FIS NUTRITIONAL GUIDELINES

ORGANIZERS SNOWBOARD, FREESTYLE & SKI CROSS GUIDE

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Specific guidelines for discipline - Snowboard, freestyle, ski cross

In some disciplines competition and training days differ substantially. While training may include many hours and carbohydrate needs are increased significantly, race days may only last a few minutes for some athletes while others spend most of the day out on the snow. Thus, meals offered around competition should be well balanced and provide high quality carbohydrates, lean protein and healthy fats to support well-being and daily nutrient needs, but also allow for adjustments when carbohydrate needs are increased. Therefore, a high carbohydrate option for increased needs and a high fibre option for regular carbohydrate needs are recommended (esp. for silver and gold level).
Main meals should provide approximately 90-120 g of carbohydrates and approximately 20 g of protein per serving (see general guidelines for examples of carbohydrate and protein sources).
Carbohydrate sources such as pasta, rice, gnocchi allow for carbohydrate loading prior to competition, esp. during multiple-heat events.
Snacks and desserts should be nutritious options with high micronutrient content to allow athletes to meet micronutrient needs.
Pre-race meals (second breakfast or between heats) should be easy digestible, high carbohydrate, low fat and low fibre meals.
Because daily schedules of athletes differ, and some athletes might have a light training schedule or rest day, a high fibre carbohydrate option as second carbohydrate choice is recommended (esp. for silver and gold level).
Keep in mind that the tension and nervousness on **competition day** can also affect digestion. Therefore, the dishes offered around and during the competition should be **easily digestible** and have only a moderate fat content.

Timing of meals

Due to different competition schedules and start times, teams will need different meal times. Meal times must respect competition schedules and allow teams to eat at times that allow for best preparation and recovery.
Breakfast should be available approximately 3-4 hrs before competition to allow enough time for athletes to digest the meal. Similarly, lunch or second breakfast should be available approximately 3 hr before competition to allow early starters enough time to digest their pre-competition meal.
The last big meal before a competition usually provides a serving of carbohydrates, lean protein and a small serving of vegetables, and is very easily digestible. The closer a meal is consumed to competition, the more focus is on carbohydrates, i.e. a meal with rice and tofu with broccoli at lunch 3 hrs before competition vs just a serving of rice 60 min before competition.
The intake after competition is crucial for recovery after long competition days. For successful recovery, a first energy intake soon after competition is essential (ideally within 30 minutes after competition). Carbohydrate-protein options (80-110 g of carbohydrates per serving; 10-20 g of protein) must be provided after competition to allow athletes to successfully support their recovery after competition.
During competitions with multiple heats, organisers should provide carbohydrate and protein options, so that athletes can fuel their body and avoid decline in energy and performance. During the event, the focus is mostly on carbohydrates, after the race, a combination of carbohydrate and protein is necessary.

Fuelling during Multiple Heat Events

Provide easy digestible, high-carbohydrate, low-fat options for athletes. During competition and between competition rounds, the body needs carbohydrates to support brain and muscle work.

In order to allow for a carbohydrate intake during competition days, food provided around heats allows athletes to maintain a high performance level.
One easy digestible carbohydrate option (+ 1 gluten-free option if main option is not gluten-free) and a low-fat option for protein must be available to fuel the body during long competition rounds. Ideally, there is also a hot option provided. Carbohydrate and protein options can overlap with lunch/dinner options for this day (see examples of the menu ideas below).
Other foods can also serve as easy snack options for athletes between main meals on competition day (see table below).

Component	
Carbohydrate	couscous, quinoa, rice, potatoes, pasta, gnocchi, grits
Protein	choose 1 + vegetarian option: poultry, fish, tofu, cottage cheese/quark
Hot option soup	noodle soup, broccoli soup, courgette soup, carrot soup, ginger soup
Beverages	Water, tea, coffee
Additional options:	
Fruit bread, fruit bars, oats	fresh fruit including bananas, dried fruit (e.g. apricots, dates) *nutritious carbohydrates sources
nut butter, hummus (along with bread or rice cakes)	Liquid meal replacement (50-55 % carbohydrate, 15-20 % protein 25-35 % fat content; silver/gold level)
bread rolls (white bread), oats, grits, sweetened milk rice, low fat fruit cake	

Fuelling performance. High-carb options during the day and competition, nutritious options at dinner.
Regular carbohydrate, low fat meals

Whole grain pasta with tomato and basil + meat/fish/plant-protein(*)	Bean-veggie-patties with light sauce*
Whole wheat pasta with tofu and broccoli/courgette*	Vegetarian oat/bean burger (patties) with light sauce*
Whole wheat pasta with seafood and grilled vegetables	Low-fat meat lasagna
Beef with whole grain pasta and grilled vegetables	Low-fat bean/lentil/ricotta lasagna*
White fish with rosemary potatoes and red beets*	Turkey with potato wedges and grilled vegetables
Chicken breast with potatoes and mixed vegetables	White fish with quinoa and spinach*
Beef with grilled vegetables and quinoa	Courgette-polenta stew + meat/fish/plant-protein(*)
Chinese chicken with rice, vegetables	Salmon steak with grilled vegetables + potatoes
Lentil/pea/chickpea/bean vegetable stew with rice*	Pea frittata with grilled vegetables + potatoes*
Vegetable-quinoa + meat/fish/plant-protein(*)	Stir-fry chicken/tofu(*) with vegetables, quinoa

Chicken paella	Couscous with eggplant, chickpeas(*)
Shrimp paella(*)	Beef with couscous and vegetables
Turkey with pea risotto	Bulgur with feta/tofu and tomatoes(*)
Roasted tofu with vegetable stew and rice*	Mushroom tomato polenta + meat/fish/plant-protein(*)

*vegetarian/vegan option

High carbohydrate pre-race meals (during competition between heats)

Plain rice with tofu(*)/turkey	Semolina with apple puree, cinnamon*
Plain pasta with tofu(*)/turkey/tuna	Milk rice
Plain pasta with passata/tomatoes and low fat ricotta (served separately)*	Gnocchi with tofu(*)/turkey/low fat ricotta(*) (served separately)

*vegetarian/vegan option

Desserts/snacks

Fresh fruit with yogurt	Pancakes with syrup, yogurt (served apart)
Fruit cake/crostata	Vanilla pudding
Berry muffin	Apple strudel
Fruit bread	Fruit sorbet
Greek yogurt with granola	Ginger bread bars and fruit yogurt

Menu example

Day 1

Breakfast

In hotel - breakfast recommendations (seen general guidelines)

During Heats

Rice, pasta
Cottage cheese, hummus, yogurt (*for recovery)
Noodle soup
Bananas, dried dates
Tea, coffee, water; sports drink (silver/gold level)
Meal replacement (silver/gold level)

Lunch

Minestrone soup and extra bread, puffed rice cakes

	Carbohydrate	Protein	Vegetables
1	Whole grain pasta	Chicken	Carrots, broccoli; salad buffet
	Quinoa	Tofu	

Afternoon snacks

Pancakes with yogurt and syrup, fresh fruit, yogurt, yogurt alternative; take-away option (e.g. bread and spreads (silver/gold level))
Tea, coffee, water, fruit juice

Dinner

Carrot soup and extra bread, puffed rice cakes

	Carbohydrate	Protein	Vegetables
2	Mashed potatoes	Beef	Spinach, roasted beets, chickpeas; salad buffet
	Polenta	Feta	

Dessert: fruit salad, fresh fruit, yogurt, yogurt alternative

Day 2 - Mid-day Competition Start with second breakfast/pre-competition lunch

Breakfast

In hotel - breakfast recommendations (seen general guidelines)
Pre-competition meal should be easy digestible, low fat, low fibre with simple carbohydrates:

Lunch/Second breakfast

	Carbohydrate	Protein	Vegetables
1	Pasta	Turkey ham and mozzarella	Zucchini, pumpkin
	Rice	Fried egg	

During Heats

Rice, pasta
Chicken, tofu, yogurt (for recovery meal)
Broccoli soup
Bananas, dried dates
Tea, coffee, water; sports drink (silver/gold level)
Meal replacement (silver/gold level)

Afternoon snacks

Fruit cake, fresh fruit, yogurt, yogurt alternative; take-away option (e.g. bread and spreads (silver/gold level))
Tea, coffee, water, fruit juice

Dinner

Zucchini soup and extra bread, puffed rice cakes

	Carbohydrate	Protein	Vegetables
2	Mashed sweet potatoes	Chicken	Carrots, cauliflower, green beans; salad buffet
	Quinoa	Roasted tofu	

Dessert: pancakes with yogurt and syrup, fresh fruit, yogurt, yogurt alternative

Day 3 - Mid-day Competition Start with second breakfast/pre-competition lunch

Breakfast

In hotel - breakfast recommendations (seen general guidelines)

Lunch

Noodle soup and extra bread, puffed rice cakes

	Carbohydrate	Protein	Vegetables
1	Pasta	Turkey ham and mozzarella	Zucchini, pumpkin
	Rice	Egg frittata	

During Heats

Rice, pasta
Chicken, tofu, yogurt (for recovery meal)
Carrot soup
Bananas, dried dates
Tea, coffee, water; sports drink (silver/gold level)
Meal replacement (silver/gold level)

Afternoon snacks

Selection of breads and spreads, sweet semolina with berry sauce, fresh fruit, yogurt, yogurt alternative; take-away option (e.g. yogurt drink or meal replacement (silver/gold level))
Tea, coffee, water, fruit juice

Dinner

Carrot soup and extra bread, puffed rice cakes

	Carbohydrate	Protein	Vegetables
2	Rosemary potatoes	Chicken	Carrots, broccoli; salad buffet
	Couscous	Bean sauce	

Dessert: fruit cake, fresh fruit, yogurt, yogurt alternative

Day 4 - Mid-day Competition Start with second breakfast/pre-competition lunch

Breakfast

In hotel - breakfast recommendations (seen general guidelines)

Lunch

Semolina dumpling soup and extra bread, puffed rice cakes

	Carbohydrate	Protein	Vegetables
1	Gnocchi	Chicken filet, roasted tofu	Zucchini, pumpkin
	Milk rice (optional with soy milk)	(Milk rice)	

During Heats

Rice, pasta
Cottage cheese, hummus, yogurt (*for recovery)
Courgette soup
Bananas, dried dates
Tea, coffee, water; sports drink (silver/gold level)
Meal replacement (silver/gold level)

Afternoon snacks

Selection of breads and spreads, crostata, fresh fruit, yogurt, yogurt alternative; take-away option (e.g. yogurt drink or meal replacement (silver/gold level))
Tea, coffee, water, fruit juice

Dinner

Pea soup and extra bread, puffed rice cakes

	Carbohydrate	Protein	Vegetables
2	Rosemary potatoes	Chicken	Beets, broccoli; salad buffet
	Lentil curry	(Lentil curry)	

Dessert: apple strudel, fresh fruit, yogurt, yogurt alternative

Menu components overview

Components	Minimum (Bronze) standard	Silver level
• Breads • Fruit selection • Spreads • Milk & low fat yogurt & non-dairy option • Tea, coffee • Water • Fruit juice	• Soup (esp. dinner) • Salads or cooked vegetables (2 types of vegetables) • Hot carbohydrate option (+ gluten free option) • Hot protein option (+ vegetarian/vegan option)	• Soup (esp. dinner) • Salads including legumes • Cooked vegetables (2-3 types of vegetables) • Hot carbohydrate option (+ gluten free option) + hot whole grain carbohydrate option • Hot meat option (+ vegetarian/vegan option) + hot fish option • Dessert
		Gold level
		• Soup • Salads including legumes • Cooked vegetables (3-4 types of vegetables) • Hot simple carbohydrate option (+ gluten free option) + hot whole grain carbohydrate option • Hot meat option (+ vegetarian/vegan option) + hot fish option • Two desserts (cake/muffin/sorbet or similar) • Smoothie • Cheeses • Selection of various spreads Buffet includes: • High iron source • High magnesium source • High calcium source • Several snack options