



GLOBAL TRAIL RUNNING DAY

10 WAYS TRAIL RUNNING
WILL CHANGE YOUR LIFE

FREE EBOOK

Vybarr Cregan-Reid

WHILST MANY FORMS OF EXERCISE
CONTRIBUTE TO OUR HEALTH
AND WELLBEING, NONE DO SO AS
POTENTLY, OR COMPLETELY, AS TRAIL
RUNNING DOES.



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VYBARR CREGAN-REID

Vybarr Cregan-Reid is an author, academic and broadcaster who has written widely on the subjects of running, literature, health, nature and the environment. He wrote *Footnotes: How running makes us human*, which *The Guardian* called 'a wonderfully subtle and ambitious book'. His most recent book is *Primate Change: How the World We Made is Remaking Us*. He has also made two series of 'Changing World, Changing Bodies' for the BBC World Service which looks at how different parts of the body are changing in different parts of the world. He is Professor of English & Environmental Humanities at the University of Kent.

[Click here](#) to purchase a copy of Vybarr's book

Footnotes: How Running Makes Us Human on Amazon



WHAT IS TRAIL RUNNING?

One thing that people all over the world have learned in 2020 is that physical activity and being outdoors both matter to us more than we ever realised. This is why the time is now for us all to celebrate how important trail running is as an activity and why it is one of the very best forms of exercise.

For the uninitiated, trail running is a mode of exercise like jogging, but instead of the grey pavements of the city or the bump and whizz of the treadmill, it uses the trails found in and around green spaces. Everything from seaside tracks, to pathways through the woods, to hills, valleys and mountains - all are the proscenium to the trail adventures awaiting you.

WHY DOES TRAIL RUNNING MATTER?

While almost all exercise will succeed at the very basics of making you fitter or stronger, there is no other single activity that will reward you with as many benefits for brain and body as trail running. While lots of forms of exercise contribute to our health and well-being, none do so as potently, or completely, as trail running does.

PHYSIOLOGY:

Fitness and respiratory health, improved bone density, less likely to suffer from arthritis and osteoporosis.

NERVOUS SYSTEM:

Improved proprioception, boosted motor skills, better-trained senses.

PSYCHOLOGY:

Enhanced intelligence, improved resilience, higher self-esteem and better body-image.

IMMUNITY:

Less susceptible to disease (especially the big killers like cancer, heart disease and Type-2 diabetes).

ENVIRONMENT:

There aren't many forms of exercise and physical activity that are beneficial to the environment, but trail running is. For one, its environmental footprint is tiny, and it is one of only a few forms of exercise that can actually succeed in our caring more about our green spaces.

1. WE ARE MADE FOR TRAIL RUNNING

It cannot be said of any other form of exercise that over millions of years, our bodies and our DNA, specifically adapted to optimise us for running outdoors. Trail running is what your DNA is for.

There are too many to list, but aspects of our biomechanics like the achilles tendon (which you don't need to be able to walk - it's only there so we can run), the nuchal ligament (stabilises the head during running) and the arches in our feet (which can return up to 15% of our body weight with every stride) these features are unique to humans. But it's not just about mechanics: humans are great thermoregulators, too. Basically, we are great at sweating. Unlike other mammals, we can dump tremendous amounts of heat when we run. Ever wondered why humans have such a large, exposed forehead? It is so that as the sweat evaporates from there, it keeps your brain cool and working at an optimum temperature. (Our ability to sweat pretty much got us to the top of the food chain). Finally, we only have brains because we move. Our ability to link motion to reward predates even the limbic system (our 'dinosaur' brain) and locates our abilities with those of the very simplest of life forms from over a billion years ago.





2. RUNNING MAKES YOU SMARTER

Sustained aerobic activities like trail running effect a process called neurogenesis. This creates fresh, new brain cells in the hippocampus, the part of the brain that deals with spatial navigation and memory indexing.

We runners always knew we were a smart bunch, but now science has confirmed that sustained aerobic activity does indeed effect a process called neurogenesis. But that doesn't mean that you can come in from a run and solve complex problems in quantum theory. While sustained aerobic exercise creates new brain cells, they are stem cells waiting to be put to use. This means that exercise doesn't make new knowledge; it gives you the mental equivalent of a sharpened pencil and clean sheet of paper. It readies you for learning. Recent research also concluded that bouts of High Intensity Interval Training and/or resistance training created almost no impact on neurogenesis. (The weightlifters have Arnold Schwarzenegger in their camp. Runners have the mathematical genius Alan Turing - capable of a 2:46 marathon - in theirs.) Interesting to think that all that neurogenesis from distance running may have had an impact on the outcome of World War II.

3. WOODLANDS ARE POWERFUL PLACES

Green spaces and trails matter deeply to us. We need them. But if we don't use them, they get forgotten. We need to run trails to prove to ourselves and to others that they matter.

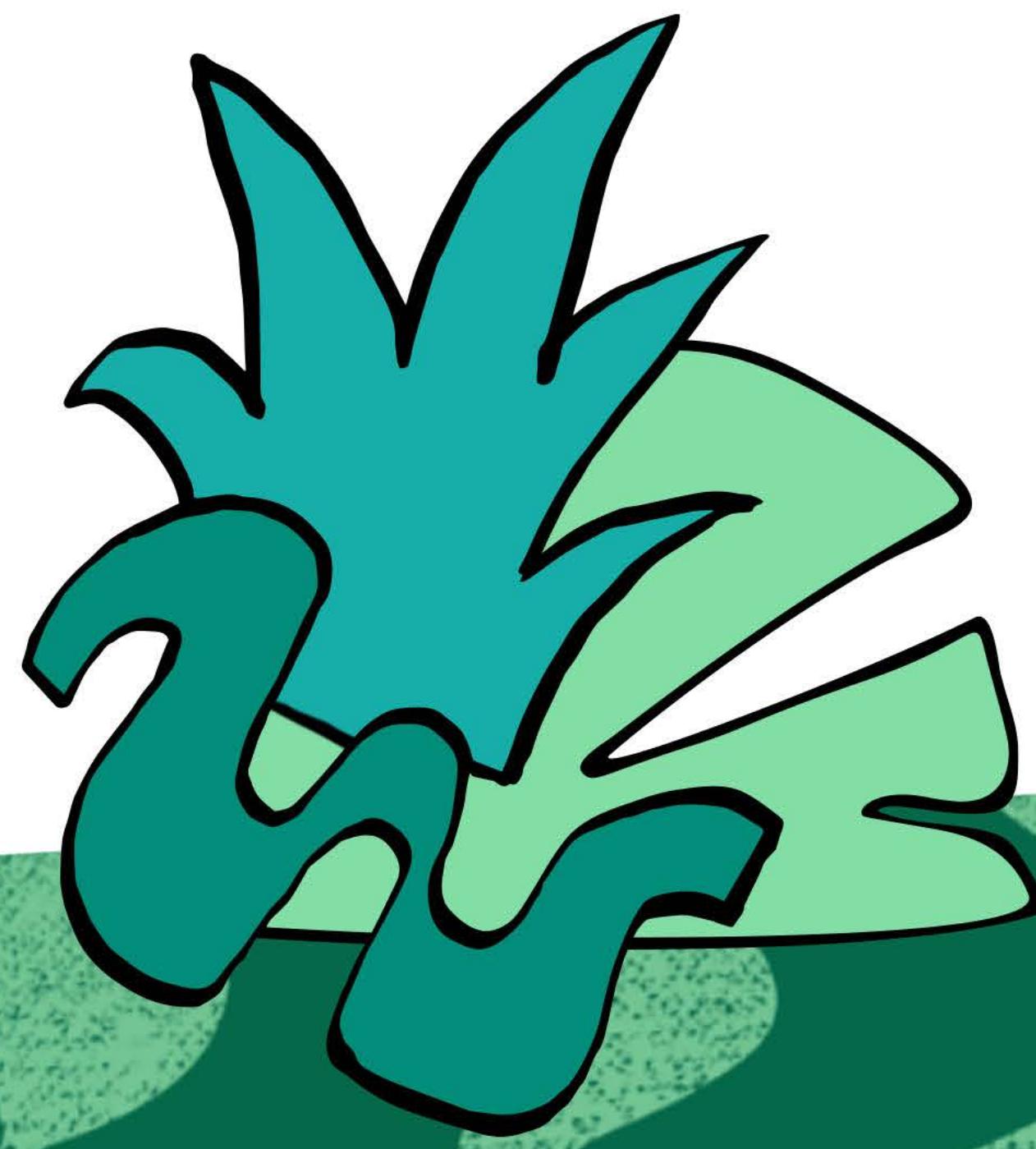
We tend to take woodlands for granted. After all, us mammals have been around them for a couple of hundred million years. It makes sense that our bodies have evolved to take advantage of these leafy and scent-filled environments. So, if you do go down to the woods today (with your trail shoes), the surprise that might be waiting for you will not be a picnic, but an astonishing array of measured and proven health benefits. 'Phytoncides' are given off by trees and plants to prevent rotting or to deter insects and they have a potent impact on humans, too. Research into woodlands shows that they can: restore 'high' or 'low' blood pressure, improve mood, help control appetite, loosen us up, improve our immunity, assist in the regulation of our sleep patterns, lower levels stress, enhance feelings of empathy, restore our abilities to concentrate, even aid in the prevention of some cancers.



4. GREEN RUNS ARE EASIER

Trail runs may be harder on the legs, but they are easier on our minds. The reasons for this go deep into who we are as a species.

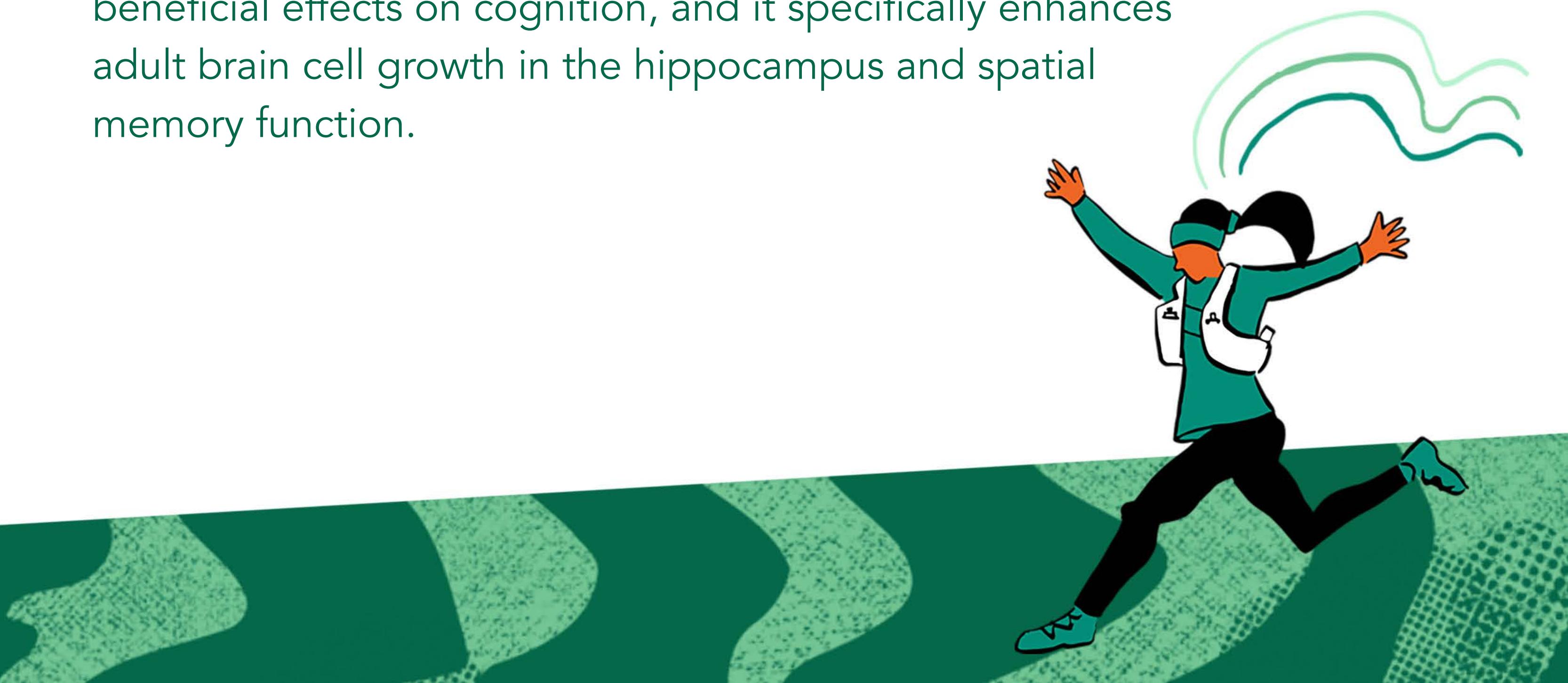
Environmental psychologists have proved that negotiating urban spaces requires substantial cognitive effort, so when we exercise in them, they are less restorative to us. The reasons for this are simple: calculating the threat level of a beech tree or a pigeon is easy. Evaluating the risks posed by an approaching car or a shady part of town: not so easy. Psychologists have also suggested that primitive and unconscious parts of our brain, like the Amygdala, perceive a green space as one that supports life because it boasts of access to sustenance and water. Urban environments by comparison are without these signs of life and appear like an arid desert. Our DNA has a deep history and evolved (over tens of millions of years) in the jungles and forests of what is now Africa. Green is the colour which our eyes have adapted to see more shades of than any other. It is the colour that our brains have to do least processing to be able to see. Green is the room temperature of our visual spectrum. When we see it, we are home.

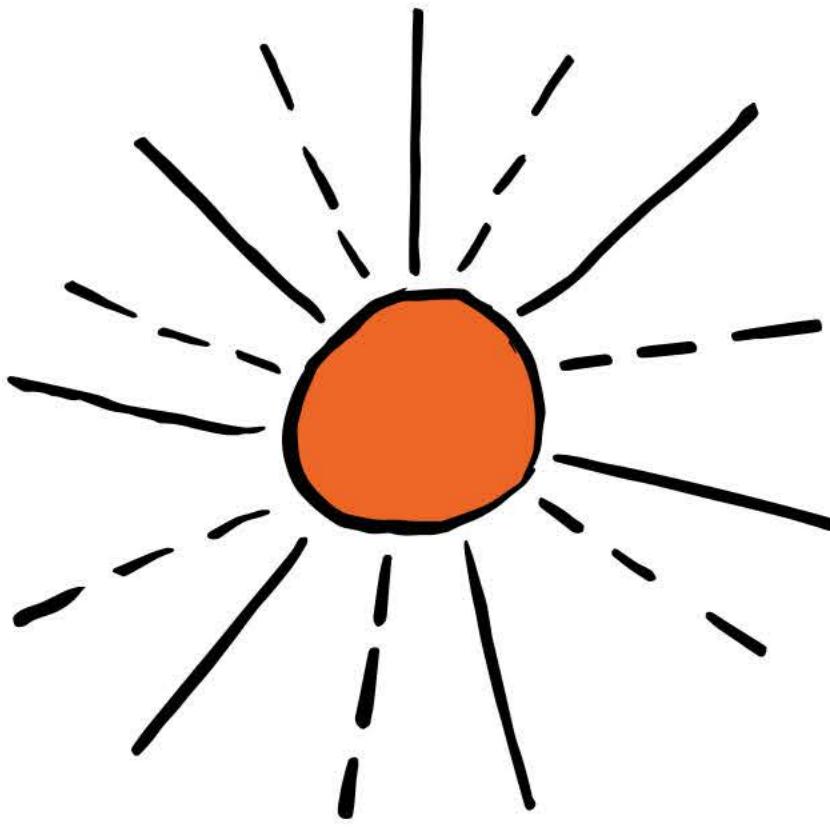


5. RUNNING CHANGES YOUR BRAIN CHEMISTRY TO MAKE YOU A BETTER YOU

Running changes our brain chemistry to optimise it for learning, but also to help prevent things like dementia and depression. It does so, by releasing a couple of clever proteins: BDNF and CTSB.

Running assists in learning in lots of ways. One is that the activity produces a protein called brain-derived neurotrophic factor (BDNF). BDNF promotes the growth of new neurones and supports existing ones. What this means is that BDNF enables the 'roots' of your brain cells (called dendrites) to create more connections across synapses. It therefore stimulates growth of existing brain cells, while helping new ones to flourish. Higher levels of BDNF are associated with lower levels of depression, and a decreased likelihood of dementia. (The things that block BDNF production are: sugar, social isolation, and of course, stress.). John Ratey, a Harvard professor of psychiatry, has called it "Miracle-Gro for the brain". Another protein secreted by runners: Cathepsin B (CTSB), assists in the expression of BDNF, while also having beneficial effects on cognition, and it specifically enhances adult brain cell growth in the hippocampus and spatial memory function.





6. THE MAGIC OF SUNLIGHT

Exercising outdoors means that you get more sunlight exposure. While, for decades we have been told that this is dangerous, it is also the case that the sun provides essential nutrients for the body, and offers some protection for it, too.

Humans need the sun more than we think, and our urban lives often encourage us to spend too much time away from it. This why outdoor exercise is so important. First, the dangers: it is never good to get burned - either limit your time in the sun, or wear protection. The good stuff: appropriate levels of sun exposure can actually help prevent skin cancer. It increases BDNF and releases endorphins. Perhaps most importantly of all, sunlight helps our bodies to make Vitamin D. It's an essential nutrient that we cannot get enough of through diet, so the sun is essential. Vitamin D is made when UV(B) light hits our skin and is an essential component for a healthy teeth and bones, as well as a good immune system. And finally, for younger runners (up to the age of about 25), sunlight exposure can help your eyes develop and even prevent the onset of shortsightedness.

7. TRAIL + RUNNING = EXERCISE²

Trail running isn't just another kind of exercise. Because it's performed in a green space, the impact that it has on physical fitness and mental health is much greater than the sum of its parts: it's exercise².

There are so many benefits to running. Not only does it make us fitter and stronger, it increases bone density and protects us from arthritis and osteoporosis, it stimulates our immune system, releases endorphins and activates the endocannabinoid system (that gives us a natural high). But because trail running is performed in a green space, we amass a whole host of other benefits, too. Waves of research tell us that if you are mentally tired there is no quicker way to restore your ability to concentrate than to spend time in a green space.

As well as attention restoration, green time has been shown to lower stress hormones, restore high or low blood pressure, to increase self-esteem and mood.

The effects of green time are so beneficial to our health that there's even an NHS page devoted to its possible therapeutic applications. Trail running is able to restores chemical imbalances in the brain that cannot currently be achieved through any kind of medication.



8. iT'S CALLED THE RUNNER'S HiGH FOR A REASON

It's not the cyclist's high, or the walker's, but perhaps it should be called the 'trail runner's high'.

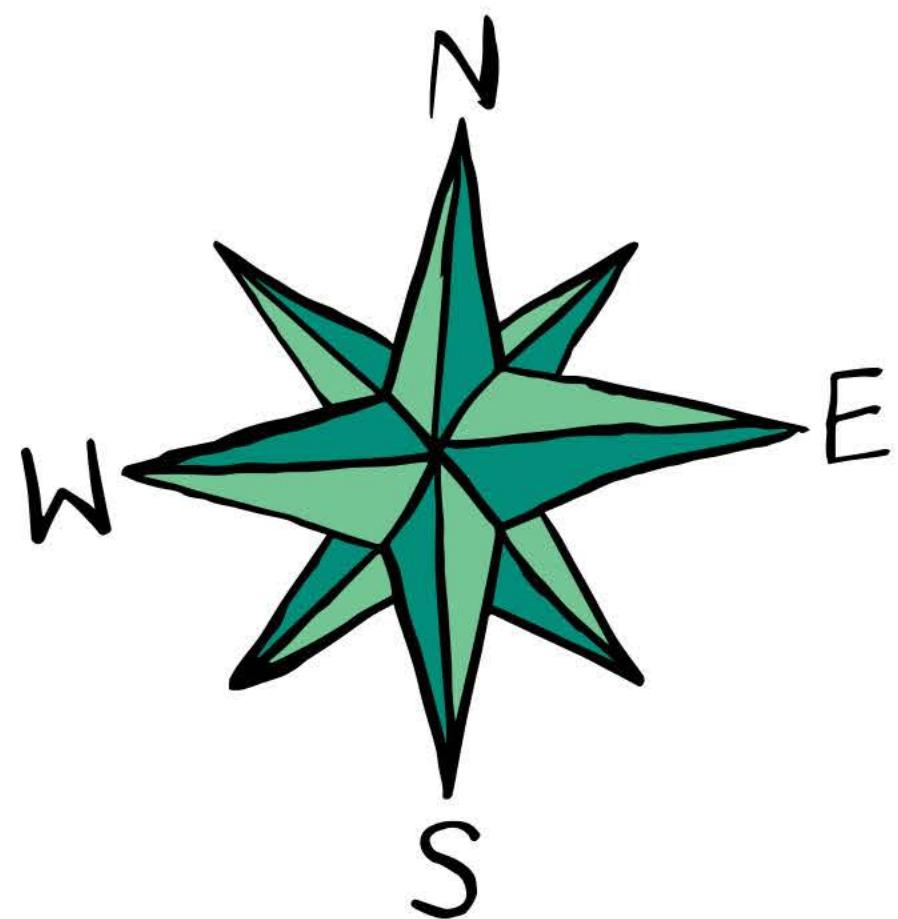
Most runners have felt it. Happily jogging along, 40-50 minutes into a run, a wave of ecstasy suddenly crashes over you and all the burrs, the static and the clamour of the everyday are instantly washed away. Suddenly, you feel calm and invincible, super-sensitive to your surroundings, and you know that at that moment there is no one else in the world enjoying a better experience. For years, the high was dismissed as an anecdotal myth amongst runners, but eventually the science caught up. The high is produced, not through endorphins (which cannot penetrate the blood-brain barrier) but when the endocannabinoid system is activated. The effect is multiple, there is the euphoria, but there are also physiological changes, like the dilation of capillaries, which facilitates the transportation of oxygen around the body. Trail runners report both the highest likelihood of getting a runner's high, as well as it being most powerful for them - it seems to be enhanced by being in green spaces. Chasers of the high should run for at least forty minutes, go at an easy pace, be relaxed, and immersed in the 'green'.

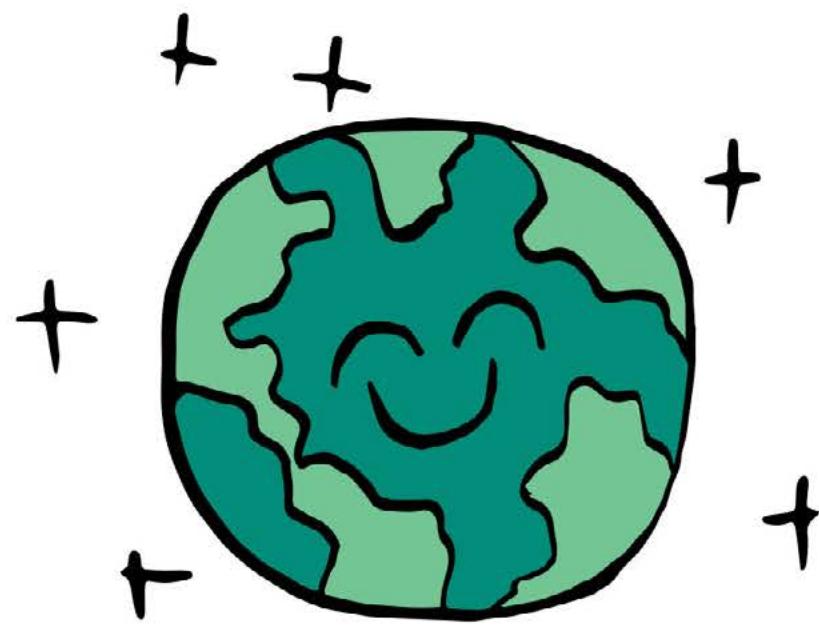


9. HUMANS ARE NATURAL EXPLORERS

Humans are natural explorers, and trail running feeds this hunger. It's so natural are brains are wired for it, and also to reward it.

It is one of the great things about trail running that you get to explore lots of new places. Our brains, though, do seem especially equipped to be able to remember these new places. While the human body has been around for 2 million years, it is only in the last few thousand that we have been able to write down maps. For the rest of our history, our maps have had to be mental. Spatial navigation is managed by a part of the brain called the hippocampus, and it receives new brain cells when we run. From an evolutionary perspective, this makes sense: those people who adapted this response to distance running were more likely to find their way back to their tribe, and consequently, to survive. Trail running's enhancement of spatial memory is basically an evolutionary safety net for when you have outrun your knowledge, when you have run so far that you no longer know where you are and you need to learn, fast. Exploration is so natural that our brains have adapted us to be better at it.





10. TRAIL RUNNING givES SOMETHiNG BACK TO GREEN SPACES

Trail running is not all about us humans benefitting from the environment; the environment can benefit from us, too.

Can nature make us more caring? Does it matter? Environmental psychologists have run a number of trials that have looked at how green spaces can change our permeability to the world around us: both other people and places. Evidence shows that green exercise doesn't just change our sense of ourselves for the better, but it makes us kinder, more caring and generous and more inclined to acts of altruism. But while we are in green spaces, they are going to work on our feelings about them. This matters because numerous studies have demonstrated that empathy for the environment increases drastically when we actually spend time in natural places, rather than merely thinking or reading about them. When we run trails, we are developing a kind of kinetic empathy with those places. So, while you may think that 'using' green or natural spaces could be bad for the environment, it is ironic that the empathy that those places create in us, is one way that they can protect themselves from human activities like deforestation and green-belt development. Running regularly in natural surroundings may make you green with empathy.

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