

## TECH TIP

*Editor's Note: We have used cold compress therapy during the first 24 hours post-op for the past several years on all our orthopedic surgery cases. Our surgery technicians use hand compression rather than pneumatic compression as was used in this study. We feel it helps minimize post-op pain. This paper was given at the ACVS Symposium in 2012 substantiated our subjective assumption.*

### **Prospective Evaluation of Cold Compression Therapy On Postoperative Pain, Swelling, Range of Motion and Lameness Following Tibial Plateau Leveling Osteotomy**

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**Introduction:** Cold compression therapy (CCT), the use of cold therapy combined with intermittent pneumatic compression, is currently used in human medicine to treat postoperative pain, decrease swelling and improve limb function following knee surgery. Our objective was to determine the effect of CCT on postoperative pain, swelling, range of motion and lameness in dogs undergoing tibial plateau leveling osteotomy (TPLO).

**Materials and Methods:** Thirty-four dogs undergoing TPLO were included in the study and randomly assigned to one of two groups. Group 1 received CCT during the 24 hour postoperative period and group 2 received no CCT. Pain, degree of lameness, stifle range of motion and swelling were evaluated preoperatively, 24 hours, 14 days and 28 days postoperatively. Logistic regression and linear regression analysis were used to compare the measured variables.  $P < 0.05$  was considered significant.

**Results:** Treatment resulted in significantly lower pain scores ( $p=0.004$ ), decreased lameness ( $p=0.001$ ), increased range of motion ( $p=0.003$ ) and decreased stifle swelling ( $p=0.008$ ) 24 hours postoperatively. No difference in the outcome measures were observed at 14 and 28 days postoperatively.

**Discussion/Conclusion:** Our study supports the use of CCT as part of a multimodal approach to decrease pain and swelling and improve limb function in the immediate 24 hours following TPLO. The benefits of CCT reported here are likely related to the decrease in pain and inflammation and improved regional tissue perfusion achieved during the treatment period.

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