Case Study

Sports nutrition and 2012 Legacy Goals

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**Sports Nutrition: How eating like an Athlete Can Benefit Recreational Athletes**

Many of us will remember learning about the nutritional pyramid, including the need to intake complex carbohydrates, protein and good fats, in addition to vitamins, minerals, fluids and fibre in order to maintain health. But the athlete takes the study of nutrition to a whole different level, timing meals with scientific precision, measuring the exact quantity of nutrients, utilising supplements (such as protein shakes and multivitamins) and drinks designed to replace electrolytes lost in training.

Whilst the data concerning sports nutrition is vast, there are some basic principles that we can take on board to enhance our recreational workouts and general health. Here, we consider the role of the basic timing of foods and fluid intake as a means of enhancing our own recreational sports & fitness performance. Doubtless the information contained here would be useful to any student-athlete or recreational exerciser.

**The Pre-Workout Meal**

Athletes time their pre-exercise meal in order to provide them with the nutrients needed to optimally sustain and promote peak performance. The pre-exercise meal will vary depending upon the sport or exercise being undertaken, and will also vary depending on the need being satisfied (e.g. to shuttle more glycogen to working muscles). However, this meal is likely to be ingested within 2-3 hours of the workout taking place.

**The Pre-Workout Snack**

Athletes also utilise a small pre-workout snack, generally ingested around 30 minutes before exertion begins. Again, the type of exercise (for example, anaerobic of aerobic) will dictate the most efficient type snack that can be eaten. Shorter exercise programmes (for example, a 30 minute moderate aerobic workout) do not require pre-workout snacks of this kind.

It is, however, important that the recreational athlete begins to ingest water frequently before and during any workout to remain hydrated and to allow the body to work as efficiently as possible.

**Intra-Workout**

Hydration during exercise is vital. Again, the level to which you need to remain hydrated during recreational exercise will depend on the type and duration of the exercise being undertaken – including other variables such as the humidity and temperature of the environment in which the exercise is taking place. A simplified recommendation is to aim to drink 8-10 fl oz of water every 15 min during exercise. For sessions lasting longer than 90 minutes, it is recommended that you drink 8-10 fl oz of a high quality sports drink every 15 - 30 minutes, or to regularly intake water.

**Post Workout Snack**

It is important to replenish glycogen stores lost during exercise as quickly as possible after the exercise session is completed. This will also enable a faster recovery. This can be achieved via the use of a snack that contains both protein and carbohydrates (for example a protein shake and oat cakes), in addition to an adequate amount of water that will enable you to rehydrate.

**Eating After Your Workout**

The post exercise snack should be followed by a post-exercise meal, roughly 2 hours after exercise is completed. Research indicates the importance of intaking 200-300g of carbohydrates within the post-exercise meal, in order to replace glycogen stores lost during endurance exercise. This process is made more effective if the carbohydrates are combined with protein in a 4:1 ratio.

**Supplementation**

The use of sports supplements, such as protein bars and shakes, multivitamins and prebiotics, can ensure that you maintain a high (as opposed to adequate) level of health & fitness, and also offer a means of accessing vital nutrients within a balanced diet in an easy and tasty way. There is nothing easier than throwing a protein bar into a kit bag and eating it as a snack on the way to a demanding training session, or keeping a protein snack and small carbohydrate snack on hand to eat immediately after training as a means of effectively and quickly replacing glycogen and maximising recovery.

A plethora of website exist to offer free advice concerning specific sports and types of exercise, in addition to well priced sports nutrition publications available via Amazon, Ebay and other sources, and it is recommended that you take

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advantage of such publications if you wish to optimise your approach to diet and fitness via effective nutritional strategies.

**Further Information**

* **Journal of the International Society of Sports Nutrition**
* **Burke, L. (2001) Clinical Sports Nutrition.**

**Discussion**

* Exercising in the absence of proper nutrients and energy carries negative side effects. What are they?
* Identify the response of your body to exercising without adequate hydration.
* Do you currently time the intake of your meals around exercise? If no, how can this document help you to optimise your approach?
* Why is eating every 3 hours (even for non-athletes) preferable to eating 3 meals per day?
* Why is it so important to eat breakfast? Reference blood sugar in your answer.

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