

Nordic Combined Skiing Return-to-Sport Strategy *Developed with Nordic Combined Ski Canada*

Nordic Combined involves both cross-country skiing and ski jumping. Below are the RTSp Strategies for both disciplines.

Return-to-Sport Strategy for Cross-Country Skiing

Stage	Aim	Activity	Goal of each step
1	Symptom-limiting activity	Daily activities that do not provoke symptoms. -walking, stationary bike, low intensity	Movement, blood flow Gradual re-introduction of work/school activities
2	Light aerobic activity	-longer duration stationary bike, stationary nordic track machine *no jogging, no outdoor/roller skiing -mild resistance training -core, walking lunges, static squats, and balance training	Increase heart rate Building intensity but remain sub-symptom threshold.
3	Sport-specific exercise	-increase time + intensity stationary bike -introduce roller skiing, XC skiing, jogging (=environmental component); **Time/intensity parameters < parameters accomplished on stationary bike -build time/intensity on roller skiing, XC skiing, jogging to match bike parameters -moderate resistance training	Add movement
4	Sport-specific practice	incorporate interval training in cardio routine -return to full time/intensity training session (skiing/rollerskiing/XC skiing) -return to regular resistance training drills/routine	Exercise, coordination and increased thinking
5	Full intensity practice	-progress to pre-injury race parameters (time + intensity + strategy + endurance)	Restore confidence and assess functional skills by coaching staff
6	Medical clearance	- Return to XC competition	

Adapted from: McCrory et al. (2017). Consensus statement on concussion in sport – the 5th international conference on concussion in sport held in Berlin, October 2016. *British Journal of Sports Medicine*, 51(11), 838-847.

Return-to-Sport Strategy for Ski Jump

Stage	Aim	Activity	Goal of each step
1	Symptom-limiting activity and intro movement	Daily activities that do not provoke symptoms. -walking, stationary bike, low intensity	Movement, blood flow Gradual re-introduction of work/school activities
2	Light aerobic activity	-longer duration stationary bike, stationary bike and walking/treadmill walking *no jogging, no outdoor skiing -mild resistance training -core, walking lunges, static squats, and balance training for ski jumping	Increase heart rate Building intensity but remain sub-symptom threshold.
3	Sport-specific exercise	-increase time + intensity stationary bike -introduce outdoor cardio: (i.e., Nordic or snowshoeing), jogging (=environmental component); **Time/intensity parameters < parameters accomplished on stationary bike -moderate resistance training -sport-specific position, walk throughs or position change/preparation for jumps -introduce light/moderate "dryland" plyos for jump prep and landing prep (box jumps)	Add movement
4	Sport-specific practice	incorporate interval training in cardio routine -return to full time/intensity training session -return to regular resistance training drills/routine -trial downhill runs (increasing difficulty hill size, start small), no ski jumping on hill -Box jumping and lunge jumps -add trampoline work (if available) -build to normal pace of drills in 'dryland' training	Exercise, coordination and increased thinking
5	Full intensity practice	- Medical consult before re-intro of full practice jumps (given height and landing component of ski jump) -return to normal downhill ski pace/mechanics -reintroduce basic -->intermediate jumps on downhill runs	Restore confidence and assess functional skills by coaching staff
6	Medical Clearance	Return to full jump height Downhill/jump competitions	

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