

# Exploring the perceptions of sports coaches and sports and exercise nutritionists regarding food safety risks in sports

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## Introduction

Athletes are reported to be susceptible to infection after acute exercise (Gleeson, 1985; Karageanes, 2007; Keaney *et al.*, 2018). Gastrointestinal infections (GI) can be debilitating to athletes (Karageanes, 2007), causing athletes to miss training or significantly impact performance in competitions (Gleeson & Walsh, 2012). The incidence of foodborne infection at sporting events, has been reported to have had a significant effect on the performance of several individual athletes and teams (Anderson, 1996).

Implementation of food safety practices and good hygiene are essential in preventing illness; in sports, it is fundamental to maintaining team effectiveness and to assist athletes in avoiding the adverse effects of illness (Howe *et al.*, 2003).

Although there is some overlap between the two specialisms (Heikkilä *et al.*, 2017), two key professionals have been identified as regularly supporting, educating and informing athletes:

- **Sport and exercise nutritionists (SENs)**, who provide food-related advice for performance oriented athletes to enable optimum-nutrition (British Dietetics Association, 2017).
- **Performance coaches** who mentor and educate athletes and/or sporting teams for peak-performance outputs (UK Coaching, 2019).

Given the relationship between SENs, coaches and athletes, this study explores the awareness and perceptions of sport nutritionists and coaches' regarding the food-safety risks associated with athletes.

## Purpose

The aim of this study was explore the awareness and perceptions of SENs and coaches' regarding the food safety risks associated with athletes.

## Methods

Focus groups ( $n=5$ ) were conducted with SENs ( $n=34$ ) and interviews were conducted with performance coaches ( $n=6$ ). Participating nutritionists and coaches worked with individual athletes and sporting teams.

Focus groups and interviews followed a structured schedule to explore food-safety awareness and identify specific food-safety risks from athletes food habits.

Audio recordings of focus groups and interviews were transcribed. Thematic analysis of the transcripts was conducted using NVivo 12 (QSR International).

Results are presented in terms of core themes which arose from the analysis and representative quotes from the respondents.

## References

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## Despite SENs and coaches being aware of the consequence of foodborne illness. Their perceptions regarding athletes food safety practices, susceptibility and responsibility, indicate the need to train SENs and coaches to support athletes to reduce the risk of foodborne illness.

<b>Perceived susceptibility of athletes to foodborne illness.</b>	Coaches perceived that athletes would be less susceptible to foodborne illness than the general population due to their physical activity. Whereas SENs indicated an awareness of the potential susceptibility of athletes, particularly after intense exercise and when travelling abroad for competition.	<p>"You'd like to think that they have stronger immune systems considering they're out in the conditions more" (Coach 001)</p> <p>"I would probably say stronger because of the physical activity" (Coach 005)</p> <p>"When they're competing they're more susceptible to picking up infection, illnesses and have poor digestive systems... their accommodation might be such that it is poor and they're cramped together." (Nutritionist)</p>
<b>Food safety concerns of coaches and nutritionists.</b>	Sport coaches did not express many concerns regarding the practices of athletes other than the use of bottles, which was of concern to both coaches and nutritionists. SENs suggested that attitudes of athletes towards the importance of food safety may prevent athletes implementing recommended food safety practices.	<p>"The water bottle thing does kind of worry me at times, but we have never had any major issues with it." (Coach 005)</p> <p>"...you quite often see them bring a packed lunch in, they wouldn't necessarily go 'oh, can I put this in the fridge', the packed lunch stays in their bag." (Nutritionist).</p> <p>"Another common one... is water bottles... in a sporting environment. They've all got them and I could probably count on one hand the amount of time I've seen an athlete wash a bottle." (Nutritionist).</p> <p>"The only thing I would have any concerns about is the condition of the water bottles that are used week in, week out and not washed." (Coach 001)</p>
<b>Food related priorities of coaches and nutritionists.</b>	Food safety was seldom a priority for coaches and SENs. The coaches seemed to focus more on the importance of nutrition and particularly hydration. SENs believed that athletes failed to be aware of food safety. Discussions indicated the need to inform athletes regarding food related risks.	<p>"Usually when they [the athletes] are travelling that they are aware [of food safety]... ..when they are competing in different countries and then I would usually be the one to bring it up they'd say ah yes I should think of that, but it wouldn't usually be their priority" (Nutritionist)</p> <p>"If I'm completely honest, it's [food safety] probably not something we think about, that's not high on the agenda especially on a match day." (Coach 001)</p> <p>"Sometimes it doesn't appear that they're particularly conscious, you know with some of the [food safety] behaviours displayed." (Nutritionist)</p>
<b>Consequence of foodborne illness to athletes.</b>	Both coaches and SENs were aware of the potential gastrointestinal impact of foodborne infection with reported examples; however the perceived impact varied between coaches and SENs. SENs focused on the potential impact on training whilst coaches focused more upon the impact associated with failing to compete.	<p>"He was out [of training] for three weeks... by the time he was back in full training capacity he had gained weight, and weight is such a huge thing... especially as he was a prop" (Nutritionist)</p> <p>"Well they'll obviously be too ill to train or play. That would mean I'd have to make team changes or try and bring players in to cover those positions." (Coach 001)</p> <p>"The team have very strict rules regarding cross infection with any GI disturbance requiring two days clear before re-involvement with the squad." (Coach 006)</p> <p>"Days off training... I guess potentially there are some long term medical side-effects, but initially it is days off training." (Nutritionist)</p>
<b>Perceived responsibility for food safety.</b>	SENs perceived a sense of responsibility for informing and educating athletes regarding the risks associated with foodborne illness and reported provision of food safety advice and information. Many reported a lack of food safety knowledge, other than 'common sense'. Conversely coaches did not perceive themselves responsible for the food safety of the athletes they coach.	<p>"When travelling internationally you educate as much as you can about food hygiene with regards to bottled water, what to choose in a café, what to avoid... avoid a quiet restaurant... stick to plain foods as well... But someone always comes back with a stomach bug." (Nutritionist).</p> <p>"I wouldn't count that [food safety] as my responsibility as a coach, I would say that's your general welfare, rather than a coach, unless you're professional." (Coach 002).</p> <p>"Something that I try to instil in the athletes is just make sure that cold food is meant to be served cold and vice versa, if it's meant to be hot then it actually is hot." (Nutritionist).</p> <p>"No, the club isn't responsible for that [food safety]." (Coach 004).</p> <p>"I think we seem to be reactive rather than proactive in regards to that [food safety]... wait for something to happen." (Coach 005).</p>

## Conclusion

- Conventionally, food-related research within sport has focused upon the nutritional impact of food upon performance. However, this study has identified potential food safety risks in sport.
- Findings suggest that there is a difference with regards to SENs and coaches in all the core themes analysed, an awareness that GI illness could impact on both performance and training.
- A lack of food safety awareness determined among coaches and SENs and poor reported knowledge amongst athletes indicates the need for further research to determine the food-safety training of SENs and coaches and the adequacy of training.