

# Dairy calf management practices following disbudding are a major driver for wound healing

Calves given additional milk recover faster and their wounds heal more quickly

By Caitlin Ford

**F**armers looking to improve pain management and wound healing following dairy calf disbudding procedures should pay attention to their animals' nutrition, according to University of Guelph research.

The research team, led by population medicine professor Dr. Charlotte Winder and PhD student Cassandra Reedman, studied calves after a standard cautery disbudding procedure where calves were given a local anesthetic and nonsteroidal anti-inflammatory drug (NSAID).

"We wanted to investigate the impact of nutrition on the recovery of these calves and also look at the effects of providing an additional dose of an NSAID," said Winder. "The amount of milk fed to calves on Canadian farms can be variable, and we wanted to see if the plane of nutrition and/or additional NSAID

Impacts of nutrition and NSAID on pain and healing time		
	Pain Outcomes	Healing Time
15 L milk per day*	Lower	Lower
2 Doses NSAID**	Lower	Higher

\* Versus 6 L/day

\*\* Versus 1 dose

affected pain and healing."

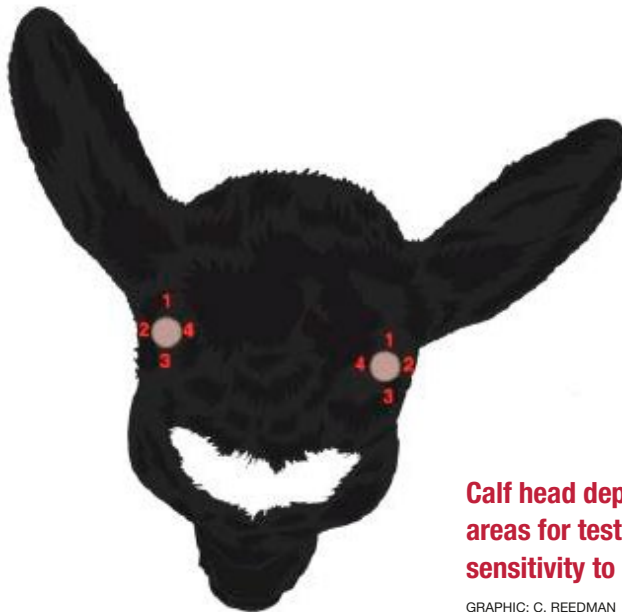
The team found that calves consuming a higher amount of milk (allowed up to 15 litres/day) healed more quickly than those limited to 6 litres/day. Winder said this finding could point toward best practices for dairy farmers caring for recovering calves.

For the second aspect of the project, calves were given either a standard single dose or two doses

of NSAID following disbudding. The researchers measured pain levels by recording how much time the calves spent lying or standing as well as the calves' response to pressure around the wounds.

Pain levels were lower among calves given two doses of NSAID, but their wounds took significantly longer to heal than among the single-dose group. Winder says that while reducing inflammation with NSAIDs can help manage pain, some inflammation is important to promote wound healing and recovery.

"The take-home message is that plane of nutrition likely affects many aspects of calf health and welfare," said Winder. "Drawing solid conclusions based on a single study is difficult. However, our findings showing improved healing were strong and show that there is a need for further work in this area."



Calf head depicting areas for testing sensitivity to pressure.

GRAPHIC: C. REEDMAN

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