

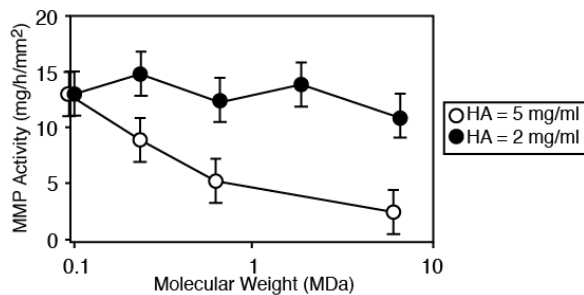
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PS78**EFFECT OF CONCENTRATION AND MOLECULAR WEIGHT OF HYALURONAN ON INTERLEUKIN-1-INDUCED METALLOPROTEASE ACTIVITY**

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Aim of Study: To determine the influences of the molecular weight and concentration of hyaluronan (HA) on interleukin-1 β (IL-1 β)-induced matrix metalloprotease (MMP) activity *in vitro*.



Methods: Confluent layers of rabbit synovial fibroblasts (HIG-82) were incubated for 48 hours in defined medium containing IL-1 β (100 pg/ml) with and without HA. Supernatant for each condition was assayed spectrophotometrically for MMP activity. To assess whether access of IL-1 β to its receptor was diffusion-limited, some studies were done in which HA was added 15 minutes after IL-1 β .

Results: At 5 mg/ml, addition of HA antagonized IL-1 β -induced MMP activity by a process that depended on HA molecular weight (N=4); no effect was seen at 2 mg/ml. Adding HA 15 minutes after IL-1 β did not alter its effectiveness in decreasing MMP activity.

Conclusions: High molecular weight HA at physiologic concentrations mitigates the activity of IL-1 β -induced MMPs. HA is effective in attenuating MMP activity when added either concomitantly with IL-1 β or after IL-1 β has initiated the degradative process.