

# Cold water swimming might ease depression

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Open water swimming shown to alleviate depression in one woman, now more research needed to see if it could help others. Credit: [Good Free Photos](#)

For the first time it has been shown open water swimming could be an effective treatment for depression.

A case study published in *British Medical Journal Case Reports* suggests open water swimming might help people with [depression](#) be able to give up their medication and live happier lives.

The study, led by television doctor Chris van Tulleken, of University College London, and co-authored by two University of Portsmouth scientists, highlights the case of a woman with severe anxiety and depression who once she began open water swimming, immediately started feeling better.

She continued to swim and, as the weeks went by, her symptoms of depression and anxiety faded to the point she was able to stop taking medication entirely.

Two years on, she remains drug-free, and she's still swimming.

The study is the first to examine open water

therapy to treat depression. The case was part of a television programme made by Dr. van Tulleken "The Doctor Who Gave Up Drugs."

He worked with Dr. Massey and Professor Tipton, a world leader in human physiology and particularly in how the human body reacts and behaves when cold. Both work in the University's Department of Sports and Exercise Science's extreme environment laboratory.

The case study follows Sarah, a 24-year-old woman with [major depressive disorder](#) and anxiety, for which she had been on medication since she was 17. When she became a mother, she was determined to try and find a way of living without symptoms or drugs.

She began open-water swimming with Dr. van Tulleken and Dr. Massey, then continued once a week swimming with others. She saw an immediate improvement in her mood after each swim and, as the weeks went by, her symptoms lessened. She gradually eased off her medication until she no longer took any.

In a BBC report on the study, Dr. van Tulken said it had long been known outdoor exercise and the companionship of fellow swimmers can improve symptoms of depression and anxiety, but the Portsmouth team believed there might be an effect of cold water immersion itself.

The report continues: Immersion in cold water evokes a [stress response](#): a set of physiological and hormonal reactions that evolved millions of years ago to cope with a wide range of potential threats.

Animal attack, jumping in cold water and sitting an exam all elicit a similar response. Heart rate, blood pressure and breathing rate all increase and stress hormones are released. But if you immerse yourself only a few times in water of 15C or less, this stress

response is reduced.

Professor Tipton and Dr. Massey have shown that the response to the stress of exercising at altitude is also diminished. This is called "cross-adaptation," where one form of stress adapts the body for another. There is increasing evidence linking depression and anxiety with the inflammation that accompanies a chronic stress response to the physical and psychological problems of modern life.

Through cross-adaptation, [cold water](#) swimming may be able to reduce this chronic [stress response](#) together with the inflammation and mental health problems that affect so many people.

**More information:** Christoffer van Tulleken et al. Open water swimming as a treatment for major depressive disorder, *BMJ Case Reports* (2018). [DOI: 10.1136/bcr-2018-225007](https://doi.org/10.1136/bcr-2018-225007)

Provided by University of Portsmouth

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