

## “The Difficult Diabetic”

There are four main reasons for a diabetic cat or dog being difficult to stabilise, these are:

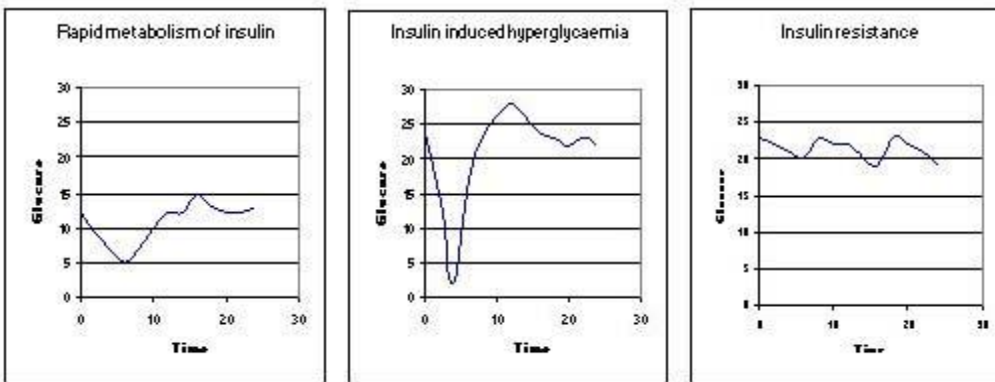
- Problems with the insulin/administration or routine
- Rapid metabolism of insulin
- Insulin induced hyperglycaemia (*Somogyi overswing*)
- Insulin resistance

An initial thorough history can often ascertain if the problem is due to the first of these causes. Some important questions include:

- Insulin - is it the right type? In date? Has it been stored correctly? Mixed gently?
- Syringes - correct ones?
- Examine the injection site for any reaction and check injection technique
- Is the owner still feeding the prescribed diet?

- In dogs, is exercise regular?

If no cause has been identified perform a glucose curve



### Rapid Metabolism of Insulin

- Usually seen in patients on once daily lente which it is not lasting 24 hours
- Action: change to twice daily injections

### Insulin Induced Hyperglycaemia = Somogyi overswing

- The dose has often been increased too rapidly, causing hypoglycaemia, compensatory mechanisms then lead to hyperglycaemia. NB morning glucosuria is noted but an increase in dose would make the problem worse.
- Action - reduce insulin dose to a starting dose

### Insulin Resistance

- Insulin resistance is defined as a dose > 2.2 iu/kg
- There is no response to insulin. NB. This pattern can also occur on lower doses during stabilisation i.e. before insulin 'kicks in'.
- Action: increase dose to attain best stability whilst looking for an underlying cause
- NB High doses of insulin are not dangerous in resistant animals but it does indicate the presence of a concurrent problem.
- Some causes of insulin resistance include:
  - Problems with the insulin
  - Obesity

- Progesterone in entire females
- Infection, especially urinary, dental
- Steroids/Hyperadrenocorticism
- Acromegaly
- Pancreatitis/EPI
- Hypo or hyperthyroidism
- Anti-insulin antibodies
- Renal/ or hepatic disease
- Stress in cats causes apparent resistance