## The Steady pounding of feet proves to be a form of

moving meditation for one long-distance runner. So

what lessons can be learned as kilometre after kilometre

I'm running — really running. In fact, I'm running my heart out. It's nearly the end of a 40km race stage in the 185km TransRockies Run — a race of multiple stages, multiple mountains and multiple metres of altitude. This should be the easiest part today; it's all downhill to the finish. That's just a few kays away now.

clicks past? By Gabi Mocatta

This is a race run in teams of two, and my running partner and I silently pace each other. We know there's another team on our tail and we're going as fast as we can. It's baking and we're both feeling it as we push hard and run faster. Then I begin to experience a side of running that's about much more than about the physical, taking me to a place deep within myself.

Slowly, the heat and the brightness around me, the trees, the mountains and my running partner beside me seem to recede from my awareness. I've gone somewhere far inside. In there, it's still, elemental and calm; a simple place where there's no thought. I no longer feel myself running. It's quiet, focused ... almost ethereal.

"Just breathe and move," I tell myself. Breathe and move. For those few final kilometres, my whole world is distilled into something so essential I'm absorbed in peace and simplicity. I spend a long time in a place that I've only just touched

on before. And then we're at the finish and there's euphoria and laughter and exhaustion — and I'm back out in the hot, bright, chaotic world.

It's strange to think that an activity that calls for as much exertion as distance running could be so deeply meditative. It's hard to see how, with all that sweat and exhaustion, there could be anything still or calm about running long distances. But there's nothing unusual about using repetitive motion as meditation. Sufis spin to bring on a trance-like state, while Japanese Zen Buddhist monks undertake kinhin — walking meditation — to access worlds beyond themselves. The Bushmen of Botswana's Kalahari Desert, like many people who live close to nature, obtain spiritual awakening through extended, ecstatic dance.

There's something about repeated, rhythmic movement that takes us beyond ourselves: something, perhaps, that allows us to access the pure essence of ourselves; a natural simplicity that takes us away from the humdrum of daily life. It's this aspect of running — the psychological and even spiritual depth — that takes many athletes to the long-distance run of the 42.2km standard marathon and far, far beyond.

"Man is a natural runner," says Dr Phil

Murrell, a GP who specialises in sports medicine and is a veteran of hundreds of endurance races and thousands of hours of training over the past 20 years. "Humans are built for running endurance: there are few creatures that can out-run us over distance and time," he says. The innate human running ability is unique among primates and stems perhaps from the need to hunt down and out-endure game on the plains of Africa where the first humans ran. "Human beings are ideal runners," says Murrell. "We're built perfectly for it. That gives us all an inbuilt affinity for running — not just those people who regularly run. The human animal is a running animal."

It might be that ancient need to run, to chase down game and perhaps even out-run other humans, that gave us the physiological phenomenon of the so-called runner's high. "It's not something that happens all the time," explains Murrell, "but experienced runners do report, after maybe 30 minutes of running, a feeling of wellbeing, increased energy, positivity, relaxation and even lowered inhibition."

This feeling — when running becomes most natural and easiest — is caused by the release of beta-endorphins in the brain, resulting in an opiate-like effect on the body: the "runner's high". "It's thought to



be an evolutionary mechanism," explains Murrell, "that made running easier for our ancestors. It's this that gave them the motivation to run in the way they had to, to sustain the early human way of life in an unforgiving environment." Our bodies are designed so that running makes us feel good — it's that simple.

The synergy of running

Apart from the pleasure and naturalness of the high, running has plenty of other valuable physical effects on the body. Like other endurance exercise, it strengthens the heart and lungs, lowers blood pressure, helps keep weight down and reduces the risk of developing type 2 diabetes. The load-bearing impact of running builds bone density, reducing the risk of osteoporosis. Runners also tend to have healthier diets and drink less alcohol, thus reducing the risk of many cancers and even slowing the ageing process. It's not hard to recognise the wiry, distance-running "type" - the natural runner that's somewhere deep inside us all.

And then there are the subtler results of running, the mind and body working in delicate synergy, producing effects that have only recently been quantified. Many studies have now shown the link between

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exercise such as running and reduction in depression. Sticking to a program of exercise gives a sense of self-mastery and simple achievement, leading to better selfesteem, an important first step away from the hopelessness of depression.

Recent studies have also shown that exercise actually alters hormone levels within the body. Endurance exercise influences the four main neurochemicals that affect the mood: raising serotonin,

responsible for feelings of happiness, comfort and satiety; lowering epinephrine, which produces feelings of stress; raising levels of dopamine, thereby reducing insomnia and improving sleep; and, of course, increasing endorphins, the body's natural pain-killers, to produce the pleasurable runner's high.

The tandem physical and psychological effects of endurance running on mood and outlook go deeper still. Some fascinating

recent analysis has confirmed the link between meditation and running that many runners — and meditators — already knew existed. Researchers at James Cook University in Townsville compared the relationship between levels of three hormones (beta-endorphin, corticotropin-releasing hormone and cortisol) and mood

athlete is close to exhaustion," Murrell says, "when he or she has long used up all the glycogen stored in the muscles and needs to eat and rest." Extreme athletes report the mind moving into a clouded state where clear thinking becomes difficult. It's at this stage that only the mind pushes a runner on with determination

The rhythm of a run calls for focus, control and awareness of the breath, and demands the runner be in the moment.

changes in 11 elite distance runners and 12 experienced meditators. It was found that distance running and meditation both lifted the mood through the same chemical mechanisms in the body. Interestingly, this phenomenon was only true of distance or endurance running, not the kind of explosive exercise engaged in by a sprinter or shorter-distance track athlete, which actually raised the stress hormone, cortisol.

In the book The Runner's High: Illumination and Ecstasy in Motion, editor Garth Battista has put together individual testimonials of runners who recount their personal experiences beyond the purely physical. Several describe running as a form of meditation. The rhythm of a run calls for focus, control and awareness of the breath and demands the runner be "in the moment". Some described, when running long distances, achieving a "meditative attention state" of leaving thoughts behind and "falling into deep mind". Not uncommon were experiences of selftranscendence, in which runners reported a feeling of the ego being muted, being at one with their surroundings and even a sense of the self separating from the body - "being free of the bonds of gravity" and "moving outside the self". Other runners described a meditative transformation: a sense of profound acceptance of self and oneness with the world.

Just like the euphoria that can come with meditation, this kind of experience is not something a runner can force. "The runner's high is not automatic," says Murrell. "And the kind of deep-withinoneself or outside-oneself experiences that can happen in endurance sport are unpredictable." During extreme running and endurance events, says Murrell, after many hours of running and especially at night-time, athletes have reported seeing hallucinations and hearing voices.

"That kind of thing happens when an

and exceptional willpower to achieve the physically superhuman.

But distance running and its accompanying insights into the self are not just the domain of exercise extremists. Sophie Atnall, a first-time marathoner at 62, speaks of her late-in-life distance-running experience: "For me, the most surprising thing about running was the new confidence I got from it. I learnt to trust that my body could do things I never would have believed." Building slowly, Atnall found a new energy and positivity from running, which gave her the confidence to enter a half marathon and then train for a marathon.

"Finishing that marathon was one of the most euphoric moments of my life. I'd stood on the start line not knowing if I would really be able to get to the end. Crossing the finishing line smiling was an absolute thrill. Me — a marathoner, at 62! Unbelievable." With running, the biggest competition is not with one's fellow racers; it's challenging oneself.

And that's the reason I'm running again. This time, it's a 6am race start in the cold. There are 64km of hilly island road before me, sometimes tar, sometimes dirt. I don't know if I can do this because this is my first ultra-marathon, but I have some marathons behind me and many, many long, alone runs in the forests and hills. I have distance in my legs and, more importantly, in my mind. I'm no great athlete, but I know what it feels like to go far and then find the extra strength in mind and body to go further still. I don't know I can finish, but I trust something deep in me that tells me I can - or that I need to try to find out. So I'm out on the lonely road again. Hours and hours ahead of me. Footfall and breath and concentration ... deeper into myself as time passes.

It doesn't happen to me this time: reaching that strange, still, meditative place inside. But as I get close to the end of the

run, I start to feel the euphoria. Uphill the last 2km to the finish. I am snail-slow, but still running. I'm beaming as I approach the finish — in this race, finish "line" is the black lacquered door of the lighthouse on the island's far southern end.

I climb up to the lighthouse and there's ocean all around. I take the last few strides and then it's both hands on the lighthouse door ... laughter and congratulations and, despite my exhaustion, I'm joyous. I thank my body and my mind for knowing how to endure.

## Some of the world's toughest ultra-runs

- Alpine Skyrun, Victorian Alps, Australia:
  100 miles/160km of mountain running with 5500m of ascents.
- Leadville Trail 100, Colorado, USA: 100 miles/160km of high-altitude running through the Rocky Mountains.
- Spartathlon, Sparta to Athens, Greece: the original marathon course — 152km ultra run.
- Comrades Marathon, Natal, South Africa: Africa's oldest ultra-marathon on a notoriously hilly 89km course.
- Antarctic Ice Marathon and 100km race: the only race run inside the Antarctic Circle, with temperatures well below zero.
- Namibian 24hr Ultra Marathon: 126km through the Namib Desert, carrying all food and water.
- The TransAlps: 240km of horizontal distance and 14,000m of climbing over eight days through three countries.
- TransRockies Run, Rocky Mountains:
  Colorado, USA, 180km over 6 stages with
  12,000m elevation gain and altitudes of up to nearly 4000m,.
- Self-Transcendence, New York, USA: 3100 miles over 50+ days the longest.

## Distance running statistics

- Marathon distance: 42.195km
- Ultra-marathon distance: anything above 42.195km to the world's longest footrace at 3100 miles.
- Marathon world records: men 2:4:26,
  Haile Gebrselassie of Ethiopia; women
  2:15:25, Paula Radcliffe of UK.
- 100km world records: men 6:23:21,
  Shinichi Watanabe; women 6:33:11,
  Tomoe Abe, both of Japan.

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