

# Vitality Health Services

PHYSIOTHERAPY • EXERCISE REHABILITATION • NUTRITION • PERSONAL TRAINING

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#### **Nutrition**

### Carbs

Sugars that fuel muscle contraction Fast and slow acting sources Slow acting or high GI foods needed to build carb stores in the days leading up to a race Do not consume high GI foods pre race  $\rightarrow$  they will block the absorption of water Fast acting or low GI food in the 30-60mins prior to exercise shown to be beneficial Low GI foods needed during exercise  $\rightarrow$  still little empirical evidence to support use, strong anecdotal Important to train how you play  $\rightarrow$  if you intend to use carb shots during a race, start incorporating them into your training regime now Without adequate stores the body is more susceptible to fatigue and injury.

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## Fats

Muscle fat stores recruited during low and moderate levels of activity Need to be replaced post exercise  $\rightarrow$  use natural, unrefined sources

#### Protein

Protein bonds in muscle are broken apart in both strength and endurance training You need to replenish these stores to ensure peak performance Start incorporating bars, drinks into your regime

#### Calcium

Maintains bone density Inadequate stores have been linked to stress #

#### Iron

Assists with the transport of oxygenated blood to muscles Inadequate store leads to low oxidative potential of muscle  $\rightarrow$  shift towards lactate production and fatiguing injuries

#### Antioxidants

ATP = energy for muscles Pathways of production are not 100% efficient Free radicals formed as a byproduct of ATP creation Free radicals damage cells  $\rightarrow$  damage triggers an inflammatory response With high level endurance exercise, this inflammatory response leads to Delayed Onset Muscle Soreness Vitamin C and E help to eliminate free radicals  $\rightarrow$  help to limit DOMS

#### Summary

Eat a balanced diet to assist training Preload with high GI carbs in the week leading up to a race Use low GI food 30-60 mins before race for max utilization Use pre-tested carb and protein sources during the race Replace proteins and good fats post race Consider supplementation for calcium, iron, Vit E and Vit C if not currently reaching your recommended daily intake

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Freedom to Move

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