

## **Diabetes – not just a disease of people**

Is your dog or cat doing any of the following – excessive drinking, passing large volumes of urine often, excessive eating with weight loss? They can be early warning signals of a serious disease: diabetes.

### **What is diabetes?**

Just like humans, dogs and cats can also get diabetes. Diabetes occurs when there is persistent high blood sugar – this can either be caused by insufficient insulin production (type 1) or insulin resistance (type 2).

Dogs are often affected by type 1 diabetes, where there is destruction of the cells in the pancreas that normally produce insulin. This could be due to genetics in some breeds or secondary to another underlying disease.

Cats tend to get type 2 diabetes, where for some reason the body cells cannot respond to the insulin produced. This creates a chronic high demand for insulin and eventually the pancreas is “worn out”.

### **What is insulin?**

Produced in the pancreas, insulin has an important role in controlling blood glucose levels. Insulin is released when there is an increase in blood glucose, after a big meal for instance. Insulin activates cell receptors allowing them to uptake glucose to be converted into energy. Without insulin, body cells become starved of glucose despite abundant glucose in the blood stream.

### **Risk factors**

Diabetes commonly occurs in dogs around 7-9 years of age and in cats around 10-13 years of age. Some dog breeds such as miniature poodles, Dachshunds, Schnauzers, Cairn Terriers and Beagles are more prone to getting diabetes. In cats, Burmese are more prone to diabetes. Other risk factors for diabetes include obesity, certain drugs and diseases such as immune mediated diseases, pancreatitis, and hyperadrenocorticism.

### **How is diabetes diagnosed?**

To diagnose your pet with diabetes, your veterinarian will perform several tests including blood glucose curves and a glucose urine test. For a blood glucose curve, a series of blood samples will be measured over 12 -24 hours. Multiple samples are needed because blood glucose fluctuates during the day due to many factors such as stress, food intake and activity level. A urine sample can be tested for the presence of glucose which indicates that the level of blood sugar going through the kidneys is so high that it is “spilling over” into the urine.

### **Treatment**

Diabetes cannot be cured but it can be managed with a combination of diet changes, weight management and medication. Research has shown that dogs may benefit from a high-fibre,

complex-carbohydrate diet whereas in cats a high-protein, low-carbohydrate diet should be given. Obese animals should have their weight reduced. The gold standard for diabetes control is insulin injections. It can take some time to work out the correct insulin dosage by performing blood glucose curves and closely monitoring clinical signs such as urination and drinking.

### **Complications of diabetes**

Ketoacidosis is a serious medical condition when the body breaks down fat for energy resulting in accumulation of ketones which are toxic to the central nervous system. As in humans, cataracts can occur in dogs leading to reduced visibility. Diabetic animals are also more prone to getting bacterial and fungal infections in different body systems.

As diabetes can lead to more serious complications, please bring your pet in to Cowra Veterinary Centre if they are showing any of the clinical signs described above. Remember, with proper management, diabetic pets can have a good quality of life!