Athletes eat and train, they don't diet and exercise.

Unknown

NUTRITION - ENERGY BALANCE

All SO programs insist on the importance of proper nutrition for healthy living. It is not our intention to describe in detail nutritional "dos and don'ts" or to present food guide recommendations as this can easily be found by consulting health agencies and SO program websites. However, we do want to recognize that nutrition is an important part of healthy living and sport skills acquisition. Understanding the relationship between energy needed versus energy ingested is key to weight control and sport performances.

Energy Balance Principle

Basic living activities such as breathing and moving require energy. A calorie is a unit of energy. Coal, gas, wood and food are all sources of energy and contain calories. Everything we do requires energy; walking, sitting and even reading. The more we do the more energy is required. Breathing hard and sweating are good indicators that our bodies are burning lots of calories. The balance between what we do and what we eat is called Energy Balance. If we eat more calories than we burn, we gain weight and if we burn more energy than we eat we lose weight.

Age, gender, weight, activity level and the sport you are practicing affect calories needed to maintain daily energy balance. The following chart is provided by Health Canada and can be used as a general reference guide. It assumes an approximate weight of 150 (68 kg) pounds for men and 130 pounds (59 kg) for women.

Males (Calories per day)

Age	Sedentary [1] Level	Low Active [2] Level	Active [3] Level
2-3 y	1100	1350	1500
4-5 y	1250	1450	1650
6-7 y	1400	1600	1800
8-9 y	1500	1750	2000
10-11 y	1700	2000	2300
12-13 y	1900	2250	2600
14-16 y	2300	2700	3100
17-18 y	2450	2900	3300
19-30 y	2500	2700	3000
31-50 y	2350	2600	2900
51-70 y	2150	2350	2650
71 y +	2000	2200	2500

Females (Calories per day)

Age	Sedentary [1] Level	Low Active [2] Level	Active [3] Level
2-3 y	1100	1250	1400
4-5 y	1200	1350	1500
6-7 y	1300	1500	1700
8-9 y	1400	1600	1850
10-11 y	1500	1800	2050
12-13 y	1700	2000	2250
14-16 y	1750	2100	2350
17-18 y	1750	2100	2400
19-30 y	1900	2100	2350
31-50 y	1800	2000	2250
51-70 y	1650	1850	2100
71 y +	1550	1750	2000

Calories and the sport you practice.

The chart above can help determine the amount of daily food intake needed to maintain energy balance depending on how active you are. Athletes that are participating in high-energy demand sports such as cross-country skiing, distance running and speed skating will have higher calorie demands than athletes participating in low energy sports such as bowling and bocce. Understanding the amount of energy (calories) needed to maintain energy balance is important.

Find your daily energy demand from the chart above and match it to the sport you practice (below). This should give you an excellent idea of your daily energy requirements. Remember for example, that if you weigh less than 150 pounds (68 kg) your energy consumption will be less than the Health Canada chart.

Sports Specific Energy demands

The Health Canada chart is divided in three categories; sedentary, low activity and active lifestyle. The active lifestyle assumes vigorous (sweating) activities for 150 minutes per week. Depending on the sport you are practicing and how many times per week you are involved, the energy balance will be different for all athletes.

Sports can be divided according to energy demands. High-energy demands require more calories while lower ones require fewer calories. Nutrition must be adjusted according to your sport.

Energy demands for SO sports

1. Sports with low energy demands

	Calories/hour (Estimate for150 pounds (68 kg) athletes)
Bowling	140
Bocce	140
Curling (with limited brushing)	200
Golf (if walking)	240
Rhythmic Gymnastics	280

Sports with low energy requirements are represented in Health Canada's second category: low activity. For example, a man of 150 pounds (68 kg) and between 19-30 years old would require 2700 calories daily when practicing his sport. On days where no practice is performed the energy requirements would drop.

Good nutrition for these sports means adequate caloric intake, which should be adapted to the amount of activity. Counting calories is one way to maintain energy balance, but we recommend increasing activity level by adding a running warm up for 20 minutes as an alternative to counting calories. Adding a warm up and other physical activities such as Club Fit is necessary to do so.

2. Sports with medium energy demands

	Calories/hour (Estimate for150 pound (68 kg) athletes)
Athletics field events	290 to 400
Alpine skiing	450
Basketball	450
Figure Skating	400
Floor Hockey	450
Powerlifting	420
Softball	275

Although more effort is required compared to the low energy demand sports, they can also be categorized in Health Canada's second category. We recommend for this category that athletes increase physical activity in order to attain Health Canada's category three.

3. Sports with high-energy demands

	Calories/hour (Estimate for150 pound (68 kg) athletes)
Athletics Track events	600 to 1100
Aquatics all events	500 to 1000
Cross-country skiing	600 to 1100
Snowshoeing (all distances)	600 to 1000
Soccer	500 to 1000
Speed skating	650 to 1000

Sports in this category are very demanding when done properly. The calories required are estimations for generic athletes. For example, an athlete in a soccer game that actively participates can burn 500 to 1000 calories in an hour. A second athlete who simply stands in place will not burn more than athletes participating in low energy activities such as bowling. Sweating and hard breathing are surely indicators of energy consumption.

Athletes taking an active part in these sports will require more calories on practice days in order to maintain energy balance.

Conclusion

Energy balance can be complicated to maintain as it depends on so many factors; age, gender, weight, activity level and the type of sport practiced. Being

precise with monitoring calories burned and calories eaten is not the aim of this chapter; this information should however provide a helpful nutrition and activity guide based on your sport and individual characteristics.

Our objective here is that SO athletes eat according to how they train rather than using diet and exercise to control weight. Using a scale daily and monitoring weight from time to time is a sure way to see if your energy balance strategy is working.