



What do recreational runners use to refuel after a 5 - 10km run?

Sian Evans

ABSTRACT

This study is to addresses a gap in the literature regarding recreational runners and their methods of re-fuelling after a 10km run it also loosely addresses the diets and knowledge of amateur runners. Large amounts of research can be found on what to eat after running, when to eat during and even before running without examining if this is followed on a daily basis. The questionnaire was designed to give an insight of what takes place on a daily/weekly basis using Parkrun as an example as it is a weekly event. Questions were directed at runners in South Wales, who run for a social running club. Findings suggest that runners do not consider their nutritional intake to be significant after a 10km run, however protein featured largely on the results of what would you eat in order to aid recovery. Those that run more often or are members of a club consider their knowledge to be greater than that of non-club runners, or those who mostly run alone.

INTRODUCTION

This research examines the knowledge and understanding of recreational runners and their nutritional intake and re-fuelling methods. Previous studies have indicated that the quality of nutritional intake, intake timing, quantity and composition can enhance the capacity for exercise and aid recovery (Thomas et al, 2016). Recreational runners are unlikely to receive sufficient or appropriate nutritional advice, which can impact on performance (Burke, 1995). Incorporating post-exercise nutrition is essential for all athletes (Alghannam et al, 2018) and if they can gain understanding of the benefits of optimum nutritional intake, then they are likely to benefit from improved running performance (Mahoney et al (2011). Elite runners will be provided with chefs, meal plans and nutritionally balanced meals. Recreational runners are unlikely have the benefit of these and will have to ensure these aspects of training are covered themselves. The process of recovery will begin immediately after exercise ends (Betts et al, 2010) during which the first two hours are the most important and are the optimal time for replenishing the body in the body (Ivy et al, 1988). There are a number of methods which can be used as post-exercise recovery methods, including food intake, supplements, compression clothing, and cold-water immersion (Bezuglov et al. 2021). The outcome of the next exercise session can be influenced by the replenishment of the glycogen stores after the previous (Alghannam et al, 2018) and it typically takes 24 hours for glycogen levels to be restored to pre-exercise levels, provided the nutritional intake is sufficient (Burke at al, 1995). There is little research into what a recreational runner will consume after exercise. Therefore, the purpose of this research was to allow us to understand whether the running community have a good level of general knowledge within the subject, give further insight into their nutritional beliefs and habits, and find out where they gain the majority of their information.

METHODS AND MATERIALS

The research was undertaken via questionnaire, which featured multiple choice questions, of which there were open and closed questions. The questionnaire was sent via online link and completed online. A week was given as a timeframe for completing the survey, during which time 56 responses were collected, the survey was then closed. Due to the nature of the study, and the questions being asked, the study contained both qualitative and quantitative questions. The qualitative questions ensured that they give their own answers and opinion, and that any bias was controlled. The questionnaire method was chosen, as it gave participants an opportunity to consider in depth their responses than if an interview had been conducted. It also allowed participants to answer questions with honesty. The questionnaire was sent to social running clubs in South Wales via email and contact details on the website. They were asked to forward to current members. This ensured that the study was sent to amateur / recreational runners within the community, with permission gained from their committee. rather than the general population. The targeted area was in South Wales; however, a more detailed study could expand over a larger area for a more in-depth study. On closing the questionnaire, a statistical package was used to analyse the data collected the and provided detailed observations into the research.

RESULTS

Of 54 responses to the question - If you were to run 10km today, what would you eat afterwards to aid in your recovery? 17 of 34 respondents claimed that they would not change anything about their 'normal' diet to reflect the fuel burnt during exercise. Other answers concluded that 14 out of 36 indicated that protein to be their usual form of re-fuelling after a 10km run however when asked: which do you consider to be a better recovery meal option? 81.2% indicated that they should be eating a meal which consists of a portion of carbohydrate, protein and fat. A number of findings were made during the study, of which 4 could be considered significant in finding with a p<0.05. Current knowledge of nutrition was analysed, and 55.4% of respondents considered themselves to have sufficient knowledge on the nutrition required for running. Data analysis concluded that of this total a large number were club runners. Analysis shows that if we look at the Chi-square test 'Who do you run with and do you consider yourself to have sufficient knowledge on the nutrition required for running?' that we find a significant association ($\chi^2 = 17.67$, $p=0.001$) as indicated in Table 1 below. The crosstabulation between how often do you run and do you consider yourself to have a good level of knowledge of nutrition (Table 2) gives a significance of ($\chi^2 14.34$, $p=0.026$)and indicates that those who run more often have greater knowledge or confidence in their knowledge of the nutrition required for running.

Whodoyourunwith * knowledgeoofnutrition Crosstabulation				
Count		knowledgeoofnutrition		
		Yes	No	I don't know
Whodoyourunwith	alone	5	9	2
	friends	2	1	3
	club	24	9	1
Total		31	19	6

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.672 ^a	4	.001
Likelihood Ratio	14.404	4	.006
N of Valid Cases	56		

a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is .64.

Table 1. Who do you run with & Knowledge of nutrition.

Howoftendoyourun * knowledgeoofnutrition Crosstabulation				
Count		knowledgeoofnutrition		
		Yes	No	I don't know
Howoftendoyourun	Daily	5	0	0
	2-3times a week	26	14	4
	once a week	0	4	2
	less than once a week	0	1	0
Total		31	19	6

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	14.338 ^a	6	.026
Likelihood Ratio	18.301	6	.006
N of Valid Cases	56		

a. 10 cells (83.3%) have expected count less than 5. The minimum expected count is .11.

Table 2: How often do you run & Knowledge of nutrition.

DISCUSSION

There is little academic research into the refuelling methods of recreational runners, and a review of the literature indicates predominantly in-depth research into disordered eating and the female athlete, as opposed to everyday practice of the general population. Supplementation techniques also plays a large role in previous studies and available literature.

This study provides an insight into the relationship between those who run more often and have a better knowledge of nutrition. It also builds evidence of the fact that club runners considering themselves to have a good general knowledge on the diet required as an amateur runner. However when we examine what is being eaten, mainly protein or nothing different to normal, then we consider that on average a 10K run will burn around 600 calories (UK fitness events, 2020) then this could considerably affect the energy levels and recovery process resulting in weight loss and malnutrition. We should begin to consider if their knowledge is sufficient, and could examine this further with a future studies which ask more specific nutritional questions.

Despite findings of significance, there were limitations to the survey in that the sample size was small and limited to a certain geographical area, with a relatively specific group of people. In future research this could be expanded to provide greater insight into the data required. Expanding the survey to include a larger number of questions, could also provide data on actual knowledge as opposed to the athletes belief on their understanding of nutrition.

CONCLUSIONS

There is considerable information available on methods of re-fuelling after running/exercise, but there is little to distinguish what is being taken on a day-to-day basis by recreational runners, and the knowledge that these runners have with regards to the subject. This research gives an analysis of the understanding of runners at this level. Recreational runners consider themselves to have sufficient knowledge in refuelling methods after running and in findings it was concluded that it was club level runners that had a good knowledge of nutrition.

REFERENCES

Alghannam, A.F., Gonzalez, J.T and Betts, J.A., (2018) Restoration of Muscle Glycogen and Functional Capacity: Role of Post-Exercise Carbohydrate and Protein Co-Ingestion. *Nutrients*, **10**(2), pp. 253.

Betts, J.A.; Williams, C. (2010) Short-term recovery from prolonged exercise exploring the potential for protein ingestion to accentuate the benefits of carbohydrate supplements. *Sports Med* 40, 941–959. [CrossRef] [PubMed]

Bezuglov, E. *et al.* (2021) 'The Prevalence of Use of Various Post-Exercise Recovery Methods after Training among Elite Endurance Athletes', *International journal of environmental research and public health*, 18(21), p. 11698–. doi:10.3390/ijerph182111698.

Calories burnt running a 10k UK Fitness Events (MAy 21, 2020) Available at: <https://ukfitnesssevents.co.uk/> (Accessed 07/05/2022)

Louise Burke (1995) Practical issues in nutrition for athletes, *Journal of Sports Sciences*, 13:sup1, S83-S90, DOI: [10.1080/02640419508732281](https://doi.org/10.1080/02640419508732281)

Ivy, J. L., Katz, A. L., Cutler, C. L., Sherman, W. M., & Coyle, E. F. (1988). Muscle glycogen synthesis after exercise: Effect of time of carbohydrate ingestion. *Journal of Applied Physiology*, 65, 2018 – 2023

Thomas, D.T.; Erdman, K.A.; Burke, L.M. (2010) American college of sports medicine joint position statement. nutrition and athletic performance. *Med. Sci. Sports Exerc.* 48, 543–568. [PubMed]

CONTACT

Sian Evans

Email:
2015052@student.uwtsd.ac.uk
Phone: 07789768735