

# Cold Water Immersion Therapy: Benefits and Risks [C1]

Gli effetti sulla salute dei bagni in acque molto fredde sono ben documentati, ma fino a che punto possono essere pericolosi e quali sono i benefici rispetto ai rischi?

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A cold shower a day keeps the doctor away, according to Wim Hof, the Dutch extreme athlete and [self-styled](#) Iceman. For Hof and other advocates, cold water immersion is a panacea for [ailments](#) from arthritis and Crohn's disease to depression and headaches. But the death of Kellie Poole, a thirty-nine-year-old whose heart stopped during a cold water immersion therapy session in Derbyshire last year, has raised questions about the safety of [plunging into](#) icy water, with the coroner expressing concern this week about the lack of regulation. So do the [purported](#) health and wellbeing benefits of cold water immersion [outweigh](#) the risks? "One of the main positives that people claim is that it awakens you, sets you up for the day, makes you feel [enlivened](#)," says Professor Mike Tipton, of the Extreme Environments Laboratory at the University of Portsmouth. "And it's unsurprising that plunging a tropical animal, which is what we are, into cold water will surprise them." This feeling of alertness is caused by the cold shock response, where a sudden fall in skin temperature causes a [surge](#) in adrenaline, noradrenaline and cortisol immediately after immersion. People will have their own view on whether diving into a cold pond is a positive, [invigorating](#) experience, but if this is the benefit you're seeking, a two-minute immersion is sufficient, according to Tipton. There's no need to [endure](#) hours in an ice bath. "The longer you stay in the more likely you're going to be exposed to [downsides](#) like hypothermia," he said. Some claim more [enduring](#) mental health benefits, which Tipton says are plausible, but mostly anecdotal at this stage. His lab [oversaw](#) immersion sessions for a woman with severe depression who credited them for her recovery, for instance. There are also suggestions of broader physical [pinpointing](#)al benefits to the immune system and anti-inflammatory effects. One Dutch study, with three thousand participants, found that people who took a daily cold shower (after a warm shower) [were off work](#) with self-reported sickness 29 per cent

less than those who had a warm shower only. But this study looked at the [outcome](#) rather than the physiological mechanisms. Tipton and colleagues also attempted to study the potential benefits and found that people who went outdoor swimming suffered fewer [respiratory tract](#) infections than their partners, who were not swimmers, but the same benefits were seen in people who went swimming indoors. “There is evidence of benefits, but we’re in the [realms](#) of [snake oil](#) if you start telling people that it’s a cure all that will solve all your problems,” he added. The physiological effects of the cold shock response can also be dangerous. The sudden cooling causes a [sharp gasp](#) followed by a period of uncontrolled hyperventilation. “A full breath of air can be two to three litres and a lethal dose of water is 1.5 litres,” said Tipton. “You can have crossed the lethal dose of water for [drowning](#) before you get back to the surface.” At the same time, the cold shock response causes the [heart rate](#) to increase and peripheral [blood vessels](#) to close. “It’s like shutting all your radiators off and turning your [heating](#) up at the same time,” says Tipton. “The blood pressure goes up, which is dangerous for people who are hypertensive.” About 60 per cent of cold water immersion deaths occur within the first minutes of immersion and so scientists recommend doing as little as possible – float or stand – for the first couple of minutes in the water, after which the cold shock response [subsides](#). There is also a difference in the physiological effects depending on whether the face goes into the water. While the cold shock response is [triggered](#) by sensors on the body’s skin, receptors on the face trigger the so-called “diving response”, which acts to slow down the [heart rate](#). When a person puts their face into a bowl of water, their [heart rate](#) can slow to as little as 25 or 30 beats a minute. During a full body plunge, the heart has competing inputs telling it to speed up and slow down simultaneously, which one study found [triggered](#) an arrhythmia in about 80 per cent of volunteers who [ducked](#) under the water for a ten-second [breath-hold](#). In most cases, this is [harmless](#), but for those with pre-existing heart [conditions](#) could turn into a more serious episode. A large part of the risk can be mitigated by a progressive approach to cold water immersion, according to Professor Greg Whyte, of Liverpool John Moores University, who has produced a two-week cold water exposure plan, [Sponge](#) to Plunge, with the Royal Life Saving Society (RLSS). The body habituates to the cold shock response, with as few

as five two-minute immersions reducing the physiological response by as much as 50 per cent and the habituation appears to last for several months. The uninitiated are advised to start with face immersion or a cold shower before trying full immersion or an outdoor swim. “It’s really about a progressive approach,” said Whyte. “There’s been a worrying trend for people launching themselves [headlong](#) into it ... and some TV series have glamorised and sensationalised that.” Whyte, believes the marginal evidence for health benefits of cold water immersion reflects that this is a new area of study rather than a lack of credibility. “We can be [fairly](#) secure in the fact there are health benefits — not only in terms of physical and mental health but, because it’s often a community activity, in terms of social health. But it’s always [caveated](#) by the fact that what you must do is do it safely.”

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# Glossary

- **purported** = presunti
- **enduring** = duraturi
- **blood vessels** = vasi sanguinei
- **outweigh** = superare
- **downsides** = aspetti negativi
- **heating** = riscaldamento
- **were off work** = assentarsi dal lavoro
- **outcome** = risultato
- **respiratory tract** = vie respiratorie
- **heart rate** = frequenza cardiaca
- **triggered** = scatenare
- **self-styled** = sedicente
- **invigorating** = rinvigorente
- **oversaw** = supervisionare
- **conditions** = patologie
- **Sponge** = spugna
- **breath-hold** = apnea
- **headlong** = di testa
- **sharp gasp** = brusco respiro profondo
- **ducked** = immergersi
- **caveated** = avvertire
- **plunging into** = immergersi
- **surge** = aumento
- **pinpointing** = individuare
- **realms** = campi
- **snake oil** = panacea
- **drowning** = affogare
- **subsides.** = diminuire
- **harmless** = innocuo
- **ailments** = malattie
- **enlivened** = animato
- **endure** = sopportare
- **fairly** = abbastanza