

**Title: Dietary Sodium Intake and Atherosclerosis**

**Participants: Dr Jonas Wuopio**

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## **Dr Jonas Wuopio**

"- My name is Jonas Wuopio. I'm a specialist in internal medicine and I am also a doctoral student at Karolinska Institute and Clinical Research Centre, Falun, Sweden, Uppsala University.

### Study Rationale

Several studies in the past, looked at salt intake and cardiovascular risk and mortality but none have studied the actual changes in the arteries from salt intake. And we had this explicit data so we wanted to close this knowledge gap.

### Patient Population and Study Design

This is a cross-sectional study and we used a cohort called SCAPIS, the Swedish CARDioPulmonary bioImage Study, where participants had been recruited from the general population in the age 50 to 64 years old. We had almost 11,000 participants, 10,778, and we used spot urine samples for measuring sodium intake or estimating sodium intake. Then we had three measurements for atherosclerosis. The first were the overall calcifications in the arteries in the heart that is measured with the coronary artery calcium score or CACS. Then we had also data for how many and how severe the stenosis in the coronary arteries, and we also had the data for the atherosclerosis in the carotids in the neck. So we studied the association between salt intake and these measurements.

### Main Findings

The main finding is that for every increase in sodium intake, there is a higher risk of finding atherosclerosis in the coronary arteries and in the carotids. And this is also the case among individuals without hypertension or known cardiovascular disease.

## Impact on Practice and Clinical Decision Making

I believe doctors should emphasise the advices given by World Health Organisation or other medical societies to limit the salt intake to about a teaspoon a day, and that this not just include those patients with hypertension or known cardiovascular disease.

## Next Steps

I think there is a consensus in the research society that a high amount of salt intake causes hypertension and atherosclerosis. There is a little controversy around a very low intake, if it's beneficial or in fact harmful. My research will focus more on the pathological mechanism behind the association between salt intake and atherosclerosis because this is not known in its details.