helene patounas NUTRITION

OPTIMISING HUMAN PERFORMANCE THROUGH PERSONALISED NUTRITION

A REVIEW PAPER ON ENHANCING COGNITIVE PERFORMANCE AND RECOVERY SPEED IN ELITE MOTOR RACING DRIVERS

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BACKGROUND

Personalised nutrition is a fast growing area of science. It is being adopted by many world class sports teams to help athletes gain a competitive edge. Elite motor racing drivers, especially Formula One drivers, are subject to intense physical and mental demands, and require a high level of nutritional support. In spite of this, scientific research specific to nutrition in motorsport does not appear to exist.

OBJECTIVES

This review paper aims to provide evidence-based nutritional insights into how cognitive performance and recovery speed may be enhanced in elite racing drivers through personalised nutrition.

DESIGN

There are 3 parts to this research paper:

1. A literature search and review on how personalised nutrition may enhance cognitive performance in motor racing.
2. A literature search and review on how personalised nutrition may enhance recovery speed in motor racing.
3. The application of these research findings to two elite racing drivers.

Personalised nutrition techniques are used to identify how this research may be relevant to motor racing and tailored to the unique needs of individual drivers. For example: the functional medicine model; mechanism descriptions and diagrams; and scientific data collection.

RESULTS

During a race, cognitive performance may be enhanced by personalised hydration, electrolyte and carbohydrate strategies, and, where appropriate, caffeine and amino acid supplementation. Further investigation is needed around the effectiveness of using other supplements e.g. ginseng and resveratrol. In-between races, cognitive performance may be supported through a number of strategies including blood glucose regulation, and ensuring adequate macro- and micronutrient intake and status.

Elite racing drivers require most recovery support in four specific areas: oxidative stress; muscle damage and inflammation; stress and sleep; and nutrient depletion. It is recommended that evidence-based strategies are applied to these areas and personalised.

CONCLUSION

This research paper provides a wide range of insights from the scientific literature into enhancing cognitive performance and recovery speed. It identifies the nutritional support needs of elite racing drivers, and provides a solid framework upon which comprehensive personalised nutrition strategies can be built. It also demonstrates that nutritional strategies need to be both personalised, and focused on overall health, if they are to be effective in optimising performance.

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