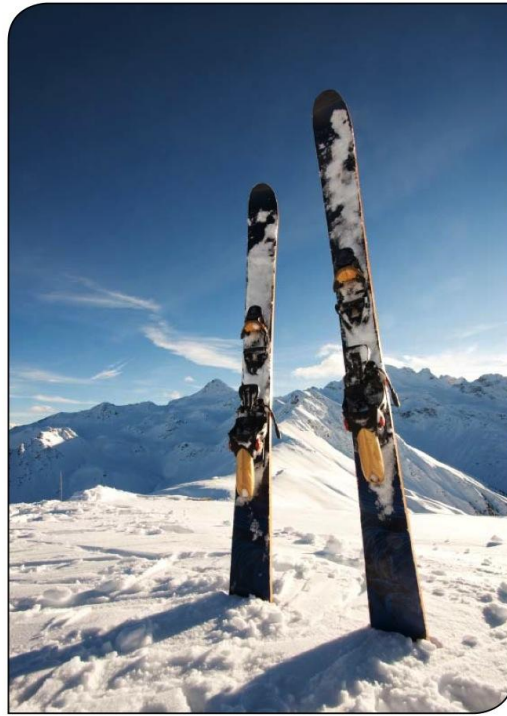


FIT FOR SNOW

IMPROVE PERFORMANCE. **REDUCE INJURY.**



RESEARCH VERSION. NOT FOR PUBLIC DISTRIBUTION

A manual for folks who work at snowsport areas full of suggestions about how to improve your on-snow performance and reduce your risk of injury.

Selkirk College 

*fit*SAFE
SOLUTIONS INC

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Fit for Snow

Synopsis

Fit for Snow is an injury prevention and general wellness program designed specifically for patrollers, instructors and lift operators working at snowsport resorts. It is based on a study that was conducted at five ski resorts in Western Canada. During the 2010/11 season data were gathered from 75 patrollers, instructors and lift operators to characterize the typical loads and stresses experienced on a daily basis. Workers also underwent previously validated testing protocols in order to evaluate movement strategies, and identify areas of mismatch between the movement patterns utilized and the demands of key work tasks. A second area of focus was an analysis of dietary and hydration patterns. Each worker was monitored every two hours over the workday to establish blood glucose levels and coincident simple- and complex-reaction times. Previous work has shown that due to the reliance of the brain and peripheral nerves on stable blood sugar levels; cognition, vigilance, decision-making, speed of reflexes and reaction times are all impaired by unstable blood glucose patterns.

These findings were used to design a corrective program that is both contextually and culturally specific to this industry. The Fit for Snow program consists of a small handbook; The Top Ten Tips, as well as a parent book; Fit for Snow (coil backed 21.5 by 14 cm), workshops and support training. Books were made available to 75 employees at the five test ski areas, along with training sessions during scheduled fall staff orientation. In addition, supervisors were coached on how to support the program including practical strategies and weekly tips. Outcome measures included surveys and a comparison of injury rates at the 5 test ski areas over time, as well as to similar areas that did not utilize the program.

Follow up surveys indicated that the program was well accepted and widely used at the resorts where management supported the program. Highly significant reductions in the number and severity of injuries were seen with worker compensation claims dropping 67% overall (Fig. 1). This outcome is similar to other culturally specific programs that have been developed by Dr. Roberts based upon correcting movement inadequacies and stabilizing blood glucose levels. In each and every case a significant improvement in employee wellness and a reduction of injuries have resulted with the implementation of the program¹⁻⁷.

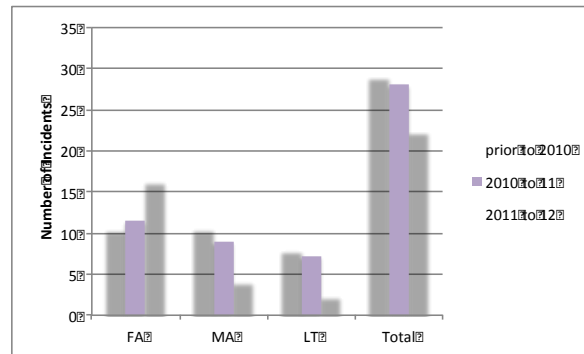


Figure 1. The average number of injury reports for patrols, instructors and lift operators at the 5 test Snowsport resorts in Western Canada during the season that Fit for Snow was implemented (2011/12) compared to the season that the study data were gathered (2010/11) and a 5 year average (prior to 2010). *Significantly different $p < 0.05$.

There is a great deal of evidence that worksite health promotion programs are effective at increasing worker productivity and reducing costs associated with poor health, inefficiencies, illnesses and injuries. The literature consistently reports a return on investment in the order of 2.5 to 6:1⁸. However, for these kinds of gains to be realized some key elements are necessary of which the most important are:

- a culturally and contextually specific program;
- strong support from management at all levels and;
- consistent exposure to the program for at least 4 years.

The Fit for Snow program is demonstrably effective. To ensure good success from your investment it is recommended that supervisors and Department Heads are included in the training process and that a multi-year commitment is made. Please contact Dr. Delia Roberts at droberts@selkirk.ca for more information on how the program can be customized to meet the needs of your resort.

Components of the program

All staff presentation

This presentation is an opportunity for all staff to gain exposure to the Fit for Snow program. Several formats are available, from 30 min up to an hour. All presentations start with the rationale behind the program, a brief description of the study and its findings, and some illustrative demonstrations that will get your staff up on their feet and very quickly establish the validity of the program. The longer formats are more suitable to staff that will not participate in the workshops but for whom you would like to introduce the concepts of Fit for Snow; they include some detail about the dietary recommendations. The shorter format is for those staff who will move on into the workshops. For the most effective transfer of information it is important to have an appropriate space for the presentation (an open cafeteria without any boundaries on the room is not as

effective as a space which encourages staff to focus on the information being delivered). Up to 100 participants are acceptable, but a more effective size is around 50 staff.

Workshops

Each participant should attend both of the workshops;

1. *Nutrition and Hydration for Health and Performance*
2. *Power to Prevent Injuries and Push Performance*

The order of attendance is not important, but the groups should be discipline specific and include 4-8 participants. The workshops are designed to take 30 minutes, but if time is available 45 minutes allows for a more relaxed, interactive process, particularly if the groups are larger than 5 participants. (We often have to ask people to leave; they would stay on if they could). The space required should be private as participants will be required to participate and they are encouraged to engage in a discussion about lifestyle that is confidential. Each participant will receive a copy of the *Fit for Snow* manual and the *Top Ten Tips* that they will use during the workshops.

Supervisors

Lift Operations, Snowsport School and Patrol supervisors should be required to attend the presentation and workshops. In addition, they will be offered an additional hour of information with coaching strategies and more in depth information about how the program can be used to develop healthy lifestyles as well as context specific strategies to promote behavioral change. Other department supervisors including all Outdoor Operations, Maintenance, Food and Beverage and Human Resource personnel would also benefit from attendance.

Management

As many Management personnel as possible should also attend the presentation, specifically those involved in Mountain Operations, Human Resources, Safety, Maintenance and Food and Beverage. It is very important that the leadership for the program comes from this level, and that there is the opportunity to look to each of these departments for demonstration of their support for the program. A workshop for this level of participants could also be offered, both on a personal level and as a management strategy looking for a solid return on investment.

In Season Support

Weekly events, newsletter items, contests and other forms of engagement can be provided by the Fit for Snow team to keep the program alive. The most common comment from participants in the study was that they would have liked to receive more coaching throughout the season.

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