**ORAL GLUCOSE TOLERANCE TESTING**

For the detection of small intestinal malabsorption syndromes (this test has no relevance to large intestinal disease such as parasitism) or for insulin resistance (Cushing’s disease and/or equine metabolic syndrome).

**Protocol**

- 12 hour fast prior to testing (allow water)
- Take ‘baseline’ oxalate-fluoride blood sample
- Give 1g/kg glucose as warm 20% solution by stomach tube (ie. 250g in 1250ml for 250kg, 500g in 2500ml for 500kg)
- Take oxalate-fluoride bloods hourly for 5-6 hours (or just once at 2 hours gives reasonable interpretability)
- Analyse samples for glucose and plot graph

**Interpretation**

‘Normal’ response is an approximate doubling of baseline blood glucose at 2 hours post-dosing. However, severely hypoalbumenaemic (<15 g/L) cases may have depressed peaks (?due to bowel oedema) in the absence of small intestinal pathology. Often therefore, normal horses peak between 90-150 minutes and the peak may only be 60-70% above baseline. A normal response is quite reassuring of small intestinal absorptive function.

A ‘partial malabsorption’ (15-65% rise) is often significant and merits a retest at a later date.

A ‘total malabsorption’ is regarded as a no greater than 15% rise in blood glucose at 2 hours post-dosing. This is almost always a highly significant finding leading to a poor prognosis although occasional cases of total malabsorption have been known to improve.

‘Insulin resistance’ is indicated by a high peak (often > 2.5x baseline) and a prolonged return to baseline (often > 6-7 hours). This is a common finding in horses with Cushing’s disease and/or so-called equine metabolic syndrome.