

# Understanding Diabetes

An understanding of diabetes – including the symptoms and challenges it presents – can help sales rep better service their veterinary customers.

## As pets age, they face

several health issues, including diabetes. They typically show symptoms at around 7 years and up, according to Peter Hanson, DVM, PhD, director of research & development and medical affairs, Abbott Animal Health. Particularly as older pets become increasingly sedate and often overweight, they are at higher risk of developing the disease. Distributor sales reps can play an important role in ensuring their veterinary customers are supplied with solutions for diagnosing and treating their diabetic patients, as well as tools for educating their clients.

## About the disease

Veterinarians generally agree that obesity is a leading factor in the increase of diabetes in dogs and cats, according to Hanson. (Tremayne J., Education Key in Diabetes Maintenance, *Vet Practice News*, Nov 2009 (RPRT-010)) However, pet owners are not always aware that their pet is obese, he says. “In a recent study, 47 percent of veterinarians felt that their canine patients were obese, while only 17 percent of dog owners agreed,” he says. (Bound G., When Man’s Best Friend Is Obese, *WSJ*, Feb 2011)

There are two types of diabetes: type 1 and type 2. Type 1 diabetes occurs from a shortage of insulin, while type 2 diabetes results from impaired insulin production or an incorrect response to the insulin. “Dogs most often get type 1

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diabetes,” says Hanson. “In dogs, obesity may lead to long-term pancreatitis, which in turn impairs islet cells and leads to diabetes.

“Cats most often get type 2 diabetes,” he continues. “Particularly in cats, obesity can lead to insulin resistance and an overproduction of insulin. Prolonged overproduction of insulin causes increased demand on the islet cells in the pancreas that produce insulin. Over time, this leads to damaged cells or cell death, which may result in a shortage of insulin.”

Once a dog is diabetic, it typically requires insulin for life. However, proper weight and diet can reduce the insulin required and improve glucose control, says Hanson. “In cats,

there is a greater likelihood that changes in diet can reverse the insulin resistance, and cats enter remission if diagnosed early and aggressive intervention is started,” he adds.

Common signs of diabetes include:

- Excessive drinking.
- Excessive urination.
- Increased appetite.

“Often, there is weight loss, even with the increased appetite,” says Hanson. “If the disease has been present for a while, cataracts of the eyes may occur in dogs. In cats, diabetic neuropathy may present. In either species, diabetic ketoacidosis can be a life-threatening complication of untreated diabetes.”

## Screening and monitoring

Screening and early detection of diabetes can help veterinarians prevent the disease from progressing to a severe state. Uncontrolled diabetes may result in cataracts, severe metabolic disorders, such as ketoacidosis, depression, inappetence, coma and sometimes death. And, as the disease progresses, it can be more costly to treat.

The most common screening test is for blood glucose. “Cats may have elevated blood glucose if they are stressed,” says Hanson. “With dogs and cats, a single high blood glucose result may be followed with a repeat test after the animal has fasted. Persistent hyperglycemia with levels >200 mg/dL in dogs and >250 mg/dL in cats is consistent with diabetes. Persistent glucose in the urine is typically a confirmatory diagnostic for suspected diabetes. Additionally, fructosamine can be run to evaluate the average blood glucose readings over the past few weeks.

“Ideally diabetic dogs and cats should be monitored daily, one to three times per day, to allow proper adjustment of insulin doses,” he says. “People with diabetes check their blood glucose levels throughout the day to

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ensure they are maintaining proper glucose levels through diet and insulin therapy. Pets are the same. Their blood glucose levels rise and fall through the day based on diet, activity, insulin dose, and other factors. To ensure the right dose of insulin is being given requires regular monitoring of blood glucose.

“Handheld blood glucose monitors that require only a drop of blood have made home monitoring easy,” Hanson continues. It is important to use a meter that is calibrated for use in dogs and cats, he says. “Human meters underestimate blood glucose in dogs and cats because glucose is distributed differently in the blood and blood cells between species.” Accurate blood glucose monitoring – along with proper diet and insulin therapy – permit veterinarians to control their patients’ diabetes and reduce secondary complications, usually at a minimal cost to the pet owner, he adds.

### Working with customers

Distributor sales reps looking to initiate a discussion about diabetes with their customers might do so by asking several probing questions, such as the following:

- “Doctor, how many patients do you see who are at risk for diabetes?”
- “How do you screen these patients?”
- “How do you address diabetes with your clients and educate them on the signs of the disease?”

- “Does your staff utilize a designated technician who can initiate diabetes discussions with owners of recently diagnosed pets?”
- “How do you manage a diabetic patient in the hospital?”
- “What is your approach to glucose curves and interpretation?”
- “Do you discuss home monitoring as an option with your clients?”

While many veterinarians and their clients appreciate the convenience of home monitoring, some veterinarians may initially be uncomfortable with their clients’ role in regulating their pet’s blood glucose levels, says Hanson. However, a number of texts and protocols now exist to guide this, he says. “There may be concern that the client is not capable of getting a blood sample for home monitoring,” he says. And, some clients might be tempted to make decisions about adjusting insulin dose without first consulting with their veterinarian.

“It is important [for sales reps] to find out if there is a diabetes champion in the practice who understands the benefit of home monitoring and other management practices,” he says. “This champion can instruct the client on diet, exercise and easy techniques to get a blood sample for home monitoring. Proper training is [also] key for the owner to understand the need to share blood glucose levels with the practice before adjusting insulin levels.” ■