

Pre-Anesthetic Testing - Is It Really Necessary?

Inevitably at some point in a pet's life, anesthesia and surgery will be necessary. For example, spaying (called an ovariohysterectomy) and neutering (called an orchiectomy) are very common surgical procedures recommended for non-breeding dogs and cats. Both surgeries are performed while a patient is under anesthesia. Prior to anesthesia veterinarians recommend a few non-invasive tests to ensure a pet is the best possible candidate for anesthesia and surgery. Pet parents may find the necessity of some of the investigation confusing given many primary care doctors offer such important testing as an optional step. Let's face it. When finances are involved, it's human nature to decline spending money on items deemed optional. This scenario begs the question:

Should pre-anesthetic/pre-surgical blood and urine testing be optional?

This week I explore this question, and hopefully provide some useful information for pet parents who have fur babies that need anesthesia and surgery.

Pre-anesthetic testing - what is it?

The first two (and absolutely most important) pre-anesthetic tests are answering all of your pet's veterinarian's questions so s/he can obtain a thorough patient history and having the veterinarian perform a complete physical examination. This makes sense, right? You wouldn't go in for surgery without meeting your surgeon and having him/her examine you first! While you may not immediately think of a patient's history or physical examination as tests, they absolutely provide the medical team with a tremendous amount of information that helps them determine if your pet is a safe candidate for anesthesia and surgery.

After a veterinarian obtains a thorough patient history and performs a complete physical examination, s/he will recommend some non-invasive blood and urine tests to help evaluate your pet's major organ systems. These tests include:

- Complete blood count (CBC): a simple blood test that provides information about red blood cells, white blood cells, and clot-forming cells

called platelets

- Biochemical profile (CHEM): a simple blood test that provides information about liver and kidney function, as well as electrolytes (e.g.: sodium, potassium) and some digestive enzymes
- Urinalysis: a simple urine assay that provides information about kidney function and possible urinary tract disease



Blood and urine can be non-invasively collected from pets prior to anesthesia and surgery

Other pre-anesthetic tests commonly recommended include:

- Coagulation profile: a simple blood test that helps determine if a patient will be able to form a proper blood clot
- Electrocardiography: a non-invasive measure of the heart's electrical activity that helps identify subtle abnormal heart rhythms not detectable during a complete physical examination

Pre-anesthetic testing should be mandatory!

Most parents understand and embrace the importance of a veterinarian obtaining a thorough patient history and performing a complete physical examination prior to anesthesia and surgery. The value of pre-anesthetic blood and urine testing is less appreciated. Pet parents need to know such investigation is performed to ensure your pet can properly and safely process and eliminate anesthetic medications. These tests are mandatory for you and me prior to surgery, and I ardently argue they should be mandatory for all pets undergoing elective and non-elective anesthetic procedures. Indeed I will not perform anesthesia or any surgery on patients without proper pre-anesthetic testing. Yes, sometimes pet parents are angered by my hardline approach. Ultimately my job is to be my patient's advocate, and I don't believe patients should be anesthetized for surgery without a proper pre-anesthetic evaluation.



The results of pre-anesthetic blood and urine tests allows a veterinary medical team to adjust an anesthesia protocol and take special precautions if necessary

Pre-anesthetic testing helps your pet's medical team detect hidden illnesses and reduce the risks (and consequences) of anesthesia and surgery. Pets who appear healthy may actually be masking clinical signs of illness, and pre-anesthetic testing can help detect such issues before anesthesia. Knowing a patient has compromised organ function prior to anesthesia is also uniquely powerful information in that your pet's healthcare team can typically modify the anesthesia

protocol and take other precautions to minimize the risk of an adverse event.

So why isn't pre-anesthetic testing mandatory?

If pre-anesthetic testing is so important, why don't veterinarians require it for all pets prior to both elective and non-elective surgeries? That, my friends, is a fantastic question! Please know there are some, like me, who do require such testing. In general pet parents do not possess intricate veterinary medical knowledge, and thus I do not believe it is fair to place them in a position of having to make a value decision about pre-anesthetic testing. It is my job as a veterinarian to partner with families and effectively communicate why the pre-anesthetic testing is so important and mandatory.

Some require pre-anesthetic testing for some patient populations (e.g.: sick patients, geriatric pets) but not for others (e.g.: younger animals). In my opinion the concept that younger patients generally do well regardless so risks are low is a sorely flawed philosophy. Congenital issues including [liver shunting disorders](#) pose a unique anesthetic challenge, and knowledge of liver dysfunction in these patients prior to anesthesia is vital.

Interestingly for some doctors there is a financial reason for not requiring pre-anesthetic testing.

These clinicians simply don't want to say "no" to a pet parent.

They don't want to mandate pre-anesthetic testing because a family may simply leave and seek veterinary care elsewhere. Understandably this results in a loss of revenue for the veterinarian, and veterinary hospitals are businesses that require money to provide healthcare to fur babies. Thus for some, it's better to get *some* business than none at all.

The take-away about pre-anesthetic testing...

Pre-anesthetic testing provides pet parents with peace of mind about their fur baby's anesthesia and surgical procedure. Combined with a thorough patient history and complete physical examination, some simple and non-invasive blood and urine tests help screen pets for health issues that may affect their ability to tolerate anesthesia. Just as this testing is mandatory for human patients

undergoing anesthesia and surgery, so too should it be for our furry companions.

To find a board-certified veterinary internal medicine specialist, please visit the [American College of Veterinary Internal Medicine](#).

To find a board-certified veterinary emergency and critical care specialist, please visit the [American College of Veterinary Emergency and Critical Care](#).

Wishing you wet-nosed kisses,

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