

FIS Consensus Warm-up & Cool-down - FINAL Statements

#	Voting results	Choice made	Revoting results	Choice made	Revoting results	FINAL Statement	Individual Disagreement
1	Dissent	Grammar				Preparation includes all physical and mental preparatory activities that typically occur > 20 minutes before a training session or competition, and aims on maximising performance or protecting the health of athletes.	n/a
2	Dissent	Merged with #1 & Removed				Preparation can be considered priming the body and mind to a state where performance is maximised and protection is as good as possible.	n/a
3	Dissent	Merged with #1 & Removed				Preparation encompasses the various dimensions/activities required to be ready for snow sports (physical, mental, equipment, and logistics).	n/a
4	Agree	Merged with #1 & Removed				The preparation of warm-up and cool-down routines can be considered a biopsychosocial process to which ALL can contribute. ALL need to be catered for through longer-term development.	n/a
5	Dissent	Merged with #6 & Removed				Warm-up includes doing whatever is required to get physically and mentally ready for subsequent training or competition.	n/a
6	Dissent	Grammar				Warm-up includes all physical and mental preparatory activities that typically occur < 20 minutes before a training session or competition, and aims on increasing the heart rate, blood flow and body temperature as well as mobility, proprioception, stability, and muscle activation levels.	n/a
7	Agree	Merged with #6 & Removed				Warm-up is more than the process of actively increasing body temperature.	n/a

8	Dissent	Merged with #6 & Removed				Warm-up is the process of increasing heart rate, blood flow and body temperature as well as mobility, proprioception, stability, and muscle activation levels.	n/a
9	Agree	Merged with #12 & Removed				Activation means getting ready for everything needed to perform (mental and physical).	n/a
10	Dissent	Merged with #12 & Removed				Activation means recruiting and potentiating the main muscle groups involved in snow sports.	n/a
11	Agree	Merged with #12 & Removed				Activation includes neuromuscular patterning, muscle activation, balance work, neuromuscular control work (off- and on-slope) and proprioceptive work.	n/a
12	Agree	Grammar				Activation includes increasing the mind-muscle connection by upregulating corticospinal excitability and motor unit conduction velocity and lowering activation thresholds of muscle fibres, and aims to achieve the individual optimal balance of physical, mental, and emotional stimuli.	n/a
13	Agree	Merged with #12 & Removed				Activation is achieved by balancing physical, mental, and emotional stimuli. The optimum balance will change from athlete to athlete AND across context (e.g., training vs competitions).	n/a
13a		Added	Dissent			Preparation, warm-up and activation affect each other and their relationship is of interactive nature.	n/a
14	Disagree	Reworded	Disagree	Reworded	Agree	Stretching aims on the elongation of muscle-tendon units and on improved flexibility.	n/a
14a				Added	Agree	Warm-up should comprise more than just stretching exercises.	n/a
15	Disagree	Reworded	Dissent	Grammar		Mobilisation means increasing or maintaining the ability to move a joint either actively or passively through an available range of motion in order to be able to achieve all needed positions during the sporting activity.	n/a
16	Agree	Merged with #15 & Removed				In preparing for sport, mobilisation is actively moving through the full range of motion of joints with dynamic mobility exercises (mobility flows, slow big motions, lunges with reach, etc.) to be able to get into the positions needed during the sporting activity and stretching is actively or passively inducing tension on specific muscles.	n/a

17	Dissent	Reworded	Agree			Cool-down aims on the downregulation of the sympathetic system and the upregulation of the parasympathetic system following a training session or competition.	n/a
18	Dissent	Merged with #20 & Removed				Recovery means restoring energy substrates, removing metabolites, activating the parasympathetic system, and debriefing and downregulating mental stressors.	n/a
19	Dissent	Merged with #20 & Removed				Recovery means returning the body to a situation where it can perform again the next day.	n/a
20	Agree	Reworded	Dissent	Grammar		Recovery means returning to a situation in which athletes can perform again and should consider a physical and mental dimension.	n/a
21	Agree					Readiness refers to physiological and psychological processes such as corticospinal excitability, motor unit activation, and the ability to focus on functioning at the maximum level. In such a way, movement efficiency, awareness, responsiveness, and performance motivation are maximised.	n/a
22	Agree					Readiness is (also) a subjective feeling that includes physical and mental aspects.	n/a
23	Dissent	Reworded	Agree			Preparedness refers to athletes' short, medium, and long-term development to meet their mental and physical sports demands.	n/a
24	Dissent	Grammar				The RAMP (Raise, Activate, Mobilise, Potentiate) protocol is a clear, sport-independent structure and content guideline for warm-up that may also be applicable in snow sports.	n/a
25	Agree					Regarding snow sports, the activation of the muscles around the core, hip and knee, and the activation and potentiation of jump landings, single-leg stability, and warm-up runs are key.	n/a
26	Dissent	Grammar				In the short term, warming up can improve muscle function (reaction, neuromuscular function, mobility, proprioception, and cognitive function) in the ranges required for the sport, thus enhancing performance.	n/a
27	Disagree	Reworded	Agree	Grammar		In the short term, warm-up mainly helps athletes exploit their potential to 100%, but not to generate additional performance potential.	n/a

27a		Added	Dissent	Grammar		In the long term, and especially in younger athletes, warm-up and cool-down can also help apply appropriate training stimuli and work on weaknesses.	n/a
28	Agree					Physiological AND psychological activation can enable the body to perform at its best.	n/a
29	Agree	Merged with #27a & Removed				By also putting the content of warm-up and cool-down strategies at the service of the athlete's long-term development (MACRO lens), athletes can also benefit from performance enhancement effects through improvements in several performance determining factors.	n/a
30	Agree					In the short term, warming up and cooling down can improve muscle function (reaction, neuromuscular function, balance, mobility, proprioception, and cognitive function) in the ranges required for the sport, thus preventing injuries.	n/a
31	Disagree	Reworded	Dissent	Grammar		In the short term, warm-up can improve mobility and better prepare the body for strains during falls, thus preventing injuries.	n/a
32	Dissent	Grammar				In the short term, warming up can improve the ability to absorb and react to the external forces that act on the body, thus preventing injuries.	n/a
33	Disagree	Reworded	Dissent	Grammar		In the short term, warm-up and cool-down can help athletes perform at (but not above) the limit without getting injured because all physical and mental body systems are ready to operate.	n/a
34	Dissent	Merged with #28 & Removed				Physiological AND psychological activation can enable the athlete to perform as safely as possible.	n/a
35	Disagree	Reworded	Dissent	Grammar		In the short term, warm-up can improve cognitive function and thus decrease the occurrence of high-risk situations such as falls or inappropriate landings.	n/a
36	Dissent	Grammar				By putting the content of warm-up and cool-down strategies at the service of the athlete's long-term development (MACRO lens), athletes can also benefit from health protection effects through improvements in several injury-relevant factors.	n/a
37	Dissent	Reworded	Agree			Warm-up can increase long-term preparedness and short-term readiness for sports participation.	n/a

37a		Added	Disagree	Reworded	Agree	Whether cool-down can increase long-term preparedness is a matter of debate.	n/a
38	Dissent	Reworded	Dissent			Warm-up can improve readiness and thus in the short-term can enhance performance.	n/a
39	Dissent	Reworded	Agree			Warm-up and cool-down can improve training quality and thus in the long-term enhance performance.	n/a
40	Dissent	Grammar				Warm-up and cool-down can decrease the risk of injury.	n/a
41	Agree					Warm-up and cool-down can reduce the risk of reinjuries.	n/a
42	Agree	Grammar				Warm-up and cool-down can optimise body perception and awareness.	n/a
43	Disagree	Reworded	Agree			Cool-down can improve and accelerate recovery.	n/a
44	Disagree	Reworded	Agree			Recommended warm-up strategies will impact a wide variety of interacting factors, like related to the cardiovascular system, the musculoskeletal system, the endocrine system, the nervous system, the visual system , the vestibular system and the metabolism.	n/a
45	Agree					2-3 runs on the slopes and mental exercises (e.g., breathing, visualisation, mindfulness exercises, self-talk) can help activate sport-specific skills and cognitive functions, and prepare mentally.	n/a
46	Disagree	Reworded	Agree			Recommended cool-down strategies will impact a wide variety of interacting factors related to physical, mental and emotional regeneration.	n/a
47	Disagree	Reworded	Agree			Cardiovascular readiness may be achieved by sustained or interval mid-intensity movement.	n/a
48	Dissent	Grammar				Altitude, temperature, and transition times must be considered, as they influence "cardiovascular readiness".	n/a
49	Agree					During the immediate start preparation (<20 min), choosing an intensity high enough to affect the opening of capillaries in the working muscles positively is important. At the same time, however, care must be taken to ensure that the athletes are recovered at the start time and do not feel pre-fatigued.	n/a

50	Disagree	Reworded	Dissent			Movement at large ROMs potentially emphasising the snow sports-specific isometric or eccentric contraction modes, may achieve musculoskeletal readiness.	n/a
50a		Added	Disagree			Movements with a time under tension of up to 30-40" per muscle may achieve appropriate musculoskeletal readiness.	n/a
50b		Added	Dissent	Typo		The intensities of different warm-up activities are exercise specific; however, in many cases, bodyweight might be sufficient for unilateral leg work and bilateral arm work as well as for core work.	n/a
51	Disagree	Reworded	Agree			The muscular warm-up work should be performed as sport-specific as possible.	n/a
51a		Added	Agree			Warm-up activities that address the leg, trunk or upper body in isolation, as well as complex forms of exercise that address all areas should be selected.	n/a
52	Agree					Muscle temperature and, thus, ambient body temperature should be considered for achieving musculoskeletal readiness, as increased muscle temperature is needed for power production.	n/a
53	Disagree	Reworded	Agree			Additional passive warm-up strategies may be considered to keep key muscles warm.	n/a
54	Agree					Metabolic readiness can be achieved by conducting a cardiovascular and musculoskeletal warming-up.	n/a
55	Agree					Metabolic readiness can be achieved, among other things, through intensive warm-up exercises performed approx. 15 min before the start with lactate values close to the competition load. Thus, all metabolic systems are switched on, and oxygen uptake kinetics is optimised. In addition, lactate as a "signal molecule" also positively affects mental readiness.	n/a
56	Agree	Grammar				Metabolic readiness may be supported by sufficient "fuel and hydration" intake (e.g., gels, drinks, etc.).	n/a
57	Agree					Motor readiness may be achieved by neuromuscular activation, some key proprioceptive exercises (e.g., single leg landing with perturbation, eventually closed eyes to prepare for harsh weather conditions), and sport-specific movements in progressively increasing intensity.	n/a
58	Agree					Motor readiness may be achieved by preparing as specifically as	n/a

						possible for the actual movement task. Best achieved with running-in (optimally with gates, jumps or park elements or runs on the slope).	
59	Agree					Cognitive readiness may be achieved by visualisation of the run. Optimally, the visualised time is close to the actual running time.	n/a
60	Disagree					Neuroathletics exercises as part of warm-up can potentially increase cognitive readiness.	n/a
61	Disagree	Reworded	Dissent			Reaching cognitive readiness may be supported by neurophysiological activation via sensorimotor exercises.	n/a
62	Agree					On-slope warm-up and activation increase cognitive readiness, as it helps to connect the body, the mind, the material, and the environment (snow, vision, wind). Athletes need to be able to feel the environment to adapt their riding appropriately.	n/a
63	Agree					Approaches for achieving emotional readiness include music, visualisation, self-talk, self-regulation, or correct address by the coach/supervisor at the start.	n/a
64	Agree					Physical and mental readiness need to be considered as an integrated whole for achieving sports readiness.	n/a
65	Agree					Sports readiness may be achieved by reaching readiness in its physical and mental subdimensions.	n/a
66	Agree					In snow sports, physical and mental readiness should focus on jump landing tasks, hamstring muscles, core muscles, dynamic postural control, proprioception, and adaptation to the day's conditions (e.g., current snow conditions or competition format).	n/a
67	Disagree	Reworded	Agree			Activating the neck muscles can support head stabilisation during snow sport-specific motion tasks.	n/a
68	Agree					If an unclear image of the surroundings is perceived during snow sports, this, in turn, impacts the athlete's motor stability. In this context, targeted eye or gaze training can help.	n/a
69	Disagree	Reworded	Agree			Warm-up runs in the competition environment (e.g., gates, jumps, or a park element) are an efficient way to prepare for the performance at the athlete's limit.	n/a

70	Agree					Immediate warm-up occurs at the top of the course on snow before skiing/riding the course for training/racing and may also include few runs on the course.	n/a
71	Agree					Long transition times should be avoided after warm-up.	n/a
72	Agree					In extremely cold temperatures, exposure to the cold should be kept short after warm-up.	n/a
73	Disagree	Reworded	Agree			An immediate warm-up may encompass perfusion, sport-specific mobility, neuromuscular activation, and postactivation potentiation.	n/a
74	Agree					For some athletes, the aim is downregulation, depending on optimal intensity state and individual intensity levels.	n/a
75	Dissent	Grammar				At the beginning of training sessions or before competitions, athletes should be ready to perform as safely as possible.	n/a
76	Dissent	Grammar				Immediate cool-down should encompass whenever possible passive or active reperfusion, lowering respiration, restoring energy, and mental downregulation.	n/a
77	Dissent	Grammar				Immediate cool-down can be difficult to achieve in snow sports, especially at races, as athletes will not have access to equipment or facilities before they return to their accommodation.	n/a
78	Agree					Broader preparation activities during the same day should include general mobility, general, neuromuscular activation, fuelling, and anticipation of the general daily conditions (weather, snow, etc.).	n/a
79	Disagree	Reworded	Dissent			Broader recovery activities during the same days may include passive or active reperfusion, mobility, refuelling, massage, physiotherapy, and cold-water immersion.	n/a
80	Agree					Concerning the long-term development of warm-up and cool-down, simple sport-specific basic exercises should be performed at the youth level to facilitate athlete compliance. More individualised exercises should be performed later in the career once warm-up and cool-down have become a clear and essential routine.	n/a
81	Agree					Warm-up and activation should be seen as a mini training session, an extension of training and practice, which can be used to develop strength, agility, and mobility and enhance neuromotor control (squat and single leg squat pattern), balance and coordination. Corrective and prevention exercises can be included to work on	n/a

						movement inefficiencies and to practice good motor patterns.	
82	Dissent	Grammar				In addition to the general long-term athlete development, warm-up could include athlete-specific exercises to improve neuromuscular skills.	n/a
83	Agree					Athletes need to learn to reach mental readiness as part of their long-term development.	n/a
84	Disagree					For overall load management, warm-up and cool-down strategies are of secondary importance, and general fitness and programming play a more important role.	n/a
85	Disagree					The microprogramming of warm-up and cool-down should include specific upregulating strategies to increase immediate performance and short-term preventive strategies.	n/a
86	Disagree	Reworded	Agree			One's warm-up and cool-down strategies should be continuously reflected and refined over time to optimise their personal effectiveness.	n/a
87	Agree					Macro programming of warm-up and cool-down should aim to develop individualised warm-up routines and general preventive strategies.	n/a
88	Agree					Warm-up and cool-down strategies performed off-snow (at the hotel/sports hall/lift station/team hospitality) should have their place/rank in the training routine. They may be supported by additional available equipment.	n/a
89	Agree					Active warm-up and cool-down strategies conducted on snow (at the run-in hill/slope/start area) should be simple and doable with minimal additional equipment.	n/a
90	Dissent	Grammar				At youth levels, coaches (and if available physio therapists) are mainly responsible for developing and implementing the routine of warming up and cooling down.	n/a
91	Agree					At elite levels, physical therapists and conditioning coaches should assist in individualising and ensuring compliance with warm-up and cool-down routines.	n/a

92	Dissent	Grammar				At elite levels, the staff may support the athlete by checking the timing during competitions to ensure enough time for re-warm-up.	n/a
93	Agree					At elite levels, the staff laps with the athlete in very cold conditions and carries a coat or blanket for passive warm-up right after the run.	n/a
94	Agree					Once a routine for warm-up and cool-down is established, it becomes part of the process and decreases the mental energy required to perform it, even creating space to prepare mentally.	n/a
95	Agree					Routines are key to compliance and consistency of warm-up and cool-down efforts.	n/a
96	Agree					Warm-up routines help to practice achieving readiness.	n/a
97	Dissent	Grammar				In developing individual warm-up and cool-down routines in the direction of top athletes, the individual needs of the athletes should be increasingly considered. At the youth level, however, athletes should learn what they actually need.	n/a
98	Dissent	Grammar				A physiotherapist or strength and conditioning coach should identify individual physical areas requiring attention (weakness, laxity, hypomobility, etc.) beforehand and address them in warm-up if relevant to the sport.	n/a
99	Agree					Physiotherapists, strength and conditioning coaches, sports psychologists and on-snow coaches should give inputs to compose individualised warm-up and cool-down routines during the preparatory season and adapt it if needed during the season.	n/a
100	Agree					The warm-up and cool-down routine should be implemented with an educational mindset from the coaches to transfer knowledge to younger athletes, providing them with a base from which to develop their independence.	n/a
101	Agree					Gendered environments, accessibility, and sociostructural factors (i.e., norms, practices, and relations in terms of implementation) are necessary to develop and individualise warm-up and cool-down routines.	n/a
102	Agree					The place where the warm-up and cool-down phases are carried out should be adapted to the respective conditions.	n/a

103	Agree					Factors such as bib number, race breaks, and starting time must be considered when planning and structuring the warm-up before a competition.	n/a
104	Dissent	Grammar				Well-prepared warm-up courses are crucial for the athletes' preparation and their provision should be taken seriously.	n/a
105	Dissent	Reworded	Dissent	Typo		Changing weather conditions and breaks on the course should be communicated to the athletes immediately allowing them to adjust their warm-up strategies accordingly.	n/a
106	Agree					Staff must support athletes if they have difficulty reaching readiness on a specific day.	n/a
107	Dissent	Grammar				Young athletes need to be educated by the staff about how to deal with short-term changes such as interruptions on the course.	n/a
108	Agree					Wearing warm, highly functional, wind- and water-resistant clothing effectively adapts to harsh weather or cold conditions.	n/a
109	Agree					After the warm-up, care must be taken to keep the muscles warm, depending on the outside temperature and possibilities at the start.	n/a
110	Agree					Warm clothing/over clothing is key to maintaining proper body temperature before a training session or competition begins.	n/a
111	Agree					Aspects of body temperature (e.g., low peripheral body temperatures) are critical situational challenges that may require situational adjustments of warm-up and cool-down routines.	n/a
112	Agree					Lack of time is a potential barrier. Warm-up (baseline, passive, re-warm-up) should always be included as an inherent part of training and competition in the planning.	n/a
113	Agree					Location is a potential barrier. Event organisers should consider the proximity of the warm-up location to the training/competition venue and provide warm-up location and equipment (e.g., stationary bikes, enough space).	n/a
114	Agree					Weather is a potential barrier. Preparation for different warm-up scenarios should happen in advance.	n/a
115	Agree					Accessibility to dedicated warm-up and cool-down areas (e.g., familiarisation tracks or retreats with limited public access) are crucial for athlete preparation and recovery.	n/a

116	Agree	Reworded	Agree			Competition organisers should provide a location for athletes with sufficient space to go through their warm-up routines (including warm-up runs).	n/a
117	Agree					Preparation for cold days must be planned (clothes, heat garments, beverages, shelter).	n/a
118	Agree					Layering and the use of heating devices during holds (heated socks and gloves, heated vest, heat packs for hands, etc.) should be promoted.	n/a
119	Disagree	Merged with #116 & Removed				Due to climate change and the resulting lack of snow, competition-like run-in possibilities (gates, jumps, park elements) are only possible to a limited extent. There is a need for regulatory action regarding the requirements for the organisers.	n/a
120	Dissent	Grammar				Keyword rewarm-up: Depending on the length of hold, an option and time for rewarm-up should be offered to the athletes at the start gate.	n/a
121	Agree					Re-warm-up must be done after transition times to ensure readiness during a run, and passive warm-up strategies may be considered during waiting times.	n/a
122	Agree					After a training or competition interruption of more than 15 minutes, another warm-up may be indicated.	n/a
123	Disagree	Reworded	Agree			Long lift rides indicate passive warm-up strategies, as well as a re-warm-up.	n/a
124	Agree					Staff may help athletes with passive warm-up strategies (e.g., bring coat down so the athlete can wear it on the lift).	n/a
125	Dissent	Grammar				Staff should help especially young athletes with the timing of the re-warm-up.	n/a
126	Agree					For the youth level, athletes should be guided to perform a general warm-up and cool down to develop a routine that contributes to developing movement literacy, competency, and training.	n/a
127	Agree					At the youth level, limited staff resources should be considered. Group warm-up and activation programs may facilitate coachability.	n/a
128	Agree					As athletes progress to elite levels, warm-up and cool-down routines should gradually become more individualised to address	n/a

						specific issues.	
129	Agree					At the youth level, warm-up and cool-down should be adapted to level-specific needs.	n/a
130	Dissent	Grammar				At the youth level, warm-up and cool-down should be gender equitable.	n/a
131	Agree					In snow sports, warm-up routines should address maximal concentric and eccentric muscle activation patterns in all planes of movement in snow sport-specific demand.	n/a
132	Agree					In snow sports, warm-up routines should emphasise the neuromuscular activation of proper jump landing biomechanics and single-leg stability.	n/a
133	Agree					In snow sports, warm-up routines should emphasise the neuromuscular activation of the core, hip and knee.	n/a
134	Dissent	Grammar				In snow sports, warm-up routines should emphasise combined frontal bending, later bending and axial rotation of the spine under load.	n/a
135	Agree					In snow sports, warm-up routines should emphasise the activation of cognitive and emotional functions as part of mental readiness.	n/a
136	Agree					In snow sports, warm-up and activation may help to adapt to different environmental factors (view, snowfall, temperature, snow conditions, wind).	n/a
137	Agree					In the context of warming up and cool-down, there is a need to increase awareness of gender norms, assumptions, and taken-for-granted practices that may have become institutionalised in the sports environment (gender biases, attitudes, values, norms, practices, policies, language, framing, underpinning assumptions, and research).	n/a
138	Agree					Regarding warm-up and cool-down, there may be sociocultural differences in accessibility, cost (both financial and time), beliefs, values, norms, and attitudes that need to be considered.	n/a
139	Agree					Different snow sports may have different performance cultures (creative/stylistic vs preset/timed); these differences should be addressed through a specific warm-up and cool-down.	n/a

140	Agree					Warm-up and activation need to be promoted and exemplified. The more people do it habitually and see it as an inherent part of competition and training, the more (younger) athletes may pick it up.	n/a
141	Agree					Competition organisers should provide shelter from the elements in an area close to the start, and teams should each have at least a long coat to be used for the next athlete should there be a start-stop.	n/a
142	Agree					A shelter from the wind is the easiest, most cost-effective method.	n/a
143	Agree					A heated tent or special warm-up facilities at the start will help athletes prepare better.	n/a
144	Agree					Adequate time must be allowed in training or competition schedules for warm-up and cool-down.	n/a
145	Agree					Institutionalised support is needed for young athletes to develop their warm-up routines.	n/a
146	Disagree	Reworded	Agree			Competition interruptions should allow for the appropriate time for preparation, which may vary depending on environmental and competition considerations.	n/a
147	Agree	Merged with #105 #146 & Removed				Transition times (e.g., transfer hotel to the hill, chair lift, course inspection) and changing locations during the day must be considered for warm-up and cool-down.	n/a
148	Agree					Dedicated time should always be set aside in the day plans to allow for (re)warming up and properly preparing to train/race.	n/a
149	Agree					Educating athletes, coaches, and other team staff on the role, effects and benefits of warm-up and cool-down in enhancing performance and preventing injury and the concepts to consider is a cornerstone to increasing athlete adherence to warming up.	n/a
150	Agree					Coach engagement is important. Coaches need to know why warm-up and activation are important (not only for injury prevention but also for performance).	n/a
151	Disagree	Reworded	Agree			Beliefs, values, norms and existing attitudes influence behaviours toward warm-up and cool-down strategies.	n/a

152	Agree					Role models/testimonials are important to increase athletes' compliance to warm-up and cool-down.	n/a
153	Agree					Context-driven implementation plans can help athletes better adhere to warm-up and cool-down.	n/a
154	Agree					Keeping warm-up and cool-down routines short and simple may increase athlete compliance.	n/a
155	Agree					Not realising the benefits and importance of warm-up and activation can be a barrier. (Youth) athletes should be supported in experiencing the benefits of it. Warm-up and activation should be made a habit from early on.	n/a
156	Disagree	Merged with #158a & Removed				Subjective, self-reported measures better reflect athletes' actual activation levels than objective measures.	n/a
157	Disagree	Merged with #158a & Removed				Objective measurement of activation level could help determine the best parameters for optimal performance preparation (i.e., warm-up).	n/a
158	Disagree	Merged with #158a & Removed				A reasonable option to test the athletes' activation levels are isokinetic strength and countermovement jump tests.	n/a
158a		Added	Agree			Quantifying and documenting athletes' activation levels before the start, whether by subjective or objective measures, may provide valuable insights into the individually best way to warm up.	n/a
159	Agree					Systematic athlete monitoring and data-driven decision-making have great potential to assist in developing meaningful warm-up and cool-down strategies in snow sport athletes.	n/a
160	Agree					In practice, systematic athlete monitoring and data-driven decision-making, including warm-up and cool-down strategies for snow athletes, are severely limited by a lack of resources (financial, human, and infrastructure).	n/a