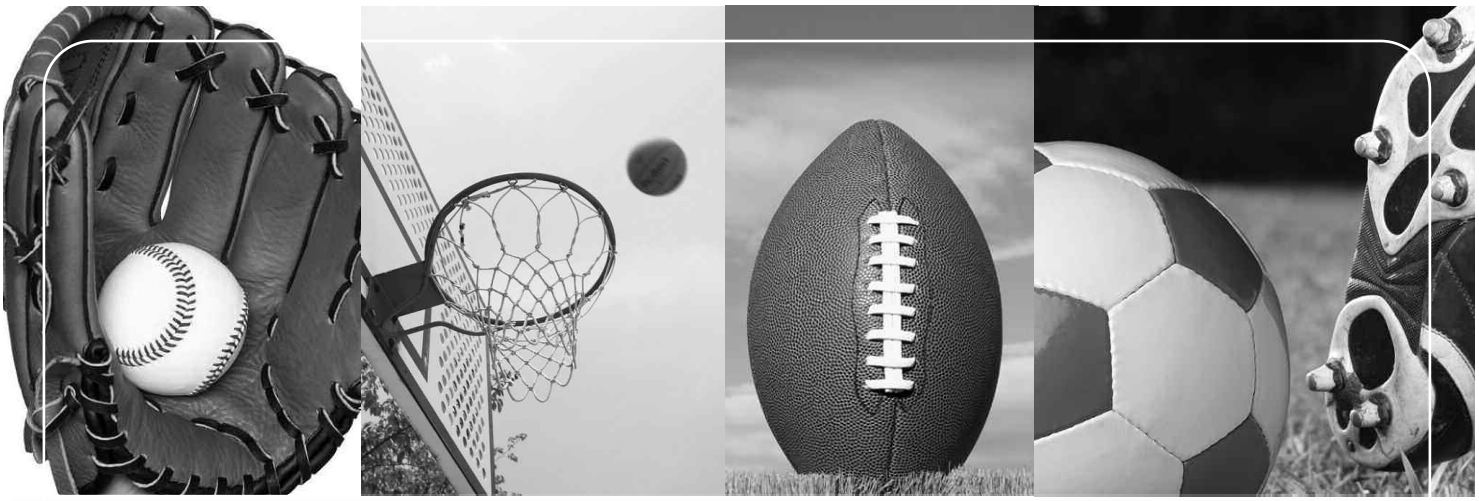

Sports Nutrition Handbook

Public Health Nutrition Program, 2009

Alberta Health Services

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Introduction

This package can help athletes, coaches and parents learn about nutrition for active people. Proper nutrition can help optimize performance, and everyone can play a part. Parents and coaches are role models who can influence athletes' food choices. Parents can provide suitable food. Coaches can promote healthy restaurants during sporting tournaments. Ultimately, the athlete makes his or her own food choices. Guidance and influence from role models, and a strong knowledge about how diet and exercise work together, will help the athlete make healthier food choices.

Promote the Message

WHO Should Get the Message?

- Athletes
- Coaches
- Community Sports Organizations
- Parents
- Local Fitness Clubs
- Physical Education or Health Teachers

HOW to Promote the Message

- Include a 'tip of the week' on schedules or a centralized bulletin board.
- Encourage cafeteria or concessions to offer healthy food choices that comply with the recommendations from Canada's Food Guide or AB Nutrition Guidelines for Children and Youth available at ***http://www.healthyalberta.com***
- Place cards next to healthy choices to promote them.
- Invite a Registered Dietitian to present nutrition information at a parent meeting, practice, health class, or as a weekend or evening workshop.
- Set up a nutrition information booth at sporting events or during Nutrition Month® (March).
- Ask local restaurants to offer an athlete discount on a high carbohydrate, low fat meal during a tournament. Be sure to advertise them in the team information packages. Some restaurant specials might be:
    - Chicken and vegetable stir fry with rice
    - Spaghetti with marinara sauce and a side salad with light dressing
    - Grilled chicken breast with baked potato and a side of vegetables
    - Turkey sandwich on whole wheat bread with minestrone soup

Healthy Eating for Athletes

Eating Well with Canada's Food Guide is a reliable tool on healthy eating habits for all healthy individuals, including athletes.

A healthy diet is based on 3 important concepts:

1. Balance - Eat foods from all four food groups, in the recommended serving sizes. If you eat too many Meat and Alternative servings, you might be too full to get the Vegetables and Fruits that you need, and you miss out on the nutrients that group provides.

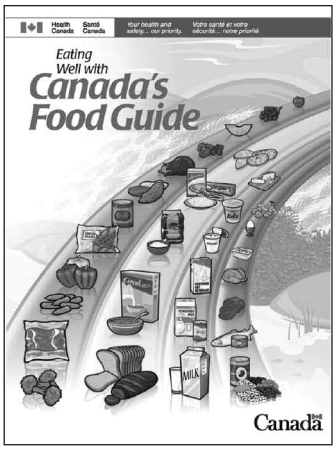
2. Variety - Choose a wide range of items from each food group because different foods contain different nutrients. An apple and a cantaloupe are both fruits, but they offer different nutrients. For example, apples contain more fibre, riboflavin and vitamin E than cantaloupes. However, cantaloupe has more potassium, vitamin C and folate compared to apples.

3. Moderation - While all foods can be part of a healthy diet, foods that are high in fat or sugar while providing few nutrients don't fit into the four food groups, and are listed as foods to limit. To make sure you are able to meet your nutritional needs, choose foods from the four food groups more often.

Most recommendations are the same for athletes, but there are a few exceptions. These are described on the next page.

To get your own copy of Eating Well with Canada's Food Guide

- Visit your local community health centre
- Talk to your local dietitian
- Call 1-800-O-Canada
- Visit Health Canada's website: ***www.healthcanada.gc.ca/foodguide***



Eating Well with Canada's Food Guide

The recommended number of servings per day for each of the 4 food groups is based on age and gender; refer to the food guide for your individual needs.

Vegetables and Fruit

- Are excellent source of vitamins and minerals; some are needed for turning food into energy.
- Contain carbohydrates - the body's preferred source of fuel, especially for sports.
- Many are high in fibre, which can help promote bowel regularity and prevent disease.

ATHLETES: May need to eat more than the recommendations because they need more energy. As a general rule, eat when you are hungry and stop when you are full.

Grain Products

- Are high in carbohydrates; provide most of the energy needed for exercise.
- Choose whole grains more often. They contain more vitamins, minerals and fibre than refined ("white") grains

ATHLETES: May need to eat more than the recommendations because they need more energy. As a general rule, eat when you are hungry and stop when you are full.

Milk and Alternatives

- Many are a great source of calcium and vitamin D, which help build strong bones and teeth. Some milk alternatives include cheese, yogurt and fortified soy milk beverages.
- Are also a source of carbohydrate and protein. Protein is essential for building and maintaining muscles and other body tissues

ATHLETES: Do not need more servings of this food group but is it important that athletes have adequate intakes of milk and alternatives to help prevent bone injuries.

Meat and Alternatives

- Are an excellent source of protein for muscles and other body tissues.
- Are often good sources of other nutrients, like iron, which are needed for energy.
- Choose meat alternatives such as peas, beans, and legumes often as they are low in fat and high in fibre. Vegetarians need 2 servings a day to ensure they get enough protein.

ATHLETES: Despite popular belief, athletes only need slightly more protein than the average person. However, these recommendations generally provide enough protein for even an athlete's needs so athletes do not need more of this food group.

Fluids

Water makes up 75% of our muscles and 50-60% of our body weight. Water has many important roles in the body, like transporting nutrients and regulating body temperature. Water is so important that even a 1% loss in body water can cause dehydration!

Dehydration

Dehydration is completely preventable and immediately impacts performance during activity and sport. Dehydration occurs when you lose more water than you take in. You lose water when you sweat, breathe and urinate. You lose more water when you exercise, so you need to drink more to prevent dehydration.

Symptoms of dehydration:

- Fatigue or weakness
- Muscle cramps
- Thirst
- Headaches
- Dizziness or lightheadedness

Dehydration can even lead to heat exhaustion or collapse.

Children are at high risk of dehydration. They are often less aware of their thirst than adults, and need to be reminded to drink while being active.

Recommendations

- Thirst is NOT a good indicator of hydration status. By the time you are thirsty, the body is already moderately dehydrated.
- To stay hydrated, drink at least 6-8 cups of water per day. Drink it throughout the day because the body can only use so much water at a time.
- More water is needed when it is hot outside, especially when you are active.

To ensure your body is well hydrated and ready to perform during practices, competitions and workouts, you should drink:

400-600 mL (about 2 cups) 2 hours **BEFORE** exercising. If dehydrated or hot outside, add 2 additional cups and 250-500 mL (1-2 cups) 15 minutes before activity.
250-500 mL (1-2 cups) every 30 minutes **WHILE** exercising
Small amounts at regular intervals **AFTER** exercising until urine is clear-colored or some athletes will weigh themselves before and after an event to determine how much fluid has been lost. To rehydrate an athlete needs to drink 1.5 liters for every 1 kilogram of weight lost.

Types of Fluids

In most cases, water is the best choice to replace fluids lost during exercise. It is inexpensive and effective.

Most other fluid options contain carbohydrates. These may be useful for providing energy for long bouts of exercise (see Eating During Activity on pg. 8). For shorter or less intense activities, they provide extra energy that might not be needed.

Fruit juices and milk

- Contain carbohydrates, vitamins and minerals.
- May be useful for enticing children who are less interested in water to drink
- Can cause cramping or diarrhea in some people, so test them out during training.

Sport Drinks such as Gatorade® or Powerade®:

- Are designed to maximize the body's uptake of electrolytes (minerals which are lost in sweat), carbohydrates and water, and minimize stomach upset.
- Cannot be diluted or they will be no more effective than water.
- Provide carbohydrates for fuel during intense workouts.
- Can be beneficial for endurance athletes, such as marathoners and tri-athletes, who exercise for longer than 90 minutes. They can also be effective in team sports that are also lasting longer than 60 minutes. For shorter activities, they provide little benefit and can be an expensive alternative to water.
- Can cause cramping or diarrhea in some people, so test them out during training.

Energy Drinks such as Red Bull®, Rockstar®, or Monster®:

- Can be misleading. The "energy" in these drinks comes from stimulants, typically caffeine.
- Can be unpredictable. Some people may experience side-effects from consuming a small amount of caffeine. Some people feel lightheaded, jittery, or nauseous. For others, caffeine can cause insomnia, headaches, irritability and nervousness.
- Can be unsafe. For children aged 12 and under, Health Canada recommends a maximum daily caffeine intake of no more than 2.5mg per kg of body weight. The amount of caffeine in energy drinks may easily exceed what is considered safe for children and adolescents.
- May contain a wide variety of ingredients, which can include herbal supplements. These are not recommended for children.
- Do not provide electrolytes to replace those lost during exercise and often contain higher amount of carbohydrates which may cause stomach upset.

Pre-Activity Eating

Pre-activity eating can help maximize the fuel available to your muscles and prevent hunger and dehydration. But what one person can tolerate before an activity may be different to what the next can. Start using this guide and adjust it to suit your needs.

What to Eat

The best foods to eat before exercising are high in carbohydrates and low in fat and fibre. These foods are digested quickly and are the primary fuel for all forms of physical activity. Once you start exercising, undigested food stays in your stomach and can cause cramping.

Best to choose:

- Pasta
- Cereals
- Breads
- Fruits
- Peanut butter
- Eggs
- Low fat milk
- Yogurt
- Vegetables
- Fruit smoothies
- Lean meats
- Cottage cheese

Best to avoid:

- Burgers
- Fries
- Chips
- Bran muffins
- Cream-based soup
- Ice cream
- Chocolate
- Beans
- Cabbage
- High fat meats
- Creamy sauces
- High fat cheese

The most important thing is to choose foods you are familiar with to avoid stomach upset and cramping

When to Eat

The timing and amount of food athletes can tolerate varies widely. Experiment in training to see what you are comfortable with. Never try a new food or food combination on competition day or for a major event.

Eating a meal about 3-4 hours before the activity gives your body enough time to digest the food and convert it to energy to fuel your muscles. Also be sure to drink 2-4 cups of fluid starting 2-4 hours before competing.

When this is not possible (such as with morning activities) or for long endurance events, like a marathon, smaller snacks 1-2 hours before the activity can help prevent hunger.

See the next page for sample meal and snack ideas.

SAMPLE PRE-ACTIVITY MEALS (eaten 3-4 hours before event):

Option 1
- 1 cup apple juice
- 1 cup cereal (lower in fat and added sugar)
- 1 cup skim or 1% milk
- 1/2 banana
- 1 slice toast
- 1 tbsp. jam or jelly

Option 2
- 1 chicken sandwich
- 1 cup vegetable soup
- 1 cup skim or 1% milk
- 4 fig newton cookies
- 1/2 cup apple sauce

Option 3
- 2 cups cooked pasta
- 1 cup tomato sauce
- 2-3 ounces ground turkey
- 1-2 slices whole wheat bread

SAMPLE PRE-ACTIVITY SNACKS (eaten 1-2 hours before event):

Option 1
- 1 granola bar
- 1 cup low-fat yogurt
- ½ medium banana

Option 2
- whole grain crackers
- ½ cup of grapes

Option 3
- bagel or toast with jam and a small amount of peanut butter
- 1 apple

Option 4
- ½ turkey or ham sandwich

Option 5
- vegetable soup with crackers

Option 6
- cottage cheese with fresh fruit
- small muffin

BEST BREAKFASTS

Any breakfast is better than no breakfast, but some choices are better than others for your sports diet. Breakfast is important to boost the carbohydrate intake to help restore your muscles from the over-night fast. Some good choices include:

- english muffins
- bagels
- cereal hot or cold
- fruit
- milk or juice
- flavored yogurt
- pancakes
- banana bread
- toast

Without a healthy morning meal, you are less likely to perform at your best.

Snacks

Sometimes athletes' schedules are very hectic, without any time to sit down for a meal. Healthy snacking can help to ensure adequate nourishment during these days. On less busy days, it can help prevent hunger between meals.

Here are a few suggestions for healthy snacking:

- Keep a supply of non-perishable snacks in your locker or gym bag so you are not tempted by unhealthy options in vending machines or concessions.
- Pack a lunch. Concessions and restaurants offer many high-fat or sugary items. A lunch bag full of snack-sized foods can be a nutritious and less expensive alternative.
- Two food groups- Try planning snacks that have choices from at least two of the four food groups

Some snack choices that are high in carbohydrates and easy to pack when you are on the go:

- Bagels
- Low-fat Muffins
- Crackers and cheese
- High Fiber, low sugar breakfast cereal
- Pretzels
- Dried Fruit
- Multigrain Wrap
- Applesauce
- Juice Boxes
- Trail Mix
- Granola (bars or cereal)
- Fig Newtons
- Raisins
- Peanut butter sandwiches
- Dried Fruit Bar
- Fresh fruit or vegetables (use nutritious dips like yogurt or hummus)
- 100% Juice Boxes
- Trail Mix
- Canned fruit cups
- Canned fish and whole grain crackers

Eating During Activity

In most cases, it's not necessary to eat during activity because your body already has enough energy. But it may be helpful for:

- Long endurance events that last for more than 60 minutes
- Morning events when you have only had a small breakfast

In these cases, eating or drinking 30-60g of carbohydrate per hour of activity can help keep your energy up. Some good food choices are:

- 1-2 cups Sports drink
- 1 cup 1% chocolate milk
- 1 fruit (pear, apple, etc)
- 1 cup fruit juice
- 1 small muffin
- Sport gels* (1-2 packs)
- 8-12 soda crackers
- 1 banana
- Sport bars*

* These choices can be expensive and generally provide no benefit over other food

Remember that athletes tolerate foods differently, so test out new snacks and foods in training to prevent stomach upset during a competition.

Recovery Foods

After strenuous exercise, it is important to refuel your muscles. Your muscles store energy but it gets used up during activity. The timing, type and amount of foods you need to ingest depends on how long you have trained/competed and when the next intense exercise will occur. It is important to refuel following intense exercise lasting greater than 90 minutes for example marathon running, swimming and triathlon. It is also critical that teams in a tournament or athletes training more than 12-20 hours a week refuel their muscles before the next game or practice.

Just After Activity

The best time to replace the used energy is within 15 minutes of ending the activity. Within this time, it is easier for your muscles to replace energy. Choose foods that are high in carbohydrates, like breads, cereals, pasta, fruits and vegetables. For certain high intensity and intermittent high intensity sports, post-exercise protein consumption immediately following exercise is desirable. Examples of these sports are basketball, ice hockey, soccer, tennis, cycling and swimming.

Meal After Activity

It is also important to plan a recovery meal within 2 hours of ending the activity. To build and repair muscles after exercise, your body needs protein. Foods from the Meat and Alternatives food group are good sources of protein to include in your after-activity meal. Remember to keep your meals balanced by including at least three of the four food groups. This will help your body to get the nutrients you need. Also remember to drink enough fluid for adequate rehydration.

Sample Menu for Active People

	Day 1	Day 2	Day 3
Breakfast	• 1 cup high fiber low sugar cereal • 1 cup milk • ½ cup berries • ½ cup orange juice	• whole wheat toast & jam • 2 scrambled eggs • 2 oz cheddar cheese • 1 banana	• 1 pancake • 3 oz ham • ½ grapefruit • 1 cup milk
Snack	• 1 apple • ¾ cup yogurt	1 orange 1 granola bar	• 3 fig newtons • ½ cup grapes
Lunch	• 1 turkey & cheese sandwich • 1 glass of water • 1 banana • 1 cup raw veggie sticks	• 1 hamburger on a whole wheat bun • 1 cup garden salad • 1 cup milk • 1 apple	• 1 cup beef and vegetable stir fry • 1 cups pasta • 1 cup choc milk
Snack	• 6 crackers • 2 tbsp peanut butter	• 1 bagel • ¾ cup yogurt	• ½ cup trail mix (with dried fruit and nuts)
Supper	• 1 cups pasta • 1 cup meat sauce • 1 cup broccoli • 1 slice garlic toast • 1 cup milk	• 3 oz lean roast beef • 1 baked potato • 1 tbsp fat free sour cream • 1 cup green beans • 1 cup milk	• 1 cup spinach salad • 1 8" ham & pineapple pizza • 1 cup milk
Snack	• 3 cups popcorn • 1 cup milk	• 1 blueberry bran muffin • 1 cup canned peaches	• 1 small bag pretzels • 1 apple

This menu is just a guide. You may find that you need more or less food depending on your age, gender and your activity. As a general rule, eat when you are hungry until you are satisfied, and do your best to follow healthy eating principles. Try to choose a food from 3-4 of the food groups at each of your meals.

Tips for the Travelling Athlete

When traveling, it's tempting to eat whatever happens to be easiest. Although an occasional high-fat meal is unlikely to interfere with training, a steady fast food diet can take its toll. This is because many fast food meals are low in vitamins and minerals so they will not provide your body with the nutrition it needs to perform it's best.

Airplane Travel

Be sure to drink plenty of fluids. You can easily become dehydrated due to the low humidity in the cabin. Try:

- Bringing along your own water bottle.
- Making healthier beverage selections such as water or 100% fruit juice.
- Asking for 2 drinks at serving time.
- Drink plenty of water several days after landing

Many airlines no longer provide free meals on domestic flights. Check with your airline to see if you need to bring you own meals. It's always a good idea to pack snacks in case the meal provided is not filling or nutritious enough to meet your energy needs.

Here are some other tips for each meal of the day:

Breakfast

- For breakfast, order carbohydrate-rich pancakes, French toast, whole-wheat toast, bagels or bran muffins. Be cautious of fatty side dishes, like sausage and bacon.
- Pack your own cereal, raisins and spoon. A water glass can double as a cereal bowl. Either bring powdered milk, or buy milk at a convenience store.

Lunch & Supper

- Choose delis over the 'burger and fries' fast food places.
- At delis, avoid fatty sides like chips and cookies. Choose a larger sandwich instead.
- At fast food restaurants avoid the high fat choices like fries and choose a baked potato, chili, thick-crust pizza or a large salad.
- Hearty soups (such as split pea, minestrone, lentil, vegetable, noodle) with crackers, bread, a plain bagel, or an English muffin, provide a satisfying, carbohydrate-rich meal.
- Choose dishes made with pasta, rice and steamed vegetables.
- Request thick-crust pizza with veggie toppings rather than pepperoni or sausage.
- Try to avoid adding fats to your meals, like mayonnaise on sandwiches, high fat salad dressings, butter and cream sauces add hidden fat. You can ask that they be served on the side.
- For day trips, try packing your own lunch.

Snacks

- Pack your own goodie grab bag. See Snacks on pg 10 for ideas.
- At a convenience store, choose small packets of trail mix, dried fruit, muffins, yogurt, vegetable or fruit juice, a hot pretzel, slice of pizza or a small sandwich and cup of soup.

Alcohol and Sports

Alcohol is commonly associated with sports. Alcohol companies own sport teams and sponsor sporting events. Celebrations and social gatherings often include alcohol. Despite all this, alcohol can actually hurt your performance!

Some of the physical effects of alcohol are:

Short-term effects

- Can cause dehydration
- Impairs hand-eye coordination
- Impairs balance
- Slows reaction time
- Can reduce mental alertness for 24 hours after a binge (3 or more drinks)
- Too much too quickly can lead to death by overdose (alcohol poisoning)
- It's expensive!

Long-term effects

- Weight gain
- Can cause vitamin deficiencies that are needed for energy
- Liver and brain damage
- Heart disease
- Sexual problems
- Relationship problems
- Addiction (alcoholism)
- It's expensive!

Try some of these strategies to reduce the alcohol you drink:

- Be the designated driver.
- Pace yourself. Alternate alcoholic with non-alcoholic drinks like water, juice or club soda.
- Keep yourself busy. You'll drink less if you're dancing, playing cards or pool.
- Drink lower-alcohol drinks, like spirits diluted by large amounts of milk, juice or club soda.

Nutritional Ergogenic Aids

Nutritional ergogenic aids are supplements that claim to enhance athletic performance by decreasing fatigue, changing body composition or increasing work output. Examples of these products are protein supplements, creatine, weight loss supplements and individual amino acid supplements.

Facts about Nutritional Ergogenic Aids:

- In many cases the claims made are unsubstantiated or based on poor quality research
- These products are generally expensive and unless an athlete has shown a nutrient deficiency there is little evidence of the effectiveness of most products.
- Many products are not licensed and there are no strict manufacturing or labeling requirements.
- The sales of these supplements have created a multi-billion dollar industry so when one product is shown to not work another quickly replaces it.

These products should not be recommended.

Weight Management

Athletes often want their weight to meet the demands of a sport. Whether you want to gain or lose weight, it needs be done slowly.

Losing or gaining weight does not always lead to improved performance. Restrictive diets can lead to fatigue, dehydration, muscle loss, and hurt performance!

Gaining Weight

You have to do resistance exercise (i.e. lift weights) and eat an additional 500-1000 calories per day to gain one pound per week. To do this, try:

- An extra snack, such as a bedtime peanut butter sandwich with milk.
- Larger than normal portions at meal time
- Finish meals off with healthy desserts such as oatmeal-raisin cookies, rice pudding, carrot cake or pumpkin pie.
- Eating higher calorie, more dense foods such as
    - Margarine
    - Peanut butter
    - Mayonnaise
    - Dried fruits
    - Fruit juices
    - Granola
    - Chocolate milk
    - Nuts
    - Cream soups

Losing Weight

Children should only lose weight with the guidance of a health professional. Inadequate energy intakes can have long term consequences such as failure to meet height potential and the development of disordered eating habits.

Not getting enough energy and fast or drastic drops in weight can cause hormone changes that damage bones. Athletes can develop osteoporosis, a disease that makes bones fragile and increases the risk of bone fractures. Such injuries can be debilitating, potentially ending an athlete's career.

To lose weight, you have to use more calories than you take in. Aim to lose 1-2lbs a week by using about 500kcal more a day than you eat. Losing weight more quickly than this can lead to muscle loss instead of fat loss. Try these tips:

- Keep exercising. This is to help ensure the weight you lose is fat, not muscle.
- Do not be restrictive with your eating. If you feel deprived, it is harder to keep with the plan. You can also become tired which makes training more difficult.
- Set goals! Make sure they are realistic.
- Keep a food journal to help identify areas you can improve on.
- Eat the same foods, just smaller portions.
- Eat slowly, enjoy your food and listen to your body. Eat when you are hungry and stop when you are satisfied.
- Avoiding eating in front of the TV. You are distracted and can eat more than you realize!
- Choose foods from the food guide most often (about 80-90% of the time), but still leave room for your favorite treats!

Special Diets

High Protein Diets

Some athletes eat high-protein diets in attempts to “bulk up” or to lose weight. While it is true that protein is required to build muscles, the average athlete’s diet gives the body more than enough protein, even for most body builders. Experts agree that high protein diets are not a safe way to lose weight.

Facts about high protein diets:

- While these diets can promote weight loss initially, it is a loss of water mass.
- Losing water can lead to dehydration and low blood pressure.
- Because carbohydrate is the body’s preferred energy source, these diets can negatively affect physical and mental performance due to lack of energy.
- A high protein intake can result in calcium loss from the bones, which can make the bones weak and susceptible to fracture.
- High-protein diets cause your body to produce ketones that cause fatigue, nausea, dizziness and headaches.
- These diets are often high in saturated fat, which raises your risk of heart disease.
- Large doses of individual amino acids can be toxic.

Vegetarian Athletes

Vegetarian diets can be very healthy for athletes if foods are selected carefully. If not, you are at increased risk for nutrient deficiencies, which can affect your sports performance. Following Canada’s Food Guide will reduce this risk. Some potential issues surrounding vegetarian diets are:

- To meet protein needs, make sure you have at least 2 servings of meat alternatives, like beans, legumes, nuts and eggs every day.
- Be aware of how much energy you are getting. Vegetarian diets are often high in fibre, so you may feel full before you’ve eaten enough energy to fuel exercise.
- Make sure you are getting enough iron. Not getting enough iron can cause fatigue. Eat iron-rich foods like meat alternatives, blackstrap molasses and fortified cereals. Ask your doctor to check your iron status if you are concerned that it might be low.
- If you do not drink milk, choose calcium- and vitamin D- rich foods to maintain bone health. Sources of calcium include fortified soymilk, tofu, almonds and dark green leafy vegetables. Look for vitamin D in some yogurts and eggs.

Positive Body Image

What Physical Health Educators and Coaches can do to Promote Positive Body Image in their Athletes

Explore your personal values, attitudes and knowledge base regarding weight, dieting, body image, physical appearance, and how these values and attitudes may inadvertently affect your athletes. Understand your role in promoting positive self-image and self-esteem in athletes.

Acknowledge, appreciate and value all your athletes no matter what their gender or their body size. Help your athletes not only accept and enjoy their bodies by encouraging physical activity but assist them in identifying and appreciating what their bodies are capable of. Try to develop non-competitive forms of physical activities where the engagement in the activities brings a sense of accomplishment.

Have a zero tolerance of jokes or teasing based on how a person looks. Comments or even implied disapproval of anyone's body is an invasion of the individual's emotional space. Eating Disorders are complex conditions that can arise from a variety of potential causes. One of the interpersonal factors that may contribute to the development of an eating disorder is a history of being teased or ridiculed about size or weight.

Sports where thinness and/or weight categories are emphasized are particularly risky, and include gymnastics, figure skating, running, synchronized swimming, ballet, dance, equestrian sports, wrestling, boxing and weight lifting. These sports not only put females at risk for developing eating disorders but males as well. Male wrestlers, for example, have a higher rate of eating disorders than the general male population.

Tips for Coaches and Parents

- Do not talk about weight or encourage athletes to lose weight. Focus on health, training and performance instead.
- Do not weigh your athletes. Do not assume that reducing body fat or weight will enhance performance.
- If you are concerned about an athlete's weight, refer them to a health professional.
- Be aware of the signs and symptoms of disordered eating. Early detection increases the chance of successful treatment.

Signs of disordered eating

- Significant weight loss
- Frequent weight fluctuations
- Low weight despite eating large volumes
- Delay in puberty, growth
- Constipation
- Hair loss
- Dry skin and hair
- Lanugo (growth of down-like hair on body for warmth)
- Dehydration*
- Muscle cramps*
- Fatigue*
- Muscle Weakness*
- Excessive training*

*Beyond what is expected for sport participation

Disordered eating can include fasting or purging, such as vomiting, excessive exercise, or use of laxatives, diuretics or enemas. If you are concerned about an athlete's eating or weight, talk to a Registered Dietitian and/or refer them to a health professional.

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