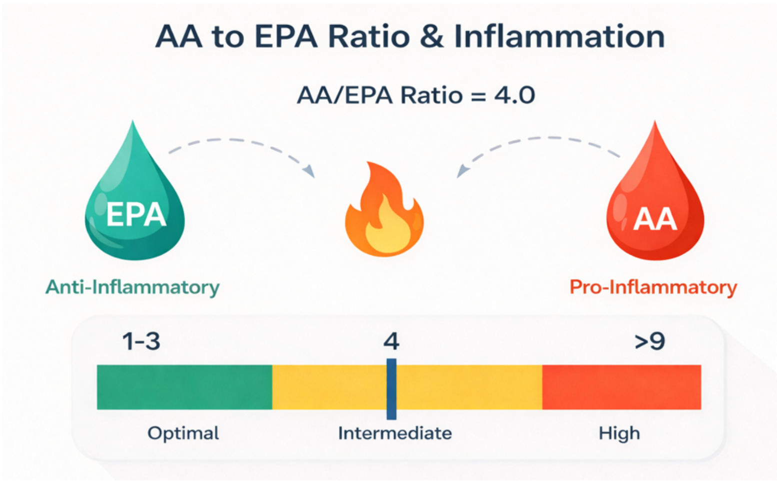
Why the AA to EPA Ratio Matters

A Simple Way to Understand Inflammation in Your Body

By Robert Ferguson



Inflammation does not start when the disease is diagnosed.
It starts **long before**, quietly, inside the body.

The **AA-to-EPA ratio** is one of the clearest ways to gauge whether inflammation is being turned **on** or **calmed**. This single number gives insight into what is happening at the **cell level**, long before symptoms appear.

What Is the AA to EPA Ratio?

The **AA to EPA ratio** compares two fats found in your blood and cell membranes:

- **Arachidonic Acid (AA)**
  An omega-6 fat that helps **start inflammation**
- **Eicosapentaenoic Acid (EPA)**
  An omega-3 fat that helps **calm inflammation**

This ratio helps show whether the body is more likely to **fuel inflammation or shut it down** [1].

Why Inflammation Matters

Inflammation is not always bad.
Your body needs it to heal injuries and fight infections.

The problem begins when inflammation **does not turn off**.

Long-term inflammation has been linked to:

- Weight gain and difficulty losing fat
- Insulin resistance
- High blood pressure
- Heart disease
- Autoimmune conditions
- Cancer

This is why understanding inflammation early is so important.

What AA and EPA Do in the Body

AA and EPA are part of your **cell membranes**. These membranes control how cells send and receive signals.

- **AA** leads to stronger, pro-inflammatory signals
- **EPA** leads to gentler signals and helps turn inflammation off

When AA levels are much higher than EPA levels, the body is more likely to remain in a **chronic inflammatory state** [2,3].

The AA-to-EPA ratio shows **which direction your body is leaning**.

Short on Time? Here's What You Need to Know

If you don't read anything else, read this.

Where Do These Numbers Come From?

Your **AA-to-EPA ratio** comes from an **at-home blood test** called the **BalanceTest**.
It measures blood fats and removes the guesswork around inflammation.

How Is the Ratio Calculated?

The math is simple:

AA percentage ÷ EPA percentage = AA to EPA ratio

How to Read Your Score

- **1–3** → Optimal, anti-inflammatory
- **4–8** → Intermediate, inflammation is building
- **9 or higher** → **Not good**, pro-inflammatory state
  (also called chronic low-grade inflammation)

A higher number means inflammation is **more likely to remain active**.

Heart Health and Inflammation

Research shows that people with **low EPA compared to AA** have a higher risk of heart disease and heart-related death [7,8].

Studies that increased EPA levels showed improvements in cardiovascular outcomes, especially in people with chronic inflammation [9].

Immune Health and Inflammatory Conditions

The immune system is strongly influenced by fat balance.

When EPA levels increase, and the AA-to-EPA ratio improves, inflammation often decreases in chronic inflammatory conditions such as rheumatoid arthritis [10].

This shows that inflammation is not just about calories or weight, but about **fat balance inside cells**.

Cancer and Long-Term Inflammation

Long-term inflammation raises cancer risk.

Before cancer develops, the body is almost always in a **state of ongoing inflammation**. Chronic inflammation can damage cells, stress the immune system, and create an environment where abnormal cells are more likely to grow.

Studies have found that people with **low EPA compared to AA** had higher cancer-related death rates, including liver cancer [11].

The AA-to-EPA ratio does **not diagnose cancer**, but it can help indicate **long-term inflammatory stress** in the body.

Why This Is More Useful Than Cholesterol Alone

Cholesterol tests do not show how inflamed the body is.

The AA to EPA ratio shows:

- How cells respond to stress
- Whether inflammation can turn off
- How the body handles immune and metabolic signals

Because red blood cells live about **120 days**, this ratio reflects what has been happening in the body over several months, not just a few days [12].

The Big Picture

The **AA-to-EPA ratio** is a powerful yet simple tool.

It helps explain:

- Why inflammation stays active
- Why does disease risk increases over time
- Why do many people feel unwell even when basic labs look "normal"

Inflammation comes first.
Disease comes later.

Testing gives you the chance to act early.

Take Action

Inflammation does not happen overnight, and neither does disease.
The good news is that you can **measure inflammation before it becomes a bigger problem**.

If this article raised questions for you, **reach out to the person who shared it**, or email me directly at **robert@dietfreelife.com**.

More importantly, take action and get your **BalanceTest**. This simple at-home test shows:

- Your **AA to EPA ratio**
- Your omega-6 to omega-3 balance
- Whether your body is more inflamed or better able to calm inflammation

Knowing these numbers gives you **clarity**, and clarity gives you the power to make better decisions for your health.

References

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About the Author

Robert Ferguson is a California- and Florida-based single father of two daughters, clinical nutritionist, Omega Balancing Coach™, researcher, best-selling author, speaker, podcast and television host, health advisor, NAACP Image Award Nominee, creator of the Diet Free Life methodology, and Chief Nutrition Officer for iCoura Health. He also serves on the Presidential Task Force on Obesity for the National Medical Association and the Health and Product Advisory Board for Zinzino, Inc.