also determined the risk of developing cardiovascular disease in the next 10 years for all participants: this was done on the basis of age, the most recently measured blood pressure, the most recent cholesterol values, the presence or absence of diabetes.

## What did we find?

In total, we found atherosclerosis (a plaque in the neck vessels) in 50% of the participants in the 2000HIV study. This percentage appears to be slightly higher in the general population (45%). Age and a history of myocardial infarction were associated with the presence of plaque in the neck arteries. HIV-specific factors, such as duration of HIV infection, HIV medications, CD4 cell number did not appear to be associated with atherosclerosis. In persons with a high risk of developing cardiovascular disease, one third of the participants used a cholesterol lowering agent. Also, a third of high-risk participants still smoked.

## What does this mean for people with HIV?

Well known risk factors are associated with the presence of atherosclerosis, while HIV-specific factors seem to be of less importance. It is therefore important that preventive guidelines such as to quit smoking and the use of cholesterol-lowering medicines are followed. In the present research, we analyze whether the immune system also plays a role in the development of atherosclerosis.

Do you have any questions about the study?  
Reach out to us via the contact form on our  
website [www.2000hiv.com](http://www.2000hiv.com)