



The healing power of the ocean

Oceans produce half of the world's oxygen and absorb one-third of human-caused carbon dioxide emissions. Who doesn't love a stroll on the beach or a swim in the waves? Being near the ocean provides a bounty of physical and psychological health benefits that you may not be aware of.

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We stare across its horizons endlessly, exercise by its shores and flock there for holidays. With 50 per cent of the world's population living by the ocean, what is it about the sea that relaxes and entrances us?

People haven't always flocked to the ocean, though. Dr Robert Ritchie, a senior research associate at the Huntington Library in San Marino, California, describes how, during the 17th century and before, the sea was

generally perceived as a frightening place filled with monsters and had the potential to flood the land. The only people who went into the sea were peasants when they were desperate to escape the heat.

This changed during the 18th century. At this time, the British upper classes were searching for remedies to a wide variety of illnesses like fever, digestive problems, nervous tics and melancholia, and the cold sea became the new cure-all wonder drug. It was believed that

the shock of cold water stimulated the body promoting circulation of the humours and reduction of tumours. By the mid-18th century, a standard medical treatment involved dunking society ladies in the freezing sea repeatedly in a flannel smock until the cold and suffocation caused panic. They were then revived with back rubs, foot warmers and a cup of tea. This was thought to calm anxiety and restore balance. Some even drank the seawater — sweetened with honey or diluted with milk!



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Those 18th century doctors were on the right track — maybe not with drinking the seawater part — but certainly in endorsing the sea as a source of healing, as science is now supporting its healing influence both physically and emotionally.

The sea and our body

The high mineral content of the sea is thought to be good for the skin and body. Minerals such as magnesium, calcium, sodium, sulphate and chloride are in higher concentrations in seawater and are thought to help with myriad skin conditions including eczema and psoriasis. Given that flushing your nose with saltwater has been shown to help sinusitis, a clean ocean may have similar effects.

Frequent swimming in cold water has also been thought to activate receptors under the skin releasing hormones like endorphins, adrenaline and cortisol, increasing feel-good chemicals like serotonin and dopamine as well as promoting immunity.

Thalassotherapy, where “thalassa” means sea, refers to treatments using seawater, seaweed, mud, sand and all substances coming from the sea used for curative and preventative purposes. The therapy should be at or near the sea and may be medically supervised. When seawater is heated to 33–37°C, it is thought that the iodine, manganese, zinc and iron are better able to absorb into the skin and body, improving oxygen supply, stimulating circulation, lymphatics, immunity and the muscular system, as well as detoxifying and reducing inflammation. Research supports the use of thalassotherapy in improving pain in fibromyalgia and sleep and geothermal seawater has been found to improve psoriasis.

We also mustn't forget that the sea is a massive oxygen-producing engine with its phytoplankton producing 50–85 per cent of the world's oxygen. When we're near the ocean, the boost to our oxygen

supplies is likely to make us feel more energised. With ocean oxygen levels decreasing approximately 2 per cent worldwide and in some areas by as much as 40 per cent over the past 50 years, this is an ominous reminder of just how critical the threat of global warming is.

The sea and our mood

Emotionally, there's a wealth of literature emerging about how spending time near the ocean alleviates mental health issues and generally invokes a calm, positive mental state.

Negative ions

Positive ions or free radicals are ions with unpaired electrons. They “steal” electrons from healthy cells to neutralise their own charge, causing cellular damage. Our modern world is oversaturated with positive ions and severe air pollution. In the absence of enough negative ions, our health is adversely affected. Our moods are altered from our natural “high” to increased levels of stress, depression, insomnia and fatigue. The ocean is reported to contain tens of thousands of negative ions, while

the average home or office building in comparison may contain a few hundred or sometimes no negative ions.

A recent review of the research on the effect of negative ions found that negative ionisation was associated with lower depression, and this association was stronger at higher levels of negative-ion exposure. The positive effects of exposure to high-density negative ions were found in people with chronic depression and seasonal affective disorder. Research also shows a link between negative ions, reduced stress and increased lifespan. Given that the surface of the earth is negatively charged, walking barefoot in the sand at the beach is likely to further boost negative ionisation.

Blue mind

Marine biologist Wallace J Nichols recently wrote a book drawing on neuroscience and human behaviour to explore the effect of the ocean on our psychological state. He calls this state “blue mind”, referring to a mildly meditative, relaxed state we often experience in, on or under water. Nichols, who lives near Santa Cruz, California, believes that the best way to protect the oceans is to make people truly value the good feelings that arise from being around water.

In an interview with *The Washington Post* in 2014, Nichols says when we step into nature and go near the ocean, “a different brain network activates. That brain network is available for a completely different kind of quality of thought which is much more introspective and self-referential. Oftentimes it leads to feelings of connectedness and that can lead to innovative thoughts.”

Unpublished results from brain imaging studies suggest people's minds wander a lot more when they look at the ocean. Dr Mathew White from the University of Exeter told the BBC, “What we're finding,





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Grounding yourself at the ocean

When you are at the sea, engage your senses. Begin by noticing the things you can see and name them: the stretch of golden sand, sunlight on the water, seagulls floating on the breeze. Move to noticing several things you can hear, like the waves lapping along the shore. What you can smell? The clean salty air? And, finally, what you can feel with your sense of touch? The warmth of the sun on your skin? The breeze on your face? It helps to focus on the pleasure of these sensations as you do this. Engaging your senses in this way makes you more present and grounds you.

When you can't visit the sea

If you don't live near the ocean, you can still reap some benefits. Put paintings or photos of a beautiful ocean in your home or listen to the sounds of waves as you go to sleep. There are also sleep apps which do this, such as *Sleepo*.

Drawing on your imagination can also be a powerful way to access the sea's calming effect. Try the following exercise: Think of a cue word for your ocean experience. It could be "ocean" or "peace". Then simply close your eyes and be there. Imagine yourself standing on the sand and move through each of your senses. What you can see in the foreground? What you can hear, smell and touch? Notice how being there makes you feel as well as where you physically feel those sensations in your body. You might notice a lightness or warmth in your chest, or a relaxed feeling in your shoulders. Intensify this good sensation in your body. If it was a 6/10, make it a 10/10. Then, imagine yourself back on the ocean shore and engage your senses again, this time making everything around you brighter, clearer and more vivid and real. Practise this visualisation two or three times, then use your cue word whenever you would like to transport yourself to the ocean and engage your senses again.

if anything, is a lot less activity in the brain when [pictures of] the sea is being shown." It's perhaps no surprise then, that if our brain activity drops when we look at the ocean, we feel more relaxed.

Sound

What is it about the sound of water that is so soothing? Orfeu Buxton, associate professor of bio-behavioural health at Pennsylvania State University, says it's about the character of the sound. While they might be loud, the slow crescendo of waves crashing is more gradual and gentle rather than the sudden sound of an alarm or scream, which goes from zero to high in volume in an instant. Even when a sound is soft, if it is sudden and juxtaposed with silence, it is more likely to startle and wake people from sleep. In contrast, the sounds of the ocean are never sudden. Orfeu says, it's like the whooshing of the sea is saying, "Don't worry, don't worry, don't worry," and these are non-threatening sounds, which is why they calm people.

Ocean therapy programs

Given its relaxing benefits, it's no wonder people are turning to the sea as a form of therapy. In 2003, Carly Rogers, a Los Angeles lifeguard and graduate student at the University of Southern California, began developing an Ocean Therapy group that taught soldiers how to surf followed by group discussion. Since then more than 1000 soldiers have been treated in the ocean therapy program.

In 2014, Rogers contributed to a study of the program published in the *American Journal of Occupational Therapy*. Of the 11 war veterans that completed the study, all reduced their symptoms of post-traumatic stress disorder (PTSD) and depression. This was with just five or less sessions of surfing over five weeks.

Josh Izenberg, a surfer and award-winning documentary film director, also recently explored the power of "surf therapy" to assist with PTSD in his documentary *Resurface*. He outlined reasons in an interview with *Psychology Today* for why he thinks surf therapy is so therapeutic. He says the ocean has the cathartic ability to wash away negative feelings by putting them in the context of a much bigger more powerful picture. It also puts you in "the zone", he says, a place of singular focus where your daily stress can dissolve. It forces you to stay present and provides a burst of adrenaline. This adrenaline provides a sense of novelty and excitement that tends to be absent for veterans in the daily grind of civilian life. He says surfing also requires a high level of physical exertion so it can be exhausting and help you sleep better at night, which is a huge plus for veterans who frequently suffer from poor sleep and nightmares.

In Australia, the following surf therapy programs are available: Ocean Heroes in Western Australia uses surf therapy to help those living with autism. Ocean Mind provides surf therapy for young people experiencing mental health issues, isolation and disabilities in Victoria. Finally, Waves of Wellness in New South Wales runs surf therapy for people experiencing mental health issues.

So, now when you head to the ocean and are seduced by its call, you can be assured that it's not just all in your imagination. The ocean really is doing you a whole lot of good. 🌊

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