

Introduction to Infant Blood Pressure Curriculum



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Table of Contents

About the Authors 4

Curriculum Structure 5

Lesson Structure 5

Lesson One – Introduction to Infant Blood Pressure 6

 FOCUS: Part 1 – Developing Awareness of Patient-Focused Care 7

 FOCUS: Part 2 – Review of Infant Arterial Anatomy..... 10

 LEARN: Introduction to Infant Blood Pressure Slide Presentation 13

 SUMMARIZE: Practice and Assessment of Taking Infant Blood Pressure 16

Sources..... 22

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Introduction to Infant Blood Pressure

This curriculum and accompanying Infant Vital Signs Trainer will help participants learn about the measurement of infant blood pressure and the meaning of the results according to the American Academy of Pediatrics.

Curriculum Structure

The *Introduction to Infant Blood Pressure* curriculum is composed of the following parts. Approximate times are included.

Lesson	Title	Approximate Time
One	FOCUS: Part 1 – Developing Awareness of Patient-Focused Care	10 minutes
One	FOCUS: Part 2 – Review of Infant Arterial Anatomy	10 minutes
One	LEARN: Introduction to Infant Blood Pressure Slide Presentation	20 minutes
One	REVIEW: Practice and Assessment of Taking Infant Blood Pressure	35 minutes
	Total	1 hour 30 minutes

Lesson Structure

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

Lesson Sections

The actual lesson follows the overview, which will contain 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 review of previous lesson information, or a demonstration. 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 – Introduction to Infant Blood Pressure

Lesson Overview

In this lesson, participants will learn about the measurement of infant blood pressure and the meaning of the results according to the American Academy of Pediatrics.

Pre-Lesson Knowledge

- Cardiovascular anatomy
- Blood flow through the heart

Lesson Objectives

After completing this lesson, participants will be able to:

- Define key terms associated with equipment and blood pressure
- Demonstrate how to explain the procedure to a patient's parent
- Explain how to measure appropriate cuff size and choose a measurement location
- Perform the steps in accurately measuring a patient's blood pressure using the technique of auscultation
- Outline the differences between hypertension, hypotension, and normal values per the American Academy of Pediatrics
- Explain how to document blood pressure

Lesson at a Glance

Activity	Materials	Preparation	Approximate class time
FOCUS – Part 1	• <i>Introduction to Infant Blood Pressure (Focus on Empathy)</i> worksheet • <i>Introduction to Infant Blood Pressure (Focus on Empathy)</i> Instructor Resource	1. Print/photocopy <i>Introduction to Infant Blood Pressure (Focus on Empathy)</i> worksheet (one per participant)	10 minutes
FOCUS – Part 2	• <i>Introduction to Infant Blood Pressure (Focus on Anatomy)</i> worksheet • <i>Introduction to Infant Blood Pressure (Focus on Anatomy)</i> Instructor Resource	1. Print/photocopy <i>Introduction to Infant Blood Pressure (Focus on Anatomy)</i> worksheet (one per participant)	10 minutes
LEARN	• <i>Introduction to Infant Blood Pressure</i> slide presentation	1. Prepare <i>Introduction to Infant Blood Pressure</i> slide presentation for viewing	20 minutes
REVIEW	• <i>Introduction to Infant Blood Pressure Check-Off</i> Instructor Resource • <i>Introduction to Infant Blood Pressure Check-Off</i> • Infant Vital Signs Trainer • Stethoscopes • <i>Introduction to Infant Blood Pressure Test</i> • <i>Introduction to Infant Blood Pressure Test – Answer Key</i>	1. Print/photocopy <i>Introduction to Infant Blood Pressure Check-Off</i> (one per participant) 2. Get the supplies ready for the lesson 3. Print/photocopy <i>Introduction to Infant Blood Pressure Test</i> (one per participant)	35 minutes

Lesson One – Introduction to Infant Blood Pressure

FOCUS: Part 1 – Developing Awareness of Patient-Focused Care

10 minutes

Purpose:

To help participants develop awareness of patient focused care.

Materials:

- *Introduction to Infant Blood Pressure (Focus on Empathy) worksheet*
- *Introduction to Infant Blood Pressure (Focus on Empathy) Instructor Resource*

Facilitation Steps:

1. Distribute the *Introduction to Infant Blood Pressure (Focus on Empathy) worksheet* prior to or at the start of the class.
2. Have the *Introduction to Infant Blood Pressure (Focus on Empathy) Instructor Resource* page available.
3. Have participants read through the information and complete the worksheet.
4. Have participants pair up upon completion and share answers.

Introduction to Infant Blood Pressure (Focus on Empathy) Instructor Resource

READ the following scenario:

Delilah is a two-month-old infant who presents to the emergency department with a fever and fussiness. Since fever in an infant this young is often a sign of serious illness, a full set of vitals, including blood pressure, is requested from the ED provider. The infant's parents are very worried about her current condition.

The CNA comes into the room and introduces herself. She then proceeds to gather vital signs. The blood pressure cuff does not fit well and Delilah is crying vigorously and moving her arms all around. The CNA says "I can't get a good reading. I'll be right back." and starts to leave the room. The mother is visibly upset and asks, "Is something wrong?" The CNA simply replies, "No, I'll be right back." The parents are distressed and try to comfort their crying infant while they wait.

REFLECT on the feelings of the patient's parents:

- How do Delilah's parents feel and why?
- How might the infant feel during this encounter?
- What could the CNA have done to change the situation?

SHARE your thoughts with a peer (*possible responses below*):

- ***It is normal for infants to fuss or cry when being assessed or having vital signs collected. However, the parents may interpret this to mean their child is in pain or being hurt by the gathering of vitals. They also may not understand what the CNA means when she says she "can't get a reading" and are not likely to know she is leaving to get a different size cuff. They are scared and worried for their child and the CNA's vague response is not reassuring or helpful.***
- ***It is also important to remember that even young infants and children can feel fear or discomfort during routine procedures like gathering vital signs. Comfort holds, distraction, or even breastfeeding can be appropriate interventions to help calm upset or crying infants while caring for them. Continuing to gather vital signs without attempting to calm the infant can lead to inaccurate readings.***
- ***It is important to acknowledge the parents' feelings. Ask the students how the CNA could have approached them differently and what they think the parents were feeling.***
- ***Remind participants to keep patients like Delilah in mind as they learn about blood pressure. It is important to focus on the patient as well as the procedure.***

Name: _____ Class: _____

Introduction to Infant Blood Pressure (Focus on Empathy)

READ the following scenario:

Delilah is a two-month-old infant who presents to the emergency department with a fever and fussiness. Since fever in an infant this young is often a sign of serious illness, a full set of vitals, including blood pressure, is requested from the ED provider. The infant's parents are very worried about her current condition.

The CNA comes into the room and introduces herself. She then proceeds to gather vital signs. The blood pressure cuff does not fit well and Delilah is crying vigorously and moving her arms all around. The CNA says "I can't get a good reading. I'll be right back." and starts to leave the room. The mother is visibly upset and asks, "Is something wrong?" The CNA simply replies, "No, I'll be right back." The parents are distressed and try to comfort their crying infant while they wait.

REFLECT on the feelings of the patient:

- How do Delilah's parents feel and why?
- How might the infant feel during this encounter?
- What could the CNA have done to change the situation?

SHARE your thoughts with a peer.

Lesson One – Introduction to Infant Blood Pressure

FOCUS: Part 2 – Review of Infant Arterial Anatomy

10 minutes

Purpose:

To help participants review infant arterial anatomy.

Materials:

- *Introduction to Infant Blood Pressure (Focus on Anatomy) Instructor Resource*
- *Introduction to Infant Blood Pressure (Focus on Anatomy) worksheet*

Facilitation Steps:

1. Distribute the *Introduction to Infant Blood Pressure (Focus on Anatomy) worksheets* prior to or at the start of the class.
2. Have the *Introduction to Infant Blood Pressure (Focus on Anatomy) Instructor Resource* available for reference.
3. Have participants read through the information and complete the worksheet.
4. Have participants pair up upon completion and share answers.

Introduction to Infant Blood Pressure (Focus on Anatomy) Instructor Resource

Blood pressure is the pressure that the blood exerts against the arteries as it is pumped through the body. Systolic pressure is the measurement of pressure inside the arteries when the heart beats. Diastolic pressure is the measurement of pressure inside the arteries when the heart is resting, or in between beats.

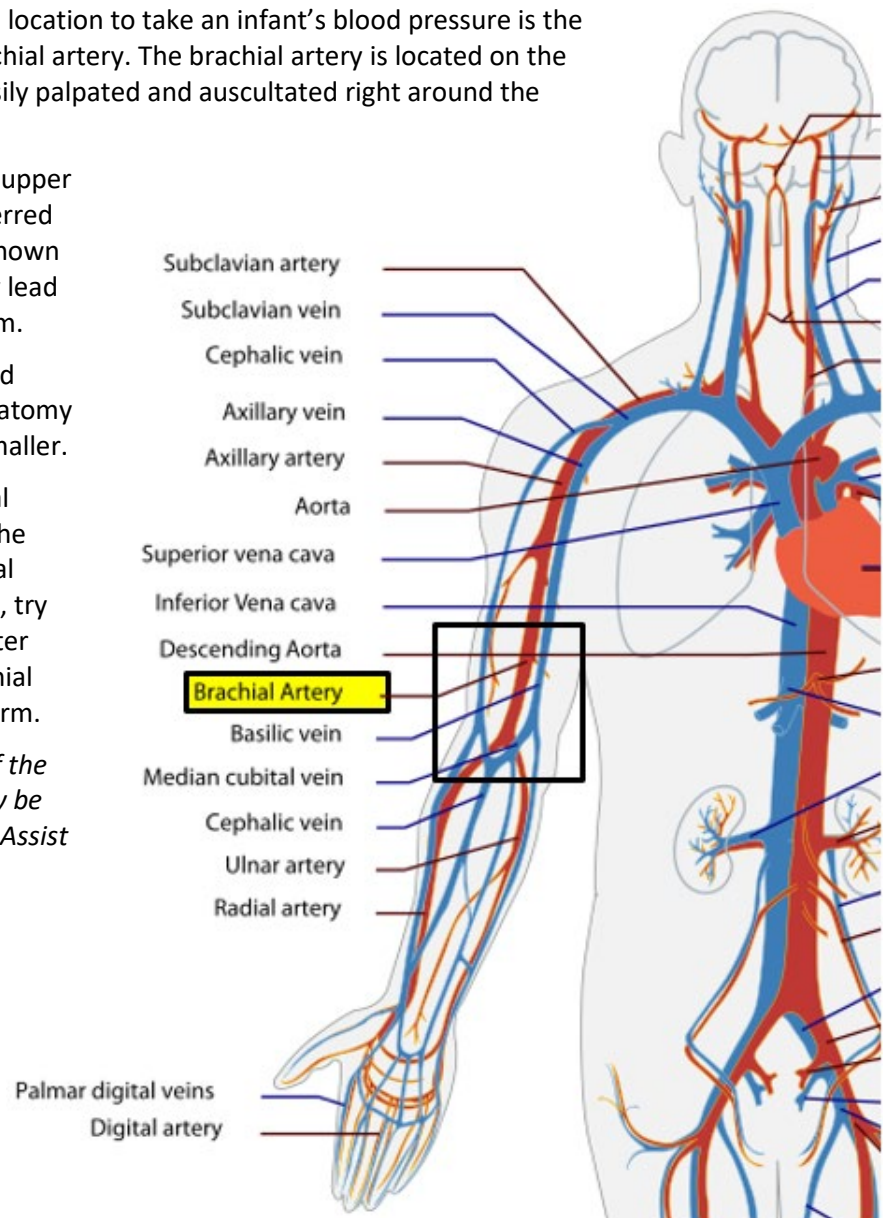
The most common and most accurate location to take an infant's blood pressure is the right upper arm, auscultating the brachial artery. The brachial artery is located on the inside of the upper arm, and most easily palpated and auscultated right around the antecubital fossa.

Infant BP can also be taken in the left upper arm if necessary, but the right is preferred just in case there is a cardiac defect known as coarctation of the aorta which may lead to an inaccurate reading in the left arm.

Below is a depiction of the arteries and veins in the adult arm. The arterial anatomy for an infant is the same, but much smaller.

Exercise: Locate and trace the brachial artery. When taking blood pressure, the stethoscope is placed over the brachial artery. Once you find it on the picture, try to palpate it on a peer. Use your pointer and middle finger to feel for the brachial pulse on the lower half of the upper arm.

Students should palpate in the area of the black box. Note that sometimes it may be difficult to palpate the brachial pulse. Assist the students as necessary.



By LadyofHats, Mariana Ruiz Villarreal [Public domain], via Wikimedia Commons. Retrieved from https://upload.wikimedia.org/wikipedia/commons/2/29/Circulatory_System_en.svg Merriam-Webster (2016). Dictionary. Retrieved from <https://www.merriam-webster.com/>

Name: _____ Class: _____

Introduction to Infant Blood Pressure (Focus on Anatomy)

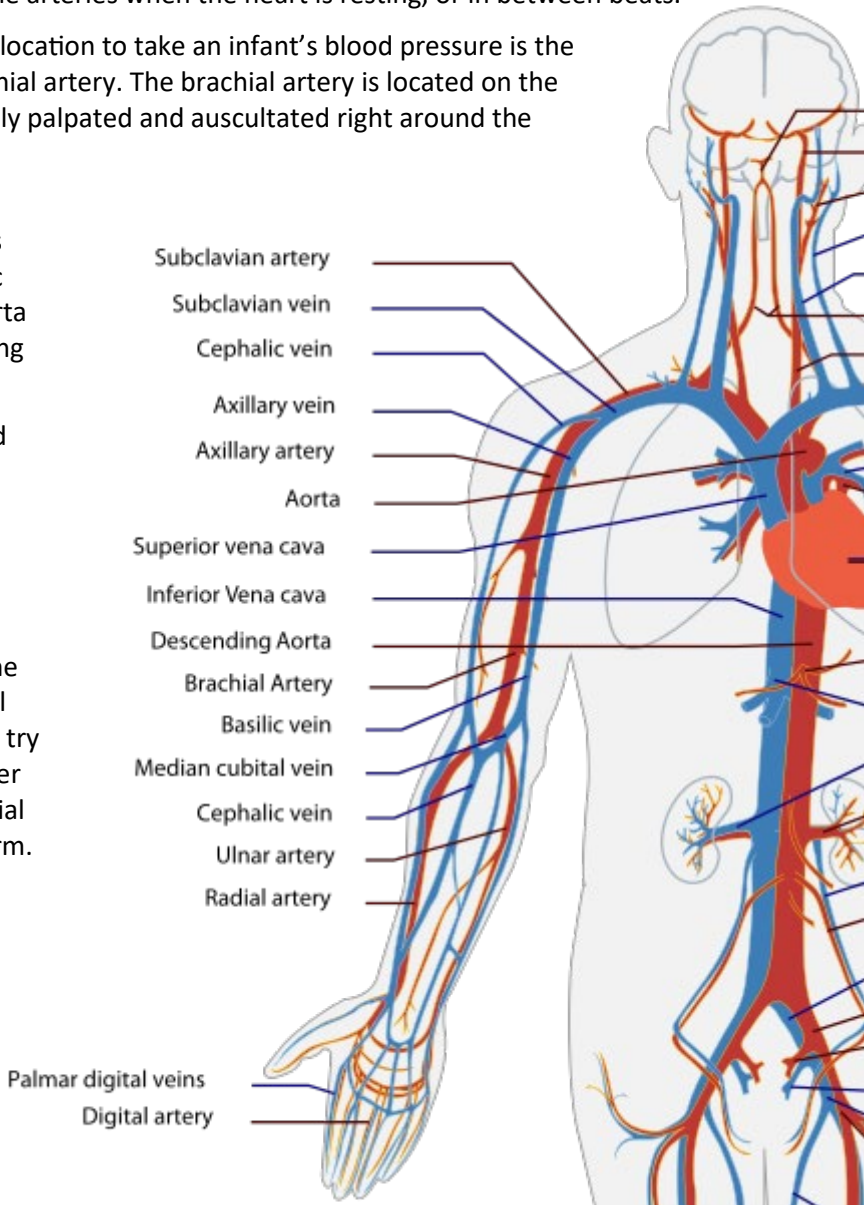
Blood pressure is the pressure that the blood exerts against the arteries as it is pumped through the body. Systolic pressure is the measurement of pressure inside the arteries when the heart beats. Diastolic pressure is the measurement of pressure inside the arteries when the heart is resting, or in between beats.

The most common and most accurate location to take an infant's blood pressure is the right upper arm, auscultating the brachial artery. The brachial artery is located on the inside of the upper arm, and most easily palpated and auscultated right around the antecubital fossa.

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Below is a depiction of the arteries and veins in the adult arm. The arterial anatomy for an infant is the same, but much smaller.

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By LadyofHats, Mariana Ruiz Villarreal [Public domain], via Wikimedia Commons. Retrieved from https://upload.wikimedia.org/wikipedia/commons/2/29/Circulatory_System_en.svg Merriam-Webster (2016). Dictionary. Retrieved from <https://www.merriam-webster.com/>

Lesson One – Introduction to Infant Blood Pressure

LEARN: Introduction to Infant Blood Pressure Slide Presentation

20 minutes

Purpose:

Participants will receive a thorough introduction to infant blood pressure and the proper procedure and documentation surrounding it.

Materials:

- *Introduction to Infant Blood Pressure* slide presentation
- Infant Vital Signs Trainer
- Stethoscope

Facilitation Steps:

1. Share the following information with participants as you show the slide presentation.

Slide 1: Introduction Slide. Source – AAP and Journal of Pediatrics

Slide 2: Blood pressure is the force on the arterial walls as the blood travels through.

It is written as a ratio with even numbers if done manually. Some automatic blood pressure machines will display odd numbers.

Slide 3: Systolic - The top number, which is the higher of the two numbers, measures the pressure in the arteries when the ventricle contracts.

Diastolic - The bottom number, which is the lower of the two numbers, measures the pressure in the arteries when the ventricles are relaxed. This is also when the heart is resting between beats and refilling with blood.

To remember which number is which, just remember that the sun is over dirt, thus systolic over diastolic.

Slide 4: -Typically, healthy and appropriately developed infants do not require having their BP measured.

Given the healthy and undamaged condition of most infant's cardiovascular systems, abnormal

blood pressure is not a common occurrence and there isn't much reason to suspect an otherwise healthy infant would have hypertension or hypotension.

When determining which infants might be at risk of abnormal BP, particularly hypertension, consider pregnancy and birth history and evaluate for risk factors.

Studies show premature and low birth weight infants are more likely to develop hypertension throughout infancy.

Slide 5: There are conditions where monitoring BP is more important and an abnormal value more likely.

Premature infants may be at risk of not being able to keep their BP high enough (hypotension) which means they cannot effectively perfuse their organs and tissues. The sickest of these infants will have intraarterial monitoring, but healthier and stronger infants can have intermittent monitoring with a cuff.

Some conditions may cause alterations in normal cardiac output or regulation of BP in infants and require BP to be monitored. Most commonly, issues with the kidneys, brain, heart, or lungs.

Infants <3 months of age or those who appear toxic or very ill may have serious illnesses like a UTI (very serious in infants), meningitis, or sepsis. Monitoring BP to make sure they are not hypotensive is important in these cases.

Slide 6: Certain medications may be given to keep an infant's BP within in normal range (caffeine is commonly given to preemies).

Or some medications an infant may be receiving for other conditions could have a

Introduction to Infant Blood Pressure

negative effect on BP (steroids, asthma medications like theophylline).

Infants exposed to illicit drugs before birth may experience withdrawal after birth and have problems keeping their BP regulated.

Rare tumors of the kidneys or brain may cause abnormal BP.

Infants with head injuries will need to have the pressure inside their skulls (intracranial pressure) regulated so it does not become too high and cause permanent damage.

Slide 7: In general, infants have a much lower BP than the average adult BP.

This is because their bodies (and hearts and blood vessels) are much smaller and more elastic and efficient than adults who have effects from their environment and aging.

Less force is needed to pump blood through their small, healthy bodies.

BP ranges are measured in percentiles.

Percentiles compare children to other children of the same age and gender.

Slide 8-9: Percentile charts. Data shows that BP is largely unchanged throughout the first year of life.

Slide 10: Unstable, septic, or seriously ill children may have hypotension.

This is concerning because if they cannot adequately perfuse their organs and tissues, irreparable damage may occur, particularly to the developing brain.

Less than 5th percentile for age is considered hypotension, but a sudden drop in BP percentile can also be concerning (for example a child who had been around 60th percentile but is now around 15th).

Slide 11: In order to take a blood pressure, you will need a sphygmomanometer (sfig-moh-muh-**nom**-i-ter) and a stethoscope.

The sphygmomanometer has three parts: the cuff, the dial and the bulb to inflate the bladder inside the cuff. There are pediatric cuffs, adult cuffs and extra-large cuffs. Show students the parts of the sphygmomanometer.

Slide 12: Cuff size is important in getting an accurate blood pressure. The proper cuff size can be determined two ways. One is to hold the bladder width around the upper arm. The correct cuff should be 50% of the arm circumference. Another way is if the white edge of the cuff falls within the white arrows when wrapped around the upper arm.

A cuff that is too narrow can cause false-high blood pressure readings.

A cuff that is too wide can cause false-low blood pressure readings.

Slide 13: Chart on cuff sizes.

There are standard newborn and infant cuffs, but NICUs or specialty units may have even more specific or wider range of sizes

Slide 14: The dial is in increments of 20 mm Hg (*point to 20, 40, 60 etc.*).

The bold line in the middle indicates ten (*point to the red arrow indicating 70*).

Each small line is 2 mm Hg (*point to the green arrow indicating 114*).

Slide 15: Show participants the stethoscope and how to use it.

Stethoscopes have ear tips, tubing, and a chest piece made of a diaphragm and a bell.

Ear tips - Before placing the ear tips in your ears, hold the stethoscope headset in front of you so that the ear tubes point away from you. When the ear tips are in your ears, the ear tips should be pointed forward.

Tubing - The average person will only pick up a difference if there is large increase in tubing length. Length of tubing seems to be a personal preference, but single tubing stethoscopes seem to carry sound better than dual tubing stethoscopes.

Diaphragm and Bell - The diaphragm is the larger, flatter side of the chest piece, and the bell has the smaller, concave piece with a hole in it. The diaphragm picks up high tone sounds while the bell picks up low tones.

Switch between the two by twisting the chest piece 180 degrees. You'll hear a click. Then tap each side to see which one is "on."

Introduction to Infant Blood Pressure

Stethoscopes rely on an airtight seal in order to transmit body sounds from the patient to the user's ear. Loose parts in the chest piece, loose tubing, or cracked tubing can prevent an airtight seal.

Slide 16: Sounds heard while taking a blood pressure are called Korotkoff sounds. They are named after a Russian physician, Dr. Nikolai Korotkoff, who discovered them in 1905.

When listening for the blood pressure, note what number is on the dial when you hear the first sound. This "phase one" sound is the systolic number.

You will mostly hear swishing, swooshing and tapping until the sound muffles and disappears. Note what number on the dial you hear the sound disappear. This is the diastolic number.

Slide 17: Most blood pressures are taken on the upper arms using the brachial artery.

The right arm is preferred in infants due to the possibility of a congenital heart defect known as Coarctation of the Aorta. This defect causes blood pressure to be different depending on how close to the aorta you are taking the BP and may make BP different from upper extremities to lower extremities.

In order to take a blood pressure on the upper arm, you will need to locate the brachial artery. This artery can be found on the middle inside of the elbow (otherwise known as the antecubital space).

Activity for group (if FOCUS Anatomy not completed prior to class): Turn to the person next to you and try to find the brachial artery by placing your pointer and middle finger on the location discussed in the presentation.

Slide 18: The first step in taking a blood pressure is to position your patient appropriately. Infants can be lying supine, prone, or sitting on a parent's lap.

They can be asleep or awake.

Consider that infants may cry with cuff placement or even have stranger anxiety. You will need to wait for them to calm down again before measuring BP or the reading will not be accurate.

Allow parents to hold and soothe their infant, consider distraction such as bubbles, attractive toys to watch, etc. You can allow infants to breastfeed or take a bottle or pacifier to help calm and comfort them.

If an infant is particularly upset, place the cuff and come back later to measure the BP once they have calmed down.

Wrap the deflated cuff around the upper arm not over clothing. The cuff should be one inch above the antecubital space directly over the brachial artery (note the word Artery on the cuff and align accordingly).

Slide 19: Place the diaphragm of the stethoscope over the brachial artery.

Pump the cuff up to around 120 which is around 30mm Hg higher than an infant's baseline.

Release the valve on the bulb carefully and slowly. Listen for Korotkoff's sounds and note the numbers. Remember that you are listening for the first and last sound heard. Deflate the cuff rapidly once no sounds are heard. Remove the cuff. If the blood pressure needs to be retaken, wait 1-2 minutes.

If the patient has a soft or low tone blood pressure, try the bell side of the chest piece.

Demonstrate to the class.

Slide 20: Remember that blood pressure numbers are recorded as an even number ratio. It is also important to record which arm it was taken on for future reference.

Lesson One – Introduction to Infant Blood Pressure

REVIEW: Practice and Assessment of Taking Infant Blood Pressure

30 minutes

Purpose:

Participants will practice taking blood pressure on Trainers, models, or trainers and then complete a test to assess mastery.

Materials:

- *Introduction to Infant Blood Pressure Check-Off Instructor Resource*
- *Introduction to Infant Blood Pressure Check-Off*
- Infant Vital Signs Trainer
- Stethoscope
- *Introduction to Infant Blood Pressure Test*
- *Introduction to Infant Blood Pressure Test – Answer Key*

Facilitation Steps:

1. Give participants the following handout:
Introduction to Infant Blood Pressure Check-Off page.
2. Access the *Introduction to Infant Blood Pressure Check-Off Instructor Resource* page. Following the steps on the check-off page, demonstrate taking blood pressure on the Infant Vital Signs Trainer. Refer to the Quick Start Guide for more information on use.
3. Participants should properly document this on their *Introduction to Infant Blood Pressure Check-Off* handout.
4. Hand out the *Introduction to Infant Blood Pressure Test* to participants. Give them a couple of minutes to complete it.
5. Have participants self-check or peer check the answers as you share them from the *Introduction to Infant Blood Pressure Test – Answer Key*

Introduction to Infant Blood Pressure

Check-Off Instructor Resource

PART ONE: Demonstrate how to use the training tool to take a blood pressure using the following steps:

1.	Gather appropriate equipment	
2.	Knock, enter room and provide for privacy	
3.	Identify yourself with name and title (student nurse, medical assistant, nurse aide, etc.)	
4.	Wash your hands with sanitizer or soap/water	
5.	Identify patient by asking the caregiver for name and date of birth; state that you would verify this information with a medical record	
6.	Explain the procedure to the patient's caregiver and ask if they have any questions	
7.	Verbalize that the patient would be positioned appropriately (held on a caregiver's lap, calm)	
8.	Place the cuff around the upper arm noting proper cuff size and placing it so the ARTERY label is over the brachial artery	
9.	Place the dial in view	
10.	Place the diaphragm of the stethoscope over the brachial artery at the antecubital space	
11.	Pump the BP cuff 30 mm HG above the patient's usual systolic pressure	
12.	Obtain a reading accurate within 2 points +/- of the blood pressure model	
13.	Ask your patient's caregiver if they have any questions	
14.	Wash your hand with sanitizer or soap/water	
15.	Document the blood pressure below Date: Time: Blood Pressure:	
	Score:	

Optional:

PART TWO: Have students practice on the model until they are comfortable with the procedure. You may give the patient a name and usual systolic blood pressure.

PART THREE: Have each student perform the activity with the model up to four times. Make sure each attempt setting has a patient name, date of birth and usual systolic pressure. Evaluate the student's ability to complete a blood pressure reading using the above steps. May score via points or satisfactory/unsatisfactory.

Example patient: Harrison Smith, DOB 5/28/21, 8 weeks old. Student should demonstrate developmentally appropriate care with comfort holds and waiting for infant to be calm/not crying. (Student should pump cuff to 120). Actual BP set on the training tool is 88/60. This is around 50th percentile for a male of this age. (Have students compare to appropriate percentile chart).

Name: _____ Class: _____

Introduction to Infant Blood Pressure Check-Off

1.	Gather appropriate equipment	
2.	Knock, enter room and provide for privacy	
3.	Identify yourself with name and title (student nurse, medical assistant, nurse aide, etc.)	
4.	Wash your hands with sanitizer or soap/water	
5.	Identify patient by asking the caregiver for name and date of birth; state that you would verify this information with a medical record	
6.	Explain the procedure to the patient's caregiver and ask if they have any questions	
7.	Verbalize that the patient would be positioned appropriately (on caregiver's lap, calm)	
8.	Place the cuff around the upper arm noting proper cuff size and placing it so the ARTERY label is over the brachial artery	
9.	Place the dial in view	
10.	Place the diaphragm of the stethoscope over the brachial artery at the antecubital space	
11.	Pump the BP cuff 30 mm HG above the patient's usual systolic pressure	
12.	Obtain a reading accurate within 2 points +/- of the blood pressure model	
13.	Ask your patient's caregiver if they have any questions	
14.	Wash your hand with sanitizer or soap/water	
15.	Document the blood pressure below Date: Time: Blood Pressure:	
	Score:	

Introduction to Infant Blood Pressure

Use the model as your patient to take a blood pressure. Your instructor will give you patient information.

Patient Initials: _____

Date: _____

Time: _____

Blood Pressure: _____

Patient Initials: _____

Date: _____

Time: _____

Blood Pressure: _____

Patient Initials: _____

Date: _____

Time: _____

Blood Pressure: _____

Name: _____ Class: _____

Introduction to Infant Blood Pressure Test

Select the best answer to the following multiple-choice questions:

1. The nurse has taken a 3-month-old infant's blood pressure and it is 92/64. The infant's mother asks why the numbers are so low. How does the nurse respond?
 - a. "Your baby is hypotensive. We need to find out what is wrong."
 - b. "This cuff size may be too big, let me remeasure."
 - c. "This cuff size may be too small, let me remeasure."
 - d. "Babies typically have a lower blood pressure than adults and this is normal."
2. The nurse is attempting to take a blood pressure on an 8-month-old infant who is clinging to his mother and crying. What is the nurse's next action?
 - a. Take the BP as quickly as possible so the child can be left alone
 - b. Offer a distraction like bubbles or a toy so the child will stop crying
 - c. Have another staff member hold the child down
 - d. Collect the rest of the vital signs and skip the BP
3. The nurse is reviewing the chart of a 2-month-old patient who will be coming to the clinic today. Which information in the patient's chart does the nurse understand to be a risk factor for hypertension?
 - a. Low birth weight
 - b. Large for gestational age
 - c. Birth by c-section
 - d. 41 weeks 1 day gestation at birth
4. When preparing to take a blood pressure on a 7-week-old infant, which extremity does the nurse know is preferred to use?
 - a. Left upper extremity
 - b. Right upper extremity
 - c. Left lower extremity
 - d. Right lower extremity
5. The nurse gathers a BP on a 6-month-old female infant and plots it at 92nd percentile on the appropriate chart. The nurse recognizes this to be:
 - a. A normal BP
 - b. Hypotensive
 - c. Elevated BP
 - d. Hypertension

Introduction to Infant Blood Pressure Test – Answer Key

Select the best answer to the following multiple-choice questions:

1. The nurse has taken a 3-month-old infant's blood pressure and it is 92/64. The infant's mother asks why the numbers are so low. How does the nurse respond?
 - a. "Your baby is hypotensive. We need to find out what is wrong."
 - b. "This cuff size may be too big, let me remeasure."
 - c. "This cuff size may be too small, let me remeasure."
 - d. **"Babies typically have a lower blood pressure than adults and this is normal."**
2. The nurse is attempting to take a blood pressure on an 8-month-old infant who is clinging to his mother and crying. What is the nurse's next action?
 - a. Take the BP as quickly as possible so the child can be left alone
 - b. **Offer a distraction like bubbles or a toy so the child will stop crying**
 - c. Have another staff member hold the child down
 - d. Collect the rest of the vital signs and skip the BP
3. The nurse is reviewing the chart of a 2-month-old patient who will be coming to the clinic today. Which information in the patient's chart does the nurse understand to be a risk factor for hypertension?
 - a. **Low birth weight**
 - b. Large for gestational age
 - c. Birth by c-section
 - d. 41 weeks 1 day gestation at birth
4. When preparing to take a blood pressure on a 7-week-old infant, which extremity does the nurse know is preferred to use?
 - a. Left upper extremity
 - b. **Right upper extremity**
 - c. Left lower extremity
 - d. Right lower extremity
5. The nurse gathers a BP on a 6-month-old female infant and plots it at 92nd percentile on the appropriate chart. The nurse recognizes this to be:
 - a. A normal BP
 - b. Hypotensive
 - c. **Hypertensive**
 - d. Elevated BP

Sources

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