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PET DIABETES HELPSHEET:

Glucose Curve

Sampling for Glucose Curves

Interpreting Glucose Curves

Glucose Curve Worksheet

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Sampling for glucose curves

ADMISSION:

Admit the dog or cat first thing before eating and receiving Caninsulin® or immediately after eating and receiving Caninsulin at home. Be sure to ask the owner how their pet is getting on and review any records they keep at drop-off. After admission, it's important that the dog or cat keeps to the same meal and exercise routine as at home. Body weight should be measured and recorded.

BLOOD SAMPLING:

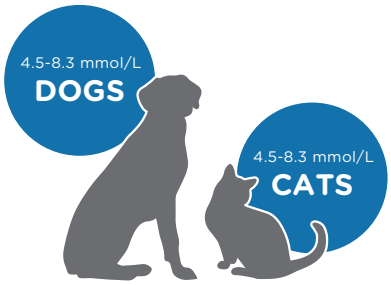
Measure blood glucose at least every 2 hours. Ideally, continue for 9-12 hours. If blood glucose falls below 8.3 mmol/L, consider checking hourly.[1]

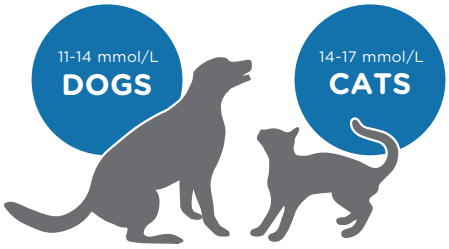
After starting treatment or a dosage change, allow at least 7 days before assessing and making further changes (unless there is evidence of low blood glucose).

CHART:

Plot the blood glucose concentrations against time. Look at the pattern of the values before connecting with lines. Remember that there is considerable variation in insulin curves between days even in an individual dog or cat.

Ideal nadir or lowest blood glucose after insulin administration:





Determine the duration of activity. This is the time between insulin injection and when blood glucose returns to baseline i.e. >11-14 mmol/L for dogs or >14-17 mmol/L for cats

In dogs, if the dose is sufficient but blood glucose is still

2x/day
insulin injections may be required

NOTE: Capillary blood samples can be taken from the lateral ear margin in cats or lip fold in dogs. Alternative sites include the pisiform pad or elbow callus. To minimize variability either capillary or venous samples should be taken.

1. Feldman EC, Nelson RW. Diagnostic tests to consider for the evaluation of insulin resistance in diabetic dogs and cats. In. Canine and Feline Endocrinology and Reproduction, 3rd ed. St. Louis, MO: Saunders; 2004. p. 526.

Caninsulin® contains 40 IU/ml of Porcine insulin present as 35% amorphous Zinc insulin and 65% crystalline Zinc insulin, and is indicated in cases of diabetes mellitus in dogs and cats.

Legal category: ROI POM NI POM-V

For further information about side effects, precautions, warnings and contra-indications please consult the product SPC, packaging, leaflets or:
MSD Animal Health, Red Oak North, South County Business Park, Leopardstown, Dublin 18, Ireland. Tel: +353 (0)1 2970220.
Email: vet-support.ie@msd.com Web: www.msd-animal-health.ie

Use medicines responsibly.

SA-20-226 GLUCOSE CURVE. IE-CAN-201200002. JAN 2021.

MSD Animal Health

PET DIABETES HELPSHEET:

Glucose Curve

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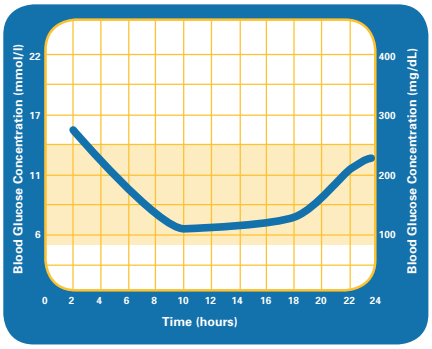
Interpreting Glucose Curves

Evaluate the glucose curve and compare it to the charts below before revising your treatment plan.

Serial glucose curves are a useful tool in the providing back-up information in diabetic dogs and cats to support the evolution of clinical signs during insulin treatment. They are vital in investigating poorly regulated and unstable diabetics.

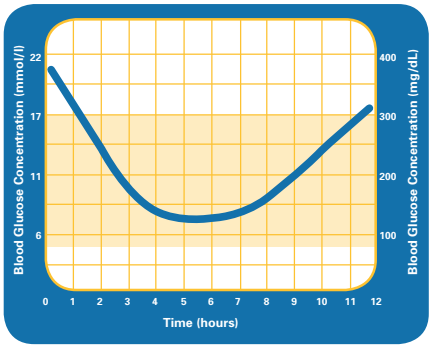
These charts show the curves you would expect to find in a diabetic dog and cat that have little or no clinical signs as well as 4 problem scenarios. Most of the examples below are plotted against over 24 hours but can be easily adapted to a 12-hour timeline. Note: Insulin given at time=0

Ideal Blood Glucose Curve: Once Daily Dosing in a Dog



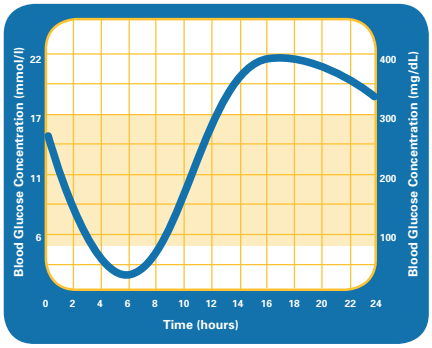
A stable diabetic dog maintains a blood glucose range of >4.5-14 mmol/L or >81-252 mg/dL for most of a 24-hour period. The renal threshold in the dog is 11-14 mmol/L or 200-252 mg/dL.

Ideal 12-hour Blood Glucose Curve: Twice Daily Dosing in a Cat



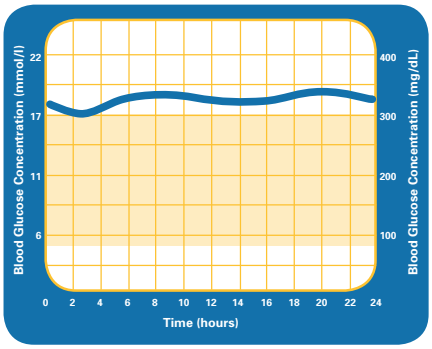
Ideally, the blood glucose should be >4.5-17 mmol/L or >81-300 mg/dL for the majority of the day.[2] The renal threshold in the cat is 14-17 mmol/L or 252-300 mg/dL.

Glycaemic instability



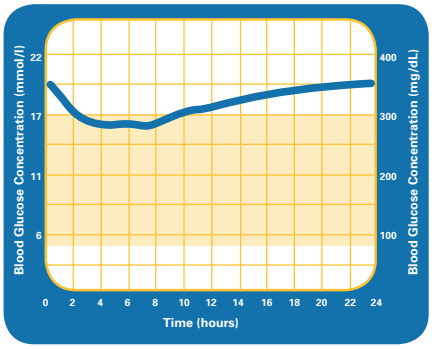
Action: If you document, see clinical signs of or suspect hypoglycaemia (e.g. prolonged hypoglycaemia in a previously responsive dog or cat): for dogs, decrease dose by 50% or more and for cats, decrease dose by 50% or return to starting dose of 1 or 2 IU/cat twice daily, whichever is lower. You may need to go back to the starting dose if the current dose is higher than 1.5-2.2 IU/kg.

Insulin Resistance



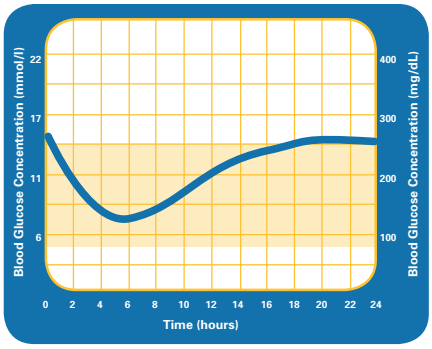
Action: Investigate cause, eg, concurrent disease, diabetogenic drugs, human factors, insulin storage and/or insulin dosing (see **Diagnostic Tests to Consider**. Consideration should be given to glycaemic instability, which can present as persistent hyperglycaemia or fluctuating blood glucose for a few days following the hypoglycemia (see **Glycemic instability**).

Insufficient Insulin Dose



Action: Differentiate from insulin resistance and glycaemic instability in dogs and cat and stress hyperglycaemia in cats before carefully and gradually increasing the insulin dose.

Short Duration of Insulin Action: Once Daily Dosing in a Dog



Action: If the duration of action is less than 14-16 hours, decrease once daily dose by 25% and administer this new dose twice daily.

NOTE: Cats need TWICE daily dosing.

PET DIABETES HELPSHEET:

Glucose Curve

Glucose Curve Worksheet

Date: _____ Pet Owner's name: _____

Pet's Name: _____

Age: _____ Sex: _____ Weight: _____ Neutered (please select one): Yes ◯ No ◯

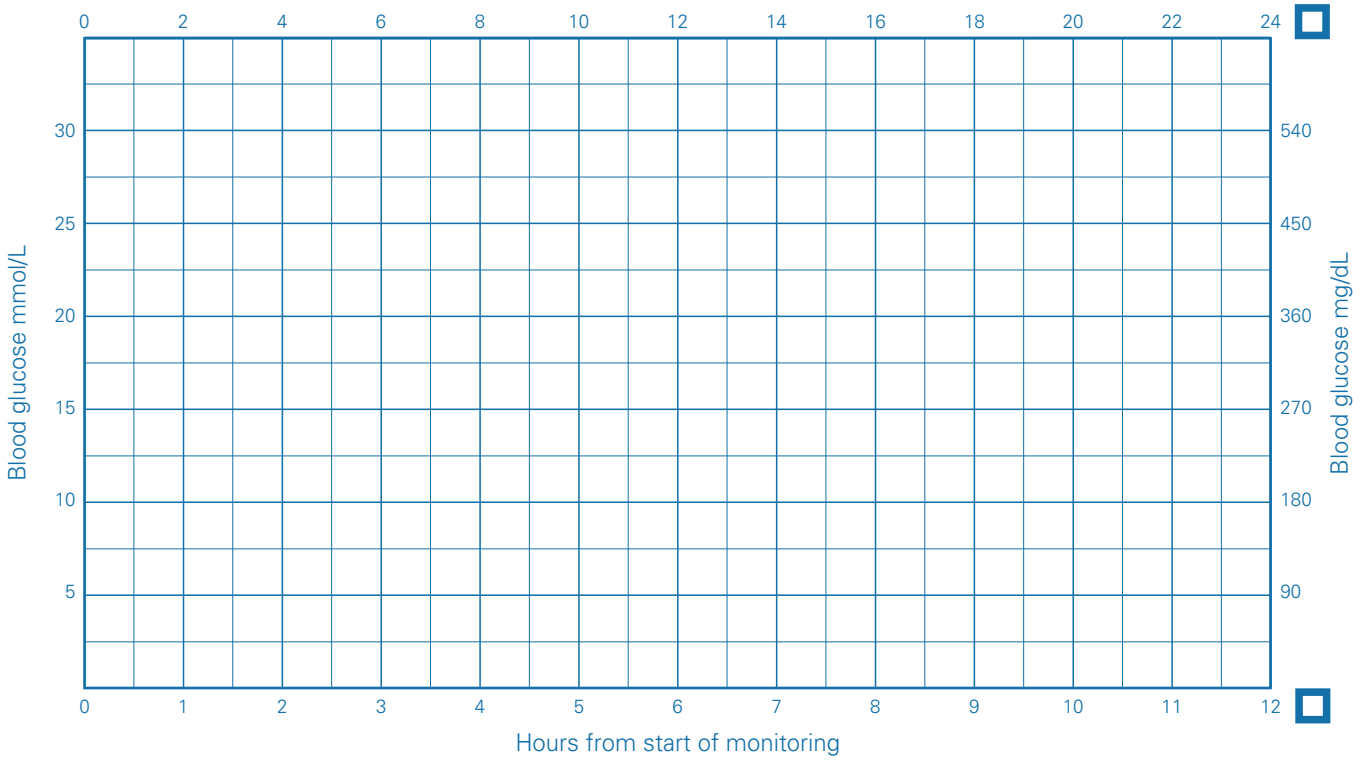
Breed: _____ Feeding time: _____

Body condition (please select one)*: 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯

*1 = very thin, 2 = underweight, 3 = ideal weight, 4 = overweight, 5 = obese (score out of 5)

Please record time of injection(s) on the chart

Please select timescale used



Units of Caninsulin Administered: _____ IU Time Glucose Curve started: _____ a.m. _____ p.m.

Time of Insulin administration: _____ a.m. _____ p.m. Time fed: _____ a.m. _____ p.m.

Comments: _____