



THE BENEFITS OF MICRONUTRIENT SYNERGY IN INFLAMMATION

Inflammation, with known symptoms of redness, feeling of heat, swelling, and pain is a natural body response to injury such as sunburn, a cut, infection or a twisted ankle. It is necessary for the healing process and subsides after a short time. However, long lasting chronic inflammation has detrimental effects in the body and has been associated with a wide variety of diseases like heart disease, arthritis, asthma, diabetes, autoimmune diseases, and cancer. The answer to inflammation is not an easy one and cannot be found in the form of pharmaceutical preparations.

The inflammatory response has the potential to damage the body because it largely involves tissue breakdown, targeting damaged tissue, and invading pathogens, before rebuilding it. It is normally a tightly regulated system, because we do not want it to get out of hand and damage healthy tissue. However, in situations of repeated injury and continuous exposure to the harmful stimuli, the inflammatory process becomes chronic and its regulation is difficult.

Conventional medicine aims only at the management of inflammatory symptoms by using steroids or painkillers such as non-steroidal anti-inflammatory drugs (NSAIDs) without eliminating the cause of inflammation. These drugs are all associated with severe and sometimes life threatening side effects, including gastrointestinal bleeding or fatal heart attacks.

On this background, we investigated whether micronutrients acting in synergy can help in various stages of the inflammatory process related to inflammation of the blood vessel walls, which is an important factor in the initiation and progression of arterial plaque buildup. We demonstrated that a specific micronutrient combination is effective in protecting the smooth muscle cells that build the arterial walls against damage caused by inflammation¹. The micronutrient combination provided better cell protection against inflammation than a widely used



NSAID painkiller - ibuprofen. Our results showed that in animals with experimentally induced inflammation the nutrient mixture could decrease production of the various inflammatory factors such as cytokines, interleukins, and the tumor necrosis factor (TNF-alpha) on an average of 80-90%. Ibuprofen was able to suppress these markers by only 20-30%². The nutrient mixture had another important effect in respect to safe and effective control of inflammation – it could suppress COX-2, a specific pro-inflammatory enzyme by 90%! This is particularly significant because ibuprofen is not effective against COX-2 and the drug Vioxx, heavily promoted as a COX-2 inhibitor, was recalled in 2004 for causing fatal heart attacks.

Inflammation is a complex biological process. While some individual nutrients display anti-inflammatory effects, the mixture of specific micronutrients based on their synergy can simultaneously target multiple mechanisms involved in the inflammatory response. Its superior efficacy and safety is yet another confirmation of the potential of a natural approach in various aspects of health.

1. V. Ivanov, et al., *Journal of Cardiovascular Pharmacology* 2007, 49(3): 140-145

2. V. Ivanov, et al., *International Journal of Molecular Medicine* 2008; 22(6): 731-741

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The ground-breaking nature of this research poses a threat to the multi-billion dollar pharmaceutical "business with disease". It is no surprise that over the years the drug lobby has attacked Dr. Rath and his research team in an attempt to silence this message. To no avail. During this battle, Dr. Rath has become an internationally renowned advocate for natural health. Says he: "Never in the history of medicine have researchers been so ferociously attacked for their discoveries. It reminds us that health is not given to us voluntarily, but we need to fight for it."

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