

Nutrition for Cold Weather Sports (<http://www.coach.ca/>)

#### Special Considerations

- Special attention to adequate fuel and fluids is imperative in cold weather sports. Some of the issues that are unique to these sports include:
- Cold temperatures increase the risk of hypothermia and can reduce the desire to eat and drink;
- Shivering increases energy expenditure through the use of carbohydrate (glycogen) in the muscle, making the athlete more prone to fatigue;
- Location of training and competition can limit access to food and fluid, making the athlete more likely to neglect to fuel and hydrate adequately.

#### Hydration

- Athletes participating in sports involving multiple training or competition runs (alpine and freestyle skiing, snowboarding, sledding, etc.) need to make a special effort to hydrate. Since fluids are not usually taken in actual competition, pre-hydration is important, and care should be taken to hydrate between events or training runs. To ensure optimal hydration, athletes should be encouraged to:
- Wear or carry a water bottle on a belt or in a backpack during warm-up;
- Carry a water bottle in a bag during training, which can be left at the top or bottom of the hill;
- Wrap bottles in clothing to keep them off the ground and prevent freezing in sub-zero temperatures;
- Pack warm beverages or soups in insulated containers to reduce the risk of hypothermia;
- Use non-breakable bottles that can be opened without having to remove gloves.

#### Fueling

- Since cold weather suppresses appetite, it can be easy for athletes to not eat enough until meal breaks or the end of training. To help ensure optimal performance and prevent physical and mental fatigue, athletes should be encouraged to:
- Bring carbohydrate-based snacks that are cold-tolerant, easy to digest, and can be handled with gloves if necessary, such as crackers and cheese, arrowroot cookies, pretzels, dried fruit, fruit leathers, dry cereal, trail mix, granola bars, and peanut butter and jam sandwiches;
- Use unbreakable, easy-to-open containers, such as zippered or unsealed sandwich bags or rubber containers;
- Take a few bites of a carbohydrate-based snack after each run to maintain blood sugar and glycogen levels, and to encourage ongoing muscle recovery.

NOTE: Athletes involved in indoor winter sports (such as ice hockey and figure skating) and cold weather endurance sports (such as cross-country skiing and biathlon) can plan for fueling and hydration before and during training and competition in much the same way as similar warm-weather sports. Consult the fact sheet Fluids and Food DURING Training/Competition for more information.