

# Children's Resources: Surgery in Veterinary Medicine



## Veterinary Specialty of the Day:

### Surgery

Some veterinarians and veterinary technicians undergo further training to specialize in a specific field of medicine. Surgery is a branch of medicine that performs operations to treat certain conditions. While all veterinarians may perform surgery, veterinary surgeons undergo additional training that equips them to handle problems or injuries requiring advanced care.

### Discussion Question

- Why might an animal need to have surgery?

## Veterinary surgeons are trained to...



### Perform Biopsies

A surgical biopsy is when a piece of bodily tissue is removed. The tissue is then examined in a lab in order to make a diagnosis.



### Treat Orthopedic Injuries

If an animal has a fracture or another type of bone/joint issue, a veterinary surgeon may be able to treat and repair the condition.



### Perform Soft Tissue Surgeries

Soft tissue refers to body parts such as our organs, muscles, blood vessels, nerves, etc. A surgical biopsy can be a type of soft tissue surgery.



### Perform Minimally Invasive Procedures

Minimally invasive procedures use small incisions. An incision is a surgical cut. Smaller incisions can allow for quicker recovery times.

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## All About Surgery



Prepping for surgery is a very important task for veterinary surgeons and veterinary technicians alike.

Staff must scrub in for surgery, meaning the hands and arms are scrubbed to make sure they are clean and free of debris. After scrubbing, the surgical gown and gloves are put on.

The patient must be prepped as well. Once the animal is under anesthesia, fur is clipped and the surgical site is scrubbed.



There are many types of surgical instruments used when performing an operation. Common instruments include scalpels (blades that make incisions), needle holders (to hold needles when suturing a tissue), scissors, forceps (surgical tweezers for grabbing tissue), and drains (to remove fluid from an area).



One of the most common types of surgeries for cats and dogs is spaying/neutering. In these types of surgeries, certain reproductive organs in the animal are removed. These procedures are done in order to prevent unwanted litters of puppies or kittens. Spaying or neutering early can also help protect cats and dogs from developing certain health problems later in life.

### References:

<https://www.avma.org/resources/pet-owners/petcare/spaying-and-neutering>

<http://www.vetsurgeryonline.com/index.html>

[https://www.vettechprep.com/\\_pps/OZBSSFVTHDFIWTWR7335.PDF](https://www.vettechprep.com/_pps/OZBSSFVTHDFIWTWR7335.PDF)

## Activities



### 5<sup>th</sup> Grade & Up

#### Surgical Sutures

*Materials: felt/fabric, yarn/thread, sewing or yarn needles, scissors, tweezers*

- Veterinary surgeons need excellent hand-eye coordination to perform their job. One part of a surgeon's job is to learn how to suture, or stitch closed, a wound.
- If your child has an interest in surgery, a fun activity to practice their hand-eye coordination is learning surgical knot techniques. To learn some of these techniques, refer to either of these series of videos on surgical knot tying:
  - <https://medschoolinsiders.com/medical-student/how-to-tie-surgical-knots>
  - <http://www.vetsurgeryonline.com/knots>
- To make the activity easier, it's recommended to use yarn and a yarn needle as they are bigger and easier to handle, but a regular sewing needle and thread works just as well. Make sure to supervise your child anytime they are using sharp instruments.
- Using a pair of scissors, cut a straight line through a piece of felt or fabric. Cut a length of string and thread it through the needle. Using the needle, have your child push it through one side of the cut fabric to the other. Cut the string after it is through the fabric.
- Referring to the above videos, your child can practice tying surgical knots with one hand, two hands, and even tweezers.

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Animal Medical Center  
Usdan Institute for  
Animal Health Education

## Activities



### 9<sup>th</sup> - 12<sup>th</sup> Grades

#### Career Exploration: Veterinary Surgeons

*Materials: computer/tablet/phone with internet access*

- The field of veterinary medicine is huge and there are many job opportunities available to those interested in pursuing a career in the field.
- If your child is interested in a career in veterinary surgery, encourage them to research the various job opportunities and programs that exist.
- Need a place to start? Check out this link to the American College of Veterinary Surgeons on the job of a veterinary surgeon: <https://www.acvs.org/what-is-a-veterinary-surgeon>