

# NEM® NATURAL EGGSHELL MEMBRANE

# Features and benefits

Now there's fast relief for people seeking natural solutions to the pain and stiffness of osteoarthritis and other joint health problems. NEM® Natural Eggshell Membrane is an innovative nutritional supplement that can reduce joint pain by 20% or more within 7–10 days and by an average of 73% after 30 days. In clinical trials, NEM also reduced stiffness significantly, and improved range of motion. NEM provides continued support for joint health by reducing inflammation, improving flexibility, and protecting against the deterioration of cartilage.

NEM is a natural source of type I collagen, glucosamine, chondroitin, hyaluronic acid, and calcium, nutrients that are essential for healthy joints. It supports the production of type II collagen, the main component of cartilage, and the production of the synovial fluid that lubricates the joints.

Human clinical trials show that NEM is free from the potentially serious side effects of NSAIDs and other medications conventionally used to treat joint and connective tissue conditions.

Natural Factors NEM Natural Eggshell Membrane, in a convenient one-a-day vegetarian capsule, provides a full-strength dose of the same NEM formula that quickly improved joint pain, stiffness, and flexibility in clinical trials, particularly with respect to osteoarthritis.

## How it works

NEM supports the body's production of type II collagen, which is the main component of the cartilage that covers bones, particularly weight-bearing joints such as the knees and hips, so that they move smoothly without rubbing together. Osteoarthritis is a progressive disorder of the joints caused by the gradual loss of cartilage.

NEM also boosts production of special carbohydrate molecules called glycosaminoglycans (GAGs), including one called chondroitin sulfate. Chondroitin sulfate is another important component of cartilage, providing resistance to compression and contributing to the tensile strength of cartilage, tendons, and ligaments.

NEM contains glucosamine sulfate, which stimulates cells called chondrocytes that form the cartilage in joints. Sulfate (a form of sulphur) is a critical nutrient for halting and reversing osteoarthritis because it supports the synthesis of GAGs in the joints and stimulates cells that produce the synovial fluid that lubricates the joints. Sulfate also binds water inside the cartilage to help it act as a shock absorber. NEM also contains hyaluronic acid, one of the main lubricants found in the synovial fluid.

Natural Factors NEM Natural Eggshell Membrane provides a full-strength dose of natural eggshell membrane to give fast relief from joint pain and stiffness, and to maintain joint health.



#### Research

For decades it has been known that eggshell membrane contains nutrients that support joint health. Exciting new research using Natural Eggshell Membrane (NEM®), a branded ingredient developed by ESM Technologies, shows that taking NEM is a clinically effective way to rapidly reduce joint pain, stiffness, and inflammation.

In an open-label pilot study, patients with mild-to-moderate joint pain received 500 mg NEM daily. After just seven days, participants had an average 26% improvement in pain and 28% improvement in flexibility. After 30 days, they had an average 73% reduction in pain, with 45% of participants reporting they were completely pain-free. They also had a 44% improvement in flexibility and 76% less pain through their range of motion. No adverse side effects were reported (Ruff, Devore, et al, 2009).

Another open-label pilot study showed similar effectiveness. Twenty-eight patients with mild-to-moderate joint pain in various parts of the body received 500 mg NEM daily. Participants had an average pain reduction of 18% after just 7 days and 30% after 30 days (Ruff, Devore, et al., 2009).

A more rigorous study confirmed NEM provides fast, effective, and continuous relief from joint pain and stiffness. The randomized, double-blind, placebo-controlled clinical trial enrolled 67 patients with osteoarthritis of the knee. They received either 500 mg of NEM daily or a placebo. Results were measured using the WOMAC (Western Ontario and McMaster Universities) osteoarthritis index. After only ten days, those receiving NEM supplements had an average 12% reduction in pain and 17% less stiffness. At the end of the 60-day trial, those receiving NEM had an average pain reduction of 15%, and 31% less stiffness. One third of the patients receiving NEM experienced pain reduction of 40% or more, and more than half had at least 50% less stiffness. These responses were five times greater than those in the placebo group. NEM was well-tolerated, with no serious adverse side effects reported (Ruff, Winkler, et al, 2009).

The conventional approach to osteoarthritis has been to treat only the symptoms of pain and inflammation using NSAIDs such as ibuprofen. However, recent research shows that nutritional therapy addresses the underlying problem. Two important nutrients contained in NEM, glucosamine sulfate and chondroitin sulfate, can help the body gradually rebuild the connective tissue in the joints. Randomized controlled trials have shown that these two nutrients produce structural improvement in the joints, as observed using radiography over a period of years (Bruyere, 2007).

Natural Factors NEM Natural Eggshell Membrane provides a clinically effective dose of the same NEM formula used in the clinical trials to produce fast relief from pain and stiffness, without the potentially serious side effects of NSAIDs and other medications.

## Ingredients

## Recommended adult dose

Recommended Adult Dose: 1 capsule daily or as directed by a health care practitioner. Consult a health care practitioner for use beyond 8 weeks.

#### Caution

Consult a health care practitioner if symptoms worsen. Consult a health care practitioner prior to use if you are pregnant or breastfeeding, and/or if you are allergic to eggs. Keep out of reach of children.

### References

Bruyere, O., Reginster, J.Y. (2007). Glucosamine and chondroitin sulfate as therapeutic agents for knee and hip osteoarthritis. *Drugs Aging*. 24(7):573-80.

Ruff, K.J., DeVore, D.P., Leu, M.D., Robinson, M.A. (2009). Eggshell membrane: a possible new natural therapeutic for joint and connective tissue disorders. Results from two open-label human clinical studies. *Clin Interv Aging*. 4:235-40. Epub 2009 Jun 9.

Ruff, K.J., Winkler, A., Jackson, R.W., DeVore, D.P., Ritz, B.W. (2009). Eggshell membrane in the treatment of pain and stiffness from osteoarthritis of the knee: a randomized, multicenter, double-blind, placebo-controlled clinical study. *Clin Rheumatol.* Aug;28(8):907-14. Epub 2009 Apr 2.

