

# CARBOHYDRATE

## Why Carbohydrates are Important for Female Distance Runners

Carbohydrates are the primary fuel source for exercise, especially for endurance (aerobic) exercise. Studies have found that during endurance events such as the Ironman triathlon and marathon, **faster finish times were correlated with high carbohydrate intake rates**. Despite this, many athletes are not consuming adequate carbohydrates to satisfy the demands of their exercise regimens.



## Minimum Daily Carbohydrate Requirements

Recommended daily carbohydrate intake ranges from 3 to 12 g/kg body weight. Carbohydrate intake should be spread over the day to promote fuel availability for key training sessions – before, during, or after exercise.

Type of Activity	Recommended Carb Intake, g/kg
Very light training (low-intensity or skill-based exercise)	3-5
Moderate-intensity training, 60 min./day	5-7
Moderate to high-intensity endurance exercise, 1-3 hour/day	6-10
Moderate to high-intensity exercise, 4-5 hour/day	8-12

## Pre-Exercise Carbohydrate Recommendations

If unable to eat breakfast prior to early morning exercise, consuming ~30 grams of easily digested carbohydrate (e.g., banana, carbohydrate gel, or sport drink) 5 minutes before exercise may improve performance.

Timing Before Exercise (Hours)	Carbohydrate, g/kg body weight
1	1
2	2
3	3
4	4

## During Exercise Carbohydrate Recommendations

Consuming carbohydrate during exercise lasting **at least 1 hour** can delay the onset of fatigue and improve endurance capacity.

Type of Activity	Recommended Carb Intake
Exercise lasting less than 45 minutes	Not necessary or practical
High-intensity exercise lasting 45-75 minutes	Small amounts of sports drinks or foods
Endurance and intermittent, high-intensity exercise lasting 1-2.5 hours	30-60g/hour
Endurance and ultra-endurance exercise lasting 2.5-3 hours and longer	≥ 80-90g/hour

## Post-Exercise/Recovery Carbohydrate Recommendations

During long periods of recovery (24 hrs), it does not matter how carb intake is spaced throughout the day as long as the athlete consumes adequate carb and energy. When exercise sessions are less than 8 hours apart, start consuming carb immediately after exercise to maximize recovery time. **Consume 1 to 1.2 g/kg/hr for the first 4 hours after exercise.**

## References

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