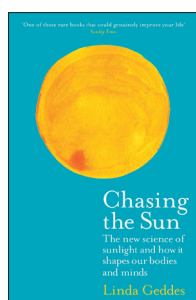


Chasing the Sun: The New Science of Sunlight and How it Shapes Our Bodies and Minds

Linda Geddes

Wellcome Collection, 2019, PB, 256pp,
£6.99, 978-1781258330



LET THERE BE LIGHT

The sun has had bad press. As GPs we correctly declaim grim warnings to our patients about skin cancer. We rightly warn of the sharp rise in malignant melanomas, the risks of sunbathing on holidays, and frequenting those tanning salons that benight our high streets. On the other hand, we are aware of the sun's benefits in the production of vitamin D. My results inbox daily has at least one patient with low vitamin D, and we seem to be testing it for a range of conditions, physical and psychological, with a corresponding increase in prescribed vitamin D supplementation.

The health benefits of sunlight have been known for centuries. Hippocrates built a solarium at his treatment centre on the Greek island of Kos, and a fellow physician, Aretaeus of Cappadocia, recommended sunlight for 'lethargics.' More recently, Florence Nightingale would position patients close to windows, arguing that *'second only to their need of fresh air is their need for light ... not only light but direct sun-light'*. In the early 20th century, Niels Finsen developed light therapy for the treatment of skin tuberculosis, and Robert Koch showed that the bacterium responsible for TB could be killed by sunlight. There followed a fashion for heliotherapy, until the rise of critical voices such as those of the British surgeon John Lockhart-Mummery, who, in his book *Nothing New Under the Sun*, dismissed sunlight therapy as 'pseudo-magic'.

Linda Geddes argues that we are missing the point in this age-old binary discussion,

and instead we should focus on the integral role of the sun in the development of our circadian rhythms. This starts in utero, but, as all new parents are well aware, circadian rhythms do not fully develop until months after birth, and they continue to evolve throughout life. In adolescence the biological rhythms are shifted later, making it harder for teenagers to fall asleep at night and get up in time for school. Adults generally have well-developed rhythms, with defined changes in body temperature throughout the day and night.

In order to illustrate the importance of circadian rhythms for our health, Geddes travelled far and wide. She starts with the Amish, an American people whose rhythms are completely dictated by the sun. She describes a yard-sale at 5.30 am: *'already a man with a chin-curtain beard, and the distinctive Amish uniform of straw hat, plain shirt and braces, is firing up a barbecue, and the smell of smoke and grilled chicken intermingle with the sweet smell of desserts'*.

Living their lives in the outdoors, the Amish are exposed to far greater levels of natural light than the rest of us, and Geddes suggests that this may help account for their lower levels of depression.

In complete contrast, Geddes describes her trip to a conference in Las Vegas in 2007 when, suitably, the International Agency for Research on Cancer added night-shift work to the list of 'probable' human carcinogens. She describes her experience of Vegas as lurching *'like a confused moth, through underground malls and vast casino floors, my sense of time becoming ever more distorted'*.

She explains that exposure to bright light at night *'forces the body to feel alert when it should be sleeping, setting off a cascade of damaging effects'*.

As an example of how we can all re-engage with our circadian rhythms, Geddes travels to the German spa town of Bad Kissingen, Bavaria, historically a place of health and healing, which has now refashioned itself along the lines of 'chronobiology'. Guided by the 'chronobiologist' Thomas Kantermann, the town starts schools later in the day, holds classes outdoors, and encourages businesses to offer flexitime for the larks and owls in their workforce. Most controversially, Bad Kissingen has proposed unilaterally abandoning Daylight Saving Time, which curtails teenagers'

sleep even further, and may well have an adverse effect on their exam results.

Geddes ends her travels where she began, at Stonehenge. There she describes the 4500-year-old understanding we have had of the sun and its importance for the 'circularity of our biology'. Justifiably, after writing a book full of complex biomedical theories intertwined with delightful history and travel writing, we learn that she has graduated from a mere visitor to a guest of the Cotswold Order of Druids.

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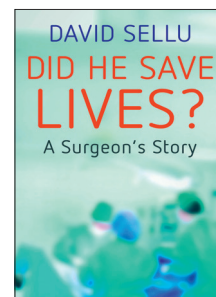
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DOI: <https://doi.org/10.3399/bjgp20X707957>

Did He Save Lives? A Surgeon's Story

David Sellu

Sweetcroft Publishing, 2019, PB, 288pp,
£7.19, 978-1912892327



A MISCARRIAGE OF JUSTICE

One ordinary evening in February 2010 an experienced consultant colorectal surgeon saw his last patient of the day, a 66-year old retired builder who had developed abdominal pain shortly following an elective knee replacement. Three years later on a cold November day David Sellu was sentenced to prison for 2 and a half years for unlawfully killing John Hughes.

Did He Save Lives? charts the events between these two dates that would lead to the conviction of a surgeon with a previously unblemished record of gross negligence manslaughter. Sellu's methodical, sparse yet descriptive prose depicting the day-to-day of prison life belies the quiet horror of a life stripped of freedom, autonomy, and dignity.

Born in a rural village in Sierra Leone to illiterate farmers it was not in Sellu's destiny to become an eminent surgeon in England.