LIFESTYLE MEDICINE – THE NEXT BIG THING?

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Lifestyle, health and the NHS

Lifestyle is defined as, “the way in which a person lives” (1). This is wonderfully ambiguous and suggests that everyone is unique. Unfortunately, the luxuries of modern life have led to maladaptive behaviours becoming extraordinarily commonplace such as smoking, alcohol consumption, stress, sleep deprivation, inactivity, dietary imbalance and social isolation and it is no secret that these factors are determinants of major chronic conditions (Table 1) (2). Many of these behaviours are already being tackled at a public health level, from gruesome advertising requirements for tobacco, the formation of DrinkAware and more recently, a Cancer Research UK driven awareness campaign on the links between obesity and cancer. However, many believe there is a deeper opportunity for using lifestyle interventions as the primary means of treating and even reversing the chronic conditions which plague our times.

In 2014, the World Health Organisation (WHO), reported that the percentage of deaths attributed to chronic non-communicable diseases (NCDs) in the United Kingdom (UK) was a startling 89% (Figure 1) (3). Whilst this statistic is a testament to improvements in hygiene, vaccination programs and acute injury management, it suggests that our National Health Service (NHS) needs to evolve to tackle modern afflictions. Unfortunately, the NHS is struggling in this regard. Approximately 15 million people in England have at least one chronic disease and approximately 70% of the NHS Primary and Acute Care budget is spent treating these conditions (4). Given that the NHS is facing an unprecedented level of financial pressure (5), finding solutions which are affordable, efficacious and easy for individuals to access is critical. Influencing population lifestyle choices might be the only economically sustainable solution.
Figure 1 – [a] Causes of mortality in the UK; [b] Stratification of NCDs in the UK. *Cardiovascular diseases primarily refer to coronary artery disease, cerebrovascular disease (stroke) and rheumatic heart disease (3).
Table 1 –Lifestyle choices as determinants of chronic conditions (2). *CLDs = chronic lung diseases.

<table>
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<tr>
<th>Risk Factor</th>
<th>Heart Disease</th>
<th>Stroke</th>
<th>Cancer</th>
<th>CLDs*</th>
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<td>✓</td>
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<tr>
<td>Poor Diet</td>
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<td>✓</td>
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<tr>
<td>Inactivity</td>
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<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
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<td>BMI &gt; 25</td>
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</tr>
<tr>
<td>Alcohol Consumption</td>
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</table>

Defining Lifestyle Medicine

The connection between lifestyle and health can be traced back to the father of modern medicine, Hippocrates, who is famously quoted as saying, “Let food be thy medicine, and medicine be thy food,” and, “walking is man’s best medicine”. Today, the Lifestyle Medicine organisations across the world have expanded on those ancient Greek principles and the concept of Lifestyle Medicine (LM) can be distilled into the following:

“An evidence based approach in which comprehensive lifestyle changes (including nutrition, physical activity, sleep, stress management, social support and tobacco/alcohol/drug limitation) are used to prevent, treat and reverse the progression of chronic disease, by addressing their underlying causes, whilst promoting self-management” (6, 7).

It is worth elaborating on the evidence base for LM. There is an abundance of data which identifies lifestyle choices as a major determinant of disease and a growing collection of evidence which demonstrates the efficacy of lifestyle interventions as a primary treatment for disease and on occasion, a facilitator of disease reversal. Capturing the scope of evidence relevant to LM can be difficult, but a selection of research findings can be seen in figure 2.
Diabetes costs the NHS £10 billion per year, is the leading cause of blindness in those of working age and results in over 100 amputations per week. (8)

Cardiovascular diseases affects 7 million people in the UK and there are 545 heart attacks daily (9)

Sitting for >6 hours/day is associated with 94% and 48% increases in relative mortality for women and men respectively (10)

Sleep deprivation costs up to £40 billion per year to the British Economy (11)

The COST of lifestyle choices

The PROMISE of lifestyle-interventions

Lifestyle interventions can reverse coronary artery disease (12, 13), have been demonstrated to reduce stroke risk (14) and are associated with a significantly lower incidence of cancer (15)

A low-fat vegan diet can improve glycaemic and lipid control (16) in type 2 diabetics and comprehensive lifestyle interventions can induce partial remission of disease (17)

Lifestyle interventions can maintain or even improve cognitive function in the elderly (18, 19)

A crucial function of sleep is to facilitate removal of degradation products from neural activity which accumulate during waking (20)

Lifestyle interventions can promote telomere lengthening – a potential anti-aging effect (21)

Figure 2 – A selection of findings which demonstrate the scope of lifestyle driven consequences and the breadth of reported benefits of lifestyle interventions.
Do clinicians have the time and expertise to utilise such a diverse range of interventions?

On face value, the notion that a single doctor could ever adequately assess a patient’s lifestyle, suggest appropriate interventions and monitor their effects, whilst also managing any disease, seems nonsensical when considering the 10-minute timeframe which General Practitioners (GPs) are pressured to function within. In fact, no single healthcare professional can independently practice LM but rather, a diverse team is a necessity, with doctors, nurses, dieticians, exercise physiologists, physiotherapists and psychologists each performing their roles with a GP pulling the strings. Furthermore, if LM delivers on its promise of large-scale reduction in chronic disease burden, the NHS would be rewarded with time, money and manpower to tackle the issues that remain.

Regarding the level of expertise in LM, the current circumstances are mixed. Whilst the General Medical Council (GMC) dedicates a chapter to Health Promotion and Illness Prevention in their 2018 Outcomes for Graduates publication, they don’t mention the use of lifestyle interventions as a primary treatment (22). Furthermore, most senior doctors qualified years if not decades ago, when such guidelines were not in place. However, a defining feature of the healthcare professions is the commitment to lifelong learning and one doesn’t need to look far to find doctors who are leading the way. From Dr Rob Lawson who heads the British Society of Lifestyle Medicine (BSLM), BBC’s Doctor in the House, Dr Rangan Chatterjee, or Dr Rupy Aujla who runs The Doctor’s Kitchen website and envisages a day where each GP surgery is affiliated with a community kitchen. These healthcare innovators are inspiring a generation of doctors to embrace the LM philosophy and for current doctors who feel ill-equipped, reforms to education are beginning to surface. The Royal College of GPs now approve LM courses delivered by the BSLM and Lobe Medical and work on a culinary medicine course by The Doctor’s Kitchen is in progress too. With time, these educational opportunities are sure to multiply and flourish.

Should NHS clinicians be looking outside the orthodox, western, biomedical model for therapists to refer to?

On the NHS Choices website, there is a webpage dedicated to “Complementary and Alternative Medicines” (CAMs), but in principle, these therapies are not lifestyle interventions. On the other hand, the concept of “Social Prescribing” (SP) embodies the philosophy of LM perfectly. SP describes the referral of patients from primary care to local, non-clinical services such as voluntary or community sector organisations which can help GPs identify new life opportunities which cater to the increasingly complex needs of patients (24). For example, a GP might want to address a patient’s inactivity and their feeling of social isolation and to find a solution, they refer to an SP scheme which can help direct the patient to suitable local opportunities such as sports groups, walking clubs or dancing classes.

Implementation of SP schemes is limited, but reported patient benefits include reduced anxiety, higher quality of life and fewer GP attendances, emergency department visits and hospital admissions (25, 26). Unfortunately, most studies related to SP are small in scale, conducted without the use of control groups and rely on self-reported outcomes. After examining the evidence base for SP, the University of York’s Centre for Reviews and
Dissemination concluded that there is insufficient data to suggest that SP is either efficacious or cost-effective (27). However, others argue that such findings are unsurprising because SP schemes aim to provide benefit over much larger time-scales and the breadth of benefits can be difficult to measure (24). Constructing an evidence-based case will require several long-term and comparative schemes to be implemented across the UK. Despite these challenges, NHS England include the principles of social prescribing and the role of local non-clinical services in both the NHS Five Year Forward View and the GP Forward View publications (28, 29).

**Conclusion**

To transition from a reactionary, pill-based approach, to a pro-active and lifestyle focused philosophy, will be time-consuming, challenging and subject to intense scrutiny. Nonetheless, convention has led to our population living longer but not necessarily better, with the time spent with injury or illness rising alongside life expectancy (30). We can continue to medicalise all health conditions or recognise that many ailments can be resolved, with the use of social capital and lifestyle modifications alone. The case for the adoption of lifestyle medicine has never been stronger and the future of the NHS might depend on its implementation.
References


27. The University of York, Centre for Reviews and Dissemination. Evidence to inform the commissioning of social prescribing [Internet]. 2015. Available from: https://www.york.ac.uk/media/crd/Ev%20briefing_social_prescribing.pdf

