



Surgical Services

**194 Thorold Rd. W.
Welland, Ont.
L3C 3V7**

905-735-7410

Procedures Performed

We perform a wide variety of surgical procedures at the Welland Animal Hospital. Dr. Karner & Dr. Fidler each have over 15 years of surgical experience and they have performed thousands of procedures each. Our doctors have taken numerous supplemental surgical courses to expand their skills including courses in Cruciate Repair, Medial Luxating Patellar Repair, External Skeletal Fixation, Total Ear Canal Eblation. Some of the procedures we perform on a routine basis include;

- Canine & Feline Ovariohysterectomies (Spays)
- Canine & Feline Orchidectomies (Neuters)
- Feline Onychectomies (Declaws)
- Cystotomies (Bladder surgery)
- Tumour & Cyst removals
- Wound/laceration repairs
- Bite wound abscess repairs
- Intra-Abdominal surgery
- Cruciate Repairs
- Medial Luxating Patella repairs
- Simple fracture repairs

What is involved in preparation for anesthesia and surgery?

Our Primary Goal is to provide ASAP (As Safe As Possible) Surgery

It is important to note that there is a small but unavoidable risk whenever a pet undergoes anesthesia and surgery. Pre-surgical preparation does not eliminate this risk, but it greatly reduces the potential for unexpected complications, and goes a long way towards ensuring your pet has a safe procedure, and a smooth and uneventful recovery

The amount of preparation will be dictated by the age and health concerns of your pet, and by the nature of the procedure being undertaken.

In general terms, preparation can be divided into three stages:

- 1 physical examination
- 2 pre-anesthetic blood testing
- 3 additional testing if required/recommended.

1. The Physical Examination

The physical examination includes

- a systematic visual inspection of the pet's head, neck, limbs, and body,
- palpation (feeling with the hands) of the body's outer surface (skin, fur, muscles etc.), and assessment of internal abdominal organs through the body wall,
- auscultation (listening with a stethoscope) to the heart, lungs, and abdomen.

2. Routine Blood Testing

We use our modern in clinic lab station to perform pre-anesthetic blood testing on your pet.



Routine blood testing typically includes a complete blood count (CBC) and a serum biochemistry profile; these tests provide a wealth of important information about a pet's health status.

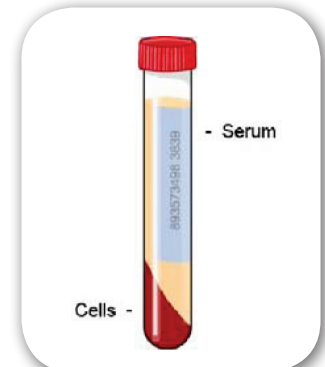
Complete Blood Count - this simple test analyses the cellular components of blood. These include red blood cells, which carry oxygen to the tissues, white blood cells, which fight infection and respond to inflammation, and platelets, which help the blood to clot. The CBC provides details about the number, size, and shape of the various cells types, as well as any abnormalities that may be present. If there are deficiencies in the red cells, white cells or platelets, or if there are abnormal cells present, then anesthesia and surgery should be delayed, if possible, until the underlying problem has been addressed.

Hematology

RBC	6.73	M/ μ L	(5.50 - 8.50)			
HCT	47.0	%	(37.0 - 55.0)			
HGB	15.5	g/dL	(12.0 - 18.0)			
MCV	70	fL	(60 - 77)			
MCH	23.3	pg	(19.5 - 26.0)			
MCHC	33.3	g/dL	(32 - 36)			
WBC	20.45	K/ μ L	HIGH (5.70 - 16.30)			
Neutrophil	16.88	K/ μ L	HIGH (3.00 - 11.50)			
Lymphocyte	0.54	K/ μ L	LOW (1.00 - 4.80)			
Monocyte	2.10	K/ μ L	HIGH (0.15 - 1.35)			
Eosinophil	.93	K/ μ L	(0.10 - 1.25)			
Platelets	433	K/ μ L	(164 - 510)			

In this example the CBC indicates an infection and our doctors would have to address this before surgery is considered.

Serum Biochemistry Profile - this is a series of tests performed on serum, which is the liquid component of blood. These tests provide information about how well the various organs of the body are working. Each test provides details about a specific organ or metabolic disease. For example, there are tests to assess the function of the liver, kidney and pancreas, and tests to identify the presence of diabetes, etc. Major abnormalities, especially involving the liver or kidney, or evidence of serious metabolic disease would justify delaying anesthesia and surgery until the underlying problem was corrected.



Chemistry

GLU	88	mg/dL	(60 - 125)			
BUN	19	mg/dL	(7 - 27)			
CREA	1.2	mg/dL	(0.4 - 1.8)			
PHOS	3.6	mg/dL	(2.1 - 6.3)			
Ca	11.0	mg/dL	(8.2 - 12.4)			
Na	151	mmol/L	(141 - 156)			
K	5.5	mmol/L	(4.0 - 5.6)			
Cl	113	mmol/L	(105 - 115)			
tCO ₂ (Bicarb)	22	mmol/L	(17 - 24)			
Anion Gap	22	mmol/L	(12 - 24)			
TP	6.0	g/dL	(5.1 - 7.8)			
ALB	3.5	g/dL	(2.5 - 4.0)			
GLOB	2.5	g/dL	(2.1 - 4.5)			
ALT	120	U/L	HIGH (5 - 107)			
AST	39	U/L	(5 - 55)			
ALKP	468	U/L	HIGH (10 - 150)			
GGT	6	U/L	(0 - 6)			
TBIL	0.1	mg/dL	(0.0 - 0.4)			
CHOL	225	mg/dL	(112 - 328)			
CK	226	U/L	HIGH (10 - 200)			

In this case this patient had indications of Liver disease which would need to be addressed.

Summary

Once all the test information has been gathered and analyzed, our veterinarians will make recommendations about the advisability to proceed with anesthesia and surgery. In some situations, the risk will be too great, and the procedure will be delayed to allow time to treat the underlying problem. In other cases, the decision will be that it is safe to proceed as planned. Sometimes adjustments will be made to minimize risk even further, such as using a different type of anesthetic, administering pre-surgical antibiotics, giving intravenous fluids prior to the surgery, etc.

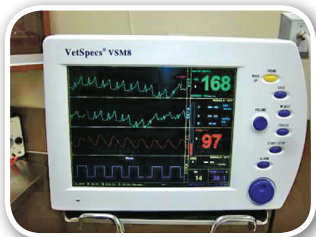
The Surgery

Once your pet has been cleared for surgery we will proceed with the procedure. Here are some of the key features;

- **IV Fluids** - We recommend IV fluids for all our surgery cases. Fluids are helpful to help maintain blood pressure and good tissue perfusion during general anesthesia.

- **Monitoring** - Our Registered Veterinary Technician carefully monitors and charts all your pets vital signs during general anesthesia. She uses modern monitoring equipment to monitor the following parameters;

- ▶ **Heart & Respiration rate**
- ▶ **Oxygen saturation**
- ▶ **ECG**
- ▶ **Blood Pressure**
- ▶ **Core Body Temperature**



- **Maintain Body Temperature** - We use a continually recycling warm water blanket to keep your pet warm while under General Anesthetic.

- **Anesthetic** - We use a combination of injectable and gas anesthetics to make your pets anesthetic as safe and painless as possible. We utilize a new modern Isoflurane Anesthetic machine similar to what would be used in a human hospital.



- **Sterility** - Maintaining a sterile field when performing surgery is critical for reducing the incidence of post-operative complications and infection. We use sterile instruments, gowns, gloves and caps and masks when performing our surgeries.



- **Suture material** - We use only monofilament single use packs of suture material. Although considerably more expensive we feel it is worth it because it reduces the incidence of suture reaction and infection.



Will my dog come home with pain medication?

Any time a dog undergoes a surgical procedure, there is trauma to the tissues, and pain relief is a critical element of the healing process. Which specific medications will be used for at-home aftercare will depend on the nature of the surgery and the decision of your veterinarian. In general, an NSAID will provide the cornerstone of at-home postoperative care, and other medications may be added.

Things to consider when price shopping a surgery...

	Welland Animal Hospital	Others
1. Experience of surgeon	>15 years	_____
2. Recommends Pre-Anesthetic Blood Testing	✓	<input type="checkbox"/>
3. Recommends IV fluids during surgery	✓	<input type="checkbox"/>
4. Has registered technician and excellent monitoring equipment	✓	<input type="checkbox"/>
5. Uses inhalant isoflurane anesthetic	✓	<input type="checkbox"/>
6. Uses single use monofilament suture material	✓	<input type="checkbox"/>
7. Offers post-op pain control	✓	<input type="checkbox"/>