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Optimal Supplement Strategy for High-Intensity Krav Maga Training

Main Takeaway: To maximize energy, endurance, and recovery during intense Krav Maga sessions involving 100–500 strikes, sparring, and tactical drills, employ a **timed supplementation protocol**:

- **Pre-Workout (20–60 min before):** Caffeine (3–6 mg/kg), Beta-Alanine (3–6 g), L-Citrulline (6–8 g), Creatine Monohydrate (3–5 g)
- **During Workout:** BCAAs/EAA (5–10 g), Carbohydrate (30–60 g/h), Electrolytes (as per sweat losses)
- **Post-Workout (Within 60 min):** Whey Protein (20–40 g), Creatine (3–5 g), Carbohydrate (1.0–1.2 g/kg), Glutamine (5–10 g)

Pre-Workout Supplements

Taking these **20–60 minutes** before class ensures peak bioavailability when engaging in high-volume striking and sparring.

Supplement	Dose & Timing	Significance
Caffeine	3–6 mg/kg bodyweight ~60 min pre-workout [1]	Enhances alertness, reaction time, anaerobic power
Beta-Alanine	3–6 g daily (can split); 2–3 g acute ~30 min pre [2] [3]	Buffers intramuscular acid, delays fatigue during HIIT bouts
L-Citrulline	6–8 g ~45 min pre	Boosts nitric oxide, increases blood flow and muscle pump
Creatine Monohydrate	3–5 g daily (or 20–25 g loading phase for 5–7 days) [1] [4]	Increases phosphocreatine stores for repeated powerful strikes

During Workout Supplements

Continuous support during training helps sustain performance through long sparring rounds and drill circuits.

Supplement	Dose & Timing	Significance
BCAAs/EAA	5–10 g spread over session [5] [6]	Reduces muscle breakdown, supports ongoing protein synthesis
Carbohydrate (CHO)	30–60 g per hour of maltodextrin/glucose [1]	Maintains blood glucose, delays glycogen depletion during prolonged drills

Supplement	Dose & Timing	Significance
Electrolytes	Sodium 300–600 mg/L; Potassium 200–400 mg/L [7]	Replenishes sweat losses, prevents cramps and maintains neuromuscular function

Post-Workout Supplements

Consume these **within 60 minutes** of class end to optimize recovery and prepare for the next session.

Supplement	Dose & Timing	Significance
Whey Protein	20–40 g (0.25–0.30 g/kg) [1] [8]	Provides essential amino acids for muscle repair and growth
Creatine Monohydrate	3–5 g (maintenance dose) [1]	Restores phosphocreatine, supports subsequent high-intensity work
Carbohydrate	1.0–1.2 g/kg bodyweight [1]	Rapidly replenishes muscle glycogen
Glutamine	5–10 g	Supports immune function, gut integrity, and muscle recovery

Significance in Relation to Krav Maga Training

- **High Strike Volume (100–500 punches):** Phosphocreatine and caffeine amplify peak power, while beta-alanine delays acidosis under repeated anaerobic efforts.
- **Sparring & Tactical Drills:** Carbohydrate and BCAAs during mitigate central fatigue, maintaining cognitive and physical performance.
- **Repeated Practice:** Post-workout protein, creatine, and carbs accelerate muscle repair and glycogen restoration, enabling consistent training quality across sessions.

Note: Always individualize dosing based on body weight, tolerance, and professional guidance. Consult a sports nutritionist or healthcare provider before starting any new supplement regimen.

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1. https://pmc.ncbi.nlm.nih.gov/articles/PMC5545206/
2. https://healthfarmnutrition.com/blogs/articles/guide-to-pre-workout-what-is-it-when-to-take-it
3. https://www.performancelab.com/blogs/fitness/beta-alanine-dosage-for-bodybuilding
4. https://www.healthline.com/nutrition/creatine-loading-phase
5. https://www.maxinutrition.com/blogs/nutrition/bcaa-dosage-how-much-bcaa-should-i-take
6. https://www.otsuka.co.jp/en/health-and-illness/bcaa/timing/
7. https://www.verywellhealth.com/nutrition-and-supplements-for-muscle-recovery-8374467
8. https://www.amway.com/en_US/discover/sports-nutrition/post-workout-recovery-guide