

# AA:EPA RATIO

## (Blood spot or Red cell)

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*The AA/EPA ratio is an indication of the levels of cellular inflammation in your body. A high level of cellular inflammation does not mean you have a disease state, but it does indicate that you are not as well as you could be. Your future state of wellness can be determined by the levels of cellular inflammation in the blood as shown below. Dr Barry Sears has published on an AA:EPA ratio of 1.5 which is considered to be ideal since this is the ratio that has shown the greatest longevity and the lowest incidence of cardiovascular disease. A lower AA:EPA ratio indicates a better balance of 'good' and 'bad' eicosanoids in your body.*

Essential fatty acids are essential to the human body and have benefits for our heart, brain, eyes and joints. By reducing inflammation, blood clots and improving membrane function, essential fats are associated with a lower risk of heart complications – including heart disease, plaque build-up and heart attacks – both in persons with a history of heart disease and in healthy individuals. Essential fats are important for optimal brain development in babies and mental function, particularly later in life.

Essential fatty Acids is a comprehensive assessment of total saturated and monounsaturated fats, omega 3 index, saturated and monosaturated fats, 4 omega-3 fatty acids, 7 omega-6 fatty acids, 4 monounsaturated fatty acids, 6 saturated fatty acids, 3 groups of trans fatty acids, 5 composites (group sums), and 2 ratios, the omega-6:omega-3 and AA:EPA.

We've become conditioned to think of fat as 'bad'. Omega-3 fats (technically fatty acids), however, are essential to the human body and have benefits for our heart, brain, eyes and joints. By reducing inflammation, blood clots and improving membrane function, omega-3 fats are associated with a lower risk of heart complications – including heart disease, plaque build-up and heart attacks – both in persons with a history of heart disease and in healthy individuals.

Omega-3 fats also seem to be important for optimal brain development in babies, and mental function, particularly later in life. For pregnant women, an intake of omega-3 fats supports normal visual development in the foetus. In short, the addition of omega-3 fats to the diet is important to maintaining both our physical and mental health.

## SIGNS AND SYMPTOMS ASSOCIATED WITH LOW ESSENTIAL FATTY ACIDS

Dry flakyskin	Cracking/peeling skin
Excessive ear wax	Excessive thirst
Menstrual cramps	Premenstrual breast pain
Vaginal dryness	Dry mouth/throat
Dry, lacklustre, brittle hair	Dry eyes
Small bumps on back of upper arms	Brittle fingernails
Mixed oily and dry skin	Dandruff or cradle cap

Red cell and whole blood (dried blood spot) analyses can provide the best reflection of tissue essential fatty acid status, as there is considerably more day-to-day variation in the plasma tests than in the red cell (or whole blood)-based tests.

We would suggest the following optimal ratios for:

- **Blood spot assay** - the omega-6:omega-3 ratio should be 4.6 or less, and the AA:EPA ratio should be 9 or less.
- **Red blood cell assay** - the omega-6:omega-3 ratio should be 2.6 or less, and the AA:EPA ratio should be 15 or less.

### AA:EPA RATIO (blood spot) [code: 5001] or (red cell) [code: 5002]

- ❖ AA:EPA ratio, AA (arachidonic acid), EPA (eicosapentaenoic acid)

### Other fatty acid tests available

- **Omega 3 Index (red cell) [5029]:** Total saturated fats, Total monosaturated fats, Total omega 3, 6 & 9, EPA, DHA
- **Essential Fatty Acid (red cell) [5011]:** Saturated Fats, Total Saturated, Monounsaturated Fats, Total Monounsaturated; Omega 3 Index, Omega 3 (ALA, DHA, DPA, EPA), Total Omega 3; Omega 6 (AA, EDA, ETA, GLA, LA), Total Omega 6, Omega 3:Omega 6 ratio; Trans Fats

Phone 03-2727 7434 for further details

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