

Diabetes Monitoring Device Benefits Man and Man's Best Friend

Device reduces stress of obtaining multiple blood samples, MU researcher says

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COLUMBIA, Mo. – The treatment of diabetes was revolutionized in 1922 when insulin was isolated from dogs. Since then, significant advances in human medicine have made diabetes more manageable for patients. Now, human medicine has returned the favor and used these advances to help dogs with diabetes. A University of Missouri researcher is using a continuous glucose monitoring device – commonly used in humans with diabetes – to help treat dogs and other animals. The device, which provides a detailed glucose picture of an animal over several days, will help pet owners manage their pets' diabetes.

“Our research has found that continuous glucose monitoring devices can be used in dogs, cats, cows and horses,” said Charles Wiedmeyer, assistant professor of clinical pathology in the MU College of Veterinary Medicine. “Use of this system alleviated the need for multiple blood samples. It also reduces the stress associated with obtaining those samples. This system may provide greater monitoring capabilities in animals with diabetes and promote the diagnostic and research potential of glucose monitoring in veterinary patients.”

The device, which is produced by the company, Medtronic, sits under the skin between the shoulder blades of an animal and records blood glucose data every five minutes. Monitoring the blood glucose levels can help veterinarians determine the proper dosage of insulin and how diet is affecting the animal's diabetes.

“Dogs with diabetes are similar to children with diabetes,” Wiedmeyer said. “Both rely on caregivers to manage their disease. Both have little control over their diet or when they receive insulin.”

Many of the symptoms of diabetes in dogs are similar to the symptoms in humans, including excessive water consumption, increased urination, or unexplained weight loss. For dogs, treatment typically involves insulin shots twice a day. Dogs get complications from diabetes, but they are not as severe as human complications, Wiedmeyer said. Older, female dogs and some breeds, such as schnauzers and poodles, are more prone to diabetes.

Wiedmeyer hopes that companies will start producing continuous glucose monitoring devices specifically designed for animals.

This summer, Wiedmeyer presented his findings at the Friends for Life: International Children with Diabetes Conference in Orlando, Fla. He has published his research in *Diabetes Technology and Therapeutics* and several veterinary journals.

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