

Switching from Insuvet to Caninsulin

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This information is designed to act as a guide for veterinary surgeons wishing to transition diabetic cats and dogs from bovine insulin (Insuvet) to porcine insulin (Caninsulin, Intervet-Schering-Plough Animal Health), and are the opinions of the authors. This guidance is designed to be used alongside the Summary of Product Characteristics (SPC) and datasheet recommendations for Caninsulin. However, it is the responsibility of the attending veterinary surgeon to determine the optimal treatment protocol for the particular case in question.

Remember that the concentration of Insuvet is 100 units/ml, whereas Caninsulin contains 40 units/ml. Please use U40 syringes, which are designed for Caninsulin administration, when you switch to Caninsulin.

Definitive recommendations applicable to all cases cannot be given - each case must be managed on an individual basis. The characteristics of an insulin product are unique to any animal. When changing the insulin product, the initial aim is to avoid hypoglycaemia without precipitating a relapse in clinical signs (polyuria-polydipsia, polyphagia and weight loss). Owners should be warned of both possibilities. How to alter the dose of Caninsulin when switching from bovine insulin will be dependant on the degree of diabetic stability coupled with the ability to monitor glycaemic control (both clinically and biochemically) and in particular hypoglycaemia.

This information is supplementary to the SPC; all other product information should be read in conjunction with the protocol.

A. STABLE DIABETIC CATS & DOGS

Cats & Dogs deemed stable on Insuvet Lente or Insuvet PZI

- » Caninsulin and Insuvet Lente (bovine lente insulin) are pharmacologically similar.
- » When switching from Insuvet Lente, administer Caninsulin at the same frequency as the previous insulin (i.e. once or twice daily).
- » Consider reducing the dose - the degree will depend on both current glycaemic control and the ability of the veterinary surgeon and/or owner to monitor blood glucose concentration.
- » If diabetics on Insuvet Lente have marked variation between their pre-insulin and nadir blood glucose concentration and/or fructosamine values within or just above the reference range, it is

prudent when switching to Caninsulin to reduce the dose per injection by 10-30%.

- » Cats and dogs on Insuvet Lente with minimal variation in their blood glucose concentration through the day and/or relatively elevated fructosamine values can potentially be switched to Caninsulin without a dose reduction.
 - » Caninsulin and Insuvet PZI (bovine protamine zinc insulin) have different pharmacokinetic characteristics - Insuvet PZI generally has a longer duration of action.
 - » When changing from Insuvet PZI twice daily, give Caninsulin twice daily and consider adjusting the dose as outlined above.
 - » When swapping from Insuvet PZI once daily, inject Caninsulin twice daily - it is suggested to halve the original dose and then reduce the dose per injection by a further 10-30%.
 - » Monitor for hypoglycaemia.
 - » Monitor for relapse of clinical signs, especially increased thirst.
 - » Re-assess the cat or dog after 5-7 days on the initial dose of Caninsulin or sooner if hypoglycaemia is suggested or documented.
 - » Undertake serial blood glucose measurements for 12-24 hours & plot a glucose curve.
 - » Regulate the dose and frequency of Caninsulin accordingly and as per the SPC/datasheet.
- B. UNSTABLE DIABETIC CATS & DOGS**

- » For dogs and cats undergoing initial stabilisation, re-start with Caninsulin at the initial dose as indicated in the SPC/datasheet and/or accompanying product support literature.
- » The same is recommended for cats & dogs that are unstable on their current insulin but, in addition consideration should be given to possible underlying causes & investigation should be conducted accordingly.

C. DIABETIC KETOACIDOSIS (DKA)

- » Soluble insulin remains the product of choice for these cases.
 - » Caninsulin is NOT an appropriate product for the management of DKA.
 - » The licensed veterinary product is Insuvet Neutral (soluble bovine insulin) but, if this is unavailable, soluble recombinant human or soluble porcine insulin are appropriate alternatives.
- IMPORTANT!**

Remember to ensure that owners only use Caninsulin U40 syringes with Caninsulin; they should be advised to discard their previous U100 syringes. Caninsulin syringes are clearly marked to avoid confusion.

For further advice, please contact Intervet-Schering-Plough Animal Health's Veterinary Support Group on 01908 685685

Footnotes:

1. It is the opinion of the authors that Caninsulin provides better glycaemic control in diabetic dogs when administered by subcutaneous injection every 12 hours versus once every 24 hours. The SPC/data sheet recommendation for diabetic cats is that Caninsulin should be administered every 12 hours. Ultimately, however, it is the responsibility of the attending veterinary surgeon to decide upon the protocol for an individual case.

2. For example, a diabetic dog on 20 units of Insuvet PZI once every 24 hours should be switched to 7-9 units Caninsulin once every 12 hours, depending on previous glycaemic control and the ability to monitor blood glucose after the change.