



Natures Stories

What does nature
do for US?



Birdsong

A study by the Department of Psychology at the University of Surrey revealed what amazing benefits birdsong can have on our everyday lives. Already used in hospitals and airports to lift moods and raise awareness, birdsong is one of nature's most beneficial gifts.

Stress relief - We are instinctively programmed to trust that birdsong means safety, only changing to harsh alarm calls if a predator is around. Birdsong induces the instant sensation of calm and relaxation. Any exposure to birdsong can leave us feeling refreshed and revitalised, helping relieve tension and encourage mental positivity and well-being.

Improve focus and awareness - Birdsong can also be used to help stimulate cognitively whether to improve concentration in the workplace or personal projects at home. The natural sound of birdsong helps us to remain awake and alert during the hours of sunlight.

A study in Liverpool examined the effects of the 'post-meal slump' on school pupils after lunch when blood sugar levels drop causing drowsiness and affecting concentration. When birdsong was introduced concentration levels dramatically increased.

Recordings of birds singing can be just as effective as hearing birdsong naturally outside.

[Ratcliffe, E., Gatersleben, B., & Sowden, P. T, 2015](#) | [Ratcliffe et al, 2013](#)

Importance of proximity to Green Space



Mental Health

Living in an area with lots of greenspace and having access to nature near home can provide a **buffer against mental stress and promote a sense of satisfaction** with one's life.

[de Vries et al 2003](#) | [Maas et al 2009](#)
| [Van den Berg et al 2010](#)
| [White et al 2013](#)



Stronger Communities

Research shows that an **increasing amount of green space** correlates with **stronger social ties** reported among neighbours, **greater prosocial activity** and **environmentally responsible behaviours**.

Kuo 2003 | [Kuo et al 1998](#) | Sommer 2003 | [Sullivan, Kuo et al 2004](#)



Lower Crime

The impact of **local nature** on **neighbours' mutual support discourages** crime, even in lower socioeconomic areas. More green space or farmland accessible in neighbourhoods accounts for **4% less crime**.

.. [Weinstein et al 2015](#)



Better physical health

Research found that **people living in city areas with more trees** showed a **higher heart and metabolic health** equivalent to people on **£16,000 higher income** or **1.4yrs younger**.

[Kardan et al 2015](#)

Nature's negative ions

Negative ions are tasteless, odourless and invisible molecules that we inhale when we are in environments that contain moving water, like rain. Once the negative ions reach our bloodstream, they are believed to produce biochemical reactions that help to relieve stress, alleviate depression and even boost our energy.

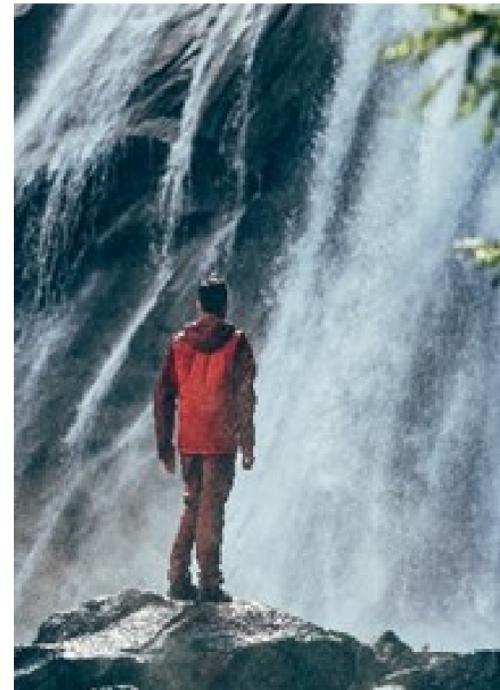
Air circulating around moving water, the mountains and the beach contains tens of thousands of negative ions — unlike a closed home or office, with all its electronics that produce positive ions, damaging free radicals which are not good for our health.

The action of the pounding surf creates negative air ions and we also see it immediately after spring thunderstorms when people report lightened moods.

A study by Columbia University used negative ion generators to see their effect on people with winter and chronic depression. The study showed that these generators helped relieve depression as much as antidepressants.

[Terman M, Terman JS, 2006](#) | Howard PJ, 1994

Benefiting



You

Mud....

Playing in mud, or little bit of gardening a day could get rid of your serious blues. Soil microbes have been found to have similar effects on the brain and are without side effects and chemical dependency potential. The natural antidepressant in soil and make you're happier and healthier.

Mycobacterium vaccae is a natural antidepressant in soil, the substance under study and has indeed been found to mirror the effect on neurons that drugs like Prozac provide. The bacterium is found in soil and may stimulate serotonin production, which makes you relaxed and happier. Studies were conducted on cancer patients and they reported a better quality of life and less stress.

Lack of serotonin has been linked to depression, anxiety, obsessive compulsive disorder and bipolar problems. The bacterium appears to be a natural antidepressant in soil and has no adverse health effects. You can get these microbes by just playing in dirt.

The Antidepressant microbes in cause cytokine levels to rise, which results in the production of higher levels of serotonin. If you inhale the bacteria, have a lot of contact with it and get it into your bloodstream when there is a cut or other pathway for infection. The natural effects of the soil bacteria antidepressant can be felt for up to 3 weeks.

Mycobacterium antidepressant microbes in soil are also being investigated for improving cognitive function, Crohn's disease and even rheumatoid arthritis.

[Lowry et al, 2007](#)

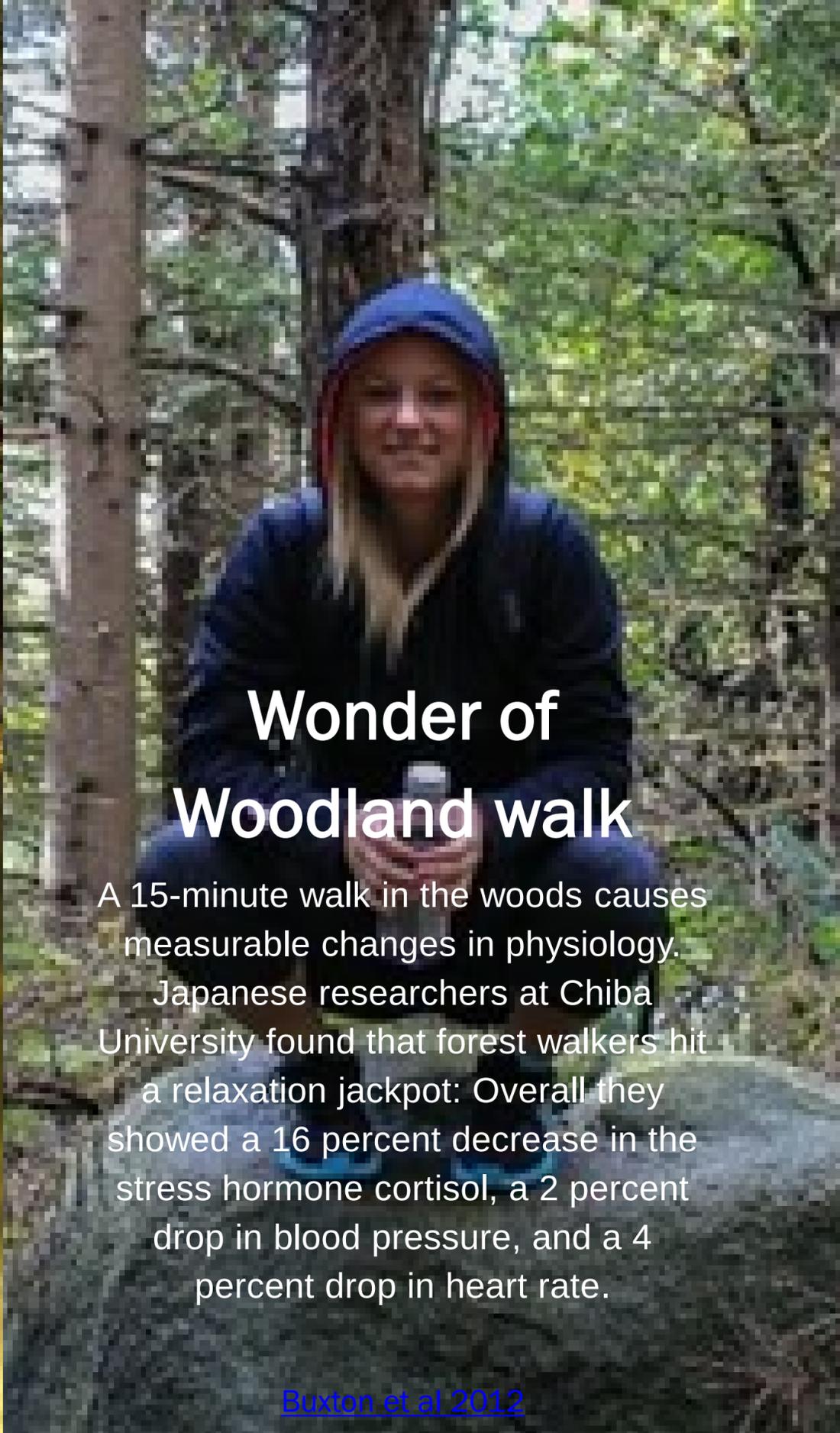




Nature's Sounds aid sleep

Many abrupt noises trigger our evolutionary response of the brain to threats. Ocean waves, rainforest and rain include fluctuations in amplitude and are non-threats, which work to calm people in their sleep. Buxton the main researcher said. "It's like they're saying: 'Don't worry, don't worry, don't worry.'"

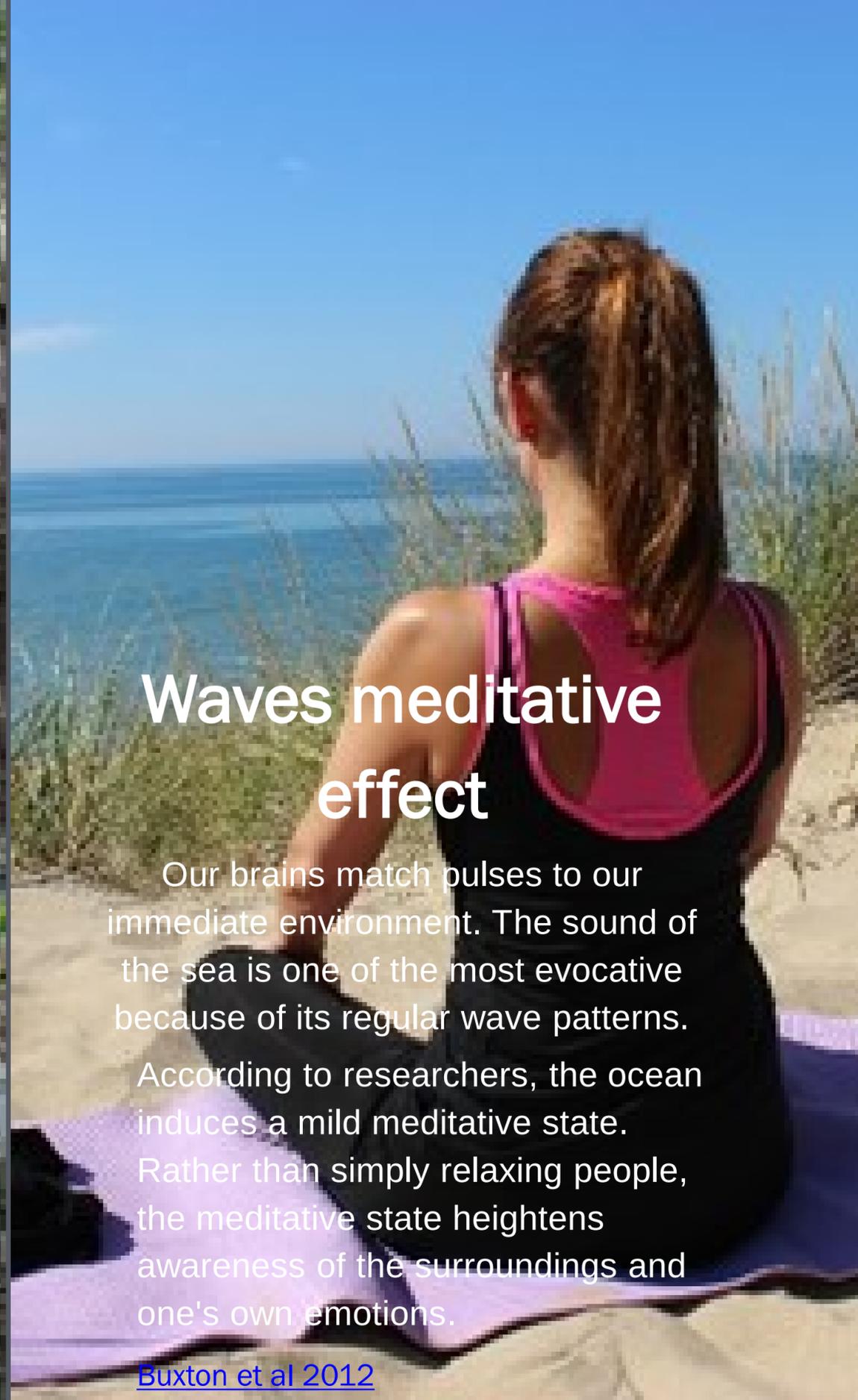
[Buxton et al 2012](#)



Wonder of Woodland walk

A 15-minute walk in the woods causes measurable changes in physiology. Japanese researchers at Chiba University found that forest walkers hit a relaxation jackpot: Overall they showed a 16 percent decrease in the stress hormone cortisol, a 2 percent drop in blood pressure, and a 4 percent drop in heart rate.

[Buxton et al 2012](#)



Waves meditative effect

Our brains match pulses to our immediate environment. The sound of the sea is one of the most evocative because of its regular wave patterns. According to researchers, the ocean induces a mild meditative state. Rather than simply relaxing people, the meditative state heightens awareness of the surroundings and one's own emotions.

[Buxton et al 2012](#)

Just a view of nature can aid recovery

Patients viewing a tree or water scene were less anxious during the postoperative period than patients assigned other pictures and control conditions. These patients suffered less severe pain and shifted from strong narcotic pain drugs to moderate strength analgesics much faster.

By contrast, an abstract picture produced higher patient anxiety than control conditions of no picture at all.

Recovery of gall bladder surgery patients who had a bedside view of nature, compared to those looking at the wall, had shorter hospital stays and suffered fewer minor post-surgical complications (i.e persistent headaches or nausea). Patients with the view of trees more frequently received positive written comments from staff about their conditions in their medical records (“patient is in good spirits”) and needed far fewer doses of strong narcotic pain drugs.

Ulrich, 1984 | Ulrich, 2002





SUN



1. It cheers you up

SUNSHINE boosts levels of serotonin - the body's natural happy hormone. That's why we tend to feel happier and more energetic when the sun shines. Regular sun can stave off moderate depression.

[Fraikin et al 1989](#) | [Schulz et al 2002](#) | [Spindelegger et al 2012](#) | [Praschak-Rieder et al 2008](#) | [Lambert et al 2002](#)

2. Reduces heart disease

A STUDY showed that people in the UK are more likely to die of heart disease in winter than in summer, which is believed to be because of low levels of vitamin D. Where you live matters. Blackpool has 27 per cent more hours of sunshine a year than Burnley - and 9 per cent fewer deaths from coronary heart disease.

Cholesterol levels rise in winter, because our vitamin D levels fall. Dr Holick found that exposing people with high blood pressure to UVB rays in a tanning salon lowers blood pressure by similar amounts as prescribed drugs.

[Grimes et al 1996](#) | [Hypponen 2007](#) | [Holick, 2007](#)

3. Prevents diabetes

VITAMIN D may help to prevent the onset of diabetes. A study in Finland found children given a vitamin D supplement for several years had an 80 per cent reduced risk of developing Type I diabetes as young adults.

A deficiency in vitamin D is also thought to contribute to Type II diabetes, according to a recent study by Dr Barbara Boucher at St Bartholomew's and the Royal London Hospitals.

[Hyppönen 2001](#) | [Boucher 2011](#) | [Boucher 2014](#)

4. Beats SAD

SEASONAL Affective Disorder (SAD) - or the winter blues - is a depression specifically caused by lack of sunlight. Lightboxes can be used to treat it, although increased exposure to natural sunlight is more beneficial. Get out for an hour's walk in the morning during autumn and winter months, and sit outside for 15 minutes a day in summer.

[Spindelegger et al 2012](#) | [Praschak-Rieder et al 2008](#) | [Lambert et al 2002](#)



SUN

5. Relieves aches and pains

Being out in the sun helps to warm the body's muscles and eases stiffness, reducing the pain caused by inflammatory conditions such as arthritis.

[Merlino et al 2004](#)

6. Prevents cavities & helps stronger bones

THE sun could even help to keep your teeth strong. A dental study found the prevalence of cavities was greater in children from areas with less than average sunshine.

The body needs sun exposure to manufacture Vitamin D (skin cells derive it from sunshine). Vitamin D enhances the absorption of calcium from the intestine and the utilization of calcium and phosphorus in the body, so sunshine indirectly contributes to maintaining strong and healthy bones. Early research into rickets highlighted the role of Vitamin D in bone health.

[Grant 2011](#) | [Russell 2012](#)

7. Helps prevent MS

MULTIPLE sclerosis (MS) is a disease of the central nervous system, leading to tremors and even paralysis. The cause is not known but scientists have noted that exposure to sunlight in childhood appears to dramatically reduce the risk of developing this disease in later life. Scientists have also noted that the incidence of MS is lower in sunnier countries.

[Van der Mei et al 2003](#) | [Mahon et al 2003](#)

8. Reduces risk of cancers

ALTHOUGH over exposure to the sun increases your risk of skin cancer, vitamin D provided by sunlight can actually help to significantly reduce your risk of other types of cancer. Studies have found that people exposed to high levels of sunlight were significantly less (50% less) likely to die from breast and bowel cancer. A similar effect was seen in bladder, womb, oesophagus and stomach cancer.

[Thorne & Campbell 2008](#) | [Deeb et al 2007](#) | [Mareno et al 2005](#) | [van der Rhee et al 2016](#) | [Mohr et al 2014](#)



9. Boosts fertility

THE sun reduces levels of the hormone melatonin which suppresses fertility, so more likely to conceive in summer. Sunlight makes you more fertile and increases the length of your fertility. A study in Turkey discovered that women who get less than an hour of sunlight a week reach menopause 7 to 9yrs earlier. Sunlight also boosts testosterone levels in men by 20%.

[Myerson & Neustadt 2011](#) | [Genç et al 2012](#) | [Svartberg et al 2002](#)

10. Beats period problems

ABOUT disease which causes abnormal periods, unwanted body hair and in one in five women of childbearing age suffer from polycystic ovary fertility. Half the participants treated with vitamin D and calcium recovered normal periods and two became pregnant. Women with premenstrual syndrome are likely to be deficient in vitamin D.

[Tehrani 2014](#)

11. Eases Inflammatory Bowel Disorders

PEOPLE with Crohn's disease or other inflammatory bowel disorders (IBD) generally have low levels of vitamin D. Sunlight is the best way to boost vitamin D in these cases. Although it is available in some foods (including meat, eggs, oily fish and some breakfast cereals), levels are low and poor absorption of fat - a common complication of inflammatory bowel disease - may make it difficult for sufferers to absorb vitamin D from their diet.

[Butcher 2012](#) | [Ananthakrishnan 2013](#) | [Ananthakrishnan et al 2013 & 2014](#) | [Reich et al 2014](#) | [Cantorna et al 2014](#) | [Zatar 2014](#)

12. Less sleepy and more energy

MELATONIN also regulates sleep, so having lower levels of this hormone in your body gives you more get up and go. This is why you need less sleep in summer but still feel livelier. Plus, being woken by natural light rather than an alarm clock helps you feel more positive.

[Partonen et al 1996](#)

Sunshine

13. Helps skin conditions

EXPOSURE to the sun can help to heal such skin conditions as psoriasis, acne and eczema. Regular controlled sun exposure is often prescribed for sufferers. For serious cases, contact your GP. For minor cases, try exposing affected areas of skin to the sun for up to 30 minutes before covering up or slapping on the sunscreen - but make sure you never burn.

[Mead 1990](#)

14. Boosts your immune system

SUNLIGHT encourages the production of white blood cells, which help to boost your immune system and fight infection. Vitamin D induces cathelicidin, a polypeptide that effectively combats both bacterial and viral infections.

[Lange et al 2009](#) | [Gombart 2009](#)

15. Helps you lose weight

HIGHER levels of serotonin in our bodies not only makes you feel happy but it also suppresses the appetite, so you'll eat less in warmer weather.

[Curzon 1990](#)



16. Sun exposure aids brain disorders

Low vitamin D levels increase risk of Schizophrenia, Alzheimer's disease and depression. A high dose of vitamin D per day, during the first year of a child's life, can reduce the risk of developing schizophrenia. Increased light exposure consolidates sleep and strengthens circadian rhythms in severe Alzheimer's disease patients.

In Parkinson's, light exposure (1000–1500 lux, 1 hour daily for 2 weeks) improved mood, social activity and motor function and, in some cases, reduced medication for dopamine replacement by 13%–100%.

[Schneider et al 2000](#) | [McGrath et al 2004](#) | [Johnstone et al 2016](#) |
[Cawley et al 2013](#)

17. Sunlight is a Natural Pain Killer

One study found that post-surgery exposure to sunlight decreases stress and pain. Thus minimizing the need for painkillers by 21% .

The pain killing effects of sunlight are probably due to its ability to increase beta-endorphins in the skin. Beta-endorphins are natural pain killers. In one study, 88% of people with chronic pain had Vitamin D deficiency

[Walch et al 2005](#) | [Saunders 2013](#) | [Shipton & Shipton 2015](#)

18. Sunlight is Good For Your Eyes

Studies have shown that children who get more exposure to natural sunlight have a lower risk of developing myopia – short-sightedness.

[Repka 2015](#)



sunshine



Care for others & nature

Connected

Studies show that time spent in nature makes humans feel more connected to each other and the world at large. Stronger feelings of belonging give both adults and children more reason to protect the world in which they live.

But the science goes even further. Dr. Nancy Wells, an environmental psychologist at Cornell University, has produced multiple studies on the relationship between time spent in nature and the will to conserve it. Her 2006 study published in *Children, Youth and Environments* even suggests that childhood participation with nature may set individuals on a trajectory toward adult environmentalism.

The effects are all the more profound if one's time in nature involves an educational experience or volunteer effort. For instance, someone who volunteers to clean up a river and, in the process, learns about the importance of clean watersheds, is more likely to put other efforts toward reducing water pollution through individual actions or activism!



Benefits of climbing trees



Climbing a tree improves cognitive skills & memory – researchers discovered the brain is constantly calculating and evaluating spatial awareness, balance and orientation increasing working memory capacity by 50 percent. The same researchers found that people with high working memory are more optimistic and hopeful about the future compared to those with low working memory.

[Alloway & Alloway, 2015](#)

Boosts confidence & mental health – From analysis of many studies researchers found no negative effects of risky play, and most found evidence that kids who engaged in "risky" adventures were more active, more confident or more psychologically healthy.

[Brussoni, Olsen, Pike & Sleet, 2012](#)

Tree climbing develops you physically in a huge way - A full body workout. It improves muscular strength, endurance, flexibility, stability and balance. Children are becoming weaker, less muscular and unable to do physical tasks that previous generations found simple. From 1998 and 2008 10yr olds arm strength fell by 26% and grip by 7%, with half the previous number able to support their own weight. BMI was the same, but the ratio of fat to muscle had increased. Updated research in 2015, shows a worsening picture.

[NICE, 2008](#) | [Cohen et al, 2011](#) | [Sandercock, 2001](#)



*More children are now admitted to British hospitals for injuries incurred falling out of bed than falling out of trees.
A survey in 2011 found that a third of children aged between six and fifteen had never climbed a tree.*

Indoor Plants

Clean air and Carbon Dioxide Reduction - Live indoor plants demonstrate nature's hearty resolve and process of **cleaning** surrounding **air** (some species have the ability to **remove harmful compounds** such as benzene & hexane).

Concentration and productivity reduce when high levels of carbon dioxide are present indoors, sometimes producing drowsy employees. During photosynthesis plants extract carbon dioxide and replace it with oxygen. Where there's plenty of natural light, this process is amplified - Wolverton | Wood & Burchett,

Less Stressed and More Productive - Plants significantly lower workplace stress and enhance worker productivity. Participants working in an environment with plants present were 12 percent more productive and less stressed than those who worked in an environment without plants. – Ulrich et al, 1991| Russell | D Lohr

Flowers and Plants Inspire our Creativity - In a work environment employees demonstrate more innovative thinking, generate more ideas and creative, flexible solutions to problems in the office environment that included flowers and plants.

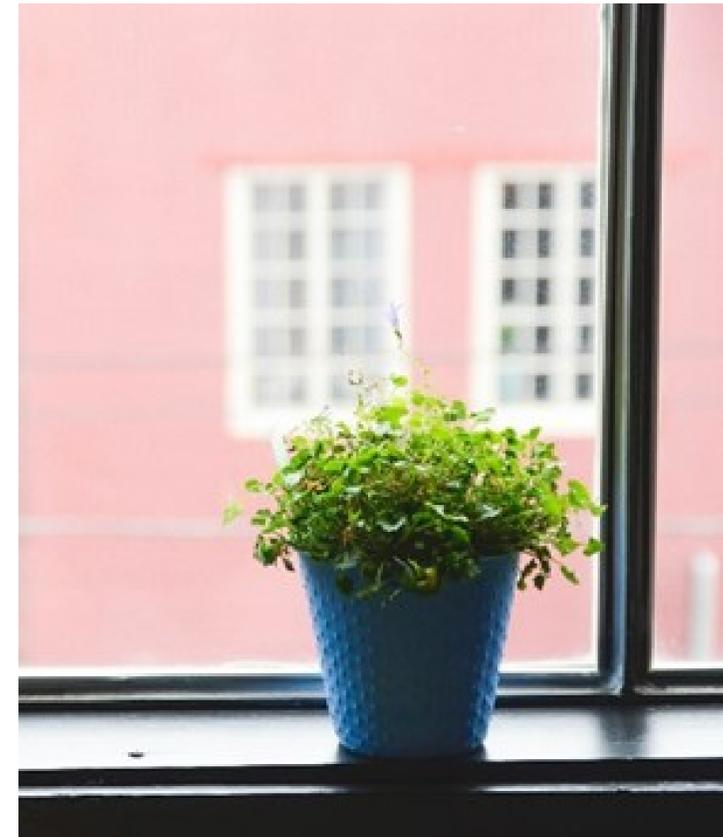
- Shibata and Suzuki 2002 | Ulrich et al, 1992

Plants Contribute are Important to a Healthy Lifestyle - Real life office studies have proven the direct relationship between the frequency of clinical health complaints and the presence of plants.

- [Fjeld et al. 1998](#).

Visual contact with nature impact on health and well-being

- [Grinde & Patil 2009](#)



Sea dip



1. Helps skin conditions & looking younger

Magnesium-rich sea water promotes the retention of moisture in the skin. Other research found that sea water is good for some skin conditions such as acne and psoriasis — it's thought the salt and potassium chloride found naturally in sea water 'seals' the damaged skin and speeds up the healing process.

The British Association of Dermatologists has found that eczema in children improves when parents introduce sea swimming into their exercise regimen.

Salt water also promotes new cell regeneration, which plumps up our overall appearance, making us look more youthful and healthy as a result. The ocean is full of anti-aging minerals that can counter the decline of your skin's elasticity, which improves its outer appearance.

[Prosksch et al 2005](#) | [Levi-schaffer et al. 1996](#) | [Shani et al. 1995](#) | [Montgomery 1979](#) | [Williams et al 2007](#) |

2. Improved Respiratory System

One of the amazing benefits of sea water is that it has the ability to cure flu symptoms, a runny nose, as well as to treat bronchitis and sinusitis. Inhalation of sodium or salt seawater chloride, helps loosen mucus and treat lung problems.

[Lange et al 2009](#) | [Gombart 2009](#)



Sea immersion

Best & free spa treatment.....

3. Improved immunity

Rich in vital elements, sea water has the ability to activate the body's healing mechanism and boost the immune system. It opens skin pores, allowing them to absorb sea minerals, while helping them expel harmful toxins, responsible for numerous diseases. It also increases the level of oxygen in our bloodstream, and thereby the amount of beneficial elements needed by the blood to fight off free radicals.

Iodine in sea water supports our immune system and boosts the thyroid activity. Being a great natural antiseptic, it also considerably increases our body's ability to fight infections and kill parasites, bacteria and fungus.

More ref to come | [Nasermoaddeh & Kagamimori 2005](#)

4. Magnesium

Magnesium-rich seawater purportedly can also relax your muscles, reduce stress and help induce sleep. Magnesium depresses nerves to relieve nervous irritability for an increased sense of calmness, it is the fourth most abundant mineral in humans and it is necessary in over 300 reactions within the body.

Just a dip can top up your levels as Caffeine, alcohol, processed grains and sugar prompt the kidneys to expel magnesium, depleting already low levels resulting from modern living still further.

More ref to be added – since earliest spas

The medicinal use of sea water dates all the way back to 4th century B.C. when Hippocrates first used the word "thalassotherapy".

This word comes from the Greek thalassa, meaning water, and therapia, meaning to cure. Known also as the father of modern medicine, Hippocrates was the first to use sea water for healing purposes.

Outdoor

1. Boosts your immune system

For your body, a sudden and drastic change in temperature constitutes an attack.– Whilst “attacking” your own body may not sound like a good thing, there is no harm in keeping it on its toes. In fact, quite the opposite.

Scientists from the Czech Republic immersed witting subjects in cold water for one hour, three times a week and monitored their physiology. They found significant increases in white blood cell counts and several other factors relating to the immune system. This was attributed to the cold water being a mild stressor which activates the immune system and gives it some practice.

[Siems et al 1999](#) | [Shevchuk et al 2007](#)

2. For an all-natural high and better mood

Endorphins are the body’s natural pain killers. In the case of a cold dip, your body releases to take the sting away from your skin. So, to get high, all you need to do is jump in a river.

If you think that sounds dangerously close to the pleasure/pain barrier then you’re probably right. The two other primary causes for endorphin release are pain and orgasm.

The cold swimming will also stimulate your parasympathetic system, which is responsible for rest and repair, and this can trigger the release of dopamine and serotonin (cocaine & amphetamines activate dopamine systems in similar ways). These neurotransmitters are a vital part of keeping us happy and low levels of them are linked with depression. This is why, taking the plunge or a cold shower? - you’ll get feelings of excitement, as if you can do anything!

[Srámek et al 2000](#) | [Lange et al 2009](#) | [Gombart 2009](#)



Swimming

3. Gets your blood pumping for natural glow

Evidence demonstrates that your body adapts to the cold with repeated exposure and this may improve your circulation, particularly to your extremities – no bad thing in the winter months.

It helps flush your circulation for starters, pushing blood through all your capillaries, veins and arteries. It will exfoliate your skin and flush impurities from it, thus helping your complexion (firm-bodied women of all ages around pool sides say it stops cellulite).

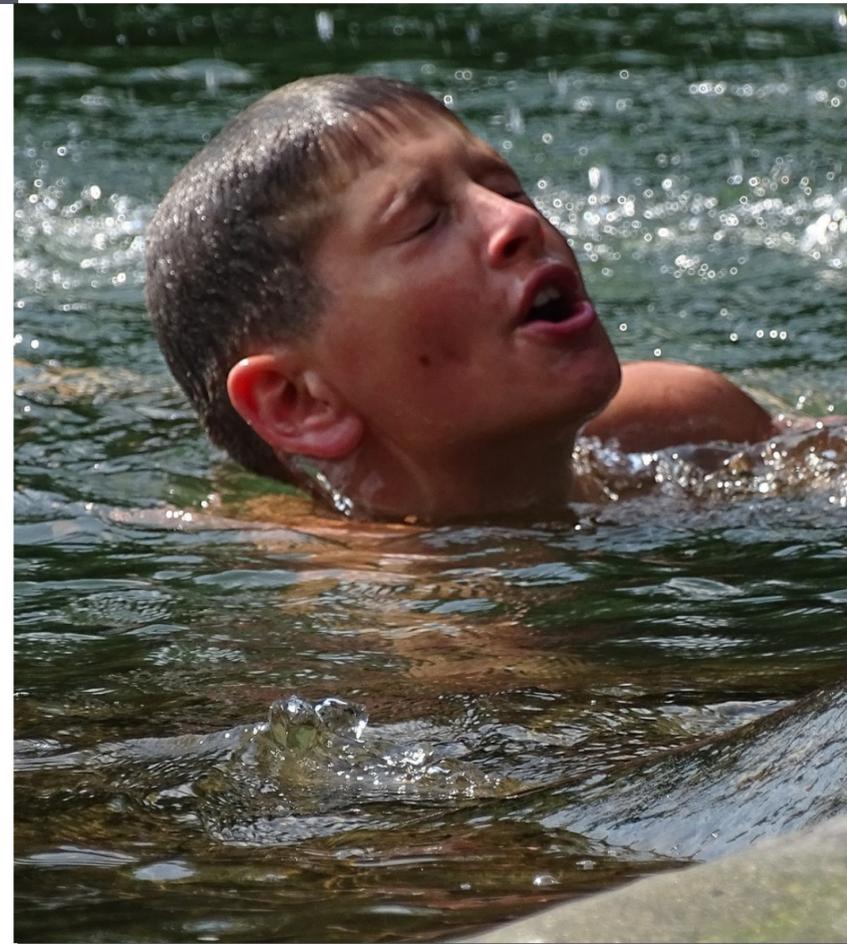
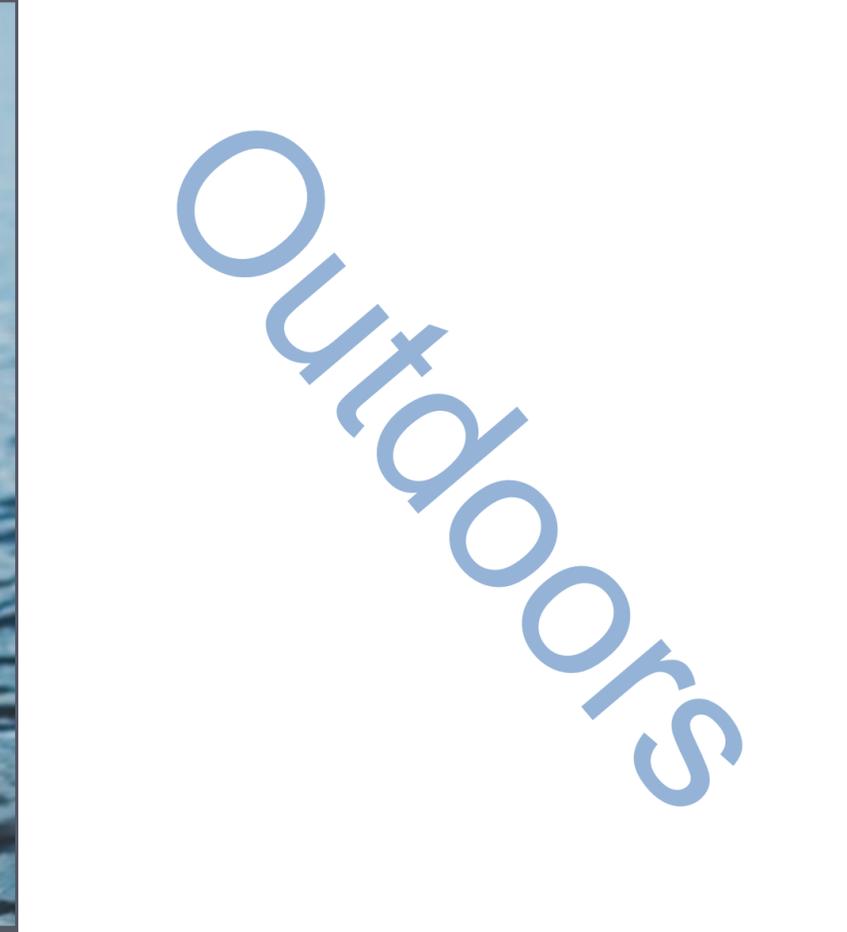
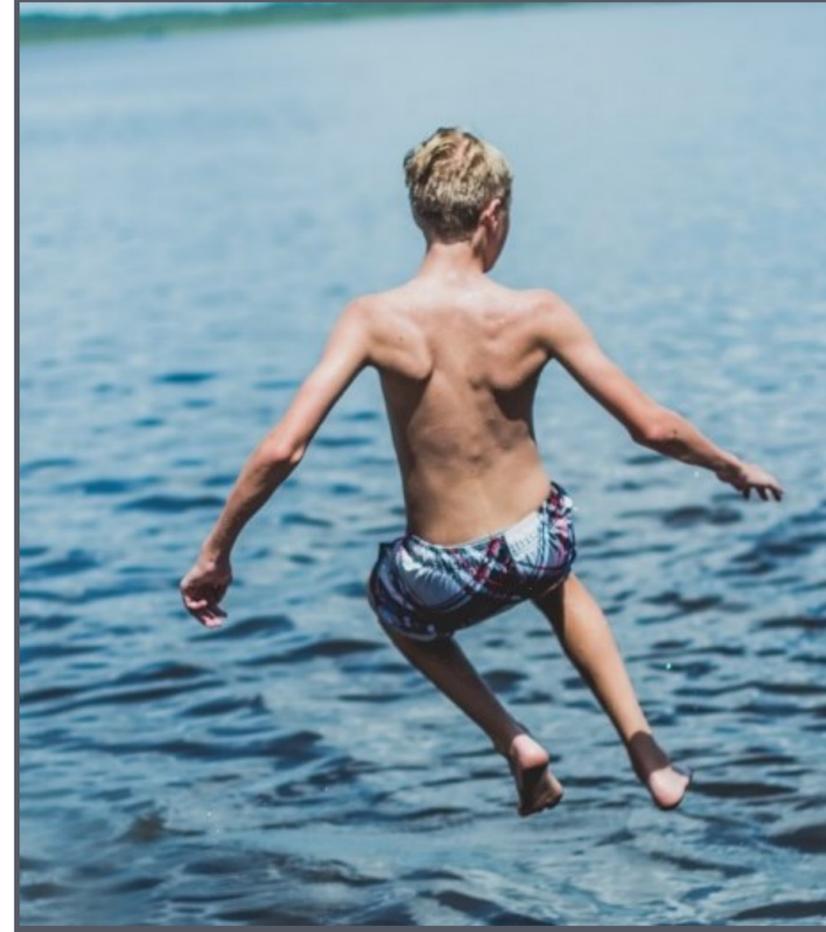
[liyana et al 2008](#)

4. Improves your sex life

Participants who took daily cold baths in a Czech study were found to have increased production of testosterone and oestrogen in men and women respectively.

In addition to enhancing libido in both sexes, these hormones also play an important role in fertility. In fact, one technique recommended for men looking to fatherhood is to bathe their testicles in cold water every day. Whatever your procreative desires, a dip of a different sort certainly could add an edge to your sex life. Chinese research indicated all round benefits of winter swimming to male sexual health.

Czech ref. to be added | [Ma Gu et al, 2006](#)



COLD

Cold swim



5. Burns calories

Swimming in cold water will make your body work twice as hard to keep you warm and burn more calories in the process (much higher metabolic rate – $14^{\circ}\text{C} = \text{MR at } 350\%$), although an increase in appetite can often negate the gain. For this sort of exercise, fat is your body's primary source of energy and the increased work rate will increase your metabolism in the long run.

There is great news for those who feel 'stuck' at a certain weight, cold thermogenesis can improve leptin sensitivity, allowing the body to release fat without trying to defend your 'set point'.

[Srámek et al 2000](#) | [Ray Cronise TED Lecture 2010](#)

6. Reduces susceptibility to heart attacks, strokes and cancer

Research highlighting cold water's effect on immunity shows an increase in both the number and activity of peripheral cytotoxic T-lymphocytes and natural killer cells – the major effectors of adaptive and innate tumour immunity, respectively. Cold water plunges could help fight serious diseases!

[Shevchuk & Radoja 2007](#)

7. Better mental health and reduced pain

Tension, fatigue, poor memory and negative mood significantly decreased with the increasing duration of the swimming. All swimmers who suffered from rheumatism, fibromyalgia, or asthma, reported that winter swimming had relieved their pains.

[Huttunen 2004](#)



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Benefits of Nature to US!

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