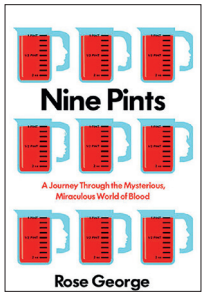
Nine Pints: a Journey Through the Mysterious, Miraculous World of Blood
Rose George
Portobello Books, 2019, PB, 384pp, £8.56, 978-1846276125



OUT FOR BLOOD

This is a fascinating account of the mysterious red substance that flows around all our bodies. Divided into nine chapters to represent the nine pints in the average human body, it cover topics as diverse as the origins of the blood transfusion service, HIV in South Africa, menstrual taboos, and the management of major trauma. The author, Rose George, is an investigative journalist and she creates a compelling narrative suitable for both lay readers and healthcare professionals. Historical details about the discovery of circulatory system, early attempts at blood transfusion, and blood-letting treatments are cleverly interwoven with current research.

I was intrigued and a little revolted to read about her visit to a leech farm in Wales where tanks are designed to give the leeches the optimum amount of exercise. They are then starved for 6 months, sterilised by UV light, before being dispatched by post. Leeches are used mainly following plastic surgery to remove blood from engorged grafts where the capillary network has yet to recover.

Nine Pints is not always an easy read. I was disturbed to learn about the continued use of paid plasma donors by commercial companies in Canada and the privatisation of the UK plasma supply industry, and I was saddened to read of the large number of Nepalese women who are still subject to freedom-limiting menstrual taboos including having to sleep outside or stay in a crude hut when menstruating.

I appreciated her righteous anger about girls not attending school because of the lack of sanitary provision in many developing countries and young women receiving so-called 'blessings' (which might include lunch money, phone credit, or hair weaves in return for sex with older men in South Africa), which is fuelling the HIV epidemic. Then there are the lost generation of haemophiliacs in the UK who contracted blood-borne viruses from Factor VIII (contaminated with HIV and/or hepatitis C during the 1970s and 1980s) and who have yet to receive an apology from the government.

She introduces unsung heroes such as Janet Vaughan, who established the UK blood transfusion service, and Arunachalam Muruganantham, who developed a machine that can manufacture sanitary pads very cheaply and has provided employment in resource-poor settings.

The final chapter gives a brief history of vampires including a US company called 'Ambrosia', which offers to reverse the ageing process by transfusing its customers with blood from young donors. It concludes with a discussion of the latest efforts to develop an artificial blood substitute.

There are occasional jarring elements: the author asserts that her own endometriosis was caused by exposure to environmental toxins, despite quoting research studies that fail to support her point of view, and when commenting on people with HIV being jailed for not disclosing their status to their partners she states that: *'Chlamydia and hepatitis, now more life threatening or disabling, get no such sanction.'*

The US spellings used throughout the book are a little incongruous in a book dedicated to the NHS.

Overall, though, this was an entertaining and thought-provoking read, and I was left feeling grateful to live in a developed country with accessible treatment for blood-borne viruses, sanitary provision available to all, and for our blood transfusion service supported by altruistic donors.

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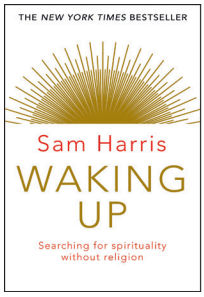
Waking Up: Searching for Spirituality Without Religion
Sam Harris
Black Swan, 2015, PB, 256pp, £9.99, 978-1784160029



ONLY THE SPIRIT?

Sam Harris captures a popular call for spirituality that is good for mental health and not tainted by religion. He expands the secular concept of spirituality fruitfully, but his insights are limited by a lack of academic rigour or practitioner experience.

Harris argues that spirituality is not only *'an indispensable part of understanding the nature of the mind'* but also requires a broader focus than the individual. Spirituality has ethical and relational aspects distinguishing it from concepts of individual mental wellness or peace. This is an important insight: the need to think about spirituality in a more communal way.

Harris's propositions are informed by neuroscience, Buddhist teachings, and personal experiences of psychotropic drugs. He dismisses religious traditions, including contemplative traditions, even though they may have much in common with what he regards as spiritual. Harris is upfront about this, but this suggests an ideological position rather than a genuine enquiry. Harris creates an account of spirituality later in the book that is primarily neurological, calling on functional MRI and other evidence. Extensive notes and references are provided but these omit mainstream academic work on spirituality and health/mental health, for example, that of Chris Cook, John Swinton, or Harold Koenig, which would provide balance to Harris's arguments, or in some cases challenge them.

Those looking for help with spiritual practices will find brief advice on dealing with negative emotions, but Harris strays readily into bizarre-sounding meditations, including imagining one has no head! Harris not only references mindfulness-