Nutrition project: analysis of dietary causes and effects

ASSIGN BUSTER

Introduction

There is an obvious relationship between nutrition and lifestyle, leading to a variation in an individual's diet every day. Hence, it is challenging to maintain the right amount of nutritional intake for the body's needs as lifestyle factors, for instance, work can affect one's eating patterns. In my case, I struggled to achieve a healthy eating pattern due to several circumstances including work schedule and university. This project will discuss the causes and effects of my own diet of 5 days, Monday to Friday, including social, family and individual factors.

Methods

I have chosen a subjective method approach of a 5-day estimated food diary of which I have recorded through the MyFitnessPal application. The application has allowed me to measure my nutrient intake, including breakfast, lunch, dinner, snacks and water intake, through the process of estimating my portion sizes or scanning the barcode of products in the application. Moreover, it also calculates the number of calories I have consumed and burned from exercise. I have selected the lose weight option that sets a target for the number of macronutrients and kilojoules I should be attaining, and the application also calculates micronutrients that make it easily assessable for individuals due to the variety of analysis.

I have chosen this method due to its accessibility as a mobile application compared to other methods such as a 24-hour recall as I can record for a longer period of time for more accurate analysis of my diet. Others such as food frequency questionnaires are challenging for me as I would rather

record my food intake straight away than all at once following a specific period of time, establishing more accurate results in contrast to a frequency scale.

Results

My recommended intake, according to the MyFitnessPal app, is 6, 569 kilojoules per day of which 50% should be carbohydrates, 20% protein and 30% fat. Four out of the five days of tracking my intake, I did fall under the recommended kilojoule intake, however, on some days I exceeded the macronutrient percentage of one and fell under a requirement of another. For example, on Tuesday I exceeded the recommended fat consumption from 30% to 52% but had inadequate portions of carbohydrate; consuming 28% instead of 50%.

Breakfast was the highest kilojoule intake of the day for every day except the day that I did not have breakfast; Wednesday. On Tuesday however, dinner was exceptionally higher than breakfast and additionally, it was the only day that I exceeded the recommended kilojoule intake by a difference of 4, 338.

On Monday and Thursday, dinner intake was exceptionally low, 690kjs and 749kjs respectively. For instance, Monday’s dinner only consisted of a brown rice tuna and avocado sushi roll that contained 3g of fat, 5g of protein and 31g of carbohydrates. Additionally, on Tuesday and Wednesday, I ate outside of home whereby dinner portions were larger in comparison to the other days. Snacks and water intake varied every day, however, intake of water daily was significantly low.

Discussion

Firstly, as the chosen option to lose weight was set up on the app, the recommended macronutrient intakes were based on a default goal setting of which I did not modify. This, in turn, led me to focus on reaching these targets, influencing my dietary behaviours. These ratios are derived from the Acceptable Macronutrient Distribution Ranges (AMDR), although, they are not entirely appropriate for weight loss as it is established for individuals who wish to maintain their body weight (Australian Bureau of Statistics, 2015). Hence, this gives rise to the questioning of appropriate ratios that an individual should follow to lose weight where in contrast, the CSIRO recommends a higher protein diet to increase fat loss and preserve muscle growth (Noakes, 2018). Hence, as my dietary behaviour was influenced by the suggested ratio of macronutrients, this may lead to the inability to lose weight in the long-term.

The type of food consumed on Tuesday and Wednesday evening was predominantly influenced by my family and friends. Most locations and the type of food ordered are mainly chosen by my parents during family dinners as they bear the expenses. Similarly, on Tuesday night I was surrounded by my friends that played a role in the choice of dinner and I was less conscious of the amount of food consumed. This is supported by studies that show how parents and peers contribute to an adolescent’s habit of eating, that may result in obesity

(Salvy et al., 2012). If this dietary behaviour of eating out becomes consistent, there is a possibility of weight gain as a long-term effect due to

exceeding the amount of kilojoule intake recommended to lose weight on the MyFitnessPal app.

My dietary behaviours were also influenced by the psychological thought of eating healthy, especially post-exercise. Specifically, on the days that I went to the gym in the morning, breakfast was dominated by protein as I personally believed it was necessary for muscle repairment. For example, on Thursday, 36% of the protein consumed on the day was during breakfast, compared to 14%, 24% and 25% during lunch, dinner and snacks respectively. Consequently, recent evidence also indicates it's long term effects in improving recovery and immune functioning. (Kreider and Campbell, 2009). Alongside this, with knowledge and beliefs obtained over time, I have come to value breakfast as the most significant meal shown through the consistency of having meals in the morning with the exception of Wednesday. Hence, long-term effects include the protection of cardiometabolic health and the maintenance of a balanced diet that can result in weight loss (Smith et al., 2010). Furthermore, being knowledgeable about the importance of eating enough vegetables, I encouraged my parents to choose healthier dishes during family dinners, such as Tuesday night. As I have previously read the Australian Dietary Guidelines, I am recommended to consume 5 serves a day of which is beneficial in the short run as it can reduce hunger and in the long run by protecting individuals against chronic diseases including heart disease (National Health and Medical Research Council, 2013). Although my perspective on healthy eating is distinct from others, for example, a dietician would know what foods to consume specific to targeting weight loss whereas my behaviour stems from previous

knowledge and beliefs obtained over time. Hence, personal beliefs on health contribute to dietary behaviours.

Other factors such as a busy schedule have also influenced my dietary behaviour. For example, on Wednesday due to time constraint having needed to attend a class at university, I was unable to have breakfast after exercising. In the short-term, I consequently felt tired due to the lack of energy specifically after high-intensity training. A solution to this could be to improve on time management and workout earlier. In addition, breakfast skipping can lead to an increased 24-hour glycaemia (Kobayashi et al., 2014) that can lead to the development of type 2 diabetes. Similarly, Monday and Thursday dinner intakes depicted my inability to eat at an appropriate time as I had worked night shifts, consuming dinner at around 11 pm. These foods were convenient to eat as they were leftovers from the restaurant, although they were not large portions nor were they nutritional. Hence, a busy schedule contributes to a poor diet that can consequently affect health and weight as I fail to achieve the recommended nutrient intake.

Additionally, as my dietary behaviours were affected by the concerns of reaching the target ratios of macronutrients, this was not entirely accurate as the kilojoules burnt during exercise were not accounted for. This is due to the difficulty in tracking specific weighted exercises that I performed at the gym. Hence, on the days that I did engage in physical activity, the difference in the intake should have been much less on the days I exceeded and much more on the days that I was under. As such, I could have been more or less conscious of what I had consumed having known that I was further away from the recommended kilojoule intake. Also, my dietary behaviour may

have been impacted by subconscious acts of eating healthily due to the awareness of having to put my consumptions on record. Furthermore, water intake was very low on all days that can “ increase the risk of kidney stones and, in women, urinary tract infections” (Better Health Channel 2014).

Thus, my dietary behaviour is shown to be affected by the MyFitnessPal application, my social and cultural environment, which includes friends, family, university and work, as well as personal beliefs and knowledge.

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