The last few decades have witnessed a proliferation of research uncovering the profound effects of meditation on emotional wellbeing and mental health. The ancient Eastern practice has boasted a wide swath of miraculous benefits including the ability to reduce stress, enhance empathy (https://www.theatlantic.com/health/archive/2015/07/mindfulness-meditation-empathy-compassion/398867/), improve cognition (https://www.sciencedirect.com/science/article/abs/pii/S1053810010000681), and even slow aging (https://wsimag.com/wellness/35256-the-anti-aging-impact-of-meditation). But does it offer any aid to runners looking for a mental edge?

The answer is a resounding yes. While runners grind through speed work, tempo runs, and weight sessions vigorously training their bodies to perform to maxim capacity in races, the mind doesn't receive nearly as much attention — yet victory or defeat happen in the mind first. Our brain is an organ that can be either our greatest ally or most ruthless enemy in those vulnerable moments during a race when we are faced with the choice to push victoriously through pain or succumb to suffering by slowing down. It all depends on how we train it — and research has found certain meditation techniques to be unrivaled in powerfully honing the mind.

Beyond running, if you haven’t tried meditation yet, this chaotic and precarious year is a good time to start a practice. (Who doesn’t want to transcend 2020?)
What Exactly is Meditation?

The mind tends to produce a lot of chatter, creating stories about the future, replaying the past, worrying, judging, fantasizing, etc. Meditation seeks to calm the erratic thought currents of what is sometimes referred to as the “monkey mind” ([https://www.psychologytoday.com/us/blog/the-empowerment-diary/201709/calming-the-monkey-mind](https://www.psychologytoday.com/us/blog/the-empowerment-diary/201709/calming-the-monkey-mind)) by attuning us to the present moment.

An internet search will take you down a rabbit hole of various meditation practices, but one of the most well studied, and that which most of the research in this article refer to, is mindfulness meditation. In this practice, you focus intently on one specific thing or sensation, whether it be your breath, an object, or a body part, for a set amount of time. The mind will naturally wander, the idea is to notice when it does and bring your attention back to your point of focus.

And somehow, this “do-nothing” practice boasts some pretty profound benefits for endurance athletes.

Benefits of Meditation

Enhanced Focus and Mental Resilience

Running is a form of stress. The greater the intensity of the run relative to a person’s level of fitness, the more stress is generated. While a good deal of that strain is physical, some of it is mental. Prolonged strenuous training, such as a tempo run or distance race, requires enhanced attention and focus on continuing to push oneself into increasing levels of discomfort. Research has shown that practicing mindfulness meditation ([https://www.mindful.org/mindfulness-how-to-do-it/](https://www.mindful.org/mindfulness-how-to-do-it/)) a few minutes each day can increase the willpower, focus, and emotional resilience necessary for sustained endurance performance by building up gray matter in areas of the brain that regulate emotions and dictate decision making.

Photo: Aaron Burden on Unsplash
For example, in a 2017 study on college football players, mindful meditation was found to strengthen sustained attention and wellbeing among participants in periods of high stress. The participants were divided into two groups and enrolled into either a 4-week “relaxation training” program or a “mindfulness meditation” program, each lasting 2 hours per session. The relaxation group listened to soothing music and learned to systematically and progressively relax their muscles (a common tactic within sports psychology), while the other group was taught mindfulness meditation, which involves paying close attention to breathing and the present moment. Both groups were given 12-minute daily practices to do five days per week. The study was conducted over a stressful 4-week period during the players pre-season summer athletic training when they do especially intensive drills, as well as take summer school courses. As a group, the players degraded in their attentional capacity and their emotional wellbeing, but the amount of degradation differed between the mindfulness meditation group and the relaxation group.

“The mindfulness group didn’t decline, they stayed stable over time, whereas the relaxation group actually got worse” says Dr. Amishi Jha, an associate professor of psychology at the University of Miami in Florida, who was a part of the research team. “Within the mindfulness group, those that practiced more, they actually benefited more. Their wellbeing was better and their attention was better.”

The study was done on football players, but it holds some pretty profound implications for athletes of other disciplines such as running. In fact, 2004 Olympic bronze medalist and American marathon record holder Deena Kastor has used meditation practices to enhance her running performance with one of the primary benefits being enhanced focus.

“The benefits I’ve seen from a performance side, is being able to focus solely on the rhythm of my breath under stressful races,” says Kastor, who has been practicing versions of mindfulness meditation and visualization-based meditation for two decades. “Whether I’m anxious to make a move, being shoved or tripped, feeling doubt or fatigue, I can easily focus on my breath until a better thought comes in to help me through the moment.”

Dr. Jha emphasizes that when elite athletes underperform, it isn’t typically because their body gave out, but rather that their mind gave up.

“What we find in most elite athletes is that their downfall is not because the body conks out, it’s that the mind is fighting with them,” explains Jha. “So these capacities to focus and really regulate your mood and reactivity become really key in preserving their performance.”

**Better Cope With Discomfort and Pain**

During more intensive training periods, meditation practices can be helpful for reducing muscle soreness and pain. It may also help you push through make-or-break moments in a race or training session when you can either transcend pain or let it slow you down.

Recent findings have demonstrated that mindfulness meditation significantly reduces an individual’s sensitivity to pain. A 2015 study published in the *Journal of Neuroscience* looked at how study participants responded to painful heat stimuli before and after attending four 20-minute meditation training sessions over a four-day period. After the meditation training, participants rated pain, on average, as 57% less unpleasant and 40% less intense.

“This study is the first to demonstrate that mindfulness meditation is mechanistically distinct and produces reductions in pain intensity and pain unpleasantness ratings above and beyond the analgesic effects seen with either placebo conditioning or sham mindfulness meditation,” wrote the researchers in their paper.

**Race More Intuitively**
Excessive stress and elevated cortisol levels associated with anxiety can be detrimental to recovery and performance resulting in unpleasant consequences like fatigue, insomnia, hormonal disruptions, mental fog, vulnerability to infection, and increased risk of injury. If you are someone who struggles with anxious thoughts or racing anxiety, meditation can help you regulate your emotions to calm yourself down in moments that trigger stress.

Kastor says that the most unexpected benefit she experienced through her meditation practice was being able to have complete control to calm herself in moments of stress such as traffic, a cancer diagnosis, grief, and fatigue. By strengthening a person’s cognitive ability to regulate his or her emotional response, mindfulness meditation has long been recognized as an effective antidote for anxiety. Studies using brain imaging have found that meditation provides relief to anxiety by activating the anterior cingulate cortex, ventromedial prefrontal cortex, and anterior insula — areas of the brain that are involved with executive function and governing worrying. Other studies have shown that mindfulness meditation reduces stress by lowering cortisol levels in the blood.

By activating this relaxation response, meditation has been shown to reduce inflammation and facilitate higher quality sleep making it a promising powerful tool for speeding up recovery in athletes.

How to Start Meditating

If you’re interested in beginning your own practice, Dr. Jha lays out a practical template for beginning your own mindfulness meditation.

“A very common foundation of mindfulness meditation practice involves sitting comfortably, paying attention in a quiet place for a dedicated period of time, and then the instruction is to pay attention to, for example, breath-related sensations,” explains Dr. Jha. “It can be any kind of anchoring object you want. And your job is to keep your attention focused on that. And then when your mind wanders away, as it will, you just bring it back.”

Photo: Tim Goedhart / Unsplash
One of the techniques Kastor practices is breath-awareness meditation in which she says she finds 5-10 minutes to be calming. “If I have time, I love to get to a place where my breathing focus dissolves and I can be clear of any and all thoughts,” she says, estimating the meditation to last 10-30 minutes. Other times, she closes her eyes and focuses on the sounds, smells, tastes, and feel of her surroundings, typically in nature. For her visualization meditation, Kastor imagines a successful event, such as a race or a presentation. “By visualizing, allowing your mind’s eye to see something happening, your body gets to work neurologically to see it to fruition,” she explains.

Kastor suggests that anyone who wants to get into the habit of meditating practice at the same time and place every day. Typically, whenever fits best into your schedule whether it’s right away in the morning or in the afternoon before picking up the kids from school. (Though, you should try to avoid practicing at times that you’re so tired you risk falling asleep mid-meditation.) “The key is to keep at it long enough so you can feel the broad power of its benefits,” Kastor notes.

So how long is long enough? Dr. Jha recommends practicing for 10 to 15 minutes a day, the point at which some immediate results of meditation begin to kick in, for five days a week. Her lab has found that some of the benefits of mindful meditation, such as sustained attention, begin to show around four weeks of practicing. A 2016 meta-analysis on mindfulness meditation found that the practice begins to alter brain structure and activity after two months.

As meditation has become more mainstream, various digital programs and apps have been marketed over recent years to make meditation practices more accessible to the public. Kastor uses the Headspace app and recommends it for beginners because it includes guided meditation practices and can feel less intimidating.

“We think of the body as something that needs training to achieve excellence and wellness, and the mind, the brain, are no different,” emphasizes Dr. Jha. “The challenge has been that we don’t have great science as to what to offer as a training program, and mindfulness meditation happens to be a very good candidate based on the research.”
By increasing your awareness and observation, mindfulness meditation may also give you a mental edge during a race by allowing you to better read your competition and react accordingly.

“The senses meditation I practice has allowed me to take in the rich racing experience and has even allowed me to sense a competitors moves before she makes it,” says Kastor, referring to a type of mindfulness meditation technique she uses that focuses on a sensation. “And the visualization has created a powerful belief that what I want to accomplish is possible. In visualizing I try to see a variety of race scenarios and succeeding in all of them. When I can see it, I can believe it, and then become it.”

This relates to an area of research that Dr. Jha is interested in further exploring called “embedded practices,” which involves being able to integrate mindfulness practices (https://www.podiumrunner.com/events/run-with-mindfulness/) into a physical activity. While mindfully running does not replace the mindfulness meditation practice where you sit in silence focusing on your breath, it can supplement it.

“If you can start incorporating mindfulness practices into your running, then you’re kind of getting more bang for your buck,” says Dr. Jha. “You’re both training your body and you’re training your mind. And frankly, because you’ll want to use your mindfulness practice during the competition itself, it’s really good to start practicing that while you’re actually running.”

**Treat Anxiety and Lower Cortisol**