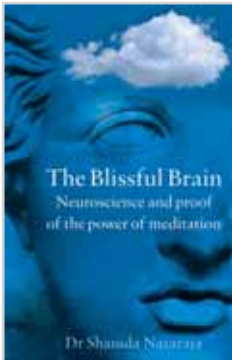


## In the Bookstores...

## A blissful read



*Shanida Nataraja : The Blissful Brain—Neuroscience and proof of the power of meditation. Gaia Books Ltd., 2008. ISBN 978-1-85675-291-6 (paperback). GBP 7.99, approximately EUR 10.15. 240 pages. More information about the book and the author can be found at [www.blissfulbrain.com](http://www.blissfulbrain.com)*

I was intrigued when I overheard EMWA's website manager, Shanida Nataraja, saying that she

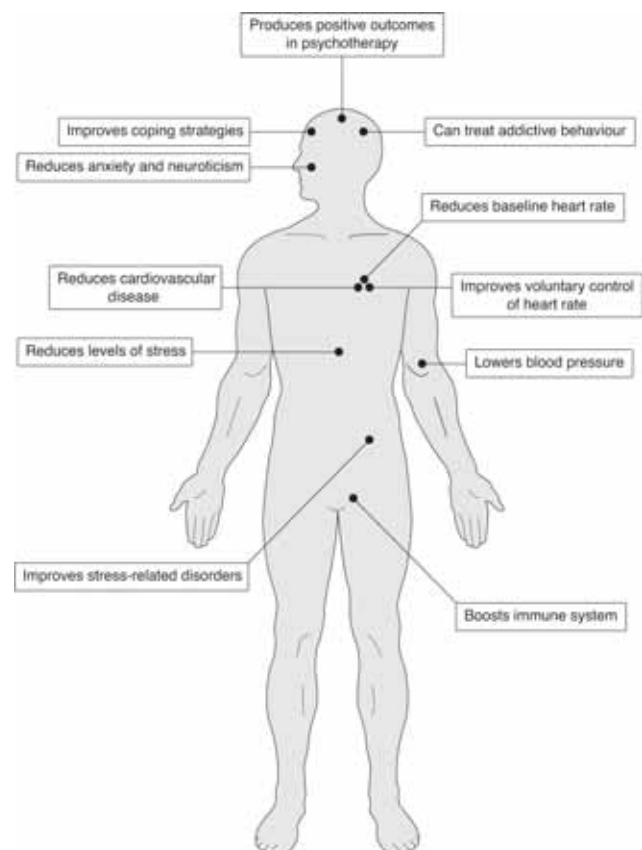
had just finished writing her first book. Later, when I discovered that the topic was the neuroscientific proof of the power of meditation, I rushed to buy a copy. Like Shanida, I am a keen yoga and meditation practitioner, and before becoming a medical writer, I was a neuropharmacologist researching into drugs that affect mood and anxiety levels. I have always found it incredible that this lump of reddish-grey jelly we call 'the brain' can contain a lifetime of memories and control our every thought, action and emotion. Shanida has a PhD in neurophysiology, and her post-doctoral research was into the mechanism of learning and memory. In her book, she clearly explains the current knowledge of how the brain works and presents scientific evidence that regular meditation practice can improve all aspects of the functioning of the brain and body.

The book first introduces meditation techniques and other related disciplines, including yoga and tai chi. It then describes how the stresses of modern life negatively affect our mental and physical health, giving rise to an explosion of stress-related diseases such as cardiovascular disorders, depression and anxiety. Our response to stress is the adrenaline-charged 'fight or flight' reaction, no doubt essential for our ancestors when fighting sabre-toothed tigers, but somewhat inappropriate during a teleconference with a demanding client! Unfortunately our attempts to reduce stress—such as smoking, overeating, excessive alcohol consumption—often worsen the situation. Western and Eastern approaches to healthcare are compared: the traditional Western approach, founded by Hippocrates, considers the human body in terms of its separate parts and targets malfunctioning components for treatment; conversely, the Eastern approach is more holistic, embracing the importance of both mind and body. A key aspect of the Eastern approach is that meditative practices play a crucial role in healthcare.

The second chapter entitled 'Peering beneath the skull' is a fascinating tour of the brain's anatomy and physiology. What I loved about this book were the numerous astonishing facts, such as 'the brain houses more than 100 billion individual brain cells' and 'if every single person in the world had access to the Internet, the resulting network would still be only a fifteenth the size of the average

human brain'. The key point to understand here is that the brain's wiring is constantly changing and 'it is estimated that there are more possible configurations than there are elementary particles in the universe'! What this means is that your brain produces your thoughts—but your thoughts produce the networks in your brain....wow, that's philosophical, isn't it? A map of human intellect has been drawn using techniques such as magnetic resonance imaging. Shanida explains how quantum physics and the idea of the 'quantum brain' question our entire scientific reasoning—but I have to admit that my own limited brain couldn't completely grasp this part, so forgive me if I don't summarise it!

The third chapter describes scientific research into 'meditation and mystical experiences'. For example, one neuroscientist invented a motorcycle helmet containing magnets which produced temporal lobe microseizures and apparently triggered religious and mystical visions! This 'God Machine' was a media sensation, but was met with considerable scepticism in the scientific community. Other researchers injected radioactive tracer in meditating subjects and visualised the blood flow in the different regions of the brain. A typical sequence of changes in the brain was observed during meditation including a shift from left-brain (logical, analytical) to right-brain (creative) function and a dramatic decrease in activity in the 'orientation association area' in the parietal lobe (responsible for our sense of



Positive effects of meditation on the body

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self and time). Other scientists performed electroencephalograms (EEG) on meditating subjects and showed a typical pattern with a reduction of beta waves and an increase in alpha and theta waves. These results are fascinating, but as Shanida says, they do not answer the age-old question: which came first, consciousness or the brain? Nevertheless the boundaries between science and spirituality appear to be less well defined than we originally thought.

The fourth chapter entitled 'Bridging science and spirituality' discusses the new discipline of 'neurotheology'. I don't want to scare you off the book by making you think it is all about religion—not at all! In fact this section is a fascinating mixture of philosophy and psychology which I will probably read again many times before fully understanding the concepts.

The fifth chapter describes how psychoactive drugs such as psilocybin (magic mushrooms) and lysergic acid diethylamide (LSD) can alter consciousness and have been used by scientists in their research. For example, the horse tranquilliser, ketamine, can produce an altered state likened to a near-death experience with the sensation of travelling rapidly through a dark tunnel towards a light, the feeling of dying and being in God's presence. Needless to say, most of these drugs are highly toxic and not an advisable method for attaining rapid enlightenment! Some researchers, however, believe that meditation is inefficient and slow, and needs to be refined to make it more effective. The biofeedback technique using the galvanic skin response—also used as a 'lie detector'—can help subjects learn to relax and meditate more successfully. Neurofeedback is a similar technique: patients undergo an EEG whilst meditating in order to learn which thoughts produce 'good' brain waves. I have to say I found this part of the book rather disturbing: will we soon all be forced to wear neurofeedback EEG helmets every day to keep our negative thoughts under control in this stressful world!

The sixth chapter discusses the impact of meditation on health. Many studies over the last 5 years have evoked a massive surge of interest in this field. Shanida describes convincing evidence that daily meditation practice reduces stress levels, boosts the immune system, improves out-

come and quality of life in patients with cancer or chronic pain, lowers heart rate and blood pressure, reduces the risk of cardiovascular disease, and improves psychological wellbeing. One study even showed that meditation improved intelligence! Shanida argues convincingly that whilst meditation probably cannot replace traditional healthcare, it can play a key role as a preventative or add-on therapy. She says 'our healthcare systems are struggling to deal with the needs of an increasingly unhealthy population; solutions are needed, and needed quickly. Meditation promises to offer that solution, improving our general health and reducing our current reliance on the healthcare system to repair the damage inflicted by our fast-paced, stress-filled lives'.

The final chapter describes two meditation techniques in enough detail to allow the reader to give it a go. I have been meditating regularly for the past year and I have been astonished by the results. I am much happier and less stressed than before: time seems to go more slowly, and I am able to finish my projects faster with less effort! If you have a stressful lifestyle with tight deadlines (i.e. if you are a medical writer), and if you sometimes worry that this lifestyle is not great for your health, I strongly recommend that you read Shanida's book and that you try meditation: even a few minutes a day could change your life!

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## E-mails: Don't get too obsessed with the time management

E-mails can "waste huge amounts of time" but help is at hand for those struggling to keep them under control. A nice and useful article on how to handle e-mails and what e-mails are good and bad for can be found at [http://www.timalbert.co.uk/shortwords\\_handleemail.htm](http://www.timalbert.co.uk/shortwords_handleemail.htm)

## Vital signs

### Dear TWS

I have been an EMWA member from Turkey since September 2006. I would like to inform you, actually I should say people, who have worked for the new design and more functional website for EMWA that I think our website is now more appealing to people with variable interests (both medical writers and people interested in medical writing). As the contents of the sections are being regularly updated, I believe that every visitor will be inspired at the first glance. I would like to thank everyone, who has spent their time and creative energy on this successful project.

### Evin Isgor

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