

PRE-GAME NUTRITION GUIDELINES

Here are some recommendations for eating before a hockey game. However, remember that everyone is different in their tolerance to foods; some players can eat almost anything just before they compete, while others have a more sensitive stomach. It's best to experiment with different foods and meal-timing before practice sessions, so players will know what foods to eat and when to eat them before a game. Don't experiment with something new the day of the game.

PURPOSE OF THE PRE-GAME MEAL

1. To prevent low blood sugar and its symptoms of fatigue, indecisiveness, blurred vision, and light-headedness.
2. If eaten far enough in advance for digestion to occur (2-4 hours), to replenish fuel (glycogen) stores in the muscles.
3. To prevent hunger feelings and to settle the stomach by absorbing gastric juices.
4. To allow optimal exertion and performance without abdominal discomfort.

NUTRITION PRINCIPLES

Carbohydrates make the best pre-game foods. They digest quickly and are easily taken into the muscles. High protein foods (meat, eggs, etc.) take longer to digest, while fatty foods (all fried foods, hamburgers, etc.) sit in the stomach the longest and may produce a feeling of heaviness. Be sure to have players drink plenty of water before the game to prevent dehydration: 2-3 glasses of water up to 2 hours before any game, and more just before the game if possible.

If a player absolutely can't eat before the game, he should try to eat additional high carbohydrate foods the day before. Players can't cram good nutrition into one day and they should eat a high carbohydrate diet every day to ensure optimal replacement of muscle glycogen.

AVERAGE DIGESTION TIMES

Large meal: 3-4 hours.

Smaller meal: 2-3 hours.

Liquid meal: 1-2 hours

WHEN TO EAT MEALS

Morning Game

Players should eat a large high carbohydrate dinner and a bedtime snack the night before. If they can tolerate it, they should also eat a light snack in the morning to prevent hunger, settle the stomach and prevent low blood sugar levels. One or two slices of toast can be effective.

Afternoon Game

Players should eat a large high carbohydrate breakfast and a light lunch.

Evening Game

Players should eat a large high carbohydrate breakfast and lunch, then an optional light snack 1-2 hours before the game.

RECOMMENDATIONS

High Complex Carbohydrate, Low Fat Foods

Breads	Potatoes
Cereals	Fruits
Pasta	Jello
Vegetables	Soups (avoid cream-style)

SAMPLE MEALS

BREAKFAST

1 cup	orange juice
1 cup	cereal
1 cup	2% milk
1 small	banana
2 slices	bread
1 tsp	butter
1 tbsp	jam

Total Calories: 650
Carbohydrates: 122 g (75%)
Fats: 11 g (15%)
Proteins: 16 g (10%)

LUNCH/DINNER

1 cup	vegetable soup
4	soda crackers
2 oz	chicken (white meat)
2 slices	bread, lettuce, tomato
1/2 cup	apple sauce
1	date square
1 cup	skim milk

Total Calories: 625
Carbohydrates: 102 g (65%)
Fats: 10 g (15%)
Proteins: 31 g (20%)

BREAKFAST

1 cup	orange juice
1 small	banana
1 cup	2% milk
2 slices	raisin bread
1 tbsp	apple jelly
1 tsp	butter

Total Calories: 340
Carbohydrates: 63 g (70%)
Fats: 3 g (08%)
Proteins: 12 g (14%)

LUNCH/DINNER

1 cup	vegetable juice
1 cup	lettuce and vegetables
4 tbsp	2% cottage cheese
1	bagel
1 tsp	butter
2 tbsp	dried raisins

Total Calories: 360
66 g (78%) Carbohydrates:
Fats: 6 g (15%)
Proteins: 14 g (15%)

NUTRITION GUIDELINES FOR HOCKEY

This article was written by Craig Ballantyne, CSCS

CARBOHYDRATES (CHO)

Carbohydrates are the major energy source of the body and are stored within muscles. The minimum CHO intake of a hockey player during the season should be 60% of the daily total caloric intake (6-11 g/kg or about 500-800 g carbohydrate per day). Since hockey often demands that athletes play back-to-back games it is necessary to be strategic with regards to CHO consumption to ensure replenishment for upcoming competition. Consume a high-CHO meal immediately (within 30-minutes) following exercise (practice, game, or workout) minimize fatigue and to enhance muscle recovery. The optimal glycogen repletion formula is 1.0g CHO/kg within 30 minutes of exercise and 0.7-3.0g CHO/kg every 2 hours following.

FLUIDS

Dehydration can impair performance. Players can limit dehydration by drinking fluids up to ~ 1-2 hours before exercise (or as close as tolerable) and by starting to drink cool

fluids (~ 10 degrees Celsius) as soon as activity begins. During practice sessions, attempt to drink as much fluid as possible to "train" the body to drink during competition (aim for 100-150ml of cool fluids every 15 minutes). Coaches should monitor the fluid losses of players with pre- and post-exercise weigh-ins. Encourage the consumption of 2 cups of fluid per pound of body weight lost during exercise.

MEALS (sample high-CHO, moderate-protein, and low-fat meals)

Breakfast

Breakfast must NEVER be SKIPPED. This meal should have an extra emphasis on complex carbohydrates to provide energy for the day=s activities following a 7-10 hour fasting sleep. If eating breakfast is not part of the player=s routine, encourage

PRE-COMPETITION EATING

Players should be consuming a high-CHO intake everyday to maintain muscle energy stores (one good meal does not make up for a week of poor eating!). Try to find what works best with each individual athlete and follow a pre-game routine for each competition.

The optimal pre-event snack is 0.5g of CHO per pound body weight consumed ~2 hours prior to exercise and each athlete should remember to consume adequate water to ensure hydration. In general, allow ~3 hours for a high-CHO meal and ~1 hour for a snack to digest. Avoid large, high-fat meals because they require long digestion periods and may impair performance.

TOURNAMENT PLAY & TRAINING CAMP

Prepare a high-CHO meal before early morning games (see pre-event meals for suggestions). Following the first game, CHO and fluid intake is very important (fruit juice, sports drink, or a non-caffeinated pop). Fruit and yogurt can also be eaten if there is a sufficient break between events.

During periods of hard training (i.e. training camp OR playoffs), maintain a proper nutrition and fluid regimen. For 2-a-day=s, consume 100-200g carbohydrate as soon as possible after sessions and take a fluid break every 20-minutes. Always plan for a post-exercise recovery meal and consume carbohydrates and fluid immediately after games and training.

Sport drinks are absorbed quicker than water to help hydrate the player. The 4-8% sugar solutions support working muscles and carbohydrate replenishment. Players need to avoid beverages containing caffeine and alcohol because of their diuretic (dehydrating) effects. For each drink with alcohol or caffeine, players should consume an extra 2 cups of water.

them to gradually increase the amount of food eaten until a full breakfast becomes habit.

Whole-wheat cold cereal + milk (1% or skim) + toast + peanut butter + juice

Oatmeal + milk + fruit + yogurt

Eggs (2 yolk maximum) + whole-wheat toast + juice + yogurt

Pancakes + syrup + lean breakfast meat + juice

Muffins + yogurt + juice + fruit + milk

Bagels + low-fat cheese or lean meat or eggs + fruit + milk + juice

Blender meals (milk, yogurt, fruit, juice, skim milk powder)

Lunch

2 lean meat sandwiches on whole-wheat + veggies + yogurt + low-fat cookies

2 slices of cheese/vegetable thick-crust pizza + juice + fruit

Whole-wheat lean meat sub + pretzels + milk + fruit

Chicken breast + rice + vegetables + low-fat ice cream

Kraft dinner (without butter) + vegetables + lean meat + juice

Dinner

Players should plan and arrange dinner around the requirements of training and competition (i.e. a small pre-game meal OR a late post-exercise dinner). Vegetables and CHO side dishes should have a greater priority than in traditional meals.

Whole-wheat pasta + lean meat + vegetables + ice-milk or sherbert

Steak + baked potato + corn + fruit + yogurt

Hamburger + juice + salad + potato

Fish + rice + vegetables + low-fat ice cream

Pork tenderloin + potatoes + vegetable + low-fat pudding

Chicken breast + whole-grain rice + soup + low-fat cookies

Chili + whole-wheat toast + milk + fruit salad

POST- WORKOUT RECOVERY: A MUST FOR ATHLETES

This article was written by Jayson Hunter, RD, CSCS

If you want to optimize your training, improve recovery time, and accelerate muscle growth then a post-workout recovery drink is vital to your training routine. Research has shown that if you are trying to gain lean body mass you need to feed your body carbohydrates and protein within 60 minutes after your workout.

When you work out your body burns up amino acids, glucose, and glycogen and your muscles are more receptive to accepting the nutrients you feed it and shuttling those nutrients into the muscles to be repaired. When an athlete doesn't restore their fuel levels soon after the workout their muscle glycogen synthesis can be decreased by as much as 66%, which impairs their recovery time. Scientific studies show that consuming a carbohydrate-protein supplement within 60 minutes following exercise increases the rate of muscle glycogen storage. By replacing your glycogen storage levels quickly allows your body to recuperate faster and re-charge your fuel system for the next workout or event. You may also find that you have fuller, tighter muscles as well as less muscle soreness.

A great post-workout supplement should contain around 50-100 grams of carbohydrates and approximately 30-50 grams of protein. Some examples of post-workout drinks could be a Carnation Instant Breakfast with a scoop of protein powder. A glass of orange juice with some protein powder will also work. There are supplement drinks that come pre-mixed and include vitamins, minerals, and sometimes creatine or glutamine. A high carbohydrate/protein meal immediately after your workout is not as effective as a supplement drink, but is excellent for your next meal to further maximize the recovery of your muscles. The reason a meal wouldn't be ideal is that whole foods are digested much slower than liquid meals and can even lower the response of absorbing these nutrients into the blood stream and muscles.

Those first 60 minutes after your workout is when your body's anabolic system is primed for fuel. This will definitely enhance your workouts and your body will thank you with the results you are looking for.

REFERENCE MATERIALS

1. Novice Hockey Coaches Resource Manual Ages 7-8
Ron Dussiaume, Elite Hockey Education & Development
Published 2005
2. The Ultimate Guide to Weight Training for Hockey
2nd Edition, by Rob Price Published 2005