

Client Education Series: Anesthesia for Dental Procedures



Animal Dental Clinic of Pittsburgh, Krista Mendoza DVM, DAVDC

Why does my pet need anesthesia for a dental procedure?

From the avdc.org website: Professional dental scaling includes scaling the surfaces of the teeth both above and below the gingival margin (gum line), followed by dental polishing. The most critical part of a dental scaling procedure is scaling the tooth surfaces that are within the gingival pocket (the subgingival space between the gum and the root), where periodontal disease is active. Because the patient cooperates, dental scaling of human teeth performed by a professional trained in the procedures can be completed successfully without anesthesia. However, access to the subgingival area of every tooth is impossible in an unanesthetized canine or feline patient. Removal of dental tartar on the visible surfaces of the teeth has little effect on a pet's health, and provides a false sense of accomplishment. The effect is purely cosmetic.

Inhalation anesthesia using a cuffed endotracheal tube provides three important advantages...

- 1) the cooperation of the patient with a procedure it does not understand
- 2) elimination of pain resulting from examination and treatment of affected dental tissues during the procedure
- 3) protection of the airway and lungs from accidental aspiration

Another important part of the dental evaluation and procedure is investigating what is happening below the gum line using a periodontal probe and full mouth **dental radiographs, which cannot be done in an awake dog or cat.**

Both the American Veterinary Dental College (AVDC, www.avdc.org) and the American College of Veterinary Anesthesia and Analgesia (ACVAA, www.acvaa.org) have position statements against Anesthesia Free Dental (AFD) Cleanings, also called Non-Professional Dental Scaling.

There are many things we can do to make anesthesia as safe as possible for your pet.



Pre-Anesthetic testing

Blood work testing is done before anesthesia to check for any abnormalities with the liver, kidneys, electrolytes, red and white blood cells, platelets, and thyroid.

An evaluation of the urine may be advised if your pet has kidney disease or is older.

If a heart murmur is present, a complete evaluation by a board-certified cardiologist should be done to understand the cause and severity of any underlying heart disease in order to determine risk for anesthesia and also for the overall health of your pet.

For some animals, additional testing with chest x-rays, an abdominal ultrasound, or more blood work may be indicated before pursuing anesthesia for a dental procedure.



Preparing for Anesthesia



Fasting: Withholding food and water before anesthesia is important to reduce the risk of vomiting or regurgitation and preventing that material from going into the lungs which can cause an infection called aspiration pneumonia.

For morning dental appointments with procedures: NO FOOD SHOULD BE GIVEN AFTER MIDNIGHT THE NIGHT BEFORE THE DENTAL PROCEDURE, AND NO WATER AFTER 8AM THE MORNING OF THE PROCEDURE

Pre-anesthetic medications



Anti-nausea medicine is sometimes given to help reduce the risk of vomiting and upset stomach that can happen with anesthesia.

Pain medications are given before starting the dental procedure to help stay ahead of any discomfort

Sedation is used to help calm and relax your pet to help make anesthesia as smooth as possible and also reduces the amount of Induction and maintenance anesthesia needed

Induction of Anesthesia

An area on the leg is shaved and cleaned and an intravenous (IV) catheter is placed.

Injectable medication is given thru the IV to get your pet to a point where the endotracheal tube (ET or breathing tube) is placed and secured.

Oxygen and anesthetic gas are delivered thru the ET tube during the dental procedure.

Sterile eye ointment is placed to keep the eyes lubricated while under anesthesia.

All monitoring equipment is hooked up to the patient and fluids are started thru the IV catheter.



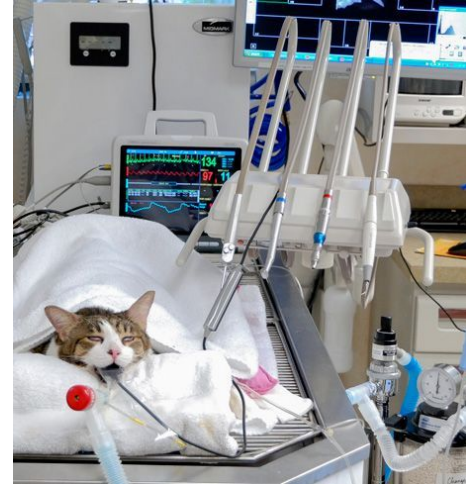
Maintenance of Anesthesia

During this phase of anesthesia, your pet's temperature is regulated with warming blankets.

Heart rate, rhythm, blood pressure, oxygenation, carbon dioxide levels, and temperature are monitored very carefully throughout the entire dental procedure.

In addition to IV fluids, antibiotics are also given intravenously during procedure.

If needed, medications are given to maintain proper heart rate and blood pressure.



Recovery from anesthesia

After the dental procedure is complete, the anesthetic gas is discontinued and oxygen is slowly weaned.

Dental nerve blocks are placed during surgery so when your pet wakes up from anesthesia there is no dental pain. If needed, additional pain medication or sedation can be given for a calm and smooth recovery.

Once stable, the animal is moved into recovery where they are snuggled in blankets and kept warm and comfortable.

Pets are monitored for at least 1-2 hours to allow time for anesthesia recovery and watch for any issues with unusual swelling or bleeding post oral surgery.



What to expect after anesthesia for a dental procedure

Your pet will likely be groggy from the anesthesia and pain medication used. These medications may also make your pet whine or vocalize and have eye changes like dilated pupils and droopy eyelids. There may also be “dysphoria” or confusion that is typically related to the drugs used for anesthesia and not from pain.

You will need to watch your pet closely around stairs, high furniture, and other animals in the household when returning home the evening after dental surgery. Most animals return to their typical level of activity by the next day, although it can take a few days for some pets, especially older ones, to really get back to what is normal for them.

The ET tube used for anesthesia can sometimes cause irritation to the trachea (windpipe) that may lead to a dry cough for 1-3 days after surgery.



Feeding your pet after Anesthesia

After returning home with your pet the evening after anesthesia and dental procedure, offer small amounts of water and food ($\frac{1}{4}$ – $\frac{1}{2}$ the usual amount) every 30 minutes to 1 hour.

These “mini-meals” help minimize the risk of your pet eating or drinking too much too fast, which could lead to vomiting and gastrointestinal upset. You can return to feeding normal amounts of softened food and water the following day.



Medications after Anesthesia and Dental Procedure

It is very important to give your pet the medications prescribed after the dental procedure to prevent pain and infection.

Some types of pain medication can cause ongoing grogginess.

Antibiotics can sometimes cause gastrointestinal upset with diarrhea or loose stool and vomiting.

If any problems are noted, contact the clinic and tell us what is happening with your pet.

