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## REPORT

### Natural Arthritis Relief With Omega-3 Fatty Acids

By Dale Kiefer



Recently, alarming studies documenting the potentially deadly side effects of prescription anti-arthritis drugs such as Vioxx® and Celebrex® have forced many to relinquish these medications. The result has been a frantic scramble among scientists and arthritis sufferers alike to find safe, effective agents that reduce inflammation and relieve arthritis pain.

Fortunately, groundbreaking research has uncovered new substances derived from the omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) that resolve and protect against inflammation. These newly discovered substances, aptly called resolvins and protectins, may help provide arthritis relief without the side effects of conventional arthritis drugs.

#### ARTHRITIS: A FAMILY OF DISEASES LINKED BY INFLAMMATION

Arthritis is not a single disorder, but rather a family of diseases, the most common of which are osteoarthritis and rheumatoid arthritis.

Osteoarthritis is considered the “wear and tear” arthritis, in which the cartilage that cushions our joints deteriorates, producing pain and discomfort. The most common type of joint disease, osteoarthritis is often associated with aging and exacerbated by obesity. By contrast, rheumatoid arthritis is an autoimmune disease in which the immune system mistakenly attacks the body's own tissues, resulting in joint inflammation and tissue destruction. Both forms of arthritis are characterized by tenderness, stiffness, and inflammation in the joints. This pain can become severe, limiting mobility and adversely affecting one's quality of life.<sup>1</sup>

#### OMEGA-3S HELP RELIEVE OSTEOARTHRITIS PAIN

Omega-3 fatty acids show promise in relieving the pain of osteoarthritis. In a preliminary study, individuals who supplemented with the omega-3 fatty acid EPA for six months reported less arthritis pain compared to people who did not supplement.<sup>2</sup> This suggests that omega-3 fats could help restore mobility and quality of life to those whose daily activities may be limited by arthritis pain.

In the laboratory, researchers have noted that adding omega-3 fatty acids to cartilage cells decreases their susceptibility to inflammation and degradation, such as occurs with osteoarthritis.<sup>3,4</sup> Omega-3 fatty acids may thus guard against the degenerative joint destruction that accompanies osteoarthritis.

#### POWERFUL PAIN RELIEF FOR RHEUMATOID ARTHRITIS

Abundant evidence suggests that omega-3s benefit people suffering from rheumatoid arthritis. Numerous studies document the rheumatoid arthritis-relieving effects of fish oil.<sup>5-10</sup> The most commonly observed benefit is a decrease in swollen, painful joints,<sup>8</sup> but improvements in morning stiffness, pain index, and grip strength are also reported.<sup>5,7</sup> Several studies suggest that a minimum of 3 grams of omega-3 fatty acids daily for three months is needed to produce benefits.<sup>5-10</sup>

Earlier this year, scientists reported that omega-3 fatty acids administered intravenously quickly relieve rheumatoid arthritis pain. Patients with active rheumatoid arthritis received fish oil intravenously, in addition to standard prescription therapies. After just one week of once-a-day therapy, more than half of the patients experienced significant improvement in their symptoms. The therapy was well tolerated, and the research team recommended further investigation into the intravenous use of omega-3 fatty acids as a therapeutic option for rheumatoid arthritis patients.<sup>11</sup>



In a recent study from Brazil, rheumatoid arthritis patients reported markedly improved symptoms within three months by taking a daily dose of 3 grams of omega-3 fatty acids from fish oil. The patients experienced improvements in grip strength, pain intensity, ability to move easily, and fatigue. Interestingly, patients who also added olive oil to their daily regimen of fish oil supplements experienced even greater improvements in their symptoms, as determined by both self-reported and objective assessments of disease activity. The benefits of supplementation were even more pronounced after six months of therapy.<sup>12</sup> This synergistic effect between olive oil and fish oil was reported in an earlier study by US researchers, who documented a significant decrease in production of inflammatory cytokines, as well as relief of rheumatoid arthritis symptoms, in patients who received fish oil and olive oil.<sup>13</sup>

Regular consumption of omega-3 fats from fish oil could help rheumatoid arthritis sufferers reduce their use of pain-relieving nonsteroidal anti-inflammatory drugs (NSAIDs). Numerous studies have documented that when rheumatoid arthritis patients regularly consume fish oil, they can dramatically lessen their need for NSAIDs.<sup>14-16</sup> A substantial number of individuals have experienced ongoing relief from rheumatoid arthritis symptoms with continued fish oil supplementation.<sup>15,16</sup>

## **OMEGA-3S FIGHT PAIN BY QUELLING INFLAMMATION**

Omega-3s may be particularly helpful in managing arthritis because they reduce production of compounds that fuel the fires of inflammation, while increasing the production of biochemicals that limit inflammation.

New research reveals that EPA and DHA both serve as direct precursors of novel anti-inflammatory compounds aptly named resolvins and protectins.<sup>17,18</sup> Groundbreaking work shows that various resolvins from EPA and DHA trigger resolution, or reduction, of inflammation, while protectins derived from DHA offer powerful protection against runaway inflammation.<sup>19</sup> Furthermore, consumption of omega-3 fatty acids has been associated with reduced levels of two pro-inflammatory cytokines, tumor necrosis factor-alpha and interleukin-1 beta, in rheumatoid arthritis patients.<sup>20</sup> EPA and DHA may thus help alleviate the inflammation that contributes to the pain and disability of arthritis.

## **NATURAL, SAFE RELIEF—WITHOUT THE RISKS OF PHARMACEUTICALS**

Some physicians now consider fish oil an option preferable to NSAIDs such as ibuprofen or Celebrex® for relief from the inflammation of arthritis. For example, a group of Australian rheumatologists recently noted that fish oil has a number of advantages over NSAIDs. First, fish oil has not been associated with the potentially serious side effects of NSAIDs, such as upper digestive tract upset or upper gastrointestinal tract bleeding.<sup>21</sup> (Since fish oil can produce a modest blood thinning effect, people who suffer from an abnormal bleeding tendency or use blood-thinning drugs such as Coumadin® should consult a physician before taking fish oil.<sup>22</sup>)

Furthermore, omega-3 fatty acids from fish oil benefit cardiovascular health, in contrast to some prescription arthritis medications, such as Bextra® and Vioxx®, that may harm the cardiovascular system.<sup>23</sup> Thus, while fish oil works through several mechanisms to reduce risk for cardiovascular events, including cardiac death,<sup>24</sup> numerous prescription drugs for arthritis actually increase the risk of cardiovascular events.<sup>23</sup> For this reason, some physicians now recommend that their patients take the lowest possible dose, for the shortest possible time, when using NSAIDs to treat arthritis.<sup>21</sup> By contrast, many nutritionally oriented physicians are now urging their patients to regularly consume fish oil in order to relieve the inflammation associated with arthritis and safeguard their cardiovascular health.

## **CONCLUSION**

Growing clinical evidence indicates that supplemental omega-3 fatty acids from fish oil may help relieve the inflammation, pain, and immobility of arthritis. Unlike many commonly used prescription pain relievers, these essential fatty acids are safe and well tolerated.

Clearly, people seeking to prevent or relieve joint inflammation and its associated immobility and pain should consider including the omega-3 fatty acids EPA and DHA in their daily nutritional program.

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