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Slope Style Nutrition: Nutritional Considerations for a Day of Fun and Performance on the Slopes

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For most skiers and boarders, a fun-filled day on the slopes requires 3 things; fresh powder, no lines at the lifts, and endless vertical feet of open runs. The perfect end to this day for many would include a hot tub, a fondue dinner, and a warm fire in the chalet with friends. However, what few skiers and boarders prepare for, especially young skiers and boarders, is how they plan on fuelling their bodies. The following article intends to provide recommendations for fuelling yourself for a day of fun and performance on the slopes.

A planned fuelling strategy will increase performance and decrease your chances of injury. Daily caloric and sport specific nutrition requirements are based on individual metabolic factors such as gender, body size and composition, and exercise or sport demand (for ex. endurance sport requires a different fuelling strategy than a power sport). This makes it impossible and inappropriate to provide a 1-size fits all nutrition recommendation. Health Canada's daily caloric requirement recommendations for active adults (19-50yr old) are 2900-3000kcal for men, and 2250-2350kcal for women (recommendations to maintain body weight). When combined with ski and snowboard energy system demand profiles and reported caloric expenditures of 360-1116kcal/hr, more specific requirements for the slopes can be provided. For example, a 25yr old, 170lb male, who hits the slopes for 4 hours of moderate – high intensity skiing may have a daily caloric demand of 5,000 -7,000kcal (2,950 for body requirements + 2,000 -4,000kcal for skiing activity). Considering that high intensity skiing (downhill, moguls) requires repetitive high force outputs through isometric, concentric and eccentric muscle contractions, that utilize both anaerobic and aerobic energy pathways, an effective fuelling plan requires a combination of carbohydrates, proteins and fats, and that these substrates are available at all times.

An effective fuelling strategy for the slopes also considers nutrient quality and timing of consumption, and recognition that daily consumption includes all calories from whole foods, supplements, snacks, and beverages. Whole foods that are comprised of high biological value proteins, complex carbohydrates, and anti-oxidant and other vitamin and mineral rich foods should be consumed, ideally in 3 meals (breakfast, lunch, dinner) and 2 snacks throughout the day. Always aim for a solid breakfast, as this will provide a good foundation for the energy your body will require throughout the day on the slopes. Equal intervals, with balanced portion sizes help to maintain a steady metabolic rate (rate at which you burn calories), and when comprised of a mixture of low to high glycemic carbohydrates, these meals will maintain blood sugar levels throughout the day, preventing the 'bonking' sensation that leads to drops in concentration, physical coordination, and injury on the slopes. Breakfast is most important, snack when you feel snackish, and have a healthy and hearty dinner. This will replenish your energy expenditures, and if satisfied through nutrient rich whole foods, will regenerate muscle glycogen stores and begin repairing any muscle damage. When on the slopes, make solid food decisions; *keep the grease and simple sugars in the cafeteria*. Pack snacks that are easy to transport, and nutritionally dense.

While dehydration may not be a common thought in cool / cold temperatures, the skier or boarder must continue to consume fluids during the day. This will maintain optimal thermo-regulation, prevent muscle cramping, and reduce muscle soreness that night, or next day.

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