

# Leyla Weighs In: High arachidonic acid? Blame corn



Arachidonic acid is a pro-inflammatory fatty acid responsible for the production of series 2 prostaglandins, a hallmark of inflammation associated with conditions such as asthma and arthritis, to name a couple. However, arachidonic acid is not altogether a foe. It is stored in virtually all of our cell membranes and is a necessary component of a healthy immune system. It is released in response to stimuli such as histamine.

Foods high in protein, and fat such as meat and egg yolks, are blamed for containing high amounts of arachidonic acid, but the truth is, it's not actually inherent in these foods. Arachidonic acid is high due to the presence of corn and corn oil products in the feed of cattle, hogs and hens. That's why it's so important to choose grass-fed meats, free range poultry, and pastured eggs and butter, which are significantly higher in anti-inflammatory omega-3 fats and lower in omega-6.

The body makes arachidonic acid from linoleic acid, an omega-6 essential fatty acid. Arachidonic acid is produced in higher amounts in response to an unfavorable ratio of omega-6 to omega-3 fatty acids, such as in the standard American diet (SAD) where the ratio is approximately 20:1, *if not higher*. A healthier ratio is 2:1 as it was with our Stone Age ancestors. Achieving this beneficial ratio requires eliminating processed foods and commercial meats which contain high amounts of omega-6 fats.

Indeed, we are what the animal eats! But there's more.

The production and conversion of these important fatty acids to their preferred end products (series 1 and 3 prostaglandins which are anti-inflammatory, as opposed to series 2 prostaglandins which are pro-inflammatory) are dependent on the proper functioning of our desaturase enzymes, particularly delta-6-desaturase which requires sufficient vitamin B6, magnesium and zinc, and delta-5-desaturase which requires vitamin C, niacin, and zinc.

Properly sourcing your foods will ensure a more balanced ratio of omega-6 to omega-3 fats, normalizing arachidonic acid.

To your health!

Leyla Muedin, MS, RD, CDN