

Journal of Interdisciplinary Science Topics

The Unhealthy Lockdown Habits of BBC Staged

Kai Jac Cordes

Natural Sciences (Life and Physical Sciences), School of Biological Sciences, University of Leicester

12/04/2024

Abstract

The BBC show *Staged* was filmed and set during the first COVID-19 lockdown and follows David Tennant and Michael Sheen, playing fictionalised versions of themselves, attempting to adjust to the lockdown. This paper looks in to some of the unhealthy habits the background characters displayed during the first series, Adrian Lester's coping mechanism of running excessively in an attempt to avoid thinking about his problems and Lucy Eaton's evenings of comfort eating, and investigates the physical ramifications of their coping mechanisms.

Keywords: TV Programme; Biology; Exercise; Nutrition; Staged

Introduction

A number of questionable health choices were made by the characters of *Staged*, particularly in Series 1 where the show is directly set during the 2020 lockdown and follows the struggles of adjusting to life at home. This is shown repeatedly by the main characters; with Michael and Anna (Anna Lundberg, Michael's real-life partner) drinking excessively [1], David's empty fridge leading to him garnishing leftover lasagne with a milky bar easter egg for dinner [1], and the both of them attempting to manage their emotions by screaming in the garden [1]. The paper will be focussing on 2 particular examples from the extended cast: Adrian's excessive exercising habit, mentioned in Series 1, Episode 5 [2]; and Lucy's preferred comfort food from the extended version of Series 1, Episode 4 [3].

Adrian

In Series 1, Episode 5 [2], Adrian Lester stars as a version of himself who has been brought in to the project. Adrian is experiencing emotional distress from the effects of the lockdown, and when various breathing exercises are unable to help this, he "[goes] for a little run" – of around 20 miles a day! While exercise in moderation is a good thing, this is a little excessive, likely close to the training levels of professional athletes, and without their coaching or levels of fitness knowledge it is likely that he is over-exercising and under-eating, and this could be having a significant effect on his body.

The approximate number of calories burned by a person in one day can be calculated by using a multiple of the Basal Metabolic Rate (BMR) to find the Total Daily Energy Expenditure (TDEE). Various equations for calculating BMR have been created and used, the current best prediction is the Mifflin St Jeor equation [4], which is shown in *equation 1* (below) for men, and *equation 2*, to be used later in the paper, for women [5].

$$BMR = 10w + 6.25h - 5a + 5 \quad [eqn 1]$$

$w = \text{weight (kg)}$
 $h = \text{height (cm)}$
 $a = \text{age (years)}$

The TDEE can be calculated for a lightly active person (classed as doing light exercise/movement, a fair assumption of a person during lockdown excluding intense bursts of exercise such as the runs) by multiplying the calculated BMR by 1.375 [6]. The additional energy required for Adrian's runs will be more accurately calculated separately.

Adrian Lester was 51 years old when *Staged* aired, he is 185 cm tall [7] and is stated to weigh 75 kg [8]. This means that his BMR can be calculated to be 1637.5 kcals, and his TDEE to be 2251.563 kcals.

The calories burned during the runs are to be calculated separately as basic TDEE calculations do not account for such intense exercise. First, the time Adrian spends running must be determined, as that is the primary value calorie calculators use. According

to Running Level, the average time taken for a 50-year-old male to run 20 miles is likely to be between 3 hours 32 minutes (10.5 minute miles) and 3 hours 2 minutes (9 minute miles) [9]. This assumes that Adrian is somewhere between a 'Novice' runner, having been running for at least 6 months, and an 'Intermediate' runner, having been running for at least 2 years, which seems likely as he has likely had some running experience to be able to run this much. Taking the average of these, an online calculator estimates that he would burn 2580 kcals in the time he is running each day [10], taking in to account the calories that would be burnt during that time by basic bodily functions regardless, it can be calculated that he will be burning an additional 2272 kcals due to the run. This means that Adrian would need to be eating a total of 4524 kcals per day to adequately fuel his body's functions and the additional exercise he is doing. This is not an unreasonable amount to be aiming to eat, especially given the hunger he is likely to be feeling, and he does state that he has been eating well [2]. However, he is still unlikely to be fully meeting his body's caloric needs and will most likely be steadily losing weight over time.

Lucy

In the extended version of Series 1, Episode 4 [3] Lucy (Eaton, Simon Evans' sister) states that she will need to buy another jar of marmite at the shops because she finished their recently opened jar the night before. She defends herself saying that "different people comfort-eat different things", however spreads such as marmite were not intended to be eaten in large quantities, so there could be notable health implications of her preferred comfort food. Her BMR and TDEE, as discussed earlier in the paper, can be calculated using the following equation:

$$BMR = 10w + 6.25h - 5a - 161 \quad [eqn 2]$$

Lucy states in the show [11] that she is 4 years younger than her brother Simon, who was 36 when *Staged* aired [12], so she can be taken to be approximately 32, she is 160 cm tall and weighs 59 kg. From this, her BMR can be calculated to be 1269 kcals and her TDEE to be 1744.875 kcals.

Jars of marmite come in 3 sizes: 70g, 250g and 500g [13]. For the purpose of this we will take the 250g jar, as the median option it is the better estimate and also the most likely to be available in shops. Marmite contains 260 kcals per 100g, notably it also contains 10.8g of salt and 24µg of Vitamin B12 [14]. One

portion of marmite (8g) is stated to contain 76% of a person's daily required intake of Vitamin B12, the highest percentage value stated of the nutritional components, so it is a significant component to note even if the value appears small.

The 250g jar contains 650 kcals, 27g of salt and 60µg of Vitamin B12. Using the percentages of the intake of an average person (this will not be completely accurate as Lucy is smaller than the average, however it will make a good enough estimate), she is consuming 450% of her daily salt requirements and 2500% of her daily Vitamin B12 requirements [15]. Salt poisoning is very possible, but Lucy would need to consume 30-60g of salt for it to be fatal [16], so as long as her salt intake from the rest of the day was reasonably low, she is not at a significant risk. This would, however mean, that if the jar of marmite had been the 500g jar, she would be at a significant risk of medical complications. From the excess salt, she is likely to be bloated and thirsty for a couple of days following this, and if this occurs repeatedly, over time she will be at an increased risk of high blood pressure and heart issues [17].

Despite the excessive proportion of Vitamin B12, there is actually limited danger to consuming this much, as the excess is able to just be passed out of the body in the urine [18]. However, high doses can cause nausea, diarrhoea and fatigue, so it would certainly be likely that Lucy would have experienced some of these in the days that followed.

The calories in the jar only make up around 37% of her approximate daily requirements (see above calculation of TDEE), so she would be able to eat fairly regularly around this without even slight health implications in that regard.

Conclusion

While both Adrian and Lucy are using some extreme coping mechanisms to deal with their emotions, there is a surprisingly low chance that either of them will be suffering any significant medical consequences from this. However, in the long term, the effects for both of them would be likely to build up, possibly leading to noticeable weight loss for Adrian and heart and digestive issues for Lucy. None of the actions from any of the characters in the series can be seen as particularly healthy coping mechanisms and they would certainly not be recommended, but that being said, things could be a lot worse!

References

- [1] Evans, S. (2020), *Up To No Good*, Staged, Series 1, Episode 2 [TV Episode]. BBC. First Broadcast 10 June 2020.
- [2] Evans, S. (2020), *Ulysses*, Staged, Series 1, Episode 5 [TV Episode]. BBC. First Broadcast 24 June 2020.
- [3] Evans, S. (2020), *Bara Brith*, Staged, Series 1, Episode 4 [TV Episode]. BBC. First Broadcast 17 June 2020.
- [4] Mifflin, M.D., St Jeor, S.T., Hill, L.A., Scott, B.J., Daugherty, S.A. & Koh, Y.O. (1990). A new predictive equation for resting energy expenditure in healthy individuals. *The American Journal of Clinical Nutrition*, [online] 51(2), pp.241–247. DOI: 10.1093/ajcn/51.2.241.
- [5] Calculator.net (2024) *BMR Calculator*, Calculator.net. Available at: <https://www.calculator.net/bmr-calculator.html> [Accessed: 1st March 2024]
- [6] Frothingham, S. & Fernando, I. (2023) *What Is Basal Metabolic Rate?* HealthLine. Available at: <https://www.healthline.com/health/what-is-basal-metabolic-rate> [Accessed: 1st March 2024]
- [7] IMDb (2023) *Adrian Lester*, IMDb. Available at: <https://www.imdb.com/name/nm0504412> [Accessed: 1st March 2024]
- [8] My Celebrity Bio (2024) *Adrian Lester Height*, My Celebrity Bio. Available at: <https://mycelebritybio.com/adrian-lester-height/> [Accessed: 1st March 2024]
- [9] Running Level (2024) *20 Mile Run Times*, Running Level. Available at: <https://runninglevel.com/running-times/20-mile-times> [Accessed: 1st March 2024]
- [10] Luff, C. (2022) *How Many Calories Do You Burn While Running?* Very Well Fit. Available at: <https://www.verywellfit.com/how-many-calories-does-running-burn-2911108> [Accessed: 1st March 2024]
- [11] Evans, S. (2020), *Cachu Hwch*, Staged, Series 1, Episode 1 [TV Episode]. BBC. First Broadcast 10 June 2020.
- [12] Companies House (2024) *Simon Richard Evans*, Companies House. Available at: <https://find-and-update.company-information.service.gov.uk/officers/WHC02Vg3uvr09U58VLI2Egp7zJ4/appointments> [Accessed: 1st March 2024]
- [13] Unilever (2022) *Our Range*, Marmite, Unilever. Available at: <https://www.marmite.co.uk/products.html> [Accessed: 1st March 2024]
- [14] Unilever (2022) *Nutrition Information*, Marmite, Unilever. Available at: <https://www.marmite.co.uk/nutrition-information.html> [Accessed: 1st March 2024]
- [15] British Nutrition Foundation (2021) *Nutrition Requirements*, British Nutrition Foundation. Available at: <https://www.nutrition.org.uk/media/nmmewdug/nutrition-requirements.pdf> [Accessed: 1st March 2024]

- [16] Smith Haghghi, A. & Tinsley, G. (2021) *What is an excessive amount of dietary salt?* Healthline. Available at: <https://www.medicalnewstoday.com/articles/too-much-salt> [Accessed: 1st March 2024]
- [17] Lagaite, M. (2023) *Signs You're Eating Too Much Salt*, WebMD. Available at: <https://www.webmd.com/diet/ss/slideshow-too-much-salt> [Accessed: 16th March 2024]
- [18] Pruthi, S. et al (2023) *Vitamin B-12*, Mayo Clinic. Available at: <https://www.mayoclinic.org/drugs-supplements-vitamin-b12/art-20363663> [Accessed: 1st March 2024]