

**ISSUES RELATED TO ANAESTHESIA AND THE POST-
OPERATIVE PERIOD**
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CATEGORIES OF ANIMALS UNDERGOING ANAESTHESIA

Category 1: a normal healthy patient with no detectable disease

Category 2: an animal with slight or moderate systemic disease causing no obvious incapacity

Category 3: an animal with mild to moderate systemic disease causing mild symptoms (moderate fever, anaemia, or dehydration)

Category 4: an animal with extreme systemic disease that constitutes a threat to life (toxaemia, kidney failure, severe dehydration, heart failure)

Category 5: a patient not expected to live more than 24 hours without treatment.

ANAESTHETIC PROCEDURE

Pre-medication injection. This is usually a mixture of a sedative and a painkiller (pain relief is much more effective if painkillers are given before surgery rather than after), The vet will probably then induce general anaesthesia (unconsciousness) with an injection into the animal's vein, but on occasion will give a mixture of oxygen and anaesthetic vapour for the patient to breathe through a face mask.

Patients are usually quite relaxed after their pre-medication. A nurse will hold the animal and extend one of their forelegs. Some hair will be clipped so that the vein is visible and the vet will then either insert a catheter into the vein or make an injection directly into the vein. The intravenous drugs work very quickly to induce unconsciousness (within 10 seconds) and the patient is then

unaware of their surroundings. A soft plastic or rubber tube is then inserted through the mouth and into the windpipe before being connected to a machine delivering oxygen and anaesthetic vapour.

Animals are often kept on a drip throughout the anaesthetic period in order to maintain their blood pressure - this preserves blood flow to the liver and kidneys and helps in detoxifying the anaesthetic drugs. It also allows immediate access to the circulation if drugs need to be given in an emergency.

It can be helpful to administer oxygen for 5 minutes before patients are given the anaesthetic induction agent to ensure that the tissues are all well oxygenated.

The risks of anaesthesia are certainly the same in animals as in humans - most importantly that of respiratory arrest or insufficiency (not breathing enough to get oxygen in and carbon dioxide out of the body) and cardiac arrest. These are very rare complications and generally can be avoided if a nurse is monitoring the anaesthesia closely. Other risks are related to having low blood pressure during the anaesthetic, which can result in kidney damage and a drip should help prevent that.

Allergies are rare but possible, as are seizures.

Nurses Monitoring the Patient
In general practice nurses are usually responsible for monitoring anaesthetised patients once they are being given the anaesthetic gases. The nurse will monitor the heart and respiratory rate along with the 'depth' of anaesthesia and keep the vet informed of the patient's status. If changes are needed to the anaesthetic depth the vet will ask the nurse to alter the percentage of the anaesthetic vapour that the patient is breathing.

In some practices additional monitoring equipment is available such as pulse oximeters (that measure the amount of oxygen in the arterial blood), blood pressure monitors, ECGs (that measure the

electrical activity of the heart), and capnographs (which measures the amount of CO² leaving the lungs) that assist the nurse in caring for the patient during anaesthesia. Under direction of the vet, nurses may also administer painkillers and intravenous fluids during the anaesthetic. An anaesthetic record should be completed showing patient details, the date, all drugs administered and the status of the patient recorded over time in a graph form – this serves to illustrate changes in status over time and also as a record for future reference.

Once the surgery is complete the anaesthetist will turn off the anaesthetic vapour and continue administering oxygen via the tube in the windpipe.

The animal will receive oxygen through the tube in the windpipe until they start wake up, at which point the tube is removed.

DRUGS COMMONLY USED

Propofol is also known as 'Rapinivet' or 'Tivafol'; Isoflurane is sometimes called 'Isoflo', and Sevoflurane 'Sevoflo'.

Common drugs used as intravenous anaesthetics are: Thiopentone or Propofol (Propofol is associated with a slightly faster recovery after anaesthesia but both are equally safe).

There are 3 different types of anaesthetic vapour available in general practice- Halothane, Isoflurane and Sevoflurane. Basically they are all quite similar - Isoflurane and Sevoflurane tend to show faster recoveries after the anaesthetic, and Halothane can cause heart irregularities in some cases but these are generally not significant.

Rimadyl is a painkilling drug, of the same type as aspirin and Ibuprofen, which is generally given before or during anaesthesia so that animals are comfortable when they wake up - the effects of the

injection last for about 24 hours in dogs. It's not an anaesthetic on its own but using it can mean that the amount of anaesthetic vapour required to keep animals asleep can be reduced because the animal is less sensitive to pain.

Metacam is a similar drug used in this manner.

POST-OPERATIVE PERIOD

After the operation

Usually a vet will try to make sure that all pets are able to stand and walk before we allow them to go home, but once they are home and relax they may just want a quiet place to recover in their own time. It can also be a good idea to keep children away as pets may be a little grumpy if disturbed.

What might be noticed

Once a pet is home after an operation it might be noticed that there is a small area of fur clipped from its front leg. This is where the anaesthetic was administered and should not cause any problems. The site of the operation will usually have a large clipped area compared to the size of the actual wound. This is to prevent contamination of the wound during surgery and will grow back surprisingly quickly. At Hunt and McGinn the wound is usually closed using white nylon sutures.

Looking after the wound

Unless the wound is contaminated and the vet has given instructions to do so, the wound does not need to be cleaned. We do however recommend that you check the site daily for any swelling, infection, or tightening of the sutures.

The occasional lick does not normally cause a problem, but excessive licking and/or nibbling may introduce infection or remove

sutures and should be discouraged. A buster collar may be required to prevent self-harming.

Painkillers and antibiotics?

At Hunt and McGinn an injection of each of these is given pre-operatively and this is all they normally require. However if the wound is infected or the pet has had a major operation, more individualised treatment may be required.

Tablets are only dispensed if they are necessary and essential to a pet's treatment. If giving the medication is a problem contact your vet as soon as possible so they can find an alternative route of administration.

How long should I keep my pet indoors?

Usually a pet's reflexes will be a little slower than usual after an anaesthetic, so do not let them out on their own when you get home.

Cats: Following castration or dental work, usually keep in over night.

Following surgery that requires sutures, keep in for 2-3 days unless otherwise instructed.

If a Buster collar is being worn or a bandage applied, keep in until the vet is happy for it to be removed.

Dogs: Allow you pet to have access to the garden or take for a short walk in the evening post-operatively. We recommend lead exercise only until any sutures have been removed.

Dressings

It is best to check the dressing daily to see if it has slipped, is causing irritation, or has become wet or has an unpleasant odour. All of these mean the bandage needs replacing. A plastic carrier-bag placed over a leg dressing on rainy days means that your dog need not miss its usual walk.

Food and feeding

All animals' appetites may be affected in different ways. We recommend you offer a small amount of the usual food to your pet when you get home. If this is eaten, then offer more food later in the evening; if it is refused, do not worry because most pets will return to normal eating patterns within a day or two. However if they are still not eating after this time it is wise to contact the vet (in some cases a special diet may be recommended, but we suggest you change over to this gradually to prevent upset stomachs).

Buster Collars

A buster collar (which looks very similar to a lamp shade) is put on to prevent a pet getting at its wound. It should be kept on at all times, as pets can be very sneaky. If it is removed for any reason, e.g. feeding, we suggest you keep a very close eye on your pet.

Follow-ups

Your vet will probably like to check on your pets' progress 2-3 days post operatively, and sutures are usually removed a week later.