

# How to perform a glucose curve at home



Par Dre Avril Hamel-Jolette, DMV, Dipl. ACVIM (M.I)

The glucose curve is an essential tool for the management of your pet's diabetes. If your diabetic pet is very stressed during his visits to the hospital, your veterinarian might ask you to perform a glucose curve at home. In this case the curve will be more representative of the pet's glucose level in his normal environment. Another advantage of doing the home glucose curve is that it will help reduce the overall cost of managing your pet's diabetes. With a demonstration performed by an animal health technician and a bit of practice, you will be comfortable with this procedure before you know it! *Please follow your vet's recommendations and avoid making changes to your pet's insulin dose without professional advice.*

## The glucometer :

Until recently, human glucometer were used to monitor pet's sugar level (glycemia). However, many studies have shown that the human glucometers are not very accurate for animals. The glycemia is often underestimated at low levels (i.e. the glycemia read by the human glucometer is lower than the actual value). This inaccuracy is due to the fact that each specie has a different concentration of glucose in their red blood cells and serum. Glucometers specifically calibrated for dogs or cats are now available on the market and their accuracy is improved. The ALPHA-TRAK meter by Abbott is a good option and is available by the intermediary of a veterinarian. You may consult their website for more information and useful videos. [www.alphatrakmeter.com](http://www.alphatrakmeter.com).

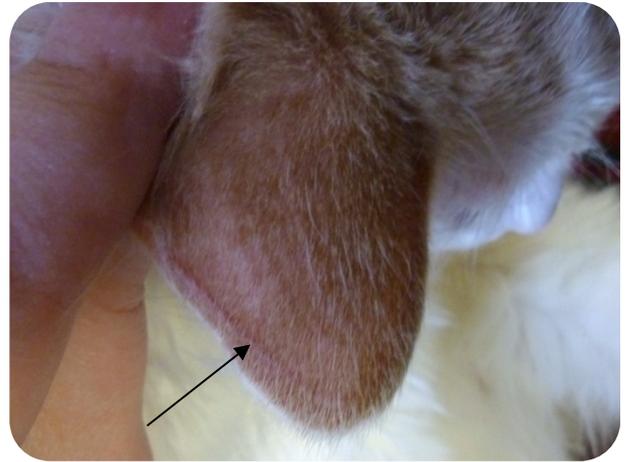


## Material :

The glucometer will come with a starter kit. It usually contains strips, lancing device, lancets and an instruction manual. You can also look-up their website for a tutorial video.

## The blood sample:

A drop of blood can be obtained from different sites, but the easiest most accessible location is the ear's marginal vein (arrow). A blood drop can also be obtained from other sites such as the non-weight bearing footpad, the callous of the elbow (dog only) or even the inside of a lip (dog only).



## The procedure step-by-step :

- 🐾 Make sure that you have all the material ready next to you in order to be efficient and to avoid starting over. Here is the list of the material you need:
  - Glucometer
  - Strips (make sure they are not expired)
  - Lancing device and lancets or a needle
  - Petroleum jelly (Vaseline)
  - Gauze or a cotton ball (to apply pressure on the puncture site after you're done)
- 🐾 Place the lancet in the lancing-device
- 🐾 Now it's time to get your pet
- 🐾 Identify the marginal ear vein. You can use a bright light to help localise the vein.
- 🐾 Apply a very thin layer of Vaseline on the ear vein, by rubbing gently. Rubbing will activate the circulation. Vaseline will help keep the drop formed and avoid it from spreading in the fur.
- 🐾 Poke the vein with a landing device or needle.
- 🐾 Insert the strip in the glucometer and touch the drop of blood with the strip.
- 🐾 A glycemia value will show in a few seconds.
- 🐾 Apply pressure on the punctured site for a few seconds with gauze or a cotton ball to stop the bleeding.
- 🐾 Don't forget to note the time and the glucose value on your chart.



## The glucose curve :

- 🐾 Take your pet's glycemia just before giving his meal and insulin. This value is very important.
- 🐾 Note the meal time and the insulin dose administered.
- 🐾 Take the glucose level every 2 hours for the next 12 hours (or the frequency recommended by your veterinarian). Note the time and value of each glycemia.
- 🐾 Consult with your veterinarian with this data. The data combined with your pet's clinical signs at home will help the veterinarian decide if the treatment needs to be modified.
- 🐾 Example: Here are the results of Fido's blood sugar taken every 2 hours. He received 6 units of Caninsulin at 8:10am and 8:05pm.

Time	Glycemia (mmol/L)
8	16,4
10	13,1
12	10,0
14	8,2
16	11,3
18	13,1
20	15,7

## Additional information required:

It's very important to inform your veterinarian with your pet's condition at home.

- 🐾 Appetite (normal, increased or decreased?)
- 🐾 Water consumption and urination (normal or excessive?)
- 🐾 Energy level

Your veterinarian will also need your pet's current weight. With this information, in addition to the glucose curve, treatment recommendation can be made (increase, decrease or maintain the insulin dose or even change the type of insulin).

With all these tools you will be able to perform a glucose curve at home. However, if you don't feel comfortable, please do not hesitate to ask for advice or for another demonstration!