Diabetes mellitus in dogs is an endocrine disorder characterized by persistently elevated blood glucose levels. Diabetes can result from deficiencies or loss of pancreatic beta cells, or resistance to the action of insulin in the tissues. The clinical signs can include polyuria, polydipsia, polyphagia and weight loss.

Studies of diabetes risk in a range of species have suggested that multiple antibiotic courses and/or prior glucocorticoid treatment may increase diabetes risk.

This study explored glucocorticoid use and antibiotic use as risk factors for the development of diabetes mellitus in some key dog breeds using information from anonymised veterinary clinical records from the VetCompass™ Programme.

The frequency of exposure for glucocorticoids in the 6 weeks prior to diabetes mellitus diagnosis was documented in 50.1% of cases and 42.9% of controls.

Exposure to glucocorticoids and antibiotic use as risks for disease

**Diabetes mellitus**
- West Highland White Terriers: 6.8% of cases
- Tibetan Terriers: 20.7% of cases
- Border Collies: 20.0% of cases
- Cocker Spaniels: 0.0% of cases
- Cavalier King Charles Spaniels: 1.3% of cases
- Cairn Terriers: 1.3% of cases
- Spaniels: 2.0% of cases
- Spaniels: 0.0% of cases
- West Highland White Terriers: 3.6% of controls
- Tibetan Terriers: 13.6% of controls
- Border Collies: 3.5% of controls
- Cocker Spaniels: 0.0% of controls
- Cavalier King Charles Spaniels: 3.3% of controls
- Cairn Terriers: 0.0% of controls
- Spaniels: 1.3% of controls

**Exposure to antibiotics**
- Dogs receiving multiple antibiotic courses and diabetes mellitus risk.

**Conclusions**
- Further work is required to further understand the mechanisms involved in the development of diabetes mellitus.
- There was a clear association between multiple antibiotic courses and diabetes mellitus risk.
- Doses prescribed of at least one unique antibiotic accounted for 13.8% of cases and 12.1% of controls.