Study on the CHONDROPROTECTIVE Effects of Hyal-Joint®

OBJECTIVE
To study the effects of Hyal-Joint® on the synthesis of cell-catabolism mediators prostaglandin E2 (PGE2) and metalloproteinase 1 (MMP-1) in cases of inflammation (interleukin 1b).
ABSTRACT

Increased synthesis of proinflammatory cytokines and proteases is produced in cases of rheumatic disorders (rheumatoid arthritis, osteoarthritis, etc.), with the resulting destruction of cartilage matrix.

Interleukin 1b is a proinflammatory cytokine that contributes to cartilage degradation. Among other things, it induces increased synthesis of prostaglandin E2 and metalloproteinase.

Prostaglandin E2 is directly involved in the mechanisms that trigger inflammation.

Metalloproteinase (MMP-1) is a collagenase that also causes cartilage degradation, given that it destroys collagen, a structural component of cartilage that gives strength and flexibility to the connective tissue.

A product capable of inhibiting prostaglandin synthesis or lowering MMP-1 levels could be an effective therapeutic aid for reducing inflammation, preventing the destruction of joint cartilage and curbing the evolution of arthritis.

CONCLUSION

The study showed that Hyal-Joint® can reduce inflammation because it significantly lowered PGE2 levels in fibroblast cells cultured under conditions similar to those of inflammation.

Furthermore, it showed a tendency to lower MMP-1 levels.

These results indicate that Hyal-Joint® may have chondroprotective effects.

CENTRE WHERE THE STUDY WAS PERFORMED

The study was performed by the company Advanced In Vitro Cell Technologies, S.L., which is located in the University of Barcelona Parc Científic.

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