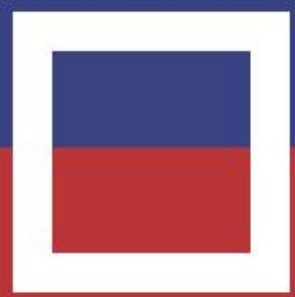




INGREDIENT OF THE MONTH



American Culinary Federation
Education Foundation

ALL ABOUT TUNA

Tuna is one of the world's most culturally significant and economically important fish, with roots tracing back to ancient maritime civilizations across the Mediterranean and Pacific. Early societies such as the Phoenicians, Greeks, and Romans documented tuna migrations and developed trap-fishing systems like the tonnara, while Japan and Pacific Island cultures built deep culinary traditions and sophisticated fishing knowledge around this prized species.



By the 20th century, innovations in fishing vessels, freezing, and canning transformed tuna into a global commodity and household staple. Today, most tuna is still harvested from the wild using techniques like purse seining, longlining, and pole-and-line fishing across major ocean regions. This growth in demand has driven significant sustainability efforts, including international stock management and traceability programs that support responsible harvest and long-term resource health.

Alongside wild fisheries, tuna aquaculture has advanced rapidly. Early ranching systems, capturing juveniles and raising them in offshore pens, originated in Japan and expanded to regions like Australia, Mexico, and the Mediterranean. More recently, full-cycle aquaculture, where tuna are bred and raised entirely in captivity, has emerged as a major breakthrough despite the species' complex biology and high-performance growth needs. Research continues to focus on feed innovation, environmental stewardship, and more efficient farming systems.

Today, tuna supports coastal economies, global supply chains, and culinary traditions around the world. From ceremonial fishing practices in Pacific Island communities to Mediterranean mattanza rituals and the celebrated place of maguro in Japanese cuisine, tuna represents a powerful link between culture, craft, and the ocean. Its story reflects both the richness of marine ecosystems and the shared responsibility to steward them for future generations, making tuna not just an ingredient, but a legacy of the sea.

HEALTHY INGREDIENT CONTRIBUTION

Tuna is a high-impact nutritional food, delivering substantial portions of daily protein, B12, selenium, and omega-3 fatty acids with relatively few calories. When consumed thoughtfully, it plays a strong role in supporting cardiovascular health, brain function, metabolic efficiency, and overall nutritional adequacy.



- **Lean Protein:** ~20–22 g per serving (≈40% DV) supports muscle repair, satiety, and immunity
- **Rich Omega-3s:** Supports heart health, reduces inflammation, and promotes brain/eye function
- **Vitamin B12:** ~100% DV supports red blood cell production, nerve health, and energy metabolism
- **Niacin:** ~50–60% DV aids energy production and healthy cholesterol metabolism
- **Vitamin D:** Supports bone strength, muscle function, and immune health
- **High in Selenium:** Powerful antioxidant; supports thyroid health and helps offset mercury exposure
- **Low Saturated Fat:** Heart-healthy protein choice with high nutrient density
- **Moderation:** 2–3 servings per week; rotate species for optimal omega-3 benefits and mercury risk

Nutritional Information/Values from [USDA FoodData Central](#)

TYPES AND VARIETIES

Tuna are large, fast-swimming marine fish in the Scombridae family. Several species are commercially important, each with distinct characteristics in flavor, texture, fat content, size, and culinary use.

Major Types & Varieties of Tuna:

Skipjack (*Katsuwonus pelamis*)

- Most widely consumed “light” tuna globally
- Mild, slightly stronger than albacore, softer texture
- Low to moderate fat content
- Highly sustainable in many fisheries

Albacore (*Thunnus alalunga*)

- Known as “white tuna”
- Mild, clean, firm, and lighter-colored flesh
- Moderate fat content, higher omega-3s
- Popular in U.S. retail markets

Yellowfin (*Thunnus albacares*)

- Also known as “ahi”
- Clean, rich, meaty; deep pink to red flesh
- Moderate fat content
- Versatile and widely used in foodservice

Bigeye (*Thunnus obesus*)

- Highly prized for raw preparations
- Rich, buttery, and tender
- Higher fat content than yellowfin
- Careful sourcing due to stock pressures

Bluefin (*Thunnus thynnus*)

- Most valuable and luxurious tuna
- Extremely rich, butter, melt-in-the-mouth
- Very high fat content, especially toro cuts
- Strictly regulated due to overfishing

Longtail (*Thunnus tonggol*)

- Fresh consumption common in Southeast Asia
- Stronger flavor with firm flesh
- Relatively low fat content
- Less common in Western markets



Market Categories: Canned, Shelf-Stable, Fresh, Frozen, Sushi-Grade, Premium

SELECTING AND STORING

Selecting Tuna:

- **Fresh**
 - Yellowfin/Bigeye (bright red to pink) and Albacore (pale pink to ivory)
 - Avoid excessive rainbow sheen or dull discoloration
 - Flesh should be firm, elastic, and moist; not mushy or slimy
 - Aroma should be clean, mild, and ocean-like
 - No gaping, excessive purge (liquid), or dry edges
 - Tuna should have clear labeling for species, harvest method, and origin
- **Frozen**
 - Solidly frozen with no soft spots or freezer burn
 - Minimal ice crystals in packaging
 - Vacuum-sealed or tightly wrapped



Storing Tuna:

- **Fresh**
 - Store at 32–36°F (0–2°C), colder than standard refrigeration
 - Preferred method: Keep tuna on crushed ice (drained) and change ice daily
 - Wrap tightly in plastic wrap or parchment + plastic
 - Best used within 24-48 hours
- **Frozen**
 - Store at 0°F / -18°C or lower
 - Frozen tuna should be used within 6-8 months for lean and 2-3 months for fatty
 - Thaw slowly under refrigeration
 - Never refreeze once thawed

CULINARY USES

Tuna's value lies in its species-specific versatility, performing equally well in raw, high-heat, preserved, and convenience-driven applications, making it one of the most adaptable proteins in professional kitchens.

Raw & Minimal Manipulation

- Sushi, sashimi, crudo, tartare, poke, carpaccio
- Bluefin/Bigeye= richness, fat, mouthfeel
- Yellowfin= clean flavor, firm texture

Seared, Grilled, & High Heat

- Tataki, rare-seared, binchotan grilling
- Maximizes Maillard on exterior
- Ideal for yellowfin and albacore loins

Gentle Cooking Methods

- Poaching, oil confit, low-temp roasting
- Retains moisture and prevents protein tightening
- Paired with aromatics, olive oil, herbs, or dashi

Cured, Smoked, & Preserved

- Salt curing, cold smoking, bottarga-style
- Italian tonno sott'olio, Spanish escabeche
- Extends shelf life while intensifying umami

Canned & Processed

- Salads, rillettes, croquettes, pasta, spreads
- Skipjack for bold flavor
- Albacore for clean profile

Global Culinary Inspiration

- Niçoise (France)
- Maguro don & tekka maki (Japan)
- Tuna curry (Sri Lanka / India)

Modern Menu Innovation

- Tuna burgers
- Tartare cones
- Smoked collars
- Crudo + fermentation
- Cross-utilization of trim for sustainability



INTERESTING FACTS



- Tuna hatch smaller than a grain of rice, yet bluefin can grow over 1,500 pounds
- Tuna sit near the top of the marine food chain, rivaled mainly by sharks and marine mammals
- Tuna muscles are rich in myoglobin, giving their flesh its deep red color and endurance power
- Tuna can swim up to 45–50 mph, making them among the fastest fish in the ocean
- Some tuna species migrate thousands of miles each year, crossing entire oceans
- Tuna must keep moving to force water over their gills or risk suffocating
- Tuna consume 10–25% of their body weight daily to fuel their constant movement
- Unlike most fish, tuna can warm their muscles and organs, allowing them to hunt in cold, deep waters
- A single bluefin tuna has sold for millions of dollars at Japanese fish auctions
- Shelf-stable tuna helped make protein affordable and accessible worldwide in the 20th century

RECIPE

Sicilian-Style Tuna with Olives & Capers

Yield: 4 Servings

Ingredients:

4 6-ounce tuna steaks
1/2 cup extra virgin olive oil, divided
6 cloves garlic, sliced
4 small anchovy fillets or 2 tsp anchovy paste
1/2 tsp red pepper flakes
1/2 cup dry white wine
1 pound cherry tomatoes, halved
3 tbsp capers, rinsed
3/4 cup Sicilian olives pitted, chopped, and rinsed
3 tbsp pine nuts, toasted
1/4 cup flat-leaf Italian parsley, minced
salt and pepper, to taste



Directions:

1. Heat a large nonstick pan to medium heat with 3 tablespoons of extra virgin olive oil. Pat the tuna steaks dry then season with salt and pepper.
2. Add the steaks to the pan and sear for 2-3 minutes per side or until browned on the outside but still raw on the inside. Remove the tuna steaks to a plate and tent with foil.
3. Add the remaining extra virgin olive oil to the pan along with the garlic and anchovies. Break up the anchovies with a wooden spoon and continue to sauté until the garlic is golden.
4. Add the red pepper flakes and cook for 30 seconds. Add the white wine and turn the heat to high and cook for 1 minute. Add the tomatoes, capers, and olives and bring the sauce to a simmer.
5. Once the sauce starts to thicken a bit (2-3 minutes) turn the heat to a low simmer and add the tuna steaks back to the pan along with the pine nuts. Spoon the sauce on top of the steaks and cook until your liking (125-130°F for medium-rare or 145-150°F for well done).
6. Turn off the heat and mix in the parsley. Taste test the sauce and season with salt and pepper if required. There will be enough sauce for roughly a half pound of pasta or serve with crusty bread. Enjoy!

QUIZ



After you read through this month's Ingredient of the Month, take this quiz to test your knowledge. In order to earn continuing education hours (CEHs) from the American Culinary Federation (ACF), the test must be completed through the ACF's Online Learning Center. Seventy-five percent accuracy is required to earn one hour of continuing education credits toward professional certification.

QUIZ

Question #1

Tuna fishing traditions can be traced back to ancient Mediterranean and Pacific cultures.

- A. True
- B. False



QUIZ

Question #2

Which fishing methods are commonly used to harvest wild tuna today?

- A. Bottom trawling and dredging
- B. Spearfishing and net casting
- C. Purse seining and longlining
- D. Hand harvesting and reef trapping



QUIZ

Question #3



Which nutrient in tuna most directly supports cardiovascular and brain health?

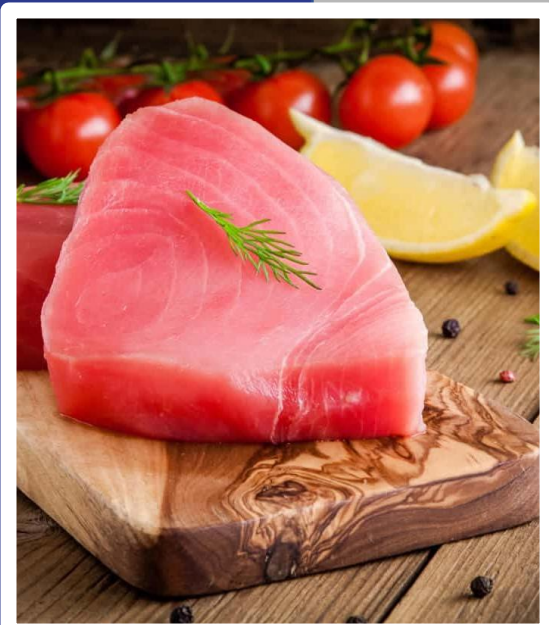
- A. Saturated fat
- B. Omega-3 fatty acids
- C. Vitamin C
- D. Calcium

QUIZ

Question #4

Tuna provides a high level of protein while remaining relatively low in calories.

- A. True
- B. False



QUIZ

Question #5

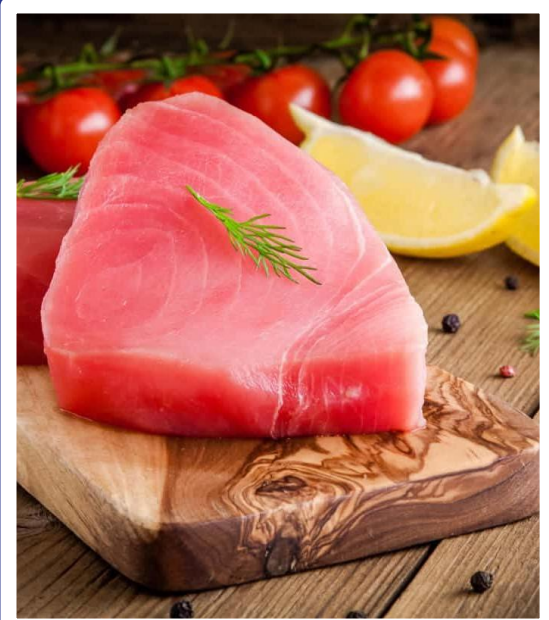
Which species is also known as “ahi” and is versatile in foodservice applications?

- A. Yellowfin
- B. Skipjack
- C. Bluefin
- D. Longtail



QUIZ

Question #6



Which tuna is highly prized for raw preparations and has a rich, buttery, tender texture?

- A. Skipjack
- B. Bigeye
- C. Albacore
- D. Longtail

QUIZ

Question #7

Excessive purge or liquid in fresh tuna is a sign of good quality.

- A. True
- B. False



QUIZ

Question #8

What is the recommended storage temperature for fresh tuna?

- A. 40–45°F (4–7°C)
- B. 32–36°F (0–2°C)
- C. 28–30°F (-2 to -1°C)
- D. 0°F (-18°C)



QUIZ

Question #9



Cross-utilization of tuna trim in modern kitchens is primarily aimed at:

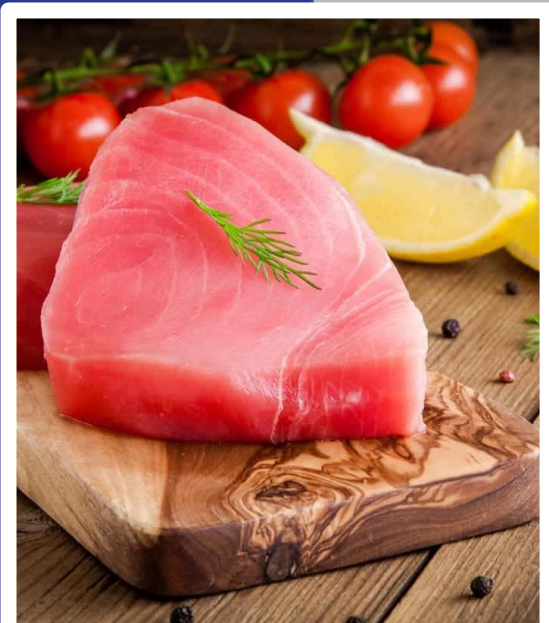
- A. Reducing cooking time
- B. Enhancing visual presentation
- C. Supporting sustainability
- D. Making it suitable only for raw applications

QUIZ

Question #10

How much of their body weight do tuna consume daily to fuel constant movement?

- A. 1-5%
- B. 5-10%
- C. 10-25%
- D. 25-40%



JOIN US NEXT MONTH!

Stay tuned for the next ACF Ingredient of the Month! Be sure to visit the Online Learning Center (OLC) to download a copy of each month's ingredient presentation. Don't forget to take the official IOTM quiz through the OLC to earn one hour of continuing education credits toward professional certification.

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