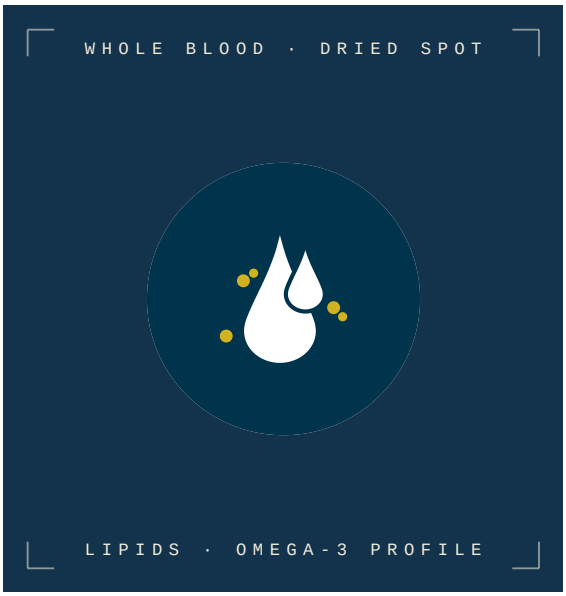
CanAlt
Health Laboratories

THE COMPLETE REPORT

OmegaScore® Complete

A whole-blood fatty-acid profile — omega-3 status, omega ratios, the trans-fat index, and the full panel of essential, mono-, and saturated fatty acids.



SAMPLE ID	SAMPLE COLLECTION	TEST DATE	REPORT RELEASE
DEMO-OMC-01 · OM-C	2026-07-15	2026-07-17	2026-08-06

WHAT IS IN THIS REPORT

PREPARED FOR

Jordan Sample

Female · DOB 1985-04-12

PRACTITIONER

Dr. Morgan Ellis
ND · 9000

SAMPLE TYPE

Blood Spot

16 Falconer Dr, Unit 14 · Mississauga, Ontario · Canada, L5N 3M1

LAB DIRECTOR · Dr. M. Halsall, PhD · CAP-CA-19002

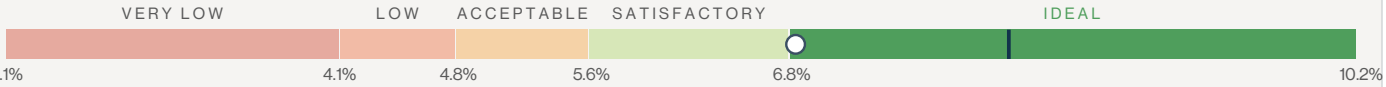
OMEGASCORE COMPLETE

OmegaScore & Trans Fat

OMEGASCORE®

A higher OmegaScore reflects a more favorable omega-3 status, which research has associated with cardiovascular wellness.

8.12% ● IDEAL



○ PREVIOUS 6.84% · 2026-01-15 +1.28

INTERPRETATION

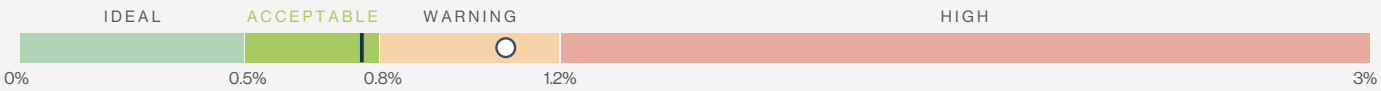
Reading the OmegaScore

OmegaScore® quantifies the combined percentage of EPA, DHA, and DPA — key omega-3 fatty acids in whole blood — capturing both recent dietary intake (plasma) and intermediate-term storage (blood cells). Research has associated a higher whole-blood omega-3 status with cardiovascular wellness and healthy aging (Harris & von Schacky, 2004; Mozaffarian & Wu, 2011); an OmegaScore at or above 8.05% is reported as cardioprotective, 3.84–8.05% as intermediate, and below 3.84% as higher-risk. A higher dietary intake of EPA and DHA from oily fish or quality supplements has been associated with a rising OmegaScore, with blood levels typically equilibrating over 3–4 months.

% TRANS FATTY ACIDS

The desirable range is below 0.5% of total fatty acids.

0.76% ● ACCEPTABLE



○ PREVIOUS 1.08% · 2026-01-15 -0.32

INTERPRETATION

Reading the trans fat level

% Trans Fat indicates the proportion of trans fatty acids among total blood fatty acids. Research has linked higher trans-fat levels — especially from partially-hydrogenated oils — with less favorable cardiovascular, inflammatory, and metabolic measures (Mozaffarian & Wu, 2011). A desirable level is below 0.5%; values above 1.2% have been associated with a higher intake from processed or fried foods.

Analysis performed by CanAlt Health Laboratories

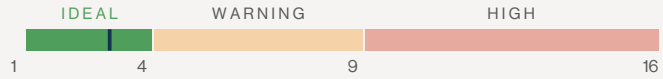
OMEGASCORE COMPLETE

Omega Ratios & Indices

Six derived markers that translate the fatty-acid panel into inflammatory tone, omega-3 quality, and metabolic activity.

PRIMARY RATIO

Omega-6 : Omega-3 — 2.97



IDEAL Previous · 4.21

The omega-6 to omega-3 ratio offers key insight into inflammatory tone and dietary fat balance. Research has associated elevated ratios — common in Western dietary patterns — with a more pro-inflammatory state (Simopoulos, 2002). A more balanced ratio, near 4:1 or lower, is linked to anti-inflammatory pathways.

PRIMARY RATIO

AA : EPA — 3.46

WARNING Previous · 5.12

The AA:EPA ratio is a wellness marker that reflects the body's balance between pro- and anti-inflammatory fatty acids. While the omega-6:omega-3 ratio gives a broad view of dietary fat intake, the AA:EPA ratio offers a more focused view of how these fats may shape the body's inflammatory tone (Calder, 2013).

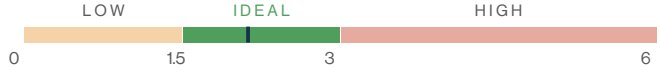
ADDITIONAL INDICES

EPA : DHA — 0.38

EPA-LED

Compares the two principal long-chain marine omega-3s. EPA is more anti-inflammatory; DHA is the structural omega-3 for brain and retina.

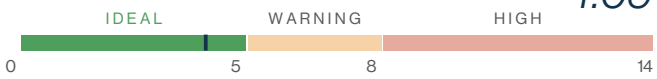
DHA : DPA — 2.12



IDEAL

DPA serves as a metabolic reservoir that the body can convert in either direction. A ratio in the 1.5–3 range suggests efficient omega-3 incorporation.

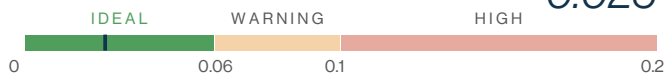
D5D — AA : DGLA — 4.09



IDEAL

A surrogate for delta-5-desaturase activity in omega-6 metabolism. Lower values are the favorable direction; research has associated higher values with less favorable metabolic and inflammatory measures.

SCD-1 — 16:1n7 : 16:0 — 0.025



IDEAL

A surrogate for stearoyl-CoA desaturase activity. Higher values reflect de novo lipogenesis linked to a high-carbohydrate intake, which studies associated with less favorable cardiometabolic measures.

PRACTITIONER NOTE

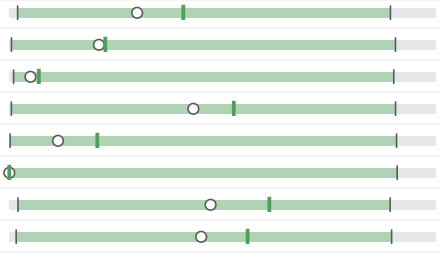
The omega ratios shifted most efficiently in studies when EPA and DHA intake rose from fish or quality supplements — omega-6 blood levels responded less readily to dietary change. Ratios typically reached a new steady state over 3–4 months (Holub, 2002).

OMEGASCORE COMPLETE

Complete fatty-acid panel

Each fatty acid as a percentage of total measured fatty acids, plotted against the central 95% reference range of a reference adult population.

FATTY ACID	CODE	VALUE	PREVIOUS	STATUS	REF RANGE
Omega-3 Fatty Acids		**9.09%**	7.18		2.57–15.14%
Omega-3 Index		**8.40**	6.84		2.80–15.40
Alpha-Linolenic	C18:3n3	**0.54**	0.51		0.10–1.90
Eicosatrienoic	C20:3n3	**0.08**	0.07		0.05–0.50
Eicosatetraenoic	C20:4n3	**0.12**	0.10		0.01–0.20
Eicosapentaenoic (EPA)	C20:5n3	**1.67**	0.98		0.14–6.92
Heneicosapentaenoic	C21:5n3	**0.00**	0.00		0.00–0.05
Docosapentaenoic-n3	C22:5n3	**2.07**	1.71		0.53–2.81
Docosahexaenoic (DHA)	C22:6n3	**4.39**	3.71		1.00–6.50
Omega-6 Fatty Acids		**27.01%**	30.21		24.85–44.15%
Linoleic	C18:2n6	**18.50**	20.32		14.00–31.30
Gamma-Linolenic	C18:3n6	**0.21**	0.18		0.05–0.72
Eicosadienoic	C20:2n6	**0.29**	0.31		0.10–0.43
Dihomo-gamma-linolenic	C20:3n6	**1.41**	1.52		0.50–2.50
Arachidonic (AA)	C20:4n6	**5.76**	7.12		5.00–14.80
Docosatetraenoic	C22:4n6	**0.59**	0.62		0.30–2.50
Docosapentaenoic-n6	C22:5n6	**0.13**	0.14		0.08–0.83
cis-Monounsaturated		**24.36%**	24.67		15.65–31.82%
Palmitoleic	C16:1n7	**0.51**	0.54		0.13–2.90
Oleic	C18:1n9	**18.59**	18.97		14.20–29.50
Eicosenoic	C20:1n9	**0.16**	0.18		0.10–0.77
Nervonic	C24:1n9	**5.26**	4.98		0.13–1.96
Saturated Fatty Acids		**38.24%**	38.82		29.89–42.10%
Myristic	C14:0	**1.11**	1.18		0.10–2.45
Pentadecanoic	C15:0	**1.74**	1.66		0.15–0.60
Palmitic	C16:0	**20.02**	21.18		17.50–27.10
Stearic	C18:0	**9.80**	9.42		8.40–15.00
Arachidic	C20:0	**0.46**	0.51		0.10–0.53
Behenic	C22:0	**1.46**	1.38		0.20–1.59
Lignoceric	C24:0	**3.65**	3.49		0.20–1.92
Trans Fatty Acids		**0.76%**	1.08		0.30–2.02%
Trans Palmitoleic	C16:1n7t	**0.38**	0.52		0.10–2.45
Trans Oleic	C18:1t	**0.30**	0.41		0.00–0.51
Trans Linoleic	C18:2n6t	**0.09**	0.15		0.07–0.92



In reference range · Below range · Above range

Reference ranges represent the central 95% of a reference adult population. Interpretation requires a qualified healthcare professional.

OMEGASCORE COMPLETE · CLINICAL REFERENCE

Individual fatty acids, at a glance

A bedside reference for the species reported on the Complete fatty-acid panel.

EPA 20:5 n-3

OMEGA-3 (LONG-CHAIN)

Eicosapentaenoic acid

A substrate for series-3 prostaglandins and E-series resolvins. Research has associated EPA with anti-inflammatory tone and cardiovascular wellness (Mozaffarian & Wu, 2011).

- Studies observed lower triglycerides with higher EPA and DHA intake
- Research has linked EPA with balanced mood and inflammatory resolution
- Contributes to an anti-platelet, anti-inflammatory balance

SOURCES Salmon, sardines, anchovy, mackerel, fish oil, algal oil

DHA 22:6 n-3

OMEGA-3 (LONG-CHAIN)

Docosahexaenoic acid

Quantitatively the dominant omega-3 in neuronal and retinal membranes, and a precursor of D-series resolvins, protectins, and maresins (Dyall, 2015).

- Central to brain and retinal membrane function
- Research observed a shift toward larger LDL particles and higher HDL2
- Important during pregnancy and infant neurodevelopment

SOURCES Oily fish, fish oil, algal oil (vegan), egg yolk

DPA 22:5 n-3

OMEGA-3 (INTERMEDIATE)

Docosapentaenoic acid

Sits between EPA and DHA in metabolism, is freely interconvertible with EPA, and may serve as a tissue reservoir.

- Observational research has associated higher DPA with cardiovascular wellness
- May participate in omega-3 storage and turnover within tissue
- Not yet part of the conventional Omega-3 Index — its role is still maturing

SOURCES Fish, seal oil, endogenous synthesis from EPA

ALA 18:3 n-3

OMEGA-3 (PLANT)

Alpha-linolenic acid

The essential plant omega-3. Studies observed only weak conversion to EPA (about 5–10%) and marginal conversion to DHA (about 0.5%) in adults, so diet alone rarely raised the Omega-3 Index from ALA (Holub, 2002).

- Research observed some inverse association with stroke, independent of conversion
- Important in vegetarian and vegan dietary patterns
- Did not fully substitute for EPA and DHA in studies

SOURCES Flaxseed, chia, walnuts, hemp, canola oil

AA 20:4 n-6

OMEGA-6 (LONG-CHAIN)

Arachidonic acid

A precursor for series-2 prostaglandins, thromboxanes, and leukotrienes — pro-inflammatory and pro-aggregatory eicosanoids that also serve normal signalling.

- Its substrate balance with EPA defines eicosanoid tone (the AA:EPA ratio)
- Essential for normal immune signalling and vascular function — not "bad"
- Research observed AA responded more to EPA intake than to AA restriction

SOURCES Meat, poultry, eggs, organ meats, endogenous synthesis from LA

LA 18:2 n-6

OMEGA-6 (ESSENTIAL)

Linoleic acid

The essential omega-6 and the most abundant PUFA in modern diets. Research has associated higher circulating LA with more favorable — not less favorable — metabolic and cardiovascular measures.

- Studies observed improved insulin sensitivity with a higher LA status
- Research observed an inverse association with type-2 diabetes
- LA restriction is no longer an evidence-based dietary practice

SOURCES Sunflower, safflower, soybean, corn oils; nuts, seeds

tFA trans

INDUSTRIAL / RUMINANT

Trans fatty acids

Geometric isomers from partial hydrogenation or biohydrogenation. Research has associated industrial trans fats with a less favorable lipid profile — higher LDL and lower HDL (Mozaffarian & Wu, 2011).

- No nutritional requirement — a level as low as feasible is the favorable direction
- The blood level is a direct mirror of recent dietary intake
- Reformulation lowered population levels by roughly half since 2009

SOURCES Partially-hydrogenated oils, fried foods, some baked goods

Compiled from peer-reviewed omega-3 research; full references appear on the final page. The Omega-3 Index, by convention, comprises red-blood-cell EPA + DHA; DPA is reported separately given its emerging clinical signal.

OMEGASCORE COMPLETE · PATIENT GUIDE I

Understanding the fatty-acid profile

A short guide for interpreting the families of fats in whole blood, and what they mean day-to-day.

THE FAVORABLE FATS

Omega-3 fatty acids

Healthy fats the body needs but cannot make on its own. EPA and DHA are the active marine forms; ALA is the plant form (flax, chia, walnuts) but converts to EPA/DHA only weakly.

- Support heart and vascular health
- Support brain function and mental clarity
- Help resolve inflammation
- Best food sources: oily fish — salmon, sardines, mackerel, herring

NECESSARY, BUT IN BALANCE

Omega-6 fatty acids

Common in modern diets through vegetable oils (corn, sunflower, soybean) and meats. Linoleic acid (LA) is essential; arachidonic acid (AA) is the inflammatory precursor.

- Support skin, brain development, and inflammation regulation
- Excess relative to omega-3 may amplify inflammation
- A ratio near 4:1 or lower has been associated with balance
- Raising omega-3 has generally mattered more than lowering omega-6

HEART-FRIENDLY FATS

Monounsaturated fats (MUFAs)

One healthy bend in the fatty acid chain — liquid at room temperature. Oleic acid is the dominant member, found in olive oil, avocado, and many nuts and seeds.

- Cornerstone of the Mediterranean dietary pattern
- Support healthy cholesterol balance
- Research has associated MUFAs with cardiovascular wellness
- Olive oil is often chosen in place of butter

USE IN MODERATION

Saturated fats

Solid at room temperature. Found in butter, cheese, red meat, and tropical oils. The body needs some for cell membranes and hormones; excess can raise LDL cholesterol.

- Palmitic and stearic acid make up ~98% of saturated fat in blood
- Excess carbohydrate intake also raises blood saturated fats
- Plant- and fish-based fats are the favorable emphasis
- Moderation, rather than elimination, is the usual emphasis

AVOID

Research has associated trans fats — found in partially-hydrogenated oils and many processed and fried foods — with a less favorable lipid profile (higher LDL, lower HDL). They offer no nutritional benefit, and a level as low as feasible is the favorable direction (Mozaffarian & Wu, 2011).

OMEGASCORE COMPLETE · PATIENT GUIDE II

Dietary sources of EPA and DHA

Approximate EPA + DHA content per typical 3 oz (85 g) serving, cooked with dry heat.

SOURCE	EPA + DHA	MG
Pacific Herring		1,807
Atlantic Salmon (wild)		1,564
Atlantic Salmon (farmed)		1,500
Bluefin Tuna		1,279
Sockeye Salmon (wild)		1,046
Mackerel (canned)		1,046
Rainbow Trout (farmed)		981
Sardines (canned)		835
Albacore Tuna (canned)		733

SOURCE	EPA + DHA	MG
Swordfish		696
Sea Bass		648
Halibut		395
Oysters (farmed)		374
Scallops		310
Shrimp (mixed)		267
Cod		134
Tilapia		115

SUPPLEMENTS

Standard fish oil capsules supply ~300 mg EPA+DHA. Concentrated formulas, cod liver oil, krill oil, and algal oil all contribute — quality and freshness matter more than the source.

CLOSING NOTE

A meaningful dietary or supplement change is best discussed with a healthcare provider. A re-test after 3–4 months tracks change, and every 6 months once in the ideal range.

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