## BY THE NUMBERS | EXPLOSIVE POWER SPORTS SPORTS NUTRITION FOR THE COMPETITIVE SEASON

**Current Recommendations from the Scientific Literature** This document is designed as a quick reference of published recommendations for adults. These numbers should be used as a guide, taking into account individual factors and goals of the athlete. Explosive power sports require an all-out effort. Jumping, sprinting, throwing, track, cycling, wrestling, gymnastics, speed skating, canoeing, kayaking and sprint swimming are some events that require quick, explosive power and strength.



Daily Carbohydrate

Daily Protein

6-12 g/kg/d [5]

1.5-1.7<sub>g/kg/d [5]</sub>



Pre-Carbohudrate

1-4 h pre.

 $1-4_{g/kg^{*}}$  [1]

Pre-Fluid

5-7 mL/kg 4 h pre; if urine is dark or not produced another

3-5 mL/kg 2 h pre (3,4)





Exact timing and amount should meet individual athlete preferences and time constraints.

**KPLOSIVE POWER** 



## **During Carbohydrate**

During training or practice ≥ 1 h:

30-60 g/h (5)

## **During Fluid**

Based on individual sweat rate.
Aim to consume an amount of fluid to minimize body weight

<~2%<sup>3</sup>



Post-Carbohydrate

Post-Protein

Post-Fluid

1.2-1.5 g/kg (5)

0.25 g/kg, ~20–25 g works for most athletes (2.5)

20–24 oz/lb body weight lost of fluid with sodium [4]

For more in-depth information, refer to the Foods and Fluids for Explosive Power Sports at www.GSSIweb.org/for-practitioners.

## References:

- (1) Burke, L., Hawley, J., Wong, S. & Jeukendrup A. (2011). Carbohydrates for training and competition. Journal of Sports Sciences, 29 Suppl 1, S17-27.
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- (9) Sawka, M. N., Burke, L. M., Eichner, E. R., Maughan, R. J., Montain, S. J. & Stachenfeld, N. S. (2007). American College of Sports Medicine position stand: Exercise and fluid replacement. Medicine and Science in Sports and Exercise, 39, 377–390.
- (4) Shirreffs, S. & Sawka M. (2011). Fluid and electrolyte needs for training, competition, and recovery. Journal of Sports Sciences, 29 Suppl 1, S39-46.
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