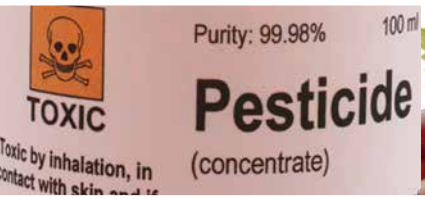
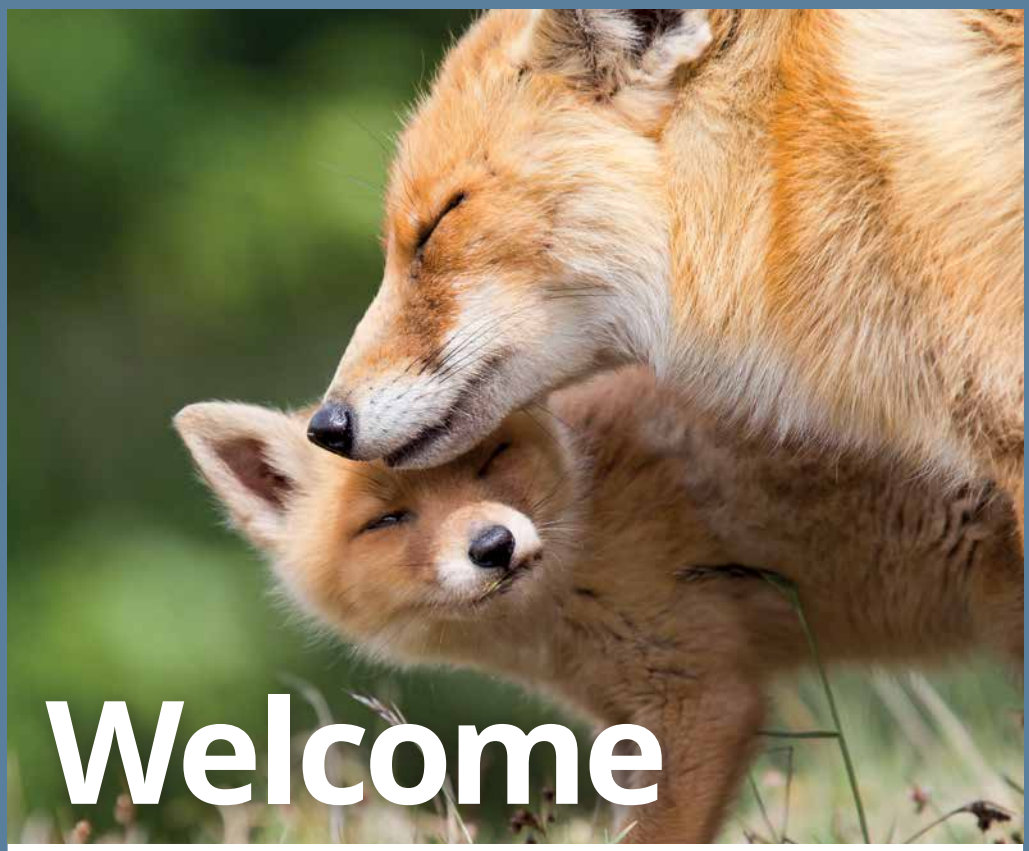
Toxic Times

SPRING 2016 ISSUE







Welcome

Welcome to the Spring edition of Toxic Times.

Most importantly, please note that our telephone number has changed

The 24 hour emergency number is now 0207 3 055 055

The admin number: 0207 294 7561
The fax number: 0203 538 6639

In this issue, there is an article on some of the dietary supplements found in households today, to which animals can be exposed.

We also discuss the issue of whether it is always appropriate to make an animal vomit, aimed at preventing over-treatment in poisoning cases.

Some unusual and interesting cases are also presented; we are always keen to hear your cases, irrespective of whether you needed to call us at the time, so if you have a case that you would like to share, or which had any out of the ordinary features, let us know via our email address, **info@vpisglobal.com** or use the Report A Case facility on our website **www.vpisuk.co.uk**

The CPD dates for the year are listed; these days are always a good way to keep up to date with toxic doses and the recent developments in the treatment of poisoning, whilst learning of the newer agents to which animals may be exposed. They are also a chance to meet long-standing and new colleagues, and (non-toxic) home-made cakes often feature prominently.

2016 CPD COURSES

Key Areas Covered (six hours of CPD)

- Case histories for potential poisons cases
- Decontamination for poisons cases
- Toxicology information resources

Cost and Bookings

Standard fee: £295 + VAT
Early bird fee: £250 + VAT*

Each delegate will receive course notes and a CPD certificate (equates to 6 hours CPD training). Lunch and refreshments are provided.

Bookings: To reserve a place, please visit the link below and download the booking form.

http://vpisglobal.com/class-based-courses-2016/

Date	Location
June 29th	Bristol
July 27th	Edinburgh
September 7th	London
October 5th	Manchester
November 23rd	Norwich

** Early bird discount applies to bookings made up to 8 weeks prior to the course date*

DIETARY SUPPLEMENTS: DESIGNED FOR OWNERS, EATEN BY PETS

There are a wide range of dietary supplements available, some of which will have a medical validity and some will be taken as a way of aiding and promoting weight loss, contributing to a 'healthier' lifestyle.

As always, pets will and can help themselves to anything they find and the VPIS has seen a rise in the number of enquiries regarding these products.

Some of the most common groups are multivitamins, vitamin D preparations, weight loss preparations including bulking agents, joint supplements, omega-3 fatty acids and bee products such as pollen or royal jelly. Of these, vitamin D analogues (as opposed to multivitamins) are potentially the most serious and will be discussed separately, along with joint supplements, in the next edition of Toxic Times.

Multivitamins are usually purchased as over-the-counter preparations and even when taken acutely in large quantities, do not pose a significant risk to the health of the animal, as the quantities of each component vitamin are small. Dogs ingesting large amounts of over-the-counter vitamins may experience some mild self-limiting gastrointestinal effects, but generally, no treatment would be required.

The vitamin D content of these OTC multivitamins is commonly between 1-20mcg per tablet, but the treatment dose of vitamin D in these preparations is 500 tablets/kg body weight (for a 1mcg preparation), so even for a higher strength (20mcg), a dog would need to ingest over 25 tablets/kg for there to be cause for concern.

Weight loss medications (orlistat, raspberry ketones)

This group of preparations has, over recent years, increased and diversified, with each new addition giving the hope of effortless weight loss.

Amongst the most commonly ingested formulations are those containing orlistat, available both on prescription and OTC. Orlistat prevents absorption of dietary fats but this leads to unfortunate leakage of oily diarrhoea. Most animals remain asymptomatic following ingestion. Other gastrointestinal effects reported in humans include increased defecation, soft/liquid stools, faecal incontinence, flatulence and abdominal discomfort.

Gastrointestinal decontamination is not required, but it would be prudent to recommend a low fat diet for at least 24 hours. Rehydration is rarely needed.

Raspberry ketones are sold as weight loss agents even though there is little evidence that this works - they are the aroma from raspberry and are either extracted from raspberry and other soft fruits or, more likely and cheaper, are synthesised.

The few cases VPIS has, where follow-up is available suggests that there is no stimulant effect and this fits with →

studies which show that they are safe, acutely, unless very large amount are given. It is important to note however that these products often contain a) caffeine - which will clearly be a potential problem causing stimulation, tachycardia, hyperthermia, restlessness and b) more worryingly, 5-hydroxytryptophan (5-HTP).

5-HTP is a naturally occurring amino acid and chemical precursor as well as a metabolic intermediate in the biosynthesis of the neurotransmitters serotonin and melatonin. As well as an appetite suppressant it is used as over the counter antidepressant. In overdose 5-HTP can cause serotonin syndrome.

The onset of clinical signs may be rapid (<30 mins), with behavioural changes, gastrointestinal signs and increased neuromuscular activity

Treatment, other that early emesis and activated charcoal - if safe to do this – is aimed at controlling hyperthermia and convulsions. Ideally, diazepam (or barbiturates) can be used for agitation, tremors or convulsions, and it should not be necessary to scale up, although propofol CRI could be considered if required. IV fluids may be needed to maintain hydration and to assist, when cool fluids are used, in controlling hyperthermia.

Cyproheptadine (Periactin®) is a non-specific serotonin antagonist and has been used in dogs. A suggested dose of 1.1 mg/kg orally or rectally every 1-4 hours should be used until signs resolve. The dose should be given rectally if there is vomiting or activated charcoal has been given recently.

'Bulking' agents are also claim to aid weight loss. A fibre complex of plant origin, containing various forms of celluloseit acts by making the gut feel fuller - well it is in fact fuller. As these products are of plant origin, they work in part by holding additional water in the colon. This is likely, when taken in quantity, to produce diarrhoea. Treatment would be supportive with additional fluids and control of diarrhoea.

Fish oils are used as nutritional supplements and have high concentrations of omega-3 fatty acids, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). The most common oil is cod liver oil which also contains vitamin A and vitamin D. Halibut oil, salmon oil and shark oil are also used.

There is little information available on the animal toxicity of fish oils but they are considered to be of low acute toxicity. The content of vitamins A and D is low and insufficient to cause acute toxicity, even if a very large quantity of capsules has been ingested. No treatment would be required.

Bee products such as pollen, propolis and royal jelly may well do wonders for our complexions, vitality and overall health, but would be considered non-toxic, even when ingested in large quantities by overenthusiastic pets; the VPIS has numerous cases where 10s of tablets or capsules caused no clinical signs at all.

To vomit or not to vomit: That is the question

Although apomorphine is undoubtedly effective, in that it WILL induce vomiting in a dog, there is an underlying and ongoing debate about the efficacy or the effect on outcome. The use of emetics have been abandoned in the treatment of human poisoning cases, as there was no evidence to support their use in relation to outcome (Höjer et al, 2013).

There are a number of contraindications to the use of emetics, relating to the clinical condition of the animal and the nature of the agent ingested; these would include an animal which is drowsy or lethargic, or if there is the possibility of rapid onset convulsions occurring. Emetics would also be contraindicated if the agent ingested is a corrosive or a volatile solvent; a foaming agent, such as a detergent, would also be contraindicated as there is a risk of aspiration.

However, there is of course a world of difference between the treatments and monitoring options available to a doctor in charge of a human poisoning case compared to a veterinary surgeon, with a good example being paracetamol; in human medicine, paracetamol levels are regularly determined and routinely used to determine the severity and progression of the toxicity, and hence, prognosis. This is not the case in veterinary medicine. This would support the use of emetics in animals, assuming the dose ingested is known, and above the treatment dose.

However, knowing the toxic dose is key, and we would always encourage you to call us before initiating treatment, as it is our experience that many animals are being unnecessarily treated, which would include the use of 'routine' apomorphine.

Höjer, J., Troutman, W. G., Hoppu, K., Erdman, A., Benson, B. E., Mégarbane, B., ... Caravati, E. M. (2013). Position paper update: ipecac syrup for gastrointestinal decontamination. Clinical Toxicology, 51(3), 134–9. http://doi.org/10.3109/15563650.2013.770153

CASE CORNER

We are always keen to hear of your unusual cases, so please let us know of anything that you don't see on a regular basis, or of any cases where the clinical effects or outcome was unexpected.

To continue the theme of 5HTP...

1 An 18 kg cross breed presented about 6.5 hours after ingestion of 2 g of 5-HTP (so 111 mg/kg). She had become drowsy and agitated at 5 hours. From 6 hours she developed tachypnoea, severe tremor, blindness and dilated pupils, elevated bilirubin, mild diarrhoea and severe laboured respiration. By 8 hours she was recumbent and comatose. She was given IV fluids and diazepam which helped control the tremors. The practice had no cyproheptadine (Periactin®) and would only be able to obtain some from a long distance but it was decided that they should try and obtain it. Once obtained, around 17 hours post-ingestion, the tablets were crushed and given rectally. Two doses were given 4 hours apart with good result. She recovered 7 hours after cyproheptadine (24 hours post-ingestion), and the comment we received on our follow-up questionnaire was that the turning point seemed to be after the first dose of cyproheptadine.

2 A 2 year old Labrador was found with an empty bottle of 5-hydroxytrytophan but it was unclear how many tablets he could have had. By 30-40 minutes he has severe nystagmus, tremors, collapse and severe hypersalivation. He was given diazepam, phenobarbital, methadone, IV fluids and rectal cyproheptadine but had diarrhoea after each dose of cyproheptadine. He was given a general anaesthetic and a gastric lavage (which retrieved some white powder). He was referred to the RVC ITU where he was described as having classic signs of serotonin syndrome. He was recumbent, with dyspnoea and vocalising. His rectal temperature was 35.4°C and he had peripheral oedema. Chest X-rays showed signs consistent with aspiration and a bronchial lavage revealed large numbers of rods and cocci. He was treated with antibiotics and meloxicam and his respiratory condition improved. He recovered over 4 days, although was still a bit wobbly on discharge due to all the sedatives he had received.

3 A 4.5 year old 30 kg Labrador became unwell after ingestion of 59 x 100 mg 5-hydroxytryptophan (so 196.7 mg/kg). She immediately developed diarrhoea (which recurred at 5 hours), hypersalivation and mild seizures. These were controlled with diazepam. By 30-40 minutes she had severe pyrexia, moderate tachycardia, dilated pupils and severe tremor. She became excitable with vocalisation at 6 hours. She was managed with IV fluids, diazepam and from 4 hours was given rectal cyproheptadine (Periactin®). The cyproheptadine was given hourly for 17 hours. The dog had fully recovered by 38 hours post-ingestion. The vet felt she might have improved more quickly if they had been able to start cyproheptadine sooner and was 'amazed by complete recovery despite severity of signs'

The 'take home' here is that cyproheptadine can be very effective and is relatively easy to acquire and cost effective.

http://bit.ly/27QSzy4

4 A 30 kg Labrador ingested all the owner's tablets - an unknown quantity of vitamin E, zinc supplement, vitamin C and 5-hydroxytryptophan (5-HTP). Within 2 hours she had hypersalivation, congested mucous membranes, laboured respiration, conjunctival hyperaemia and periorbital oedema. She was given IV fluids, diazepam, mirtazapine and dexamethasone but died 4 hours after ingestion, the signs being consistent with 5-HTP poisoning.

Baclofen although uncommonly reported is occasionally serious, and we would always recommend the use of intravenous lipid infusion sooner rather than later:

1 A 20 kg Staffordshire bull terrier ingested 360 mg of baclofen and within 23 hours developed hypothermia, mild bradycardia and severe collapse. He was given a gastric lavage and activated charcoal was placed in stomach afterwards. There was no improvement and the owner could not afford intensive care and opted for euthanasia.

2 A 12 week old 1.86 kg puppy ingested 10 mg of baclofen and 20 mg of citalopram (the owner did not notice the tablets were missing until the dog became unwell). She presented vocalising with vomiting, bradycardia (lasting 10 hours), hypersalivation and severe collapse. She was given two doses of intravenous lipid infusion and 2 doses of diazepam (she settled well after the diazepam). She had recovered fully by 24 hours, much to the surprise and delight of her veterinary surgeons.

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