# A players guide to protein, collagen, BCAA's & creatine

Created by
**Empyrean Wellness**
Performance Optimization Consultants

*A guide for youth ice hockey players (ages 16–21)*

## 01 WHEY, CASEIN & VEGAN PROTEIN POWDERS

| WHEY | CASEIN | VEGAN |
|---|---|---|
| Made from cow's milk. Fast-digesting, making it ideal post-practice or post-game when muscles need quick amino acid delivery to kickstart recovery. | Made from cow's milk. Digests slowly, releasing amino acids over several hours — great before bed to support overnight muscle repair. | Pea, rice and hemp blends suit plant-based athletes and those with dairy sensitivities; quality blends now match whey's amino acid profile. |

All three support muscle repair and growth when paired with training and adequate calories — no one is definitively better for young athletes. Choice often comes down to timing, digestion tolerance, and dietary preference.

## 02 COLLAGEN

- Collagen is the most abundant protein in the body, forming the building blocks of tendons, ligaments, cartilage, and connective tissue.
- Unlike whey or casein, it's low in certain amino acids needed for muscle building, so it's not a substitute for those proteins.
- Its value for young hockey players lies in supporting joint health, connective tissue resilience, and recovery from the repetitive skating strides, collisions, and quick pivots that stress joints.
- Some evidence suggests pairing collagen with vitamin C, taken about 30–60 minutes before activity, may help support tendon and ligament durability over a long season.

## 03 BRANCH CHAIN AMINO ACIDS (BCAAS)

- BCAAs — leucine, isoleucine, and valine — are three essential amino acids the body can't produce on its own and must get from food or supplements.
- Leucine in particular helps trigger muscle protein synthesis, the process that repairs and builds muscle after hard training.
- For young hockey players, BCAAs may help reduce muscle breakdown during long tournament weekends, ease training-related soreness, and support recovery between back-to-back games.
- **Note:** Players eating enough total protein from whole foods and shakes are often already getting sufficient BCAAs, so they're a supplement to consider rather than a required addition.

# 04 CREATINE

- Creatine is one of the most researched sports supplements and occurs naturally in muscle, helping regenerate energy for short, explosive efforts like sprints, shots, and battles along the boards.
- Supplementing with creatine monohydrate can increase strength, power output, and the ability to repeat high-intensity bursts — qualities central to hockey's stop-and-go pace.
- It also may support faster recovery between shifts and reduce injury risk when combined with strength training.
- Effects vary by individual, and players should start with standard dosing (avoiding unnecessary "loading" phases) and choose products that are third-party tested for purity.

**A Note on Supplements & Minors:** Since several players in this age range are still minors, remind them to loop in a parent, guardian, or the team's medical staff before starting any new supplement — especially around dosing and product quality/testing. Look for products certified NSF Certified for Sport or Informed Sport.

## REFERENCES


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