

# **Sport Science Update**

By Luke Hogarth Queensland Oztag PhD Candidate March 2014

# Preparation Guidelines for the 2014 Queensland State Cup!

In less than two weeks time, a total of 87 teams from Weipa to the Tweed Coast will take to Stockland Park on the Sunshine Coast for the 2014 Queensland Senior State Cup. The fastpaced and competitive nature of Oztag places considerable demands on players and with teams competing in multiple games over the three day tournament, you need to be dedicated to both your fitness and nutrition in order to play at your best. This issue of Sport Science Update provides you with some simple and effective guidelines to ensure your teams success!

# **Nutritional Guidelines**

Playing multiple games at your best during tournament competition requires focused nutrition and hydration strategies. During matches, muscle glycogen, our bodies main source of fuel, can diminish and effect our ability to perform sustained, high-intensity exercise. Loss of fluid may also lead to dehydration affecting heat regulation, mental function and fatigue levels. Nutrition and hydration strategies focusing on adequate fuel supply, fluid replacement and recovery between games is crucial to your performance. Check out the meal ideas below to prepare your body for success at the Queensland

### 1. Days Before: Carb-Loading

In the days leading up to the tournament, aim to eat plenty of carbohydrate foods at each meal and snack. This is sometimes referred to as "carb-loading" and ensures your body stores enough muscle glycogen for multiple, highintensity efforts. Have a look below for some high-carbohydrate foods that are great meal ideas for carb-loading!

- Breakfast cereals, muesli or porridge
- Pasta and rice dishes
- Sandwiches, rolls, wraps, pita bread
- Potato or Kumara

State Cup!

- Legumes e.g. chickpeas or baked beans
- Fruits (fresh, canned or dried)

### 3. Post-Match Recovery Snacks

Nutrition plays a vital roll in recovery between matches. Recovery snacks should include both carbohydrates (~50 g) and protein (10-30 g) and should be taken within 30 min post-match. Try some of these ideas:

- Protein bar + 200 ml sports drink
- Protein shake made with milk + banana + 200 ml sports drink
- 600 ml chocolate milk

## 2. Game Day: Meal Ideas

On game days, your meal plan should still reflect a high-carbohydrate diet however focus on foods that are low in fat and fibre. These foods will be easier to digest and wont leave you feeling "heavy" during competition. Check out the meal plans below for your game day preparation.

### Breakfast (Ideally ~3 hours before first game):

- Weetbix + fruit + milk + yoghurt and toast + spreads (e.g. peanut butter)
- Porridge + canned peaches + milk and toast + spreads
- Vegetable omelette + toast + fruit salad
- Cereal + banana + yoghurt + milk and crumpets + jam

### Pre-Game Snack (1-2 hours before if needed):

- Banana
- Sports drink
- Fruit yoghurt
- Jam sandwich made on white bread

### Light Lunch (during day if time allows):

- Bread roll filled with lean meat and fruit
- Egg salad sandwich + yoghurt







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# **Match Preparation**

It's well accepted that an effective warm-up is important risk of injury and improve performance. An effective warm-up will prepare both the body and mind for competition. The warm-up should commence at a low intensity and increase intensity gradually throughout. Include dynamic exercises such as swings to increase flexibility and functional movement. Static stretching during warm-up should be avoided as it has been suggested to increase risk of injury and detriment muscular power output. For warmup drills specific to Oztag, aim to perform with intensity and efficiency and avoid fatigue by keeping the warm-up short in duration.

## **Example Warm-Up Routine:**

- 1. Light ~400 m jog
- 2. (~10 min Dynamic Stretching):
  - 2 x 10 m knee hugs
  - 2 x 10 m lunges
  - 2 x 10 m sumo squats
  - 2 x 10 m hip rotations
  - 2 x 10 m high-knee skips
  - 3 x 10 m sprints
  - 2 x 10 m zig zag
  - 6 x leg swings
  - 3-6 x back rolls and twists
- 3. Offensive+defensive skills (~10 min)
  - Tagging, catch + passing.
- 4. Game-based running (~10-15 min)
  - Exit sets, attacking sets etc.

## **Post-Match Recovery**

Taking the time to cool-down after a match is just as important as the warm-up itself, particularly when you may

need to back-up in just a few hours time. A 5-10 min routine incorporating low-intensity jogging and dynamic stretching exercises as listed in the warm-up above will be effective. Static stretching may also be used during the cool-down and will help relax the muscle and return them to resting length. You can also try hydrotherapy strategies (seen below) following a day of competition.



#### **Cold Water Immersion**

- 5min above waistline at ~12°C
- Used to treat acute soft tissue sports injuries by reducing inflammatory response and reduce spasm and pain. Has been shown to reduce muscle following intense soreness exercise.

## In the next Issue:

Research from the Jnr State Cup!

Do you have a question for the sport science team? Email: luke.hogarth@research.usc.edu.au



### **Deep Water Running**

- ~20 min exercise involving light, movements such as jogging, dynamic exercises and static stretching.
- Increased density levels in deep water helps aid removal of metabolic waste products, decrease muscle soreness and stiffness and restore muscular power output.





#### **Contrast Water Therapy**

- Alternate, 5x 1min hot shower (45°C) and 1min cold water bath (~12°C).
- Shunts blood from muscle to heart, removing metabolic waste products.
- Perhaps most effect and commonly used of type hydrotherapy. More positive feeling after CWT compared to CWI; including feeling more relaxed, and finding easier to rest and sleep post-game.







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