




What Are The Benefits Of Cold And Hot Showers?

Most studies into the health benefits of cold and hot water have used water immersion therapy. During water immersion therapy, a person immerses their body, or a part of their body, in a vat of water for a specified amount of time.

 This article outlines the results of such studies, including the potential health benefits and risks of cold and hot showers.

Benefits of cold showers

Although taking a cold shower may not be a pleasant experience, it can provide certain health benefits. One [2014 review](#), for example, suggests that cold water can:

- decrease [inflammation](#) and swelling
- decrease muscle spasms
- have pain-relieving effects

An older study, this time from [2000](#), investigated the effects of different water temperatures on bodily reactions. In the cold water condition, the researchers submerged participants in 57.2°F (14°C) water for 1 hour. The participants experienced the following effects (some of which may not necessarily be beneficial to

health):

- increased [metabolism](#)
- increased [heart rate](#) and [blood pressure](#)
- increased levels of the neurochemicals dopamine and norepinephrine
- lower levels of [cortisol](#), the “stress hormone”

Some beneficial effects of cold water immersion include:

Improved circulation

Exposure to cold water causes the blood vessels on the surface of the skin to constrict. This diverts blood flow away from the surface of the skin. In fact, one [small 2019 study](#) found that taking a cold shower after exercise may improve general hydration by cooling down the body.

As blood travels away from the skin, blood vessels in deeper body tissues dilate. This improves circulation in the deeper tissues.

Lower cortisol levels

Cortisol is the “fight-or-flight” hormone that the body releases in response to [stress](#).

Lowering cortisol levels in the blood may therefore help reduce stress levels. [Researchers](#) note that when people immerse themselves in a bath of cold water, their cortisol levels drop.

Reduced pain

According to a [2014 review](#), cold water exposure triggers an automatic pain response called stress-induced analgesia (SIA).

SIA is a reduced pain response during or following exposure to a stressful stimulus, such as cold water immersion.

Reduced sports-related muscle soreness and fatigue

One older [study from 2009](#) tested the effects of cold water immersion on physical performance among athletes. Following sports, some of the athletes received cold water immersion, while others received tepid water immersion.

The researchers did not find any differences in subsequent physical performance between the two groups, nor did they find any differences in the amount of muscle damage or inflammation the participants experienced.

However, perceptions of [muscle soreness](#) and general [fatigue](#) were significantly lower in the group that received the cold water immersion. This psychological effect could prove beneficial during competitive

sports.

Benefits of hot showers

Hot showers may also have beneficial effects for health. Some examples of the potential health benefits include:

Improved cardiovascular health

As one [2014 review](#) of hydrotherapy notes, warm water bathing appears to improve blood flow in people with chronic [heart failure](#). This is due to a natural widening of the blood vessels when exposed to high temperatures.

A [2012 study](#) explored the effects of warm water immersion on arterial stiffness, which occurs when the arteries within the body become less flexible. Arterial stiffness plays a major role in the cardiovascular condition [atherosclerosis](#), which can lead to [high blood pressure](#).

The study found that participants who submerged their feet and lower legs in warm water for 30 minutes showed reduced arterial stiffness. Participants who did not receive warm water immersion did not show this effect.

Improved muscle and joint health

As mentioned above, hot showers can enhance blood flow, helping soothe stiff joints and tired muscles. Cold showers, meanwhile, can reduce inflammation and help numb pain.

One [2017 study](#) investigated the effect of hot and cold therapies on knee osteoarthritis. The researchers divided 96 participants into three groups. A control group received only standard osteoarthritis treatment. The two other groups received standard osteoarthritis treatment along with either heat therapy or cold therapy.

The heat therapy group applied heat to the affected knee twice daily for 3 weeks, while the cold therapy group applied cold to the affected knee twice daily for 3 weeks.

At the end of the study, both groups showed a mild reduction in pain and a mild improvement in knee function. However, these effects were not significantly stronger than those the control group experienced.

Improved brain health

One [2018 study](#) investigated the effects of hot water immersion on brain-derived neurotrophic factor (BDNF). BDNF is a protein that has several important functions in the brain and spinal cord, including:

- promoting the survival of nerve cells
- promoting the growth, maturation, and maintenance of nerve cells
- promoting learning and memory

The study was small, involving just eight men. One group took a 20-minute bath in hot water with a temperature of 107.6°F (42°C). The other group took a 20-minute bath in warm water with a temperature of 95°F (35°C).

Participants who took the hot bath had significantly higher BDNF levels. The researchers concluded that hyperthermia induced by the hot bath increased the production of BDNF.

Improved sleep

Organizations such as the [National Heart, Lung, and Blood Institute](#) recommend taking a hot shower or bath before bed as a way to improve sleep.

A hot shower may improve sleep quality due to the combination of how the body relaxes while bathing and the fall in body temperature afterward.

When to take hot or cold showers

Doctors sometimes recommend heat or cold therapy for people with muscle or bone injuries. However, it is not yet clear whether or not a cold or hot shower has the same benefits as applying an ice or heating pad.

Some people with [arthritis](#) enjoy hot showers in the morning because it helps them feel mobile. However, cold showers are beneficial for injuries accompanied by inflammation.

For taking a hot shower to improve sleep, a 2019 study found that the best time to take a shower or bath was [1-2 hours](#) before sleeping.

People with [eczema](#) and other rashes should avoid hot showers altogether, as these can further dry out the skin.

Potential risks

Long baths or showers that are too cold or too hot could excessively lower or raise a person's body temperature.

If a person's body temperature drops below [89.96°F \(32.2°C\)](#), a person may experience:

- a decreased breathing rate
- a drop in blood pressure
- heartbeat irregularities
- decreased consciousness

If the water is too hot, people are at risk of burns and heat [stroke](#).

As long as a person avoids extreme temperatures, taking cold and hot showers can provide certain health benefits. Hydrotherapy is generally a [safe](#) strategy and does not cause dependence or any noticeable side effects.

Further studies will be necessary to investigate and confirm the long-term effects of taking cold and hot showers.

Summary

Most of the research into the health effects of cold and hot water has involved immersion therapy. Studies seem to suggest that both cold and hot temperatures can have beneficial, but differing, effects on the body.

It is not clear if taking a shower produces the same effects as immersion therapy. If it does, a person should consider the type of effects they want to achieve before deciding whether to take a cold or hot shower.

As with water immersion therapies, taking a cold or hot shower is likely to be safe. However, people should avoid taking extremely cold or extremely hot showers, as doing so could be harmful to health.

MedicalNewsToday, posted on [SouthFloridaReporter.com](#), Jan. 19, 2020