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Are Saunas Good for Your Brain?

Analysis by Dr. Joseph Mercola | February 13, 2024

STORY AT-A-GLANCE

- Men who used a sauna four to seven times a week had a 66% lower risk for dementia, and a 65% lower risk for Alzheimer's disease, compared to men who used the sauna once a week
- Sauna use may boost brain health by lowering inflammation and blood pressure, improving vascular function and enhancing relaxation and well-being

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In the U.S., many Americans use a sauna only occasionally, perhaps while at the gym or on vacation — if at all. In Finland, in contrast, 99% of Finns take at least one sauna a week,[1] and some far more often than that.

Known as a "poor man's pharmacy," Finns value saunas for stress relief, above all else, but the simple act of sitting quietly in a heated room, with or without steam (or as it's known in Finland, löyly), offers proven health benefits that virtually everyone can enjoy, including a boost to brain health.

Not surprisingly, much of the research on saunas' health benefits comes from Finland, a country with about 5.5 million people and 3.3 million saunas (they're as common as television sets).[2] There, saunas are commonly found in private homes, offices and even factories, and regular use is an integral part of Finnish life. According to the Harvard Health Blog:[3]

"Saunas are accessible to Finns of every walk of life … [and] the very nature of the Finnish sauna is designed to reduce stress. The sauna has been a gathering place for family and friends for centuries.

And sauna etiquette, which frowns upon swearing or discussing controversial topics while bathing, is instilled in Finns during childhood."

Sauna Use May Lower Your Risk of Dementia

In an age when Alzheimer's disease, the most common cause of dementia, is the sixth leading cause of death in the U.S.,[4] simple tools to help with prevention are crucial. Sauna use, it turns out, may be one such option.

Finnish researchers evaluated medical records from more than 2,300 men who were part of the Kuopio Ischemic Heart Disease (KIHD) study, tracking their health for an average of 20 years.

Men who used the sauna four to seven times a week had a 66% lower risk for dementia, and a 65% lower risk for Alzheimer's disease, compared to men who used the sauna once a week.[5] The average length of each sauna was about 15 minutes.

How Sauna Use May Boost Brain Function

There are many reasons why sauna use may boost brain health, including potentially lowering inflammation and **blood pressure**, improving vascular function and enhancing relaxation and well-being.[6]

Other research has shown sauna use increases levels of norepinephrine,[7] a stress hormone that increases focus and attention, as well as prolactin, which may promote myelin growth, helping your brain to function faster and repair nerve cell damage.

Even the boost in endorphins and well-being that's often felt after exercise (sometimes referred to as a runner's high) may be related to heat stress, such as that experienced in

a sauna. One animal study revealed that heat stress from exposure to a sauna increases endorphins significantly.[8]

There's also a potential link between exposure to heat and brain-derived neurotrophic factor or BDNF, which activates brain stem cells to convert into new neurons. BDNF also triggers numerous other chemicals that promote neural health.

Interestingly, exercise in heat increases BDNF compared to exercise done at lower temperatures, adding another layer of support for heat stress (i.e., sauna use) for your brain.[9]

Using a Sauna Is Good for Your Heart

The benefits of sauna usage extend throughout your entire body, including your heart. Using the same KIHD study data, researchers found the frequency of sauna use, and length of time spent in the sauna, correlated with a lowered risk for lethal cardiovascular events.[10]

Sauna use was also associated with a reduced risk of death from any cause, and the more the men used the sauna, the better. Men who used the sauna seven times per week cut their risk of death from fatal heart problems in half compared to those who only used it once each week.

In addition, frequent sauna bathing was associated with a reduced risk of sudden cardiac death, fatal coronary heart disease and fatal cardiovascular disease. These findings remained stable even when confounding factors such as smoking, blood pressure and triglyceride levels were factored in.

The greatest benefits were found among those whose saunas lasted 19 minutes or more each session. The benefits were so significant that researchers compared sauna bathing to low- or moderate-intensity exercise, noting:[11]

> *"Heart rate may increase up to 100 [beats]/min during moderate sauna bathing sessions and up to 150/min during more intense warm sauna bathing,*

corresponding to low- and moderate-intensity physical exercise training.

These proposed functional improvements associated with sauna bathing correspond to similar benefits seen with regular physical exercise, such as improvement in blood pressure and left ventricular function.

It has been documented that cardiac output is increased mainly because of the increase in heart rate during sauna bathing."

Saunas' 'Hyperthermic Conditioning' Improves Exercise Performance

In another study, those who had a 30-minute sauna session twice a week for three weeks after their workouts increased the time it took to run until exhaustion by more than 30%.[12]

This benefit may be due to hyperthermic conditioning, or "acclimating yourself to heat independent of aerobic physical activity through sauna use," which boosts endurance because it induces adaptations in your body that make it easier for you to perform when your body temperature is elevated.

As your body is subjected to reasonable amounts of heat stress, it gradually becomes acclimated to the heat, prompting a number of beneficial changes to occur in your body.

These adaptations include increased plasma volume and blood flow to your heart and muscles (which increase athletic endurance) along with increased muscle mass due to greater levels of heat-shock proteins and growth hormone. Other physiologic adaptations that occur from hyperthermic conditioning include:[13]

Improved cardiovascular mechanisms and lower heart rate[14]	Lower core body temperature during workload
Higher sweat rate and sweat sensitivity as a function of increased	Increased blood flow to skeletal muscle (known as muscle perfusion) and other

thermoregulatory control[15]	tissues[16]
Reduced rate of glycogen depletion due to improved muscle perfusion[17]	Increased red blood cell count[18]
Increased efficiency of oxygen transport to muscles[19]	

Sauna Use for Pain Relief, Detoxification and Longevity

Many people enjoy using a sauna to soothe muscle tension and research suggests it can be beneficial in helping your body recover from strength and endurance training sessions.[20] Other research also supports sauna use for reducing pain in fibromyalgia patients.

In one study, 44 patients with fibromyalgia found a reduction in pain between 33% and 77% after use of a far infrared-ray dry sauna.[21] Six months after the study had concluded, the participants continued to report a reduction in pain between 28% and 68%.

Longevity-wise, research[22] shows you can boost your human growth hormone (HGH) levels by two-fold by taking two 20-minute sauna sessions (at 176 degrees F) separated by a 30-minute cooling period. Two 15-minute sauna sessions separated by a 30-minute cooling period may boost your HGH by five-fold.

Some of the benefits of sauna usage also occur due to increased sweating. Many people do not sweat much on a regular basis, but it acts as an important route of detoxification, including helping to excrete toxic metals like arsenic, lead and mercury.[23]

Researchers writing in the Journal of Environmental and Public Health explained:[24] "Sweating with heat and/or exercise has been viewed throughout the ages, by groups worldwide, as 'cleansing' … Sweating offers potential and deserves consideration, to assist with removal of toxic elements from the body."

Different Types of Saunas

There are three basic types of saunas:

1. The wet Finnish sauna, where steam is created by pouring water on hot rocks (the heat can be generated by either wood burning or electricity)
2. The dry Finnish sauna that uses electrical heating, and therefore does not employ water (these stoves are not made to have water poured on them. Doing so can result in short-circuiting)
3. Infrared saunas

The difference between an infrared sauna and the traditional Finnish-style saunas is that the latter heats you up from the outside in, like an oven. The infrared sauna heats you from the inside out. The traditional wet sauna typically uses a small stove with radiant heat elements, i.e., resistive elements that heat up when current flows through them.

These elements heat up the rocks piled on top. The temperature is regulated by a thermostat. Initially, the sauna will feel warm and dry, but once you toss some water on the rocks, hot steam is generated, which helps open your pores and induces sweating.

In an infrared sauna, your body temperature naturally rises, but the temperature of the surrounding air does not. I typically use my infrared sauna three times a week for 30 minutes at 136 degrees F. While some still favor old-fashioned wood-burning saunas, the more modern electrical versions and the infrared saunas are the most common today. Unfortunately, this has also led to some problems, namely high electromagnetic radiation.

You can test the sauna you're using with an inexpensive electrical meter or a more sophisticated Electromagnetic Fields (EMF) meter. In the video below, Steve Benda, trained in nuclear engineering and power systems, explains the importance of reducing electromagnetic radiation from your sauna.

Safety Tips When Using a Sauna

Sauna bathing is considered to be safe for most healthy adults.[25] It may also be beneficial for people with asthma, chronic bronchitis, psoriasis, chronic congestive heart failure and rheumatic disease. According to research in the American Journal of Medicine:[26]

> *"[S]ome studies have suggested that long-term sauna bathing may help lower blood pressure in patients with hypertension and improve the left ventricular ejection fraction in patients with chronic congestive heart failure …*
>
> *The transient improvements in pulmonary function that occur in the sauna may provide some relief to patients with asthma and chronic bronchitis. Sauna bathing may also alleviate pain and improve joint mobility in patients with rheumatic disease."*

It's important to always listen to your body when deciding how much heat stress you can tolerate, so start out slowly, gradually increasing the length of your sauna sessions over time to somewhere between 15 and 30 minutes per session. Be sure to stay hydrated before, during and after the session, and always use a sauna with a buddy, not by yourself.

Additionally, males may need to be concerned about long term heat exposure to their scrotum and the potential for decreased fertility that may result.[27]

And always avoid drinking alcohol in a sauna as the alcohol and heat may trigger a cardiovascular event. In fact, while very few heart attacks and sudden deaths occur in saunas, alcohol consumption during sauna bathing increases this risk.[28] If you're healthy and you use common sense, however, sauna use is not only safe but highly beneficial for most people.

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