

# The Power of Carbohydrates

## Carbohydrates are the FOUNDATION of an athletic diet!!

- Daily restoration of the body's carb reserves should be a priority for athletes in all sports
- Carbs are the preferred fuel for intensities about 65% VO<sub>2</sub> Max - Athlete training level
- Anaerobic activity (short bursts lasting 1-2 minutes) uses ONLY carb energy for fuel.

### *Importance of Glycogen:*

- Glycogen is the stored form of carbohydrate energy found in muscle tissue.
- The greater the pre-exercise glycogen, the greater the endurance potential.
- Order of energy stores used in activity
  - 1<sup>st</sup> – Blood glucose – 100 calories
  - 2<sup>nd</sup> – Liver – 300-400 calories
  - 3<sup>rd</sup> – Glycogen – 1200-1600 calories

### *Effects of Glycogen Depletion:*

- Sluggishness
- Difficulty maintaining a normal exercise intensity
- Sudden weight loss of several pounds
- Feelings of exhaustion



### *Building and Maintaining Glycogen:*

- Blood flow to the muscles is greater immediately after exercise
- Fast absorbing carbs are preferred: sports drinks, crackers, breads, sugars, etc.
- Optimal window of storage repletion is 1-2 hours after exercise

### *If You Want to Get Specific:*

Athletes in heavy training should consume:

Daily Total: 7-10 g of carbs/kg

Pre-Exercise: 1-4 g carb/kg 1-4 hr. before

During Exercise: 30-60 g/ hr. for activities lasting more than 1 hr.

Post- Exercise: 1.5 g/kg immediately following exercise and the same amount within the next 2 hours.

\*\*\* To find kg take # of lbs. and divide by 2.2

### *Example for 200 # Athlete*

Daily Total: 636-900 g carb/day

Pre-Exercise: 90-363 g carb

Post-Exercise: 136 g carb



# Sports Nutrition