Facilitation of optimal muscle recovery should be an essential component of any sports medicine professional’s approach to working with athletes and active individuals. It is an important component of practice to consider in order to prevent injury, maximize activity, and perhaps enhance performance. For these reasons, I decided to research the recommendations associated to recovery beverages and their use in athletics and physical activity. These beverages are commonly consumed by athletes and active individuals before, during, and after physical activity, in order to combat the potential detrimental effects of exercise (i.e. DOMS, etc.).1 Moreover, they can range from simply water to traditional carbohydrate-electrolyte replacement drinks to milk and chocolate milk.1

A review by Spaccarotella and colleagues investigated the application of recovery beverages to endurance activities in order to provide recommendations on the “optimal formula” and timing of use for endurance and team-sport athletes.1 The main purpose of these beverages is to maximize glycogen re-synthesis as glycogen stores may be depleted following daily or multiple practices and/or competitive events.1 This could potentially leave the athlete at risk for injury and/or withdrawal from competition in some instances. The authors recommended the following1:

* Consume 1.2 g/kg of body weight of carbohydrate as glucose or sucrose IMMEDIATELY after exercise and each hour thereafter for 4-6 hours post-exercise (or 0.8 g/kg in conjunction with 0.4 g/kg of amino acids or protein of body weight)1

Furthermore, fluids are important for rehydration, and sports medicine professional should recommend beverages as follows to help restore loss through sweat:

* Recovery beverage with electrolytes, including potassium and chloride and approximately 0.3-0.7 grams of sodium/liter of fluid1

Lunn et al have also recommended the use of chocolate milk following endurance exercise secondary to it’s beneficial effects muscle protein fractional synthetic rate, skeletal muscle protein turnover, leucine kinetics and greater time to exhaustion performance measures.2 Similarly, Ferguson and colleagues demonstrated that chocolate milk supplementation improved successive exercise performance and increased intracellular signaling stimulus for protein synthesis.3

Just the other day I saw a football athlete drinking a jar of pickle juice on the sideline following a long run. There is anecdotal recognition of pickle juice as a substance that can alleviate acute skeletal muscle cramps within 35 seconds.4 In fact, pickle juice was shown to decrease the duration of skeletal muscle cramps in hypohydrated subjects following electrically induced muscle cramps.5 Perhaps there is some validation of this anecdotal information here? Regardless more research is needed to determine the mechanism of affect of pickle juice and validate its use with athletes and active individuals.5

This is all great information to use on the field or in the clinic, especially when working with competitive athletes and active individuals. You can use it to enhance your intervention approach, perhaps decreasing the risk for injury and enhancing performance. When it doubt, for a good relationship with a dietician and/or nutritionist and refer out, if needed.

**References:**

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