Omega-3 Fats for Performance

Potential Health & Performance Benefits

-Lower systemic inflammation and oxidative stress
-Promote brain and eye health and development
-Lessen delayed-onset muscle soreness
-Support heart, immune and mental health

·A·S·P·D·A·
FUELING VICTORY®

ALA
Alpha-Linolenic Acid

- Found mainly in plants, such as flax, chia, nuts, seeds and vegetable oils.
- The body converts ALA into EPA and DHA, but this process is highly inefficient.

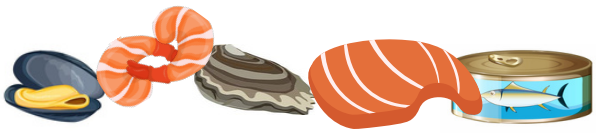


EPA
Eicosapentaenoic Acid

- Mainly supplied by oily fish and shellfish
- Supports general health and inflammation control
- Can be converted to DHA

DHA
Docosahexaenoic Acid

- Mainly supplied by oily fish and shellfish
- Essential to the health and development of the brain and eyes
- Helps regulate inflammation



Give EPA and DHA priority when planning omega-3 nutrition support, especially for overall brain health and neuroprotection.

Food Sources of Omega-3

Cooked Seafood (3 oz portion)	Milligrams in each serving DHA	EPA
Atlantic Salmon, farm-raised	1240	590
Atlantic Salmon, wild	1220	350
Atlantic Herring	940	770
Rainbow Trout, wild	440	400
Canned Tuna	170	20
Oysters	230	30
Shrimp	120	120
Scallops	90	60

*Source: USDA FoodData Central

Fueling Guidance

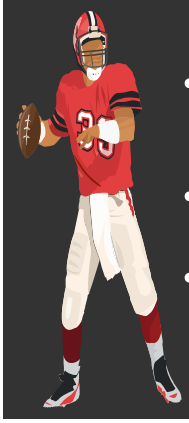
- The American Heart Association advises adults to eat at least 2 meals with fatty fish each week.
- The Academy of Nutrition & Dietetics advises adults to get at least 500mg EPA + DHA each day.
- The National Academy of Medicine sets Adequate Intake (AI) for ALA at 1.1g for adult women and 1.6g for adult men.
- Note: Athlete-specific guidelines are not yet established, but a commonly suggested daily intake is at least 2-4 grams of omega-3 fats.

Assessing Omega-3 Levels

The Omega-3 Index (O3I) is a widely used measure of the amount of omega-3 fatty acids in blood.

- Levels below 4% have been linked with adverse cardiovascular events.
  An 8% value has been proposed as the target
- for cardiovascular health.

0-4%	4-8%	8-12%
Linked with greater risk of CVD events	Intermediate CVD risk	Lowest CVD risk



Usual Athlete Intake

- A 2018-2019 study of nearly 1500 NCAA Division I student-athletes across the US found average EPA + DHA intake below 150mg daily, well below most recommendations.
- A small number of studies measured athletes' omega-3 status in blood. Almost none met the O3I target of >8%.
- The typical Division I student-athlete appears to have an O3I of 4.0-4.5%.

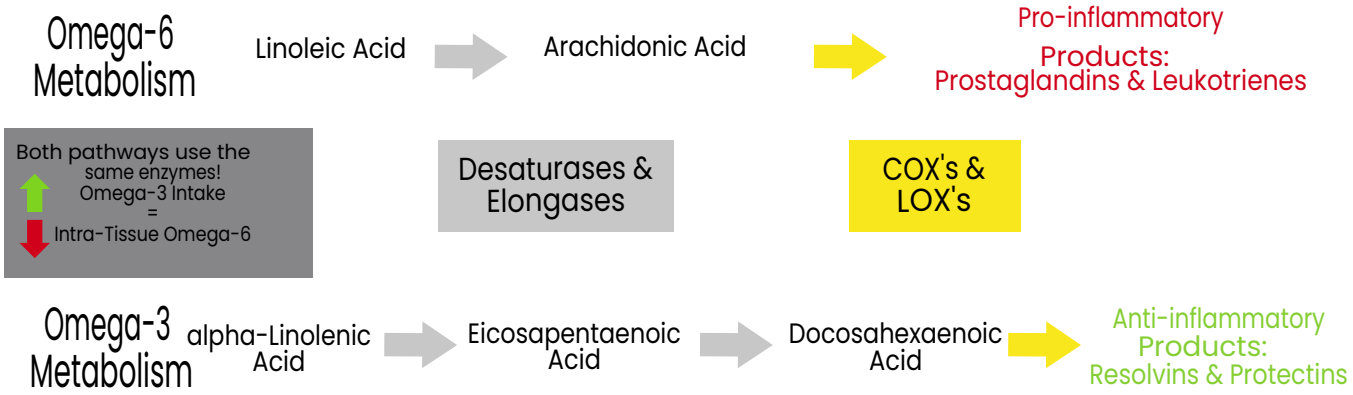
In January 2019, the NCAA revised Nutritional Supplements Bylaw 16.5.2.7 to permit omega-3 fatty acid supplements, allowing Division I institutions to supply these supplements to their athletes.

Note: Division II and III institutions should check with their compliance department before supplying supplements.

Omega-3 Fats for Performance

The O6:O3 Balance & Inflammation

Omega-3 and omega-6 fats are essential nutrients that must come from a healthy diet. Omega-6 intake has risen greatly over the past century, while limited food sources leave many Americans short of omega-3. These two fat classes use the same enzymes. Getting enough of both therefore appears important for regulating inflammation, particularly for athletes who are training intensively.



Choosing Omega-3 Supplements

Firm supplement guidelines are not yet available, but the current evidence indicates:

- A starting dose of 1g combined DHA + EPA suits most athletes.
- Athletes aiming to support brain health may benefit from 2g DHA + 1g EPA.
- Long-term EPA + DHA supplement intakes up to 5 grams have not shown adverse outcomes.
- *Use only independently tested supplements to support purity and accurate labeling.

Who May Benefit from Supplements?

- Athletes who generally eat little fish or seafood
- Athletes with a history of high omega-6 intake
- Athletes in high-impact sports or with past concussions
- Athletes facing surgery or an injury needing immobilization

Types of Supplements

- Triglycerides - occur naturally in fish and are absorbed better than ethyl esters.
  - Algae oil is a plant-based, bio-equivalent option for vegetarian or vegan athletes and people with fish or shellfish allergies.
- Ethyl esters - most common; absorption is lower, especially without dietary fat.
- Phospholipids - often sold as krill oil; absorption is similar to triglycerides, but products usually contain very small doses.

Bioavailability details may appear on a product's supplement facts or ingredient list. If they are not listed, check the company's website or contact the supplier directly.

Sources

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