

Regular sauna use shown to decrease risk of first-time stroke

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What did the authors study?

It is commonly known that specific behaviors, such as getting regular physical exercise, eating a healthy diet, and avoiding smoking, can reduce the risk of stroke.¹ However, stroke remains the second leading cause of death worldwide in people over the age of 60.² Therefore, identifying new protective activities and lifestyle factors continues to be an important goal of researchers. Regular sauna use, a popular tradition in Finland for thousands of years,³ has been associated with several wide-ranging health benefits.⁴ The article “Sauna bathing reduces the risk of stroke in Finnish men and women: A prospective cohort study” is the first to examine the relationship between regular sauna use and risk of stroke.⁵

How was the study done?

In the article, researchers examined the sauna habits of 1,628 Caucasian men and women in Finland. Participants were then followed by researchers for approximately 15 years with annual assessments to document the occurrence of strokes. The study focused on middle-aged and elderly people, with an initial age range of 53–74. Baseline heart health was measured at the beginning of the study. This was done by testing cholesterol levels, resting blood pressure and blood sugar, and assessing active medications, physical activity levels, lifestyle characteristics, and socioeconomic status. People with a history of stroke were not included in the study. Study participants were placed into 1 of 3 categories based on their average frequency of sauna use. The first group was made up of frequent sauna users: people who used a sauna between 4 and 7 times per week. The second group was made up of intermediate sauna users: those who used a sauna between 2 and 3 times per week. The third group was made up of infrequent sauna users who only used a sauna once per week. People who did not use saunas were not included in the study. The frequency of first-time stroke in each of these groups was compared.

What were the results?

Over the 15 years of the study, 155 first-time strokes occurred in the 1,628 participants. Among frequent sauna users, there was a significant decrease in the number of first-time strokes compared to infrequent (weekly) sauna users. The rate of first-time strokes in the frequent sauna use group was approximately 40% of that seen in the weekly sauna users. The intermediate group, who averaged 2–3 sauna sessions per week, also showed a decreased rate of stroke compared to weekly users. However, the decreased risk in this group was small and no conclusions could be made. The influence of existing stroke risk factors was also evaluated. The decreased number of strokes in the frequent sauna group was found to be independent of age, sex, physical activity, socioeconomic status, tobacco use, high blood pressure, diabetes, alcohol use, and obesity.

Researchers also looked at the effect of sauna use on different types of strokes. Hemorrhagic strokes (caused by bleeding in the brain) occurred in 34 participants. Ischemic strokes (caused by a blocked blood vessel) occurred in 129 participants. Frequent sauna users had

a significant decrease in ischemic stroke risk compared to participants with weekly sauna use. Again, ischemic strokes in frequent sauna users occurred at about 40% of the rate as the weekly group. Hemorrhagic (bleeding) strokes also occurred less often in frequent sauna users when compared to weekly users. However, the decreased risk of hemorrhagic stroke was small. No conclusions could be made about the effect of sauna use on hemorrhagic stroke risk.

Why are these findings important?

Saunas have long been used for relaxation, but there may be a hidden health benefit from their use. This study shows that frequent sauna use may strongly decrease the long-term risk of stroke in middle-aged and elderly people. Importantly, this study also showed that the protective benefit of frequent sauna use was independent of other common stroke risk factors.

What's next?

This study shows promising results. Because it is the first study to directly compare frequency of sauna use with stroke, future studies will be needed to replicate these results. Future studies will also be needed to evaluate the protective effect of sauna use on diverse ethnicities and age groups as this study focused only on a middle-aged and elderly Caucasian population.

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About stroke

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What is stroke?

There are 2 kinds of stroke. In the first type, called ischemic stroke, there is loss of blood flow to a certain part of the brain. About 85% of all strokes are ischemic. Often this is caused by a blockage in a blood vessel. When blocked, blood and oxygen cannot get to the area of brain that the blood vessel supplies. If this goes on long enough, the brain cells begin to die. Ischemic stroke can be caused by narrowing of the large arteries to the brain, also known as atherosclerosis. In other people, a clot can form in arteries of the neck. If a piece of the clot breaks off, it can travel to the brain and block a brain blood vessel. In the same way, clots may also form in the heart, and travel by blood flow to the brain vessels, causing stroke.

In the second type of stroke, bleeding occurs into the brain: this is called a hemorrhagic stroke. Bleeding may occur for several reasons. In one type, an aneurysm, which is a weakened blood vessel, breaks open or ruptures. When this happens, the bleeding puts pressure on surrounding brain. The pressure injures and possibly kills the nearby brain cells.

In either type of stroke, the resulting brain damage may cause weakness, numbness, and speech problems. If the stroke is severe enough, it can lead to coma, and possibly death. Fortunately, there are effective ways to prevent stroke. If you have a stroke, seeking immediate medical attention can help reduce your chances of death and disability.

How common is stroke?

Every year, about 800,000 people in the United States have a stroke. Stroke is our nation's number 3 killer, after heart disease and cancer, and the number 1 cause of adult disability. In the United States, African Americans are at greatest risk for stroke compared to other races.

Transient ischemic attacks, or TIAs, have many similarities with strokes. TIAs occur when a clot temporarily blocks a blood vessel, resulting in symptoms much like those of a stroke. However, the symptoms of a TIA last less than 24 hours and there is no permanent brain damage. TIA can be a warning sign for a later stroke.

Treatment of stroke

There are many treatments for strokes. Treatment selection depends on whether the stroke is ischemic or hemorrhagic. A picture of the brain, such as a CT or MRI scan, is usually performed to determine the type of stroke. Once a doctor determines whether the stroke is ischemic or hemorrhagic, treatment can begin.

Ischemic stroke, if identified early, can be treated with tissue plasminogen activator (tPA), a medication that breaks down the clot blocking the blood vessel in the brain. tPA is only effective if given within hours of stroke onset. This is one reason why the time of onset of the stroke is so important to remember.

Treatment of hemorrhagic stroke is very different from that of ischemic stroke. The treatment of hemorrhagic stroke depends on the cause of the bleeding and how much bleeding has occurred. Some hemorrhagic strokes require treatment by a surgeon.

Prevention is the key

There are many risk factors for stroke. Some risk factors for stroke cannot be prevented. We cannot change our age, race, or family history of stroke. However, we can work on things like high blood pressure, an irregular heart rate (like atrial fibrillation), diabetes, cigarette smoking, high cholesterol (and fat levels in the bloodstream), alcohol abuse, and obesity. Treatment is available for all of these risk factors, and appropriate treatment can substantially reduce risk of stroke.

For more information

Brain & Life

www.brainandlife.org

National Stroke Association

stroke.org

American Stroke Association

strokeassociation.org

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