

## Benefits

Celadrin® is a unique formulation of esterified (stable) fatty acids that has been shown to reduce certain effects related to pronounced inflammatory processes that can occur in the body. Being a complex molecule consisting of various fatty acids, it is able to penetrate cell membranes, which enhances membrane permeability and cell-to-cell signaling. In doing so, Celadrin® may reduce the level of inflammatory components of the immune system from binding to cells and thus causing occasional inflammation in different parts of the body.<sup>1</sup>

### Benefits of Topical Celadrin Cream

Celadrin Cream can also be an effective option for topical joint pain relief. Celadrin fatty acid esters combined with 1.25% USP grade natural menthol provides minor pain relief for sore muscles and joints and the surrounding areas. When applied topically, Celadrin is well-absorbed and can act locally to help maintain joint comfort and increase the range of motion of joints.

Studies have confirmed the benefits of topical applications of the cream directly to sore joints. In a double-blind placebo-controlled trial published in the *Journal of Rheumatology* in 2004, forty individual with sore knee joints participated. Twenty patients were given Celadrin Cream and 20 others were assigned a placebo cream to be applied topically twice daily for 30 days. Participants were assessed on various orthopedic measures of improvement. At the end of the study, the researchers noted that the Celadrin Cream was an effective treatment for improving knee ROM, ability to ascend/descend stairs, ability to rise from sitting, walk and sit down, and unilateral balance. No changes were seen in the placebo group.<sup>9</sup>

A second study was conducted by the same group of researchers using a cream consisting of Celadrin and menthol. In this trial, participants who had significant functional performance deficiencies of elbow, knee or wrist joints were given the cream and asked to apply it twice daily for one week.

Measure of comfort and performance we reassessed before the treatment and again after one week. The researchers found significant improvement with the use of the cream. Overall, there was a significant improvement in joint range of motion, comfort levels, muscular endurance and joint function. Even in the relatively short period of this trial (only 1 week), the cream was deemed to be effective for enhancing joint function in these participants.<sup>10</sup>

## Safety

## Scientific References

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3. Kraemer WJ, et al. Effect of a cetylated fatty acid topical cream on functional mobility and quality of life of patients with osteoarthritis. *J Rheumatology* 2004;4:767-74.
4. Crolle G, D'Este E. Glucosamine sulphate for the management of arthrosis: a controlled clinical evaluation. *Curr Med Res Opin* 1980;7:104-109.
5. Rovati LC. Clinical research in osteoarthritis: design and results of short-term and long-term trials with disease modifying drugs. *Int J Tissue React* 1992;14:243-51. Acting as a biochemical "super-thiamin," it does this through several different cellular mechanisms, as discussed below.
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7. Reginster JY, et al. Long-term effects of glucosamine sulphate on osteoarthritis progression: a randomized, placebo-controlled clinical trial. *Lancet* 2001;357:251-56.
8. Macario, J. T., Rivera, I.C. Bignamini, A.A. Oral glucosamine sulphate in the management of arthrosis: report on a multi-centre open investigation in Portugal. *Pharmatherapeutica* 1982; 3(3):157-68.
9. Kraemer WJ, et al. Effect of acetylated fatty acid topical cream on functional mobility and quality of life of patients with osteoarthritis. *J Rheumatol.* 2004 Apr;31(4):767-74.
10. Kraemer WJ, et al. Acetylated fatty acid topical cream with menthol reduces pain and improves functional performance in individuals with arthritis. *J Strength Cond Res.* 2005 May;19(2):475-80.