Surgery can be an effective treatment for many conditions affecting dogs and cats. A careful physical examination and diagnosis of the animal’s problem should precede surgery. Diagnosis will often involve x rays and/or laboratory tests to evaluate the animal’s condition.

Surgery usually is performed under general anesthesia which may be an injectable drug or the inhalation of a mixture of an anesthetic gas and oxygen, or combination of both.

Most surgery is elective (owner’s choice) and can be scheduled ahead at a convenient time. Emergency surgery must be performed as soon as possible to achieve the desired result.

**Neutering.** Ovariohysterectomy and castration are two of the most frequently performed surgical procedures. These operations prevent the animal from reproducing.

Ovariohysterectomy (spay) is performed on the female, commonly not before 6 months of age, and consists of abdominal surgery to remove both ovaries, oviducts, uterine horns and the uterine body. Removal of the ovaries will prevent the animal from coming into heat (estrus) and removal of the uterus prevents infection of that organ.

Castration is performed on the male cat or dog, preferably after six months of age, and will sterilize the animal and prevent objectionable behavior such as roaming, fighting and spraying urine. Both testes, the epididymis and part of the spermatic cord are removed in this procedure.

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Careful examinations always precede surgery. Many pet owners who do not plan to breed their cats and dogs opt for neutering their animals. As a result, this is the surgical procedure veterinarians most frequently perform on dogs and cats.
Declawing. This surgery is performed in cats and kittens to prevent damage to household belongings. Claws on both front feet are removed under general anesthesia. The procedure is best performed at 6 to 12 weeks of age as it causes less discomfort at a young age.

Tumors. Surgical removal of tumors in dogs and cats is a frequently performed procedure. These tumors vary in size and location. Some require only minor surgery using local anesthesia while others are complex operations involving vital organs.

Bone and Joint Surgery. Trauma (injury) to the animal is most often the reason for surgery of the bones and joints. Fractures, dislocations and partial dislocations may require surgery to correct. This orthopedic surgery often involves use of stainless steel pins, bone plates, bone screws and wire in repairing broken bones and damaged joints.

The key to good bone healing is immobilization of the affected bones and may involve a variety of internal (within the bone) or external immobilization techniques such as pins, plates, splints and casts.

Ligament and tendon damage may accompany bone damage and require surgery to repair also.

Neurosurgery in dogs and cats most often involves damage to the spinal cord from trauma or prolapsed intervertebral discs. Spinal surgery usually is done to relieve pressure (decompression) on the spinal cord and must be done in time to prevent permanent cord damage.

Eye surgery is being done with increasing frequency to correct such problems as cataracts, glaucoma and corneal opacities.

Emergency surgery is performed frequently on dogs and cats, often as a lifesaving procedure.

Some of the more common emergency operations are to relieve blockage of the urethra from urinary bladder stones (calculi); to relieve bloated stomach in dogs due to a twisting of the bowel; to remove damaged sections of intestine; or to repair a tear in the diaphragm which allows abdominal organs to enter the chest cavity.

Also, to replace a prolapsed eyeball; to remove foreign bodies from the digestive system; and to remove kittens or puppies via Cesarian section from the dam unable to deliver them normally.
Types of Tumors

Tumors can occur in every organ and area of the body of cats and dogs. They may be either malignant or benign and often spread (metastasize) to other organs or areas.

The tumors of greatest importance and incidence in dogs include those found in the skin, mammary gland, bone, lymph nodes, liver, spleen, lung and oral cavity. Cats experience a high incidence of leukemia, which affects the blood-forming cells of the bone marrow and the lymph nodes.

Canine lymphosarcoma is a common form of cancer found in dogs. The cause is unknown but the disease attacks lymph tissue in the body and may involve any organ. Most commonly the lymph nodes are enlarged with secondary involvement of the lung, liver, spleen or bowel. Diagnosis can be confirmed by biopsy of affected tissue and blood studies.

Mammary tumors occur frequently in female dogs and less frequently in cats. Half of these tumors are malignant in dogs and over 90 percent are malignant in cats. Spread to the lungs and lymph nodes is a common occurrence and should be evaluated before treatment. Mammary tumors rarely occur in bitches and queens spayed at an early age.

Bone tumors are not found often in cats and dogs. Most of those that do occur are malignant. The larger breeds of dogs have the highest incidence. Use of x rays and surgical biopsy are the best methods of diagnosis. Bone tumors have a high degree of malignancy.

Tumors of the abdominal organs occur with moderate frequency in dogs and cats. All the abdominal organs can be affected, individually or in combinations. The liver and spleen have the highest incidence of involvement followed by the lymph nodes, pancreas, bowel and kidney.

Tumors of the chest cavity are relatively common in both dogs and cats. The dog’s lungs are both a primary and secondary target for various types of tumors, more often malignant than not. Tumors around the heart are more common in the cat.

Skin tumors are very common and cover a wide range of type, appearance and location in both dogs and cats. They range from small benign nodules and wart-like growths to highly malignant, rapidly growing squamous cell carcinomas.
Treatment of tumors in dogs and cats can involve three general methods of therapy: Surgical removal, use of drugs (chemotherapy), and use of x rays. Treatment can be successful if started in time, planned well and pursued aggressively.

Feline leukemia is a complex, widespread disease that is caused by a virus capable of spreading from cat to cat. The virus infection may be very apparent or not cause the infected animal to show any obvious signs of the disease. It may be acute or chronic and result in death, apparent recovery or development of a wide range of seemingly unrelated diseases at a later time.

Diagnosis is by blood test and the long range prognosis is poor. Treatment is directed at the symptoms but cures are rare and complications are common. Work on an effective vaccine holds hope for the future in preventing the virus disease.

Dogs and cats have an incidence of cancer comparable to that in humans, and higher when their shorter life expectancy is taken into account.

Pet Injuries
Traumatic injuries most commonly are the result of being struck by a vehicle. Other causes include falls, blows, penetrating wounds from weapons, sharp objects or fights with other animals. Proper control or confinement of pets will reduce the frequency of such injuries.

Injuries can be divided into major and minor trauma. Minor trauma is a nonserious insult to the body. This includes skin cuts (lacerations) from broken glass, barbed wire, bite wounds and penetrating wounds from fish hooks or gunshot. Bruises may result from a fall or blow.

Major trauma is the result of damage to one or more body systems. Care must be taken because the animal may appear outwardly normal. The results of damage to internal body organs may not show up for hours or even days later. An uncharacteristic quietness, physical weakness, decreased sensation, and decreased body temperature may indicate post traumatic shock.

Shock is a condition characterized by physical and mental depression and circulatory failure. Trauma may cause conditions that bring about circulatory failure. The most obvious of these conditions is hemorrhage.

Severe hemorrhage (blood loss) reduces the volume of blood the heart can pump, so
A seriously injured dog in pain may attempt to bite even its owner. Before you attempt to help it, approach cautiously, speaking in a comforting voice, and muzzle the dog with a long strip of gauze as shown.
Examination and treatment by a veterinarian as soon as possible following traumatic injury in animals is important in treating shock and in reducing possible damage to vital organs.

Blood pressure decreases. The body attempts to compensate for this blood loss by causing constriction (narrowing) of the blood vessels. This is a means of maintaining adequate circulation of blood to the heart and brain.

The process results in a coolness and loss of pulse to the limbs. Burns cause fluid loss which can lead to the same circulatory failure. Death may occur when blood loss excedes 35 percent of the initial blood volume.

A decrease in blood volume may result in reduced blood flow to internal organs such as the kidneys and liver. Decreased circulation to these organs can allow toxic waste products to build up in the bloodstream. Animals are seriously affected as body organs have reduced function and the backup of toxic wastes occurs.

Obvious damage following trauma may be accompanied by unseen damage. Internal pressure caused by severe trauma may cause organ contusions and even rupture. Lung damage can result in difficult breathing and the passage of bloody froth from the nose and mouth. Rupture of the liver or spleen can be the source of severe internal hemorrhage. Rupture of the urinary bladder may accompany pelvic fractures or abdominal trauma.

Examination and treatment by a veterinarian as soon as possible following traumatic injury in animals is important in treating shock and in reducing damage to body organs.