"It is paramount to emphasise to pet owners the importance of keeping any rubbish containers securely fastened or in a separate area from their animals"

coffee grounds or tea bags should receive an emetic, assuming it is safe to do so, repeat dose activated charcoal, diazepam if required, and a beta blocker if ECG monitoring shows the presence of arrhythmias.

Chewed chewing gum

It is unclear what the remaining xylitol content would be of chewing gum that has been discarded, with factors such as the amount of chewing prior to discarding and, of course, the initial content of xylitol all playing a part. With dogs, it seems sensible not to take any unnecessary risks with pre-chewed, discarded gum, and to treat as if it were pre-chewed gum.

Treatment would be required for any ingestion above 50mg/kg and, given that many sugar-free gums contain upwards of 400mg per piece, caution should be the watchword in these cases. As xylitol is a potent stimulator of insulin release in dogs and causes a decrease in blood glucose, blood glucose levels should be monitored every one to two hours for at least 12 hours. Phosphorus and potassium levels should also be monitored every four to six hours and, additionally, total bilirubin and liver enzymes should be noted on admission and at 12, 24, 48 and 72 hours post-ingestion.

Discarded medication

Old or out-of-date medicines should be disposed of carefully, or returned to a pharmacy rather than being thrown in the bin; however there are some medications that owners, post-use, might well feel it is safe to put in the waste.

Transdermal patches

Transdermal patches for the treatment of nicotine addiction are more likely to pose an obstructive risk than an issue with nicotine toxicity. This is partly because the oral bioavailability of nicotine is low, and it is poorly absorbed from the stomach. Also discarded patches would contain only a fraction of the pre-use, intended dose.

Clinical effects would generally be seen within 15 minutes to four hours and would typically consist of hypersalivation, vomiting, ataxia, lethargy, tremor, diarrhoea and tachycardia or bradycardia. Treatment would essentially be symptomatic and supportive, but it ought to be noted that any use of antacids should be avoided as this would enhance absorption.

Hormone-replacement therapy patches

These are considered to be of very low acute toxicity and again, apart from being aware of a potential obstruction risk, no treatment would be required.

By contrast, pain relief patches containing buprenorphine or fentanyl, may be discarded before all the drug has been discharged and may represent a significant risk to an animal that chews or swallows them.

Fentanyl patches

Fentanyl patches are designed to be worn for 72 hours and then replaced, but analysis of used patches showed that 28 to 84 per cent of the drug was still present after 72 hours of use (Marquardt et al, 1995).

After ingestion or chewing of a patch, clinical effects such as hypersalivation, ataxia, collapse, drowsiness, diarrhoea, bradycardia, hypothermia, constricted pupils (dilated pupils in cats), pale mucous membranes and respiratory depression would be expected within an hour. Fentanyl has an antiemetic effect in cats and dogs (Lefebvre et al, 1981; Blancquaert et al, 1986; Costello and Borison, 1977), so vomiting would not be anticipated. Recovery usually occurs within two to eight hours after ingestion, or within a few hours if the patch has just been chewed.

Emesis is *not* recommended – owing not only to the antiemetic effect of fentanyl, but also because it would not be wise to introduce a further source of opioid, apomorphine, into the body. Repeat doses of activated charcoal are useful in this situation, as the patch will be acting as a slow-release form of the drug.

Atropine can be used for the treatment of fentanyl-induced bradycardia, and naloxone, the opiate antagonist, should be used in animals with CNS or respiratory depression.

All symptomatic animals should be observed until signs resolve and for at least two hours after administration of naloxone (if given). Asymptomatic animals should be observed for at least two hours after ingestion.

Buprenorphine

Buprenorphine is a potent, semisynthetic opioid with mixed agonist/antagonist properties. The clinical effects associated with a similar ingestion or chewing of a pain relief patch would be drowsiness, depression, vocalisation, hallucinations, tremor and hypersalivation. Aggression, excitability, bradycardia, hypothermia, ataxia and disorientation have also been reported. Gastrointestinal effects appear to be minimal, although vomiting and diarrhoea may be seen occasionally.

Treatment would be the same as for fentanyl, with avoidance of apomorphine and the administration of repeat-dose activated charcoal.

Salbutamol or beclomethasone inhalers

These items are generally thrown away because the user knows they are empty and so the risk of toxicity is