

Dog Surgery A-Z

Anesthesia and Your Dog

Overview

As is the case for us, our four-legged friends may require anesthesia as part of a surgery or procedure. Puppies receive anesthesia when they are [spayed or neutered](#), and most pets receive anesthesia at least once more during their lifetimes.

General anesthesia is achieved by administering drugs that suppress your dog's nerve response. During general anesthesia, your dog is in an unconscious state, so she is unable to move and doesn't feel any pain. Anesthesia can also be administered locally, to numb a specific area or part of the body—such as a tooth, area of the skin, or the spinal column.



How risky is anesthesia for your dog?

There are always risks when any anesthetic agent is administered to a patient, regardless of the length of time the patient is anesthetized. In fact, it is estimated that approximately 1 in 100,000 animals will have some sort of reaction to an anesthetic agent. Reactions can range from mild to severe and include a wide variety of symptoms, such as swelling at the injection site to more serious outcomes such as anaphylactic shock or death. While these statistics seem alarming, your dog is just as much at risk getting into the car to go to the veterinary hospital for the anesthetic event. The good news is there are many things you can do to reduce your dog's risk!

Fasting for several hours prior to anesthesia, as directed by your veterinarian, is important to reduce your dog's risk. If your dog has not fasted prior to anesthesia, she could vomit and possibly aspirate food or fluid into her lungs, even with intubation (tube to keep the airway open). This could potentially result in a condition called aspiration pneumonia, which can be life-threatening.

How to minimize the risks of anesthesia on your dog

Make sure your veterinarian knows your dog's complete history before the anesthetic event. Her vaccine history, lifestyle, and any medications she takes all influence how she may respond to anesthesia. Your veterinarian may recommend a presurgical examination and diagnostic tests that help identify any underlying conditions that should be addressed before your dog undergoes anesthesia.

Recommended diagnostic tests usually include:

- Chemistry tests to evaluate kidney, liver, and pancreatic function, as well as sugar levels
- A complete blood count (CBC) to rule out blood-related conditions
- Electrolyte tests to ensure your dog isn't dehydrated or suffering from an electrolyte imbalance

Additional tests may be added on an individual basis. Your veterinarian will recommend the right thing for your best friend.

In addition to blood tests, your veterinarian may recommend the following:

- The placement of an intravenous (IV) catheter as part of the anesthetic preparation. The catheter can be used to provide anesthetics and intravenous fluids to keep your pet hydrated; additionally, if needed, it would serve as a pathway to directly administer life-saving medications, should a crisis arise.
- Intravenous fluids to help maintain hydration and blood pressure. IV fluids also help your pet with her recovery process by aiding the liver and kidneys in clearing the body of anesthetic agents more quickly.

What to expect on the day of the anesthetic/surgical event

Your veterinarian and/or veterinary staff will answer any questions you may have before your dog receives anesthesia. They may ask you to review and sign a consent form that describes all of their recommended services prior to the anesthetic event and during the procedure. It is very important to review the forms and have all your questions answered.

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How your dog is monitored during anesthesia

Several safeguards are put into place to help reduce your dog's risk during anesthesia.

They include:

- The surgical assistant/veterinary technician: A technician or assistant is present during the anesthetic event to monitor your dog's vital signs and to help adjust anesthetic levels, under the direction of the veterinarian.
- A heart rate monitor counts your pet's heartbeats per minute. Anesthesia and other factors, such as surgery itself, can affect heart rate. By monitoring your dog's heart rate, your veterinarian can make anesthetic adjustments quickly.
- An electrocardiogram (ECG) monitors your dog's heart rate and heartbeat pattern. It can detect abnormal heartbeats called arrhythmias. If an arrhythmia is detected, your veterinarian can make suitable changes in anesthesia.
- Core body temperature may be monitored, especially if your dog is undergoing a prolonged surgical procedure. Changes in body temperature can cause dangerous complications.
- A blood pressure monitor measures your dog's blood pressure. When used in conjunction with other monitoring equipment, it provides detailed information on your pet's cardiovascular condition.
- Pulse oximetry may be used to monitor the amount of oxygen in your dog's blood and her pulse rate.
- Carbon dioxide (CO₂) is often monitored together with oxygen, as it helps determine if your pet is receiving the right amount of oxygen during anesthesia.

How soon after anesthesia will your dog be back to normal?

Recent improvements in anesthetic agents allow for a quick recovery, and your dog should almost be back to normal when you pick her up after the anesthetic event. She may seem more tired than normal when she goes home. This has as much to do with the stress of her visit to the veterinary hospital as to the anesthetic itself!

Make sure you follow all go-home instructions for your dog, including feeding instructions.

*This information came from material written by Ernest Ward, DVM.

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If you have any questions or concerns, you should always visit or call your veterinarian - they are your best resource to ensure the health and well-being of your pets.