

Canine Venipuncture Curriculum



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Canine Venipuncture Curriculum

The *Canine Venipuncture Curriculum* and accompanying Canine Venipuncture Legs is designed to help students understand the appropriate needs of canine venipuncture and the proper procedure for performing this on a canine patient. The Canine Venipuncture Legs give participants hands-on practice mastering this procedure prior to working with a real dog.

Author



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Dr. Ochoa earned her Bachelor of Science degree from Louisiana Tech University in animal science pre-veterinary medicine. She acts as a consultant for a variety of companies endorsing product. She also has experience writing articles and blogs on animal husbandry, pet care, and anything related to veterinary science.

Curriculum Structure

The *Canine Venipuncture Curriculum* is composed of the following lessons. Approximate lesson times are included.

Lesson	Title	Approximate Time
One	Needs of Venipuncture in Dogs	40 minutes
Two	Proper Canine Venipuncture Techniques	60-80 minutes
	Total	1-2 hours

Lesson Structure

Each lesson begins with a Lesson Overview, Lesson Objectives, and a Lesson at a Glance table, which lists lesson activities, materials required, suggested preparation steps, and approximate class time.

Lesson Sections

The actual lesson follows the overview, which contains some of the sections described below.

FOCUS

Every lesson begins with a FOCUS activity intended to capture participants' attention. This may be in the form of a small or large class discussion, a game, a demonstration, or a review of previous lesson information. During this activity, participants are introduced to the topic of the lesson.

LEARN

The LEARN activity in each lesson varies in its presentation mode. It may be a slide presentation, group activity, or demonstration.

REVIEW

The majority of lessons end with a REVIEW activity intended to briefly review the lesson's key messages or main points.

Lesson One – Needs of Venipuncture in Dogs

Lesson Overview

This lesson will help participants understand the needs of venipuncture in dogs. The lesson will also answer some of the following questions: What are the needs for venipuncture? What does a dog do? Why do dogs need to have injections and blood withdrawals? Participants will also learn about issues to be aware of with the dog's behavior when doing this procedure.

Lesson Objectives

After completing this lesson, participants will be able to:

- Understand why we perform venipuncture
- Know the purposes for venipuncture
- Understand considerations for dogs when doing venipuncture such as:
 - Why dogs need to have injections and blood withdrawals
 - Why it's important and needs to be done correctly
 - Issues that you should be aware of with the dog's behavior when doing this type of procedure

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• Whiteboard and dry erase markers	1. Have a whiteboard and markers available.	10 minutes
LEARN	• Needs of Venipuncture in Dogs slide presentation • <i>Needs of Venipuncture in Dogs Notes Page</i> • <i>Needs of Venipuncture in Dogs Notes Page – Answer Key</i>	1. Prepare the <i>Needs of Venipuncture in Dogs</i> slide presentation for viewing. 2. Make copies of the <i>Notes Page</i> (one per participant). 3. Have the answer key available for reference.	20 minutes
REVIEW	• <i>Needs of Venipuncture in Dogs Quiz</i> • <i>Needs of Venipuncture in Dogs Quiz – Answer Key</i>	1. Make copies of the quiz (one per participant). 2. Have the answer key available for reference.	10 minutes

Lesson One – Needs of Venipuncture in Dogs

FOCUS: Why Would a Dog Need Venipuncture?

10 minutes

Purpose:

Get participants to think about why venipuncture is needed in a canine patient.

Materials:

- Whiteboard and dry erase markers

Facilitation Steps:

1. Begin with the question on the whiteboard:
“Why would a dog need venipuncture?” Get participants to raise their hands and explain why they think venipuncture is needed.
2. Write participants’ answers on the whiteboard and discuss each one.

Lesson One –Needs of Venipuncture in Dogs

LEARN: Needs of Venipuncture in Dogs Presentation

20 minutes

Purpose:

Learn about the different needs of venipuncture in dogs.

Materials:

- *Needs of Venipuncture in Dogs* slide presentation
- *Needs of Venipuncture in Dogs Notes Page*
- *Needs of Venipuncture in Dogs Notes Page – Answer Key*

Facilitation Steps:

1. Use the slide presentation and discuss each slide with the class.

Slide 1: Needs of Venipuncture in Dogs

Slide 2: When Is Venipuncture Needed?

There are three primary reasons for venipuncture in dogs. The same reasons exist for human patients. These are to:

- Give medications
- Place IV catheters
- Collect blood

Slide 3: To Give Medication

Different types of medications can be given via IV injection such as:

- Sedatives
- Antibiotics
- Euthanasia solution
- Emergency drugs
- Other medications

Slide 4: Place Intravenous Catheters

When a patient is sick, an IV can be placed to give fluids or medications to help them recover.

Slide 5: Collect Blood

Venipuncture is used to draw blood from patients for diagnostic testing.

Slide 6: Why Venipuncture Is Needed

- To access the vein for giving medication or fluids or taking blood
- This is the quickest way for patients to receive certain medications that are needed in emergency situations
- It can quickly rehydrate patients who are dehydrated
- Having blood drawn can help determine what is wrong with the patient as many diagnostic tests use blood

Slide 7: Possible Complications

When performing venipuncture on a dog there are a few things to consider:

- The temperament of the patient
- Other health conditions
- Reason for the venipuncture

Slide 8: Temperament of the Patient

- Some pets do not like being restrained and will not sit still for a blood draw
- This can cause them to have issues breathing, get hurt or injure you
- Always ask for help when needed

Slide 9: Other Health Concerns

- Underlying bleeding disorders can cause issues with clotting after blood draw
- Underlying cardiovascular and pulmonary diseases can worsen from the stress of venipuncture

Slide 10: Reason for Venipuncture

- Always know why you are performing a venipuncture
- This can help you prepare for anything that can go wrong and identify the tools needed

Slide 11: Summary

- Be prepared for your patient to **not** stay completely still
- Practicing venipuncture will allow you to access the vein quickly and easily, which helps avoid complications

Needs of Venipuncture in Dogs

Notes Page

Instructions: Take notes in the space provided as the slide presentation is shared.

The three primary reasons for venipuncture in dogs are:

What are different types of medications that can be given via IV injection?

True_or False: When a patient is sick an IV can be placed to give fluids or medications to help them recover.

Venipuncture is used to draw blood from patients for _____ testing.

Venipuncture is needed for giving _____ or _____

or _____

When performing venipuncture on a dog, there are a few things to consider:

Some pets do not like being _____ and will not sit still for a _____

True or False: Some dogs have underlying bleeding disorders and can have issues clotting after blood draws.

Needs of Venipuncture in Dogs

Notes Page – Answer Key

The three primary reasons for venipuncture in dogs are:

- **To give medications**
- **To place IV catheters**
- **To collect blood**

What are different types of medications that can be given via IV injection?

Sedatives
Antibiotics
Euthanasia solution
Emergency Drugs
Other medications

True or False: When a patient is sick, an IV can be placed to give fluids or medications to help them recover.

Venipuncture is used to draw blood from patients for **diagnostic** testing.

Venipuncture is needed for giving **medication** or **fluids** or **taking blood**.

When performing venipuncture on a dog, there are a few things to consider:

The temperament of the patient
Other health conditions
Reason for the venipuncture

Some pets do not like being **restrained** and will not sit still for a **blood draw**.

True or False: Some dogs have underlying bleeding disorders and can have issues clotting after blood draws.

Lesson One – Needs of Venipuncture in Dogs

REVIEW: Needs of Venipuncture in Dogs Quiz

10 minutes

Purpose:

This activity allows participants to test their newly acquired knowledge on venipuncture in dogs.

Materials:

- *Needs of Venipuncture in Dogs Quiz*
- *Needs of Venipuncture in Dogs Quiz – Answer Key*

Facilitation Steps:

1. Distribute copies of the quiz to each participant.
2. Have participants answer the questions and collect the quizzes at the end.
3. Go over answer with the class.

Name: _____ Class: _____

Needs of Venipuncture in Dogs Quiz

Instructions: Answer each question below.

1. What is NOT a reason for venipuncture?
 - a. To collect blood
 - b. To collect urine
 - c. To place an IV catheter
 - d. To give IV medication

2. List three complications that can arise when performing venipuncture.

3. What type of medication cannot be given via venipuncture?
 - a. Antibiotics
 - b. Laxatives
 - c. Sedatives
 - d. Emergency medication

4. Why are IV catheters placed?
 - a. To give fluids
 - b. To feed patients
 - c. To help them urinate
 - d. None of the above

5. What is not a complication with venipuncture?
 - a. A patient biting you
 - b. A patient bleeding after venipuncture
 - c. A patient having breathing issues during venipuncture
 - d. A patient breaking their leg

Needs of Venipuncture in Dogs Quiz – Answer Key

1. What is NOT a reason for venipuncture?
 - a. To collect blood
 - b. To collect urine**
 - c. To place an IV catheter
 - d. To give IV medication
2. List three complications that can arise when performing venipuncture.
Answer may vary but should mention the health of the patient and underlying medical conditions.
3. What type of medication cannot be given via venipuncture?
 - a. Antibiotics
 - b. Laxatives**
 - c. Sedatives
 - d. Emergency medication
4. Why are IV catheters placed?
 - a. To give fluids
 - b. To feed patients**
 - c. To help them urinate
 - d. None of the above
5. What is not a complication with venipuncture?
 - a. A patient biting you
 - b. A patient bleeding after venipuncture
 - c. A patient having breathing issues during venipuncture
 - d. A patient breaking their leg**

Lesson Two – Proper Canine Venipuncture Techniques

Lesson Overview

This lesson will help participants understand the steps for performing a canine venipuncture procedure. Using the Canine Venipuncture Legs, students will also get hands-on practice performing this procedure.

Lesson Objectives

After completing this lesson, participants will be able to:

- Understand the steps for performing a canine venipuncture procedure
- Perform a venipuncture successfully with the Canine Venipuncture Legs

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• Whiteboard and dry erase markers	1. Have a whiteboard and dry erase markers available.	10 minutes
LEARN	• <i>Proper Canine Venipuncture Techniques</i> slide presentation • Canine Venipuncture Legs and all supplies	1. Prepare the <i>Proper Canine Venipuncture Techniques</i> slide presentation for viewing. 2. Set up the Canine Venipuncture Legs for use with participants.	40-60 minutes
REVIEW	• <i>Proper Canine Venipuncture Techniques Quiz</i> • <i>Proper Canine Venipuncture Techniques Quiz – Answer Key</i>	1. Make copies of the quiz (one per participant). 2. Have the answer key available for reference.	10 minutes

Lesson Two – Proper Canine Venipuncture Techniques

FOCUS: Proper Venipuncture Techniques Discussion

10 minutes

Purpose:

Get participants to think about the proper technique of venipuncture.

Materials:

- Whiteboard and dry erase markers

Facilitation Steps:

1. Start off with the question: “What is venipuncture?” Get participants to raise their hands and share what they believe the definition to be.
2. Ask participants to identify the steps needed for venipuncture on a dog.
3. Write these on the whiteboard and discuss them when participants give suggestions.

Lesson Two – Proper Canine Venipuncture Techniques

LEARN: Proper Venipuncture Techniques Presentation

40-60 minutes

Purpose:

Learn the proper techniques of venipuncture so that participants will be able to successfully perform this skill on the Canine Venipuncture Legs.

Materials:

- *Proper Canine Venipuncture Techniques* slide presentation
- Videos of proper venipuncture techniques with dogs
- Canine Venipuncture Legs

Facilitation Steps:

1. Use the slide presentation to introduce the proper techniques and steps and discuss each slide with the class.

Slide 1: Proper Canine Venipuncture Techniques

Slide 2: Steps For Venipuncture in a Dog

- Restrain the patient
- Shave the area for venipuncture
- Clean the area
- Insert the needle into the vein

Slide 3: Restrain the Patient

- No patient sits still
- You must properly restrain the dog with the help of an assistant

Slide 4: Prep the Area

- The fur must be shaved
- This allows you to easily see the vein.

Slide 5: Clean the Area

- Using chlorhexidine or alcohol clean the skin over the vein
- This prevents bacteria from entering the bloodstream

Slide 6: Insert the Needle into the Vein

- Make sure the bevel is pointed upward
- Try to minimize the number of times that you stick the patient
- Only 3 sticks per needle before you should get a new needle syringe
- Sometimes it is okay to get a more experienced team member to draw blood or give an IV injection; we all have bad blood draw days

Slide 7: Time to Practice

Here is an alternative video you can show participants:

<https://www.youtube.com/watch?v=ieR8Ek3sTGM>

2. Set up the Canine Venipuncture Legs and demonstrate the proper technique on them for the class. Demonstrate how to perform venipuncture on both large and small dogs.
3. Have participants rotate through the canine venipuncture stations so that all participants have the opportunity to properly do both procedures.

Set up three small and three large dog stations. At each station, include the IV stand, IV bag, and proper syringe. The small dog leg requires three 22-gauge needles, and the larger dog leg requires three 20-gauge needles.

Lesson Two – Proper Canine Venipuncture Techniques

REVIEW: Venipuncture Quiz

10 minutes

Purpose:

This activity will allow participants to test their newly acquired knowledge on venipuncture techniques for dogs.

Materials:

- *Proper Canine Venipuncture Techniques Quiz*
- *Proper Canine Venipuncture Techniques Quiz – Answer Key*

Facilitation Steps:

1. Distribute a copy of the quiz to each participant.
2. Have participants answer the questions and collect them at the end.
3. Go over answers with the class.

Name: _____ Class: _____

Proper Canine Venipuncture Techniques Quiz

Instructions: Answer each question below.

1. What are the four steps to performing a canine venipuncture procedure?

Step 1:

Step 2:

Step 3:

Step 4:

2. True or False Every canine patient will sit still without need of restraint.

3. Shaving the fur allows you to easily see the _____.

4. Using chlorhexidine or alcohol to clean the skin over the vein will prevent _____ from entering the bloodstream.

5. When inserting the needle into the vein, make sure the bevel is pointed

- a. Downward
- b. Upward
- c. Inward
- d. Outward

6. What is the preferred vein to use for venipuncture?

Proper Canine Venipuncture Techniques Quiz – Answer Key

1. What are the four steps for performing a canine venipuncture procedure?

Step 1: Restrain the patient

Step 2: Shave the area for venipuncture

Step 3: Clean the area

Step 4: Insert the needle into the vein

2. True or **False** Every canine patient will sit still without need of restraint.
3. Shaving the fur allows you to easily see the **vein**.
4. Using chlorhexidine or alcohol to clean the skin over the vein will prevent **bacteria** from entering the bloodstream.
5. When inserting the needle into the vein make sure the bevel is pointed
- a. Downward
 - b. Upward**
 - c. Inward
 - d. Outward
6. What is the preferred vein to use for venipuncture?
- The lateral saphenous vein of the lower leg**

Sources

1. https://www.research.vt.edu/content/dam/ouv_vt_edu/sops/small-animal/sop-dogs-and-cats-venipuncture.pdf