USOC SPORTS NUTRITION

FUELING BEFORE COMPETITION

THE UNITED STATES OLYMPIC COMMITTEE

Fueling Before Competition

Athletes need to consume adequate carbohydrates to optimize carbohydrate stores (glycogen) in the liver and muscle. This helps maintain blood sugar levels and fuels muscle contraction. Insufficient carbohydrate intake decreases the ability to sustain heavy loads, mood state, mental acuity, and power output during intermittent high intensity performance, and has the potential to negatively influence immune function.

During sleep, carbohydrate stores in the liver are being used to maintain blood sugar levels, leaving glycogen stores low upon waking. Fueling and hydrating before competition are essential to replenishing energy stores and optimizing hydration status.

Not accustomed to eating early?

- Athletes can train the stomach to tolerate food before competition
- Practice introducing foods during training in the weeks prior to competition to see how they will be tolerated
- Start with easily digestible foods like toast or a banana and gradually add additional foods over time
- If solid foods are not tolerated, try a liquid snack or meal, such as a sports drink or smoothie

Develop a Fueling Plan

A fueling plan needs to be individualized and depends on...

- Duration
- Intensity
- Type of competition
- Ability to consume additional fuel during the competition
- Previous day's intake

TIP: Practice your fueling plan during training before utilizing it during competition

A good RULE OF THUMB is to avoid trying anything new on the day of competition!

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Fueling Strategies for Competition

Feel comfortable • Top off fluids – start hydrated • Top off carbohydrates for brain and muscle

Days Leading up to Competition

- If taper in training, consider small reduction in energy intake
- No need to carb load unless competition duration is > 2-3 hr; make sure carbohydrate intake is adequate at each meal and snack
- Consider reducing fiber intake if bowel function becomes an issue during competition
- Maintain adequate hydration levels
- No "special" meal required, stick to familiar foods and fluids
- Be mindful of food safety and only eat foods from trusted sources and restaurants
- Sleeping at altitude or in a hot environment may increase the risk for dehydration; increase fluid intake upon waking to top off fluid stores

Caffeine

If using any performance enhancing aids (e.g. caffeine), make sure you are aware of the effects and potential side effects. Every athlete responds differently to varying amounts of caffeine, so dosing for performance should be done gradually and tested in training before use during competitions.

Refer to our Caffeine Fact Sheet for more information on timing and dosing.

Athlete Recommendations:

Day of Competition

- Choose familiar foods trialed during training
- Eat a balanced meal **3-4 hours** before or a smaller meal/larger snack **2 hours** before
  - Adding protein to your meal can help delay the onset of hunger during competition
  - If you eat a meal 3-4 hours before competition, then top up on familiar and easily digestible carbohydrates within **15-60 minutes** of competing, such as a sports drink, carbohydrate chews/gel, fruit, or a cereal bar
- Foods higher in fat and fiber slow digestion and may cause stomach distress if consumed too close to competition
  - Spicy or acidic foods eaten close to competition may also lead to indigestion and heartburn
- Ensure fueling plan is adaptable to different competition times and food availability / travel
- Athletes who are particularly nervous before competition may prefer to consume a meal or snack in liquid form rather than solid
- Maintain adequate hydration in the 24 hours prior to competition and sip on fluids leading up to competition

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Fueling Plan Examples

Olympic Triathlon Early Morning Race

	Saturday
7:00 pm Dinner	4 oz salmon
	1-1.5 cups couscous
	1 cup grilled veggies
	8 oz water
	Sunday
4:00 am Awake	
4:30 am	1 cup oatmeal
Breakfast	1 Tbsp peanut butter
	1 banana
	6 oz greek yogurt
	8-16 oz water
6:30 am	carb gel/chews, water
	7:00 am Race Start
7:30 am	carb gel/chews, water
8:30 am	sports drink, water
9:00 am	sports drink, water
9:30 am	water & recovery
Finished!	

Volleyball Afternoon Match

7:00 am Awake	
7:30 am	3 scrambled eggs
Breakfast	2 pieces whole wheat toast
	2 Tbsp peanut butter, honey
	1 cup strawberries
	8-16 oz water
11:00 am	turkey sandwich
Lunch	12 baby carrots, hummus
	1 cup pretzels
	6 oz greek yogurt
	8 oz milk, 8-16 oz water
1:30 pm	1 banana or granola bar
Snack	8-16 oz water
	2:00 pm Match Start
2:00 – 4:00 pm	16-32 oz sports drink, water
Fueling	OR
	16-32 oz water, gel/chews
4:00 pm	water & recovery
Finished!	

Special Considerations by Sport

Continuous Endurance – cycling, triathlon, distance running, distance swimming, cross-country skiing, biathlon

- If eating breakfast 3-4 hours before morning competition is not possible, eat a carbohydrate-rich dinner the night before and a light breakfast
- The aggressiveness of fueling before competition depends on the ability to ingest additional carbohydrate during the event
- Fueling during the event should be addressed

Intermittent High Intensity, Team Sports – volleyball, basketball, hockey, water polo, soccer

- If the competition is in the afternoon or evening, eat balanced meals leading up to competition
    - Top up with water and a carbohydrate-rich snack before the game

Long Duration, Low Intensity, Technical – archery, shooting, curling

- Eat a balanced meal 3-4 hours before competition
- Choose small carbohydrate-based snacks and water during competition

Multiple Short Duration, High Intensity Events – track & field, swimming & diving, alpine skiing, snowboarding, rugby 7s

- Refueling between events is key to perform repeatedly throughout the same day

Combat Sports – boxing, judo, taekwondo, wrestling

- After weigh ins replenish fluid and glycogen stores before competing
- Consume sport drinks and small, high carb meals between events
- Add salt to foods in the evening to ensure adequate replenishment of fluid and electrolytes

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Multi-Event Fueling Plan Examples

Swim Races – AM Preliminaries & PM Finals

Saturday evening

7:00 pm Dinner	4 oz chicken 1-1.5 cups whole grain pasta 1 cup roasted veggies 8 oz water

Sunday

4:00 am Awake	
4:30 am Breakfast	1 bagel 1 Tbsp peanut butter 1 orange 6 oz cottage cheese 8-16 oz water
6:30 am	carb gel/chews, water
7:00 am 200 m Prelims Race Start	
7:30 am 2nd Breakfast (Recovery)	fruit smoothie (water, greek yogurt, spinach, frozen pineapple & mango)
9:30 am Snack	bar or banana
11:00-11:30 am Lunch	1-2 cups brown rice 4-6 oz chicken 1 cup veggies 16 oz water
12:00 – 2:00 pm	water, sports drink
3:00 pm 200 m Finals Race Start	
3:30 pm Finished!	water & recovery

Fueling Between Events

- If < 1hr, stick to fluids (e.g. water and sports drink)
- If 1-2 hr, small snack (e.g. ½-1 bar or banana) plus fluids
- If > 2 hr, more substantial snack with protein (e.g. sandwich, chocolate milk, fruit, yogurt)
- If 24 hr or more, good recovery snack then normal eating throughout rest of day

Freestyle Wrestler – 74 kg Athlete

Friday

Note: Avoid high fiber foods and if you can tolerate more food than below, go for it!

2:00 pm Weigh In

Step Off Scale	8 oz Pedialyte
Next 30 minutes	5-8 salty crackers, 12-24 oz sports drink (add in pinch of salt) - sip
1-2 hours post weigh in	1-2 bananas or plain bagel with jam or honey 12-24 oz sports drink - sip
Dinner	1.5-2 cups whole grain pasta 3 oz lean ground turkey, marinara 12-24 oz sports drink - sip
After Dinner	8 oz chocolate milk or granola bar or fruit 12-24 oz sports drink - sip

**Be sure to urinate before going to bed!*

Saturday Matches

Wake up	12-24 oz sports drink and water **Check urine color*
Breakfast	2 packets oatmeal 1 Tbsp honey 2-3 hardboiled eggs 8 oz Pedialyte
Between Matches	Follow 'Fueling Between Events' Urine color should be light
9:00 am 1st Match	
9: 15 am	12-16 oz sports drink
10:00 am 2nd Match	
Large snack	PB&J sandwich banana low fat fruit greek yogurt
1:15 pm Finished!	water & recovery

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