

Table 4.3 General Carbohydrate Recommendations Based on Exercise Intensity and Duration

| Exercise Intensity and Duration | Examples of Sports | Daily Carbohydrate Recommendation (Energy intake must be adequate) |
|---|---|--|
| Very high intensity, very short duration (less than 1 minute) | Field events such as shot put, discus, or high jump Track sprints (50–200 m) Swimming sprints (50 m) Sprint cycling (200 m) Weightlifting Power lifting Bobsled (running start) | 5–7 g/kg |
| High intensity, short duration (1 to 30 minutes continuous) | Track (200 to 1,500 m) Swimming (100 to 1,500 m) Cycling (short distance) Rowing (crew) Canoeing/Kayaking (racing) Skiing (downhill racing) Figure skating Mountain biking | 5–7 g/kg |
| High intensity, short duration (1 to 30 minutes with some rest periods) | Gymnastics Wrestling Boxing Fencing Judo Tae kwon do | 5–8 g/kg |
| Moderate intensity, moderate duration (30 to 60 minutes) | 10 km running (elite runners finish in < 30 minutes) | 6–8 g/kg |
| Intermittent high intensity, moderate to long duration (more than 1 hour) | Soccer (football) Basketball Ice hockey Field hockey Lacrosse Tennis Water polo | 6–8 g/kg; 8 to 10 g/kg during heavy training and competition |
| Moderate intensity, long duration (1 to 4 hours) | Distance running (marathon) Distance swimming Distance cycling Nordic (cross country) skiing | 8–10 g/kg during periods of heavy training and competition |
| Moderate intensity, ultralong duration (more than 4 hours) | Ultradistance running Ultradistance swimming Ultradistance cycling Triathlon Adventure sports | 8–19 g/kg depending on the stage of training |
| Low intensity, long duration (more than 1 hour) | Golf Baseball Softball | 5–7 g/kg |
| Other | Bodybuilding American football | 5–10 g/kg depending on the stage of training 5–8 g/kg; Varies according to position |

Legend: m = meter; g/kg = gram per kilogram body weight; km = kilometer

Dunford, M. Ed., (2006). *Sports Nutrition: A Practical Manual for Professionals*. Chicago: American Dietetic Association.

the night to wake and eat). In addition to carbohydrate-containing meals, ultraendurance athletes may include sports bars, beverages, and gels before, during, and after training to try and reach their daily carbohydrate goals.

Expressing Carbohydrate Recommendations. All of the carbohydrate recommendations for athletes mentioned so far in this text have been expressed on a gram per kilogram body weight basis (g/kg). In other words, recommendations are