

WHAT IS ANESTHESIA IN DOGS?

Dr. Emily S. Southward

Niles Animal Hospital and Bird Medical Center

7278 N. Milwaukee Ave. Niles, IL 60714

(847)-647-9325 FAX (847)-647-8498

www.nilesanimalhospital.com

WHAT IS ANESTHESIA?

Anesthesia is the total loss of feeling or sensation. It is primarily associated with the loss of painful sensations, which allows surgery or procedures to be performed without causing pain. There are different types of anesthesia. Local anesthesia is rendering a local area of tissue or a part of the body insensitive to pain or sensation. General anesthesia is causing complete unconsciousness and relaxation of the entire body, as well as a loss of painful sensation.

WHAT ARE THE INDICATIONS FOR PERFORMING ANESTHESIA?

Many situations in veterinary medicine require anesthesia. Any type of invasive surgery or procedure is performed under general anesthesia. These include abdominal surgery, orthopedic surgery and neuters. Dental prophylaxis requires complete relaxation, so general anesthesia is indicated. Local anesthesia is most often used when treating small skin lacerations. The tissue surrounding the laceration is anesthetized so sutures can be placed without causing pain. Local anesthetic can also be used to remove small skin masses or lesions.

WHAT PREOPERATIVE EXAMINATIONS OR TESTS ARE NEEDED BEFORE ANESTHESIA?

Before general anesthesia is performed on any patient, a complete physical examination is needed. The veterinarian listens to the heart and lungs to detect any murmurs, abnormal heart sounds or abnormal lung sounds. If any abnormal sounds are heard, chest x-rays are taken. This helps determine if there are any changes in heart size or in the lung tissue. The abdomen is palpated to detect any abnormalities or pain. Abdominal radiographs or ultrasound help diagnose any abnormalities detected during palpation.

In addition to a physical examination blood work is often performed. A complete blood cell count examines the red blood cells and white blood cells for abnormalities. A biochemical analysis examines the liver enzymes, kidney values and electrolytes.

If the patient has any abnormalities noted on these diagnostic tests, measures are taken to make the patient as stable as possible prior to being anesthetized. The drugs chosen to produce anesthesia will be those best suited to the patient and his illness or problem.

Prior to local anesthesia, a physical examination should be performed. Blood work is not usually required prior to local anesthesia unless significant abnormalities have been detected during the physical examination.

WHAT TYPE OF DRUGS ARE NEEDED FOR ANESTHESIA?

Drugs are given to produce both general and local anesthesia. As in human medicine, dogs and cats undergoing general anesthesia are given a preanesthetic medication to reduce anxiety and relax the animal. An analgesic (pain medication) is usually part of the preanesthetic protocol. The preanesthetic also allows

for easier intravenous catheter placement for the induction of anesthesia. A short acting intravenous anesthetic (induction agent) produces unconsciousness to allow for placement of an endotracheal tube (breathing tube) into the trachea (windpipe). This tube allows for the use of inhalation (gas) anesthetic for the duration of the procedure.

For local anesthesia, drugs are injected into the immediate area in which suturing or surgery will be performed.

HOW LONG DOES ANESTHESIA TAKE TO PERFORM?

For general anesthesia, preanesthetic agents are administered 45 minutes to one hour before induction of anesthesia. Induction of anesthesia is usually quite rapid, often less than one minute. The duration of general anesthesia depends on the procedure and the type of anesthetic used. If gas anesthetic is used, the duration of anesthesia can be controlled by varying the concentration of the anesthetic administered to the patient. For example, spay surgery usually take less than one hour. More complicated procedures take more time. Fracture repairs and total hip replacements can take several hours. After the procedure is finished, the gas anesthesia is discontinued and the patient begins breathing oxygen. Pets typically begin to regain consciousness within 10 to 30 minutes. The patient usually remains groggy for several hours.

Local anesthetic takes effect within seconds after administration and generally lasts 15 to 30 minutes.

WHAT ARE THE RISKS AND COMPLICATIONS OR ANESTHESIA?

Anesthesia is never without risk. The preanesthetic examination and diagnostics help to reduce the risk of anesthesia by uncovering potential problems. Any patient can have an adverse (allergic reaction) reaction to medications, including anesthetics.

Complications that occur under general anesthesia are apnea (not breathing), bradycardia (slow heart rate), hypotension (low blood pressure), blood loss and sometimes cardiac arrest. To prevent these complications from occurring, the patient is monitored continuously.

There are few complications associated with local anesthetic. The most common complication is allergic reaction.

WHAT IS THE TYPICAL POSTOPERATIVE AFTERCARE FOR ANESTHESIA?

Postoperative care following general anesthesia is aimed at returning the patient to normal function. Most patients are hypothermic (cold) and heat support is provided until the patient can maintain his own body temperature. Pain control is also standard care. Some procedures will produce postoperative pain so medication is used to keep the patient comfortable. General nursing care is also provided to keep the patient clean and comfortable.

Postoperative care following a local anesthetic is minimal. If a significant amount has been administered in one leg, the animal may be lame for a short period of time. Most animals return to normal within 30 minutes after administration of the local anesthetic.

HOW LONG IS THE HOSPITAL STAY FOLLOWING ANESTHESIA?

The length of stay in the hospital following general anesthesia depends on the type of procedure performed. Dental procedures usually do not require an overnight stay. More invasive procedures such as intestinal foreign body removal or fracture repair usually require a stay of one to several days.

Animals receiving local anesthetic rarely stay in the hospital for any length of time.