

The Natural Anti-Inflammatory Drug

<http://usatriathlon.org/content/index/6216>

To be a triathlete often means that inflammation is your constant companion due to over-training. As a result, the use of anti-inflammatory drugs (Aspirin, Motrin, and Aleve) is exceptionally common. These drugs reduce inflammation by inhibiting pro-inflammatory hormones known as eicosanoids.

Unfortunately, they also inhibit the formation of anti-inflammatory eicosanoids which results in the collateral damage that comes with long-term use. Even in short-term use in ultra marathoners, it was demonstrated that taking anti-inflammatory drugs prior to and during a race actually produced more oxidative stress (1) and inflammation without improving the muscle damage and soreness in a matched group of runners who were not taking any such drugs (2).

So what is a triathlete to do, simply live with constant pain?

Actually it turns out that following an anti-inflammatory diet will dramatically reduce the need for such anti-inflammatory drugs. An anti-inflammatory diet is one that reduces the production of arachidonic acid (AA). AA is the molecular building block for the pro-inflammatory eicosanoids. Reduce AA by the diet and you automatically reduce inflammation induced by training.

The foundation of an anti-inflammatory diet is one that is based on a diet rich in fruits and vegetables. The reason is that the color found in fruits and vegetables is a result of compounds known as polyphenols. Polyphenols not only act as anti-oxidants to reduce oxidative stress (i.e. free radicals), but they also have anti-inflammatory properties as they inhibit the same enzymes that are blocked by anti-inflammatory drugs. Now combine the consumption of fruits and vegetables with adequate intake of protein and high levels of omega-3 fatty acids, and you have a true "drug" that not only reduces inflammation, but improves performance. It's also known as the Zone Diet.

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1) McAnulty SR, Owens JT, McAnulty LS, Nieman DC, Morrow JD, Dumke CL, Milne GL. *Ibuprofen use during extreme exercise: effects on oxidative stress and PGE2*. *Med Sci Sports Exerc*. 2007 Jul;39(7):1075-9.

2) Nieman DC, Henson DA, Dumke CL, Oley K, McAnulty SR, Davis JM, Murphy EA, Utter AC, Lind RH, McAnulty LS, Morrow JD. *Ibuprofen use, endotoxemia, inflammation, and plasma cytokines during ultramarathon competition*. *Brain Behav Immun*. 2006 Nov;20(6):578-84.