Exercise Rehydration

Many athletes have the habit of taking sports drinks when training. A good example of this is the Standard Chartered Hong Kong Marathon 2013, at which a lot of athletes brought their own sports drinks, hoping to perform at top gear. What do sport drinks give us in fact? What kind of ingredients of sports drinks are considered suitable for us? Here is some food for thought.

The ingredients of an ideal sports drink

In some literature published by American College of Sports Medicine (ACSM) in relation to sports and rehydration, it is suggested that athletes should replenish fluids regularly in any workout session that lasts 1 hour or above to prevent dehydration and electrolyte imbalance. To serve this purpose, sports drinks should contain a suitable amount of carbohydrates and electrolytes. Carbohydrates (mostly in the form of sugars) can replenish blood sugar and help maintain stamina; electrolytes can replenish the salts that are lost from the body through perspiration; they can maintain the normal concentration of electrolytes in the blood and keep muscles cramp-free at work. Studies have confirmed that electrolytes promote the absorption of fluids and reduce urination; hence, sports drinks can optimise rehydration during training. A suitable sports drink should have the following ingredients:

Ingredient	Concentration	Considerations
Carbohydrates	5-8 g/100mL (5-8%)	Excess level of carbs may slow down the absorption of fluids; inadequate level of such may not be able to provide the body with enough energy to maintain performance.
Sodium	45-70 mg/100 mL (20-30 mEq/L)*	Sodium and potassium are the major electrolytes in sweat that may drain away from the body along with perspiration. Sports drinks, unlike plain water, contain a suitable amount of electrolytes, which can stimulate thirst and thus remind the athlete to replenish fluids; the electrolyte concentration of these drinks should not be too high; otherwise, the drinks will taste less good and have a discouraging effect on users.
Potassium	8-20 mg/100 mL (2-5 mEq/L)*	

* 'mEq/L' is the unit often used to describe electrolyte concentration of sports drinks.

To conclude, athletes should observe the importance of rehydration in the course of endurance training (e.g. long-distance running), especially in hot weather. Rehydration, done properly, can help them perform at top gear; it also lowers the risks of heatstroke and dehydration. In the next issue, we will explore the strategies of rehydration at training. Until then, enjoy exercise!