Wellness Minute

Health Information You Can Use On Your Path To Wellness

Specialized Pro-Resolving Mediators

"SPMs stimulate the resolution of inflammatory processes in multiple ways."

We've known for many years that high dose fish oil has significant anti-inflammatory benefits and reducing inflammation promotes healing on multiple levels. In the last 10 years, more research data is accumulating on exactly how this anti-inflammatory process takes place, and technology has been developed to accelerate it. I want to encourage you right off the bat. This Wellness Minute is a little technical, but please hang in there because these discoveries could make a major difference in how you recover.

Let's start with a term you will hear more about in the coming years, "Specialized Pro-Resolving Mediator." SPMs for short. SPMs are present in our cell membranes, and as the name implies, stimulate the resolution of inflammatory processes in multiple ways. Let me say that again because that's really the focus of this conversation. SPMs stimulate the resolution of inflammatory processes.

Inflammation is a natural response to acute stressors like infection, trauma, burns, wounds or allergies. But if the stressor continues and is not resolved, chronic inflammation sets in, which place additional burden on the body as a whole and lengthens recovery. So, unresolved acute situations often end up in chronic inflammatory conditions like arthritis, irritable bowel disease or colitis, neurodegeneration, autoimmunity, obesity, accelerated aging, as well as cardiometabolic conditions. SPMs stimulate the completion of the inflammatory process by removing inflammatory debris, restoring a healthy immune response, clearing bacteria or other infections, stimulating wound repair and supporting tissue regeneration. This slide may help clarify.

All inflammation starts out as acute inflammation. When natural SPMs are present, inflammatory debris is cleared, immune response is restored and reset, bacteria or infections are cleared, wounds are repaired, and tissue is regenerated. In other words, SPMs return the body to normal. However, here is the problem. If SPMs are not available,

inflammation is not resolved, and inflammation becomes chronic. Chronic inflammation often leads to tissue and organ injury and chronic pain. Ultimately, tissue fibrosis sets in, and recovery stalls or stops. When SPMs are present, there is clean up and restoration. However, without SPMs, unresolved inflammation and breakdown are often the end result.

Now that we understand how SPMs work, let's go back to the beginning with EPA, DHA, and DPA. These familiar fatty acids are the starting point for the body to make SPMs. These essential fatty acids are acted upon by enzymes in our bodies to provide the PRECURSORS to make SPMs. Researchers call these PRECURSORS "Specialized Pro-Resolving Mediator Precursors." These PRECURSORS are then acted upon to make SPMs.

As we get older, the quality and quantity of enzymes in our bodies decrease. As a result, as we age, the precursors to make SPMs are reduced. Fewer Enzymes = Fewer Precursors, Fewer Precursors = Fewer SPMs.

It's exciting to know that, in the last decade, highly precise extraction processes have been developed to make SPM precursors. When SPM precursors are available, the body in turn changes them to SPMs. This chart helped me understand the process better.

Omega 3s are the starting point. Historically our bodies make the enzymes needed to convert Omega 3 oils to SPM precursors. However, now there are highly specific extraction processes that make SPM precursors, which can be encapsulated. The body converts the SPM precursor to SPMs in the cell membrane.

Some of the these SPMs are Resolvins, Protectins, and Lipoxins. SPMs can't be synthesized or encapsulated. The body has to make them from the SPM Precursors.

SPMs themselves are not available commercially. However, a few companies have been able to purify and isolate SPM Precursors to make them available clinically. Biotics Research has released a SPM product called Biomega-SPM, which contains the Pro-Resolving Mediator Precursors. To date, existing companies, have three SPM precursors. However, Biotics employs a proprietary supercritical extraction process, which contains seven identifiable and tested SPM precursors. We can say identifiable and tested because Biotics has an ISO-certified laboratory in house. The expanded range of 7 SPM precursors provides a unique industry advantage. Two soft-gel capsules of Biomega-SPM contain 1200 mg of omega 3 fatty acids, which supply a highly concentrated 500 mcg of SPM precursors per serving.

Omega 3 fatty acids are necessary to facilitate the conversion process to SPMs. Some companies add omega 3 fatty acids to their SPM precursors making their capsules large and difficult to swallow. Biotics Biomega-SPM already contain 1200 mg of omega 3 fatty acids per 2 capsules, so their capsules are smaller and easier to swallow.

I know this is a lot of information. I encourage you to watch this Wellness Minute again and pause on the diagrams to take in the information. Talk with your wellness clinician and ask about a clinical trial to see if Biomega-SPM could help resolve chronic inflammation for you or a loved one.