

# FUEL FOR SPORT

## ENERGY NEEDS

- Energy (calories) derived from three sources
  - Carbohydrates = energy
    - Used during high intensity physical activity
  - Protein = muscles
    - Used for recovery, building/rebuilding muscles
    - Not usually an energy source during activity
  - Fat = long-term energy
    - Used during lower intensity activity



## EATING FOR ENERGY

- To sustain energy and muscle mass, need to eat regularly throughout the day
  - Eat every 2.5~4 hours (no more than 4 hours without eating)
  - Eating 5-6 times per day (i.e. planned snacks between breakfast, lunch, dinner)
  - Ideal snacks: combine protein and carbs for lasting energy and fullness

## SAMPLE SNACKS

- Yogurt & fruit
- Cottage cheese & fruit
- PB & apple/banana/ celery
- Cheese & crackers
- Nuts/soy nuts & dried fruit
- Hummus & pita
- English muffin & cheese
- Tuna & crackers
- Cereal & milk
- Hard-boiled egg & toast/crackers
- Fruit & yogurt smoothie

## EATING HEALTHY

General guidelines:

- Choose whole fruit and veggies over juice more often
- Aim for minimum 2-3 fruits and 3-4 veggies per day
- Needs 3-4 servings of high calcium foods per day
- Choose healthy fats (olive oil, nuts, seeds) over unhealthy fats (butter, cream, fatty cuts of red meat) more often
- Limited added sugar (e.g. pop, fruit punch, sugary cereals, candy, sweets, ice cream, etc.)

## EATING BEFORE EXERCISE

- Should eat within max 3 hours before start
- Primary energy source should be carbs
  - Longer time beforehand (1-3hours) should be starchy/slow burn carbs
    - E.g. whole wheat bread, bagels, pasta, rice, oatmeal, cereal, potato)
  - Shorter time (0-1 hour) should be easier to digest, "higher glycemic" carbs
    - E.g. banana, arrowroot cookies, pretzels, fig newtons, granola bars, graham crackers
  - Can also include some protein for fullness if more than 1 hour before
    - E.g. cereal with milk, toast with PB, banana with yogurt, bagel with cheese, rice with chicken, bread with tuna
  - As activity nears, decrease fat, fibre, sugar
    - E.g. avoid burgers, fries, pizza, bacon, chips, bran cereals and muffins, beans, candy, sports drinks, cookies, chocolate bars, etc.

## HYDRATION

- Need ~8 cups (2L) fluids per day
  - Good news – can be any liquid (e.g. milk, juice, tea, water)
- But extra fluids needed for activity!
  - Ideal: 2 cups 2 hours before, then sip 1 cup in last hour
  - 2-4 cups per hour of activity
- Aim to “pee clear”, lose 2 lbs or less during activity (try weighing self before and after)
- Sports drinks: can be used to replace carbs (sugar) and electrolytes (salts) lost during activity
  - Best if exercise > 1 hour
  - Also useful in hot weather, if sweating heavily, training twice in one day, prone to cramping
- Ideal: Gatorade, E-Load
  - E-load has more salt, can help prevent cramps

## RECOVERY

- Really important if active on consecutive days, or more than once per day
  - Timeframe: 15-30 min is optimal window
  - Key functions: replenish muscle glycogen (carbs) and repair muscle damage (protein)
  - Need 7-10g protein, 40-60g carbs
    - 1-2 cups chocolate milk, Yop or other yogurt, and banana, PB sandwich, cheese & crackers, bagel and cheese/meat or milk

## TOURNAMENTS: SAMPLE FOOD BAG

- Try to include at least 2-3 items from each column

<b>Protein Foods:</b>	<b>Carbohydrate Foods:</b>
<ul style="list-style-type: none"> <li>• Sandwich or wrap with chicken, turkey, ham, etc</li> <li>• Drinkable yogurt</li> <li>• Sports bar with 7-10g of protein, 20-40g carbs</li> <li>• Trail mix with cereal, nuts, raisins</li> <li>• Chocolate milk</li> <li>• Protein shake</li> </ul>	<ul style="list-style-type: none"> <li>• Banana or other fruit</li> <li>• Granola bar</li> <li>• Bagel or pita</li> <li>• Pretzels or saltine crackers</li> <li>• Sports drink</li> </ul>

## EATING ON THE ROAD

<b>Tim Horton's – Choose</b>	<b>Tim Horton's – Limit</b>
<ul style="list-style-type: none"> <li>• Sandwiches on w/w hold the sauce/mayo</li> <li>• Chili with bun</li> <li>• W/w bagel with cheese, tomato</li> <li>• Yogurt + fruit</li> <li>• Water, juice, milk</li> </ul>	<ul style="list-style-type: none"> <li>• Plain bagels (white bread)</li> <li>• Cream cheese</li> <li>• Donuts, pastries</li> <li>• Excessive caffeine</li> <li>• Any drink made with cream</li> </ul>

<b>Subway – Choose</b>	<b>Subway – Limit</b>
<ul style="list-style-type: none"> <li>• Subs on w/w bread</li> <li>• Lean meats</li> <li>• Lots of veggies</li> <li>• Mustard or honey mustard sauce</li> <li>• Water or juice</li> </ul>	<ul style="list-style-type: none"> <li>• Subs on white bread</li> <li>• Fatty meats (cold cut trio, meatball, pizza)</li> <li>• Mayo, sub sauce</li> <li>• Atkins wraps</li> <li>• Pop, iced tea, lemonade</li> </ul>