Return to Speed Skating Protocol & Concussion Guidelines for Club and Provincial Level Athletes

This guide has been developed based on the Return to Play general protocols developed by ThinkFirst Canada, the Canadian Freestyle Ski Association, and Speed Skating Canada’s Short Track and Long Track National Team programs. Speed Skating Canada’s Return to Speed Skating protocol and these concussion guidelines have been drafted to reflect a regular club training environment and account for the majority of situations where daily on-site medical supervision is not available. A concussion is a serious injury, but an athlete can recover fully if the brain is given enough time to rest and recuperate. Returning to normal activities, including sport participation, requires patience, attention, and caution.

Speed Skating Canada’s Return to Speed Skating Protocol and these concussion guidelines are intended as a resource to assist in the recognition and management of concussions. They do NOT replace the involvement of a physician, preferably one with experience in managing concussions, and formal medical clearance is recommended prior to Steps 2 and Steps 8 of the protocol. Clubs are encouraged to make medical clearance a requirement as part of their own concussion policies.
CONCUSSION GUIDELINES

DEFINITION OF A CONCUSSION

A concussion is an alteration of the normal function of the brain induced by trauma, either by a direct blow or by rotational forces that result in a rapid acceleration/deceleration of the brain within the skull.

WHY IS THIS IMPORTANT TO RECOGNIZE?

Concussions are often difficult to recognize, as some athletes may not complain of some of these symptoms. Loss of consciousness is not required to have a concussion, and in fact most athletes do not lose consciousness.

WHY IS THIS IMPORTANT TO RECOGNIZE?

A concussion is important to recognize so the brain is given adequate time to rest and heal. Most concussions typically resolve fully with proper rest and management in about a week or two, but concussions which are not diagnosed can possibly lead to long term and more serious health implications. If an athlete returns to training or competition too early, symptoms may drag on, and put the athlete at risk for a second concussion or other significant injury. The often vague symptoms make an initial diagnosis difficult. Since the injuries do not always occur during on-ice training or competition, and we often rely on the athlete to report the injury, it is a challenging task to determine when an athlete is concussed and not processing information properly. Nevertheless, the coach, therapist, or doctor should attempt to the best of their abilities to recognize and give the appropriate advice to a possibly-concussed athlete.

THE INITIAL ASSESSMENT AND DIAGNOSIS

Any athlete with concussion symptoms should be identified by a coach, official, therapist or doctor on site. It is particularly important to be vigilant after any fall or accident. If an athlete does not demonstrate or indicate symptoms, but a fall or other incident provides reason to suspect a concussion, the athlete should be assessed by medical personnel on site (if available) or using the Concussion Recognition Tool(CRT) before the athlete participates in any further activity. In competition, officials who suspect an athlete has been concussed may require clearance from the on-site medical personnel before allowing an athlete to participate in an event.

SYMPTOMS OF A CONCUSSION MAY INCLUDE:

- NAUSEA
- POOR CONCENTRATION
- FATIGUE
- AMNESIA
- IRRITABILITY
- SENSITIVITY TO LIGHT OR NOISE
- POOR APPETITE
- DECREASED MEMORY
INITIAL MANAGEMENT OF THE CONCUSSION

The athlete should not be left alone in the first few hours. The initial treatment is rest until the complete resolution of symptoms. Resting includes both physical and cognitive (or mental) rest. Athletes should therefore have a quiet environment and avoid excessive exposure to auditory or visual stimulation such as television, computer work, video games, cellphones, books, or text messaging.

Athletes should avoid alcohol and medication use after concussion. Some analgesics (pain-killers) and anti-inflammatories should only be taken if prescribed by a physician as they may mask some of the signs and symptoms of concussion. Medical evaluation will decide whether any other acute investigations such as CT or MRI scans are warranted.

Speed Skating Canada's Return to Speed Skating Protocol can begin once the athlete has been free of all symptoms for 24-48 hours and written clearance has been provided by a physician. The physician’s clearance should confirm the use of the Return to Speed Skating Protocol and identify any special considerations based on the specific case including the athlete's previous concussion history.

FOR MORE INFORMATION, VISIT:
- Parachute Canada: http://www.parachutecanada.org
- Speed Skating Canada: http://www.speedskating.ca/concussions-brain-injuries
- Find a Doctor: Canadian Academy of Sport & Exercise Medicine: http://www.casm-acms.org

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If an assessment confirms the presence of ANY sign or symptom of a concussion, the athlete must be removed from all activity and undergo a medical evaluation by a physician. An athlete who has sustained a concussion should NOT return to speed skating competition and training, dryland or cross-training, or any other physical exercise until provided with written clearance by a physician.
RETURN TO SPEED SKATING PROTOCOL

The following protocol presents a suggested step-by-step protocol for return to full training and competition in short track or long track speed skating. **Each step in the Return to Play protocol requires a minimum of one day.** However, each step of the protocol may be extended depending on the athlete's prior concussion history, severity and duration of current concussion symptoms, degree of compliance to the protocol, facility availability, and age. For example, each step could be two days instead of one day. A physician-parent cannot act as his or her child's treating physician. If an athlete develops any concussion symptoms (e.g., headache, feeling sick), during the activity of a step of the protocol, later the same day or the following day the athlete should stop the protocol immediately and return to Step 1 (a reassessment by a physician). **Written medical clearance from a physician is required prior to steps 2 and 8.**

**STEP 1**

**COMPLETE COGNITIVE AND PHYSICAL REST**

Limit school, work and tasks requiring concentration. Refrain from physical activity until symptoms are gone. Once all symptoms are gone, rest for at least another 24-48 hours and consult a physician, preferably one with experience managing concussion, for clearance to proceed to Step 2.

**STEP 2**

**LIGHT AEROBIC EXERCISE**

to reintroduce physical activity: 10-15 minutes of low intensity cycling on a stationary bike.

**STEP 3**

**30 MINUTES OF CYCLING**

on a stationary bike at 75% of Max Heart Rate.

**STEP 4**

**30 MINUTES OF CYCLING**

on a stationary bike at 75% of Max Heart Rate with 30 second maximum effort intervals at minutes 10, 15, and 20.

**STEP 5**

**SPORT-SPECIFIC AEROBIC ACTIVITY AND RE-INTRODUCTION OF SKATING:** 15 MINUTES OF LOW INTENSITY SKATING.

**IF THE FACILITY PERMITS, SHORT TRACK ATHLETES SHOULD START WITH LONG TRACK SKATING.**

The environment should be managed so as to ensure the athlete is not in excessive traffic and that there is minimum risk of falling or colliding with other athletes. The athlete may also attempt basic balance drills, such as gliding in basic position on one leg. If the athlete only has access to a short track facility, he or she should skate around the outside, close to the boards with no traffic on the inside.

**STEP 6**

**30 MINUTES OF SKATING**

at 75% of Max Heart Rate with 30 second maximum effort intervals at minutes 10, 15, and 20.

**STEP 7**

Regular off-ice warm-up with high intensity off-ice agility/coordination activities and monitored high intensity off-ice and on-ice workout.

**See Appendix 1.**

**STEP 8**

**FULL ON-ICE PRACTICE**

including skating in traffic, tactical drills, starts and race simulations **once cleared by a physician.**

**STEP 9**

**RETURN TO UNRESTRICTED TRAINING AND COMPETITION**
## APPENDIX 1 - RECOMMENDED TRAINING SESSION FOR STEP 7

### WARM-UP
Supervise the skater while they complete their normal warm-up routine. If the skater’s normal off-ice warm-up routine is less than 20 minutes, this should be supplemented with light aerobic cycling on a stationary bike or jogging.

### OFF-ICE TRAINING SESSION

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RECOMMENDED TRAINING SESSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Skaters training</strong></td>
</tr>
<tr>
<td></td>
<td>4+ times per week</td>
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<tr>
<td>Select 4 agility ladder exercises</td>
<td>4 reps, continuous activity</td>
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<tr>
<td>- with at least 1 lateral (left/right) and 1 backwards exercise</td>
<td>5 reps (60-70-80-90-100%) 1 minute rest</td>
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<tr>
<td>10m progressive sprints</td>
<td>5 reps</td>
</tr>
<tr>
<td>15m sprints</td>
<td>5 reps 1 minute rest</td>
</tr>
<tr>
<td>- 10 m straight line, with 5m deviation (do both right &amp; left)</td>
<td>3 to 6 minutes: alternate 1 min static with 1 min active @1/sec</td>
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<tr>
<td>Up-downs</td>
<td>3 x 20 reps 1 min rest between series</td>
</tr>
<tr>
<td>Side to side imitations</td>
<td>3 x 20 reps 1 min rest between series</td>
</tr>
<tr>
<td>Side to side imitations jumps</td>
<td>3 x 20 reps 1 min rest between series</td>
</tr>
</tbody>
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### ON-ICE TRAINING SESSION
The skater should complete the following training activities skating individually without traffic.

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<td>4+ times per week</td>
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<tr>
<td>Laps around centre circle</td>
<td>3 x 5 laps 1 min rest</td>
</tr>
<tr>
<td>Rest</td>
<td>5-10 minutes</td>
</tr>
<tr>
<td>Aerobic power intervals, 100% heart rate at end series, establish lap times based on athlete’s ability</td>
<td>2 x 10 x 15 sec 15 sec rest 5 min series rest</td>
</tr>
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