

## Chapter 14 - Lesson 1



# Surgical Instruments & Terminology

### Introduction

A veterinarian uses a variety of instruments to perform surgical procedures on animals. The instruments that are selected for a particular surgery are chosen based on their function. The general surgical pack contains instruments that are used for holding, pulling, clamping, cutting, and crushing as well as closing the surgical wound when the operation is finished.

### Scissors

Scissors are used for many purposes during a surgical procedure, and come in many different shapes and degrees of sharpness. Utility scissors are used to cut non-biological materials such as when applying and removing bandages (bandage scissors).

Utility scissors are also used during surgery to cut paper and other materials (such as suture material) that may dull the blade of a sharper instrument. Scissors for cutting suture materials when installing or removing stitches are called suture scissors and are a type of utility scissors.

Operating, or surgical scissors, come in different sizes and are used to cut soft tissue. The cutting blades can be straight, curved, blunt or pointed. The function during the operation will determine the shape of the cutting blade.

Dissecting scissors are used to separate and differentiate tissues because they are more precise than operating scissors. Iris scissors are small and designed for excising lesions on, or portions of, the iris of the eye.



*Surgical instruments.*

Excision of tissues refers to the removal of tissues by surgical cuts. An instrument that permits excision by a crushing action is an ecraseur.

### Forceps

Thumb forceps are surgical pincers used for grasping, compressing, cutting, and pulling tissues.

Clamping forceps commonly called hemostats are used to control blood flow during surgery. Hemostats come in different sizes and have locking handles to tightly clamp the cut ends of bleeding arteries and veins. Hemostats are also used by the assistant to hold tissue while the surgeon works.

Needle holders are locking forceps that are used to hold a suture needle when installing stitches or closing a surgical incision.

## Scalpels

A surgical cut made into a tissue or organ is called an incision. Surgical scalpels are used to make incisions and for excision of tissues or organs.

A surgical scalpel is a very sharp knife. Often the handle and the blade are packaged separately and assembled by the surgeon at the beginning of the operation; this maintains the sterile field. In some cases, the surgical scalpel is a single unit. Replaceable blades and handles come in different sizes and styles so the surgeon can perform operations on all types of animals. A dissecting scalpel or tenotome is for fine dissection and cutting or dividing tendons.

## Tubes

Veterinarians commonly use lengths of tubing during operations and as part of wound healing. A tube that is inserted into a body cavity for drainage of fluid is called a drain.

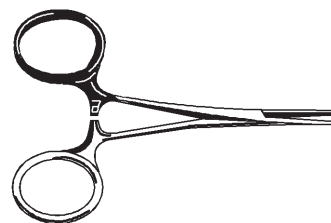
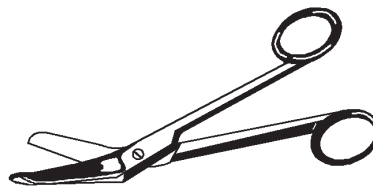
A cannula is a drain that is used to release build-ups of fluid or gas from animals. A trocar is a sharp stylet (or needle) enclosed in the cannula that is inserted through the wall of the body cavity. When the stylet (trochar) is withdrawn, the fluid or gas can drain through the cannula.

Catheters are tubes made of either metal or rubber that are inserted into body structures, permitting the passage of fluids into or out of the body through anatomic orifices or incisions during and after an operation. Body structures that are commonly catheterized are the urinary bladder and blood vessels.

## References

Hurov, L. (1978). *Handbook of veterinary surgical instruments and glossary of surgical terms*. Philadelphia, PA: Saunders.

Miller, C. W. (2003). Bandages and drains. In: *Textbook of small animal surgery* (pp. 244-249). Philadelphia, PA: Saunders.



*Bandage scissors, thumb forceps, hemostats, and scalpel.*

## Questions

1. Describe the function of the following surgical instruments:
  - a. Thumb forceps
  - b. Hemostats
  - c. Operating scissors
  - d. Ecraseur
  - e. Scalpel

## Activity

1. Under the supervision of a veterinarian, handle various surgical instruments in the different surgical packs. Observe the actions and purposes of each instrument.