Postprandial glycemia in cats fed a moderate carbohydrate meal persists for a median of 12 hours — female cats have higher peak glucose concentrations

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Abstract

The postprandial increase in glucose concentration is typically not considered in selecting diets to manage diabetic and pre-diabetic cats. This study describes increases in glucose and insulin concentrations in 24 clinically healthy, neutered adult cats following one meal (59 kcal/kg) of a moderate carbohydrate diet (25% of energy). Median time to return to baseline after feeding for glucose was 12.2 h (1.8–≥24 h) and for insulin was 12.3 h (1.5–≥24 h). Time to return to baseline for glucose was not different between male (10.2 h) and female (17.2 h) cats. There was evidence female cats had a longer return to baseline for insulin (18.9 h versus 9.8 h) and females had higher (0.9 mmol/l difference) peak glucose than males. This demonstrates that the duration of postprandial glycaemia in cats is markedly longer than in dogs and humans, and should be considered when managing diabetic and pre-diabetic cats.