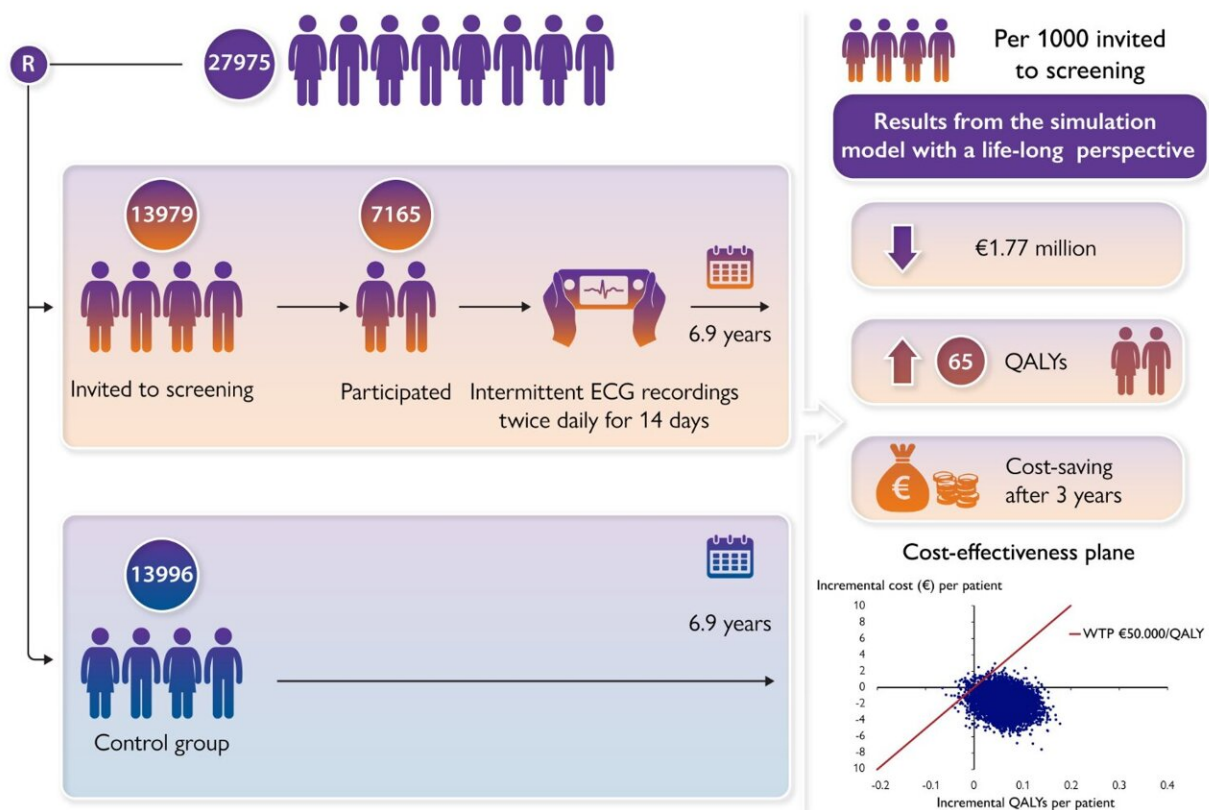


# Screening for stroke risk can save lives and money

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Graphical abstract. Credit: *European Heart Journal* (2022). DOI: 10.1093/eurheartj/ehac547

Atrial fibrillation is the greatest risk factor for stroke. Screening to

detect atrial fibrillation in older people would not only increase the chance of preventing stroke, it would also save money for the healthcare system and society. This is the conclusion from research conducted at Linköping University and Karolinska Institutet in Sweden, and published in the *European Heart Journal*.

"The greatest benefit from screening is that you receive information that could be used to reduce an individual's risk of stroke and thus may help them live longer with a good quality of life," says Emma Svennberg, specialist in cardiology at Karolinska University Hospital, and affiliated researcher at Karolinska Institutet.

A systematic screening program for atrial fibrillation is not in use anywhere in the world. The researchers who conducted the present study have calculated the cost effectiveness of screening for atrial fibrillation in people aged 75-76 years, and conclude that there are strong reasons for introducing such a program.

"Our health [economic analysis](#) shows that screening is an intervention that even saves money. What I mean is—screening not only saves lives by preventing stroke; it also saves money for the healthcare system," says Lars-Åke Levin, professor in the Department of Health, Medicine and Caring Sciences and director of the Centre for Medical Technology Assessment at Linköping University.

Some of those who have atrial fibrillation experience symptoms, but many of those who have the condition are not aware of it. In atrial fibrillation, parts of the heart known as the atria move extremely rapidly, and the pumping capacity of the atria is reduced. When this happens, blood clots can form in the heart. These can then move from the heart to the brain, and cause a stroke.

The risk of stroke is five times higher in people with atrial fibrillation

than in the [general population](#). Treatment to thin the blood (anticoagulants) is, however, available, and this can prevent [blood clots](#) forming. Screening will enable the healthcare system to identify people with atrial fibrillation even if they do not have any symptoms and to offer them anticoagulants, thus reducing their risk of stroke.

Previous health economics analyses of the value of screening for atrial fibrillation have been based on data from the literature and some assumptions. The current study differs from these in that it is based on data from a clinical study, STROKESTOP, the results of which were published in *The Lancet* in 2021.

This study had been led by Karolinska Institutet. STROKESTOP is the largest [clinical study](#) in the world on screening for atrial fibrillation. It studied 30,000 people aged 75-76 years, who were assigned at random to one of two groups. One group was offered the opportunity to participate in the screening, while the other group acted as a control group. Cases of [atrial fibrillation](#) detected during the screening were treated with anticoagulants.

"Screening is a very simple intervention. In principle it involves is placing the thumbs onto a hand-held ECG machine, which measures heart activity, twice a day for two weeks," says Emma Svennberg.

In the economic evaluation the researchers took into account that some of those offered screening will decline.

"Those who accept the screening are in general healthier than those who decline. Even so, our results show that the screening will save money and improve [public health](#). I hope that [decision-makers](#) and the [healthcare system](#) will take notice of our results. We show that one of our most serious diseases can be prevented in this way," says Lars-Åke Levin.

**More information:** Johan Lyth et al, Cost-effectiveness of population screening for atrial fibrillation: the STROKESTOP study, *European Heart Journal* (2022). [DOI: 10.1093/eurheartj/ehac547](https://doi.org/10.1093/eurheartj/ehac547)

Provided by Linköping University

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