

# CARBOHYDRATE REQUIREMENTS

- **Higher for training than competition**
- **Contingent upon number of hours training**
  - **6.6 grams/kg BW for 1 hour of training**
  - **8.8 grams/kg BW for 2 hours of training**
  - **11 grams/kg BW for 3 hours of training**
  - **13 grams/kg BW for 4 + hours of training**

# **PRE-EXERCISE CARBOHYDRATE**

- **Prevent feeling of hunger**
- **Elevate blood glucose to provide energy for the exercising muscles**
- **Up to 200 grams in the pre-exercise meal**
  - **Cereal**
  - **Waffles**
  - **Bagels**
  - **Sports bar**
  - **Pasta**
  - **Yogurt/granola**

# DURING EXERCISE

- **Carbohydrate feeding maintains the availability and oxidation of blood glucose late in exercise and improves endurance**
- **30-90 grams of CHO/hour during exercise**
  - **Sports drinks**
  - **Gels/Clif Shots/ Clif Bloks**
  - **Honey or Sugar cubes**
  - **Fruit**
  - **Crackers/pretzels**
  - **Candy**

# POST EXERCISE

- **Delay carbohydrate too long reduces muscle glycogen storage and impairs recovery**
- **GOALS: 50-150 grams carbohydrate within 15-30 minutes post exercise**
- **Solids or liquids are fine**
- **Body can store twice as much glycogen with sucrose/glucose compared to fructose**
  - **Sports drink**
  - **Granola/cereal bars**
  - **Sweetened cereal**
  - **Crackers/pretzels/Chex mix**

# PROTEIN

- **An essential component of muscle growth and repair**
- **Not the primary fuel substrate for exercise**
- **Minimum of 1.1 grams protein /kg body weight to ensure bone health and a stronger immune system**
- **EXAMPLES**
  - **3 ounces of chicken, beef, tuna- 21 grams of protein**
  - **A soy burger- 18 grams of protein**
  - **12 ounce glass of milk- 12 grams protein**
  - **2 eggs- 14 grams of protein**
  - **8 ounce yogurt- 11-23 grams of protein**
  - **2 TBSP peanut butter- 10 grams of protein**

# PROTEIN HOW TOs

- **MAXIMUM OF 2 grams protein per kg body weight**
- **73 kg athlete:**
  - 6 oz chicken- 42 grams
  - 3 oz can of tuna- 21 grams
  - 2-12 oz glass of milk- 24 grams
  - 8 oz Greek yogurt- 20 grams
  - 2 slices of cheese- 14 grams
  - 2 eggs- 14 grams
  - ¼ cup of nuts- 10 grams
  - **TOTAL: 145 grams protein**

# PROTEIN TIMING

- **Timing of protein intake is important—  
BEFORE lifting and after!**
- **12-15 grams of protein with 35 grams of  
carbohydrate BEFORE lifting**
- **Only 12-15 grams of protein needed AFTER  
lifting!**

# FAT AND EXERCISE

- **An energy substrate for low-intensity/endurance exercise**
- **Concentrated calorie source to provide energy Transports fat-soluble vitamins**
- **Diet too low in fat MAY limit performance by inhibiting intramuscular triglyceride stores**
- **Too little may mean inadequate calories, or inability to lose weight**
- **Too much may Increase body fat or cause digestive distress during exercise**
- **Dual duty foods: cheese, nuts, peanut butter**

# RECOMMENDATIONS FOR HEALTHIER FAT CHOICES

- **Monounsaturated fatty acids**
  - Olive oil, canola oil, nuts, nut butters
- **Omega-3 fatty acids**
  - Salmon, tuna, swordfish, sardines
  - Flaxseed

# **ATHLETE'S TO DO LIST**

- Prioritize fueling/hydration**
- “Parenthesize” training with food/fluid**
- Strategize during training to determine:**
  - Gut comfort with food/fluids**
  - Palatability**
  - What seems to work the best**

# THE WINNING PLATE

- **Sit DOWN to the plate**
- **Step UP to the win**
- **Let's get our athletes back to the table to:**
  - **Fuel well**
  - **Play Better**
  - **Live Long**