

# Holistic Health Trends Redefine the Mobility Market

*Consumer demands have shifted from simple joint-health support to comprehensive mobility support. Two ingredients from Bioiberica offer the science, flexibility, and synergy needed to meet the moment.*

For years, the mobility supplement market has largely catered to aging populations requiring joint health support. But if you ask experts at Bioiberica, it's time for the industry to rethink this approach. Why? Because 67% of consumers recognize the direct link between mobility and overall health, saying mobility can improve feelings of youthfulness, energy levels, sleep quality, and immunity.<sup>1</sup>

At the same time, the category's appeal is no longer limited to seniors. In fact, among the cohort of consumers who plan to improve their mobility in the next year, 39% are aged 35-44, and 31% are aged 25-34.<sup>2</sup> Indeed, different demographic groups have an interest in maintaining an active lifestyle—from young adults (who want to stay fit and healthy and prevent mobility issues later in life) to athletes (who want fast workout recovery and improved fitness) to senior adults (who want to stay active and maintain their independence). What they have in common is a desire to support healthy mobility for a better quality of life.

The good news is that there are innovative products and science-backed ingredients on the market that represent the future of this category, capable of enhancing supplements for consumer bases of all ages and lifestyles.

## PROMOTING JOINT INTEGRITY WITH COLLAVENT N2

Joint inflammation, generally caused by trauma or the aging process, and the subsequent degradation of cartilage are part of a cycle. As fragments of type II collagen are released into the synovia from the cellular matrix, the body produces an inflammatory response that can cause cartilage degradation. This then leads to the release of more collagen fragments and the cycle continues from there, compromising cartilage over time.



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How can we break this cycle? One possibility is through oral administration of small amounts of native type II collagen, initiating a mechanism of action called oral tolerance. Oral tolerance is the active process by which the immune system does not respond to an orally administered antigen.<sup>3</sup> This mechanism of action modulates the immune response towards fragments of type II collagen, yielding several positive effects.

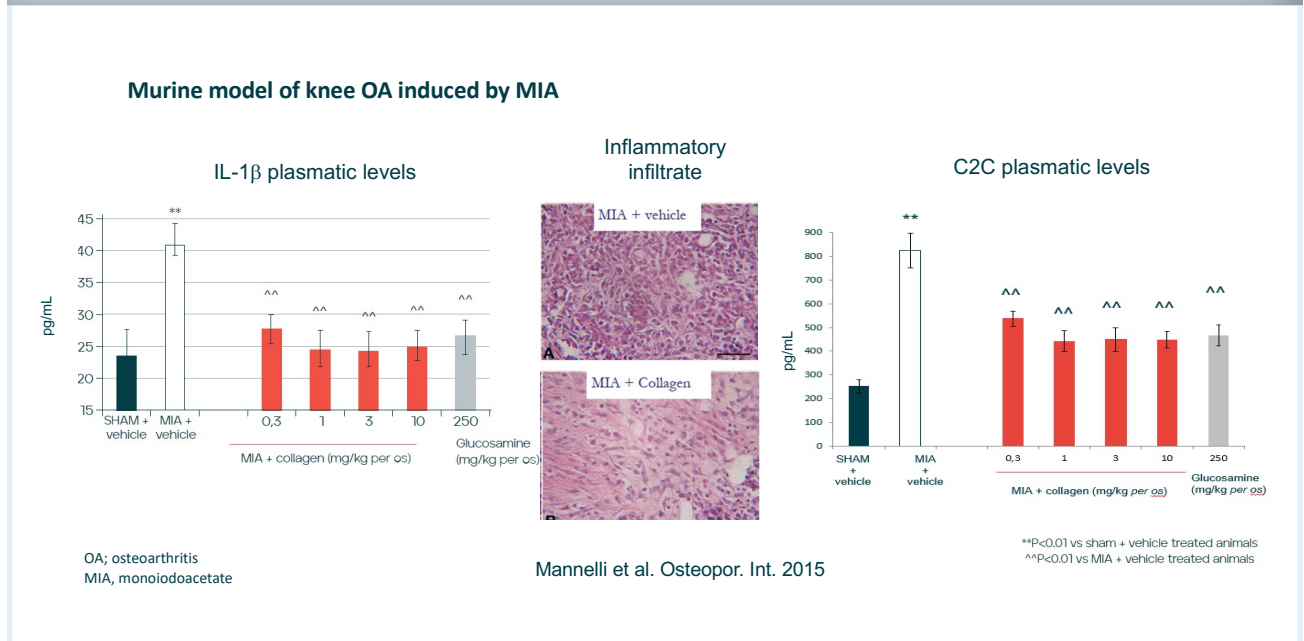
*Oral tolerance is the active process by which the immune system does not respond to an orally administered antigen.<sup>3</sup>*

Collavant n2 is a natural-origin ingredient sourced from chicken cartilage that contains native (undenatured) type II collagen. It can support joint health at a low dose of 40 mg/day – its proven benefits include the following:

**Healthy articular response\*:** One study showed that Collavant n2 can reduce inflammation as measured by plasmatic levels of interleukin-1 $\beta$  and the inflammatory infiltrate in articular cartilage. The results? Reduced collagen degeneration and improved overall mobility (**FIGURE 1**).<sup>4</sup>

**Cartilage support\*:** In a separate trial, participants with hand osteoarthritis (OA) who used Collavant n2 together with glucosamine and chondroitin sulfate over the course of one year showed enhanced cartilage protection, compared to those taking glucosamine and chondroitin sulfate alone, as measured by urine levels of CTX-II, a biomarker of collagen degradation (**FIGURE 2**).<sup>5</sup> X-ray exams also showed reduced cartilage destruction, what matches with a decrease in collagen degradation.

**FIGURE 1:** Reduces inflammation & collagen degradation



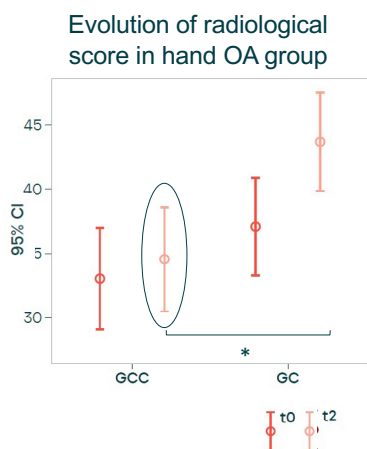
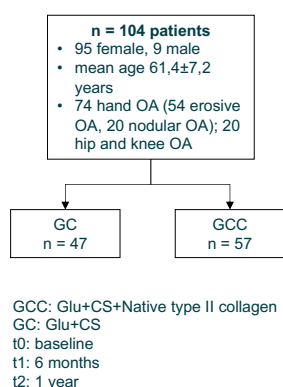
**Joint comfort\*:** In another study, oral administration of Collavant n2 reduced joint discomfort during walking and improved joint function (**FIGURE 3**).<sup>6</sup> In this particular study, both groups of participants were also treated with acetaminophen and the addition of Collavant n2 led to clinical improvement.

## INCREASING JOINT COMFORT WITH MOBILEE®

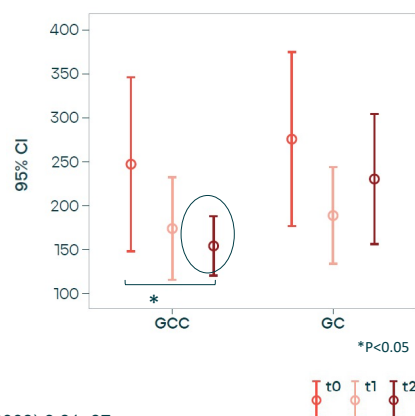
Hyaluronic acid plays an important role in the joints, helping to maintain the viscosity of synovial fluid. However, during the aging process, the body's concentration of hyaluronic acid progressively decreases, leading to discomfort and even OA.

**FIGURE 2:** Reduces cartilage degradation

### Observational retrospective 1-year follow-up study



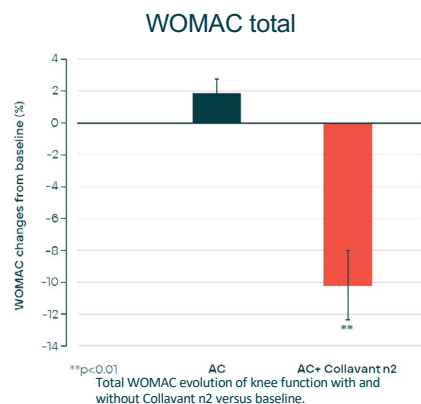
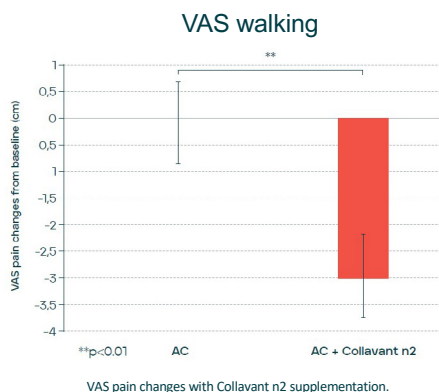
### CTX-II in hand OA group



Scarpellini, et al. J Orthopaed Traumatol (2008) 9:81–87

**FIGURE 3:** Improves mobility & reduces joint discomfort

### Randomized single-blind controlled clinical study with a three-month follow-up period



Bakilan et al. Eurasian J Med (2016); 48: 95-101

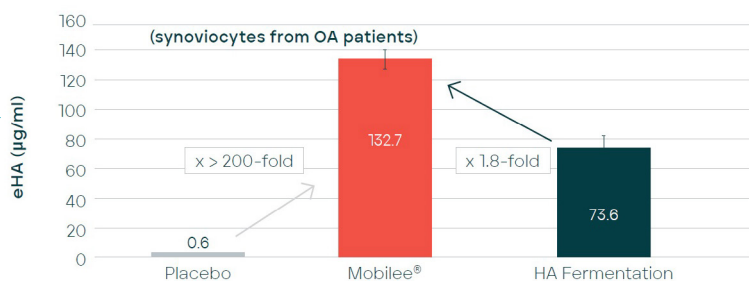
\*\*P<0.01 vs AC group  
^^P<0.01 vs baseline

Mobilee® is a hyaluronic acid matrix ingredient sourced from rooster comb for comprehensive mobility support. Its high concentration of naturally occurring hyaluronic acid (60 – 75%) works synergistically with polysaccharides (> 10%) and collagen (> 5%) to support the development of cutting-edge mobility products that simultaneously target joint and muscle health. Its benefits include:

**Supports hyaluronic acid synthesis:** One study found that supplementation of Mobilee® can increase the body's own production of hyaluronic acid better than supplementation via fermentation-origin hyaluronic acid (**FIGURE 4**).<sup>7</sup>

**Anti-inflammatory support\*:** Mobilee® can interfere with the inflammatory cascade at the joint level.<sup>8</sup> In fact, because

**FIGURE 4:** Increases the endogenous synthesis of hyaluronic acid



Effect of Mobilee® on endogenous synthesis of HA in human osteoarthritic synoviocytes after 24h

Torrent, A. et al. Osteoarthritis and Cartilage, 2009;17:S278-279

**Mobilee® increases endogenous HA secretion by more than 200-fold vs placebo and 1,8-fold vs fermentation HA**

**FIGURE 5:** Reduces synovial effusion and joint discomfort



Time evolution of the pain reduction (VAS).  
Sanchez, J. et al. Ann Nutr Metab, 2013;63:538

Daily consumption of a yoghurt supplemented with 80mg of Mobilee® significantly **reduced pain intensity** from the **second month** of treatment, compared to the placebo group.

of its effects on inflammation, Mobilee® was able to decrease joint pain from the second month of supplementation (**FIGURE 5**).<sup>9</sup>

**Healthy muscle function\*:** Using isokinetic assessment, researchers determined that three months of oral administration of a yogurt product containing Mobilee® in healthy individuals with knee discomfort provided improvements in muscle strength.<sup>10</sup>

## CONCLUSION

Mobility is becoming a key area of interest for consumers of all ages and abilities. To meet the needs of this shifting market, brands must source ingredients that are innovative, science-backed, and formulation-friendly. Collavant n2 native (undenatured) type II collagen and Mobilee® hyaluronic acid matrix ingredient are each effective on their own, targeting cartilage health and synovial lubrication, respectively. But they're also complementary, able to work together to provide a comprehensive approach to support mobility for young adults, athletes, and seniors alike.

## REFERENCES:

1. FMCG GURUS. Mobility Health Report. March 2021.
2. Ibid. FMCG GURUS. Mobility Health Report. March 2021.
3. Commins SP. Mechanisms of Oral Tolerance. *Pediatr Clin North Am*. 2015;62(6):1523-1529.
4. Mannelli LDC, et al. "Low dose chicken native type II collagen is active in a rat model of osteoarthritis" *Osteoporosis Int*. 2015;26:184.
5. M Scarpellini, A Lurati, G Vignati, et al. "Biomarkers, type II collagen, glucosamine and chondroitin sulphate in osteoarthritis follow-up: the 'Magenta osteoarthritis study'" *J Orthop Traumatol*. 2008;9(2):81-87.
6. F Bakilan, O Armagan, M Ozgen, et al. "Effects of native type II collagen treatment on knee osteoarthritis: a randomized controlled trial" *Eurasian J Med.*, 2016;48(2):95-1016.
7. Torrent A et al. "Comparative efficacy of IBOOO4 extracted hyaluronic acid (HA) and fermented HA on the synthesis of endogenous HA by human synoviocytes" *Osteoarthritis Cartilage*. 2009;17:S 278-279
8. Torrent A et al. "Anti-inflammatory activity and absorption of a natural rooster comb extract (Mobilee)" *Osteoarthritis Cartilage*. 2010;18: S266-267
9. Sánchez, J., Bonet, M.L., Keijer, J. et al. "Blood cells transcriptomics as source of potential biomarkers of articular health improvement: effects of oral intake of a rooster combs extract rich in hyaluronic acid" *Genes Nutr*. 2014;9(5):417
10. Martinez-Puig D et al. "Efficacy of oral administration of yoghurt supplemented with a preparation containing hyaluronic acid (Mobilee) in adults with mild joint discomfort: a randomised, double-blind, placebo-controlled intervention study" *Nutr Metabolism*. 2013;6:63-68

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*\*These statements have not been evaluated by the Food and Drug Administration or other competent food authorities. These products are not intended to diagnose, treat, cure, or prevent any disease. This information is only for business-to-business use and is not meant to be addressed to final consumers.*