

# Competition Nutrition

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# Aims & Objectives

## **Aim** –

- Provide an understanding of the nutritional and dietary requirements for competition

## **Objectives** – Identify;

- Performance nutrition concept
- Nutrients and sources
- Strategies for competition
- Menu options

# Performance Nutrition will never turn;



**POOR ATHLETE**

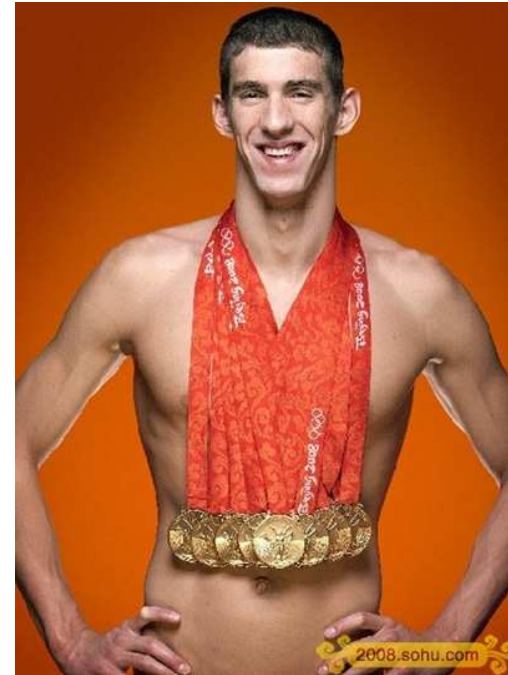


**GOLD MEDALIST**

# But poor nutrition can prevent;



**TALENTED PROSPECT?**

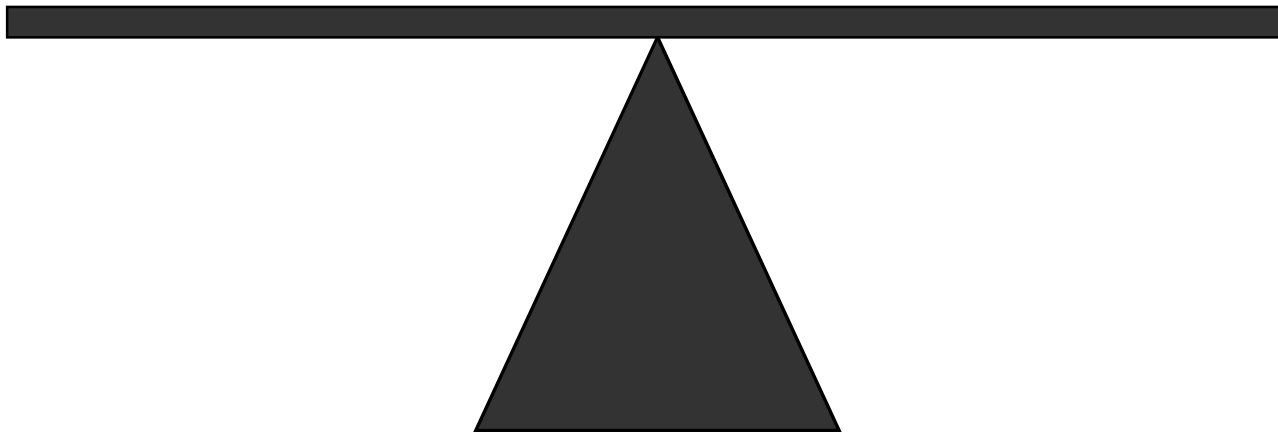


**MULTIPLE OLYMPIC CHAMPION**

# High Performance Nutrition!



# Getting the balance right!



# **Food Groups, & Fluids**

**What are the essential food groups?**

# Food Groups, & Fluids

- **Carbohydrate – TO GO**
  - Primary fuel source
- **Protein – TO GROW**
  - Building blocks (growth & repair of body tissues)
- **Fat**
  - Insulate and alternative fuel source
- **Vitamins and Minerals – TO GLOW**
  - Healthy body functions (prevents illness)
- **Water – TO FLOW**
  - Transport and Cooling system



# Carbohydrate



# Simple & Complex

## Simple (sugars) Carbohydrates

- Monosaccharide/disaccharide – single sugar molecules and paired molecules
- Most are rapidly absorbed into the bloodstream.
  - *This is called having a high glycemic index*
- **Best to be consumed during or immediately after training/races**
  - *This rapidly replenishes blood glucose and glycogen stores*



# Simple & Complex

## Complex Carbohydrates

- Polysaccharides – multiple bonded sugar molecules
- Most are slowly / moderately absorbed into the bloodstream
  - *This is called having a low / medium glycemic index*
- **Best to be consume before training/races**
  - *Provides a slow released but longer lasting energy supply to fuel whole training session*



# Glycemic Index (G.I.)

## Low

- Porridge Oats
- Muesli
- Spaghetti
- Macaroni
- Brown Rice
- Apricots
- Dairy Products
- Vermicelli
- Lentils
- Wild Rice
- Beans

## Medium

- Sweet potato
- Wholegrain pasta
- Noodles
- White rice
- Bananas
- Semolina
- Pea
- Sweetcorn
- Oatmeal
- Beets
- Cantaloupe

## High

- Gels
- Sports drink
- Jelly sweets
- Boiled sweets
- Sugar
- White bread
- White potato
- Honey
- Cornflakes
- Soft drinks
- Water melon

# Protein



# Fat

**GOOD**



**BAD**



# Vitamins & Minerals



# Fluids





# **Considerations for Competition**

**What nutrition issues do you currently consider at competition?**

# Considerations for Competition



## Nutritional aims;

- Maximise fuel stores without bloating
- Consistent energy levels
- Appropriate concentration levels
- Fast recovery
- Maintain hydration

# Considerations for Competition

## Nutritional Myths Resolved;

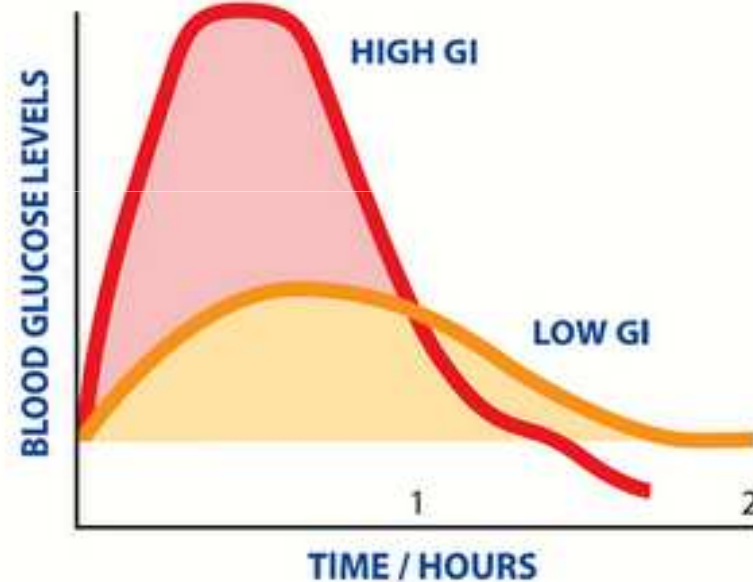
- Eat sugary foods
- Eat glucose tablets
- Drink lots of sports drink
- Drink lots of red bull



# Considerations for Competition

## Energy responses to carbohydrate foods;

- High GI - fast
  - Big boost, but short-term benefits
- Low GI - slow
  - Slower response, but long-term benefits



# Poor choices at competition

## Affects on performance;

- Erratic energy levels
- Low energy levels
- Poor focus / concentration
- Unexplained underperformance
- Slow recovery
- Increased anxiety



# Before – Event

- **Aim**

Top up muscle glycogen (energy stores)

- **What**

A meal high in complex carbohydrates like pasta, potatoes, rice, breads, cereals, and fruit

- **When**

Between 4 hours to 1 hour before the event

- **How much**

Depends on digestion; big meals 3-4 hours before, sandwiches around 1-2 hours before.



# During – Event

- **Aim**

Replenish muscle glycogen stores

- **When**

Every 2-3 hours eat small snacks. Grazing rather than to fill the stomach.



- **What**

Drinks or snacks with moderately fast absorbed carbohydrates;

- **How much**

500 ml per hour for drinks, 1-2 pieces of fruit, 1 banana, 1 bagel, 1 cereal bar



# After – Event

- **Aim**

Replace all muscle glycogen used during exercise, and aid muscle repair and adaptation

- **When**

Immediately after a high intensity training session or competitive event

- **What**

High carbohydrate and protein foods like low-fat milk or milkshakes, meat/ fish/ chicken sandwiches, and protein-carbohydrate recovery powders

- **How much**

1 milkshake; 75g serving of SIS Rego Rapid; 1 sandwich; per session





# Breakfast

- Cereals (Museli, branflakes, cornflakes, all-bran, weetabix, shredded wheat, porridge)
- Toast, muffins, bagels, crumpets
- Preservatives (jams, honey, marmite, peanut butter)
- Baked beans, smoked fish, eggs
- Free fruit, dried fruit
- Smoothies, milkshakes, fruit juices
- Yogurts, probiotic drinks

# Lunch

- Jacket potatoes with beans, cheese, or tuna
- Pasta snacks with ham, chicken, or fish
- Couscous with ham, chicken, or fish
- Sandwiches, wraps, bread cakes, baguettes, pittas with ham, cheese, tuna, chicken
- Sushi snack packs
- Chopped fresh fruit salad with yogurt

# Evening Meals

- Lasagne, salad
- Steak, chipped potatoes, baby vegetables
- Stir fry vegetables, chicken and noodles
- Turkey, chopped apple, sultanas, couscous
- Salmon, new potatoes, green beans
- Pork chops, mash, carrots, peas
- Prawns, rice, peppers, onions, rice, fajita mix
- Chicken, pasta, and chopped tomato sauce
- Sunday roast, vegetables, potatoes

# Snacks

- Yogurts / yogurt drinks
- Milkshakes
- Fruit loaf
- Cereal bars
- Rice cakes
- Rice pudding
- Vegetable sticks with salsa dips
- Free fruits, dried fruits
- Fruit juices

# Sports Foods

- No food, drink, sports food, or supplement can be guaranteed to be free of prohibited substances
- Elite athletes hold full responsibility and strict liability in regards to doping issues, including selecting trusted sports foods
- Trusted sports foods manufacturers I recommend include;
  - Sports drinks, gels, recovery powders
    - Lucozade
    - Science in Sport
    - Powerbar



# Homemade Sports Drinks

## Recovery Shake – After Training

### Ingredients

- 50 g dried skimmed milk powder
- 500 ml fresh milk
- Fruit juice (to taste)
- Fruit (to taste)



### Recipe

- Mix the dried skimmed milk powder into a smooth paste with 100mls of the milk.
- Put all the ingredients into a hand blender and blend until frothy.

# Homemade Sports Drinks

## Carbohydrate/Electrolyte Drink – During Event

### Ingredients

- 100-200 ml sugar free fruit cordial
- 700 ml water
- ½ tea-spoon salt

### Recipe

- Add the sugar and salt to the fruit juice in a 1 L drinks bottle with 200 ml of water and shake well.
- Once happy all the granules have dissolved add the rest of the water.

# Take home messages

## Competition essentials !

- **Eat balanced meals** – high quality protein, complex carbohydrates, and a variety of fruit and vegetables
- **Be prepared** – take snacks & fluids
- **Avoid sugary** foods and **caffeine** drinks
- **Refuel** after sessions ASAP
- **Keep hydrated** – 100-200ml every 30 mins





**Thanks for your attention!**

Questions?

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