

MID-LEVEL
HEALTH WORKER
TRAINING MODULES

BASIC CLINICAL
KNOWLEDGE
AND SKILLS.

- PN - AAN - 912 -

PHYSICAL EXAMINATION

UNIVERSITY OF HAWAII JOHN A. BURNS SCHOOL OF MEDICINE
DR. TERENCE A. ROGERS, DEAN

The Health Manpower Development Staff 1978-83

Director: RICHARD A. SMITH, M.D., M.P.H.

Deputy Director: RODNEY N. POWELL, M.D., M.P.H.

Manpower Development

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PATRICK B. DOUGHERTY, B.S., M.R.P.

Communications

SUNIL MEHRA, B.A.

Evaluation

ROBERT W. MACK, M.D., M.P.H.

Project Coordinators

MARIAN DeWALT MORGAN, B.A., M.A., M.P.H.
ROSEMARY A. DeSANNA, B.S., M.P.H.

Production

DAVID R. ALT, B.S., M.P.H.
RICHARD D. MUNRO-McNEILL, B.A.
ALLISON L. STETTNER, B.A., M.P.H.
KENNETH A. MIYAMOTO, B.F.A.
EVE J. DeCOURSEY
TERESA M. HANIFIN, B.A.

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Lesotho

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Guyana

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EDWARD MARGULIES, M.D., M.P.H.

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Pakistan

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GENERAL, MINISTRY OF HEALTH, ISLAMABAD
DR. NAZIR-UL-HAQUE, NWFP
DR. ZAHUR A. KHAN, BALUCHISTAN
DR. NISAR A. SIDDIQUI, SIND
DR. KHALID M. SULARI, PUNJAB

Lesotho

M. T. THABANE, PERMANENT SECRETARY
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NTHUNSE T. BOROTHO, R.N., B.S., M.P.H.
CHIEF PLANNING OFFICER
MINISTRY OF HEALTH, MASERU
NTSIENG RANKHETHOA, P.H.N., N.C.

Guyana

FRANK M. W. WILLIAMS, M.B.B.S., M.R.C.P.
DIRECTOR, MEDEX PROGRAM, GEORGETOWN
JAMES LaROSE, M.B.B.S.
HUGH HOLDER, M.B.B.S.
MELISSA HUMPHREY, ADMINISTRATOR
SASENARINE SINGH, NURSE DISPENSER, Mx.
YVETTE THOMAS-MOORE, P.H.N., Mx.

MEDEX Network Staff

University of Washington

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University of North Dakota

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EDWARD J. KLECKER, B.S.
MERRILL M. SHUTT, M.D., M.P.H.

The MEDEX Primary Health Care Series

**PHYSICAL
EXAMINATION**

Student Text

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Health Manpower Development Staff
John A. Burns School of Medicine
University of Hawaii, Honolulu, Hawaii, U.S.A.

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SCHEDULE
PHYSICAL EXAMINATION

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<p>Introduction to the Physical Examination module</p> <p>Overview of the physical examination</p>	<p>Preparing a patient for a physical examination</p> <p>Taking the vital signs and testing the urine</p>	<p>Examining the eyes, the ears, and the nose</p>	<p>Examining the respiratory system</p>	<p>Examining the abdomen</p> <p>Examining the male genitals</p>
<p>Methods of examination</p> <p>Equipment for performing a physical examination</p>	<p>Examining the general appearance, the skin, the lymph glands, and the head</p>	<p>Examining the mouth and throat and the neck</p>	<p>Examining the heart</p> <p>Examining the breasts</p>	<p>Examining the arms and legs of the musculoskeletal system</p>

6

DAY 6	DAY 7	DAY 8	DAY 15
<p>Examining the nervous system</p> <p>Review of the physical examination</p> <p>Using the practice guide for performing an adult physical examination</p>	<p>Performing and recording an adult physical examination</p>	<p>Posttest</p>	<p>Review of the clinical practice experience</p> <p>Making a diagnosis</p> <p>Performing and recording a brief medical history and physical examination</p>
<p>Recording an adult physical examination</p>			

Skill development: one week

Introduction

You have already studied the Anatomy and Physiology, and Medical History modules. What you learned in these modules has prepared you for the study of how to do a physical examination. Before you start this module, be sure you know:

Normal anatomy and physiology
How to take and record a medical history

If you are not sure how well you know this information, review the appropriate modules before you go on.

Activities in this module will help you learn how to examine adults and children. These activities will take place in the classroom and in a hospital clinic or health center.

Your schedule shows you when the learning activities will occur. Student Guides in front of each unit tell you more about what you will be expected to do. Units 1, 2, 3, and 4 will be taught in order. Your instructor will make special arrangements for Unit 5 which will take place in a hospital. Unit 6 will follow the clinical skill development practice week. Units 7 and 8 will be taught during another part of your training. Your instructor will tell you when the learning activities for these units will take place.

The training program can succeed only if you take an active part. Prepare for each session. Before each session:

Read the Student Text and answer the review questions that go with it

Write down questions to ask your instructor about any part of the lesson you do not understand

In class, the instructor will discuss the review questions and answer any other questions you have.

EVALUATION

This training program will help you build your knowledge and skills. Regular evaluations will allow your instructor to watch your progress.

If your progress does not meet the standard, you will be given more time to learn the subject. Your instructor will use the clinical performance records to measure your progress. Look at these performance records to prepare for your evaluation.

EVALUATION Level I

After seven days of classroom and clinical experience related to the Physical Examination module, you must be able to pass a written test of knowledge with a score of 80% or higher.

After another week of clinical experience, you must receive at least two Satisfactory ratings on your ability to:

 Perform an adult physical examination

 Record the findings of a physical examination

Your training includes four months of clinical practice. During the clinical practice, you will be expected to correctly diagnose, treat, and advise patients having various problems. To make a correct diagnosis, you will need to use the skills for performing a physical examination that you will have learned.

Unit 1

Overview of the Physical Examination

STUDENT GUIDE

OBJECTIVES

1. Describe the purpose of the physical examination.
2. Explain how the physical examination and the medical history are related.
3. Describe the recommended steps for performing an adult physical examination.
4. Describe the five methods used when examining a patient.
5. Describe each item of equipment used during a physical examination and how to use it.
6. Describe how to prepare a patient for a physical examination.

LEARNING ACTIVITIES

1. Listen to and observe presentations on:
 - The purpose of the physical examination
 - How the physical examination and the medical history are related
 - The steps for performing a physical examination
 - The five methods used when examining a patient
 - Each item of equipment used during a physical examination and how to use it
 - How to prepare a patient for a physical examination
2. Take part in a discussion of the presentations.
3. Observe the instructor while he examines an adult patient.

1.1 INTRODUCTION

Performing a physical examination is part of the process of deciding what is causing a patient's problem and making a diagnosis. You examine a patient after you take his medical history.

You examine a patient to find signs of disease. You use your sight, hearing, touch, and smell to recognize normal and abnormal occurrences in the patient's body. The medical history gives you clues to where to look for signs of disease. For example, a patient may say, "My chest hurts when I cough or take a deep breath." This information tells you to look at the patient's chest and to listen to his lungs to detect any signs of a problem.

This module explains how to perform a physical examination of an adult and a child. It also explains how to record the findings of a physical examination. Once you have finished taking the medical history and doing the physical examination, you will diagnose the patient's problem. Learning how to make a diagnosis requires a great deal of skill and practice. This module discusses the first steps in making a diagnosis. Your skill in making a diagnosis will increase as you study other modules and practice taking medical histories and doing physical examinations.

You will refer to the Physical Examination module throughout your training. In order to make this a complete reference book, these special assessment procedures have been included in the Appendix at the end of the module:

Procedure for Assessing a Pregnant Woman

Procedure for Assessing a Woman in Labor

Procedure for Determining a Newborn's APGAR Score

Procedure for Assessing a Newborn

Procedure for Assessing a Postnatal Woman

You will learn how to do these procedures later in your training.

1.2 SIGNS

Signs are clues that you look for as you examine a patient to help you decide what his problem is. As with symptoms, some typical signs are associated with each system of the body. This module discusses some important signs. Other modules will discuss additional signs.

Signs can be normal or abnormal findings. Normal signs tell you that the body is functioning properly. A change in the body or in its normal functions causes other signs. These are signs of abnormal conditions. Normal signs are just as important to detect as abnormal signs. Looking at both will help you identify a patient's problem and decide how severe the problem is.

1.3 STEPS FOR PERFORMING A PHYSICAL EXAMINATION

Follow these steps when you perform a physical examination.

- a. Arrange on a table within easy reach all of the equipment that you will use during the examination.
- b. Prepare the patient for the physical examination:

Make the patient comfortable. Arrange for a private area to perform the examination

Explain the purpose of the examination

Ask the patient to remove his clothing. Provide a drape

Warm the stethoscope and speculums before using them on the patient

Give clear instructions before you perform a procedure

- c. Take the patient's vital signs. Test his urine.
- d. Inspect the patient's general appearance.
- e. Examine the patient's:

Skin	Mouth and throat	Male genitals
Lymph glands	Neck	Arms and legs
Head	Respiratory system	Musculoskeletal system
Eyes	Heart	Nervous system
Ears	Breasts	Female genitals
Nose	Abdomen	

- f Explain the findings to the patient.
- g Record the findings of the physical examination.

1.4 METHODS OF EXAMINATION

Use these five methods when you examine a patient:

Inspect

Inspect means to look at the patient carefully for signs. Inspecting reveals more signs than does any other method.

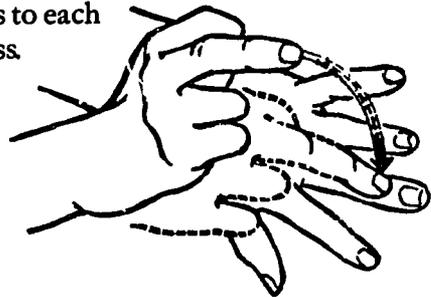
Palpate

Palpate means to touch or feel with your hands. Use your hands to determine the temperature, moisture, and texture of the skin. Feel for abnormal shapes of parts of the body. Feel for tenderness in the body.

Percuss

Percuss means to tap on certain parts of the body to make a sound. You will percuss the chest and the abdomen. To percuss:

- a. Press the middle finger of your left hand to the patient's skin surface. Lift your other fingers and the rest of your hand away from the skin.
- b. Strike the end joint of your left middle finger with the tip of your right middle finger. Move the right hand from the wrist to strike the left middle finger.
- c. Give two or three sharp taps to each area that you want to percuss.



- d. The sound will help tell you what lies under your finger. Compare the sound that you hear in one area with the sound that you hear in another area.

Auscultate

Auscultate means to listen with a stethoscope. You will listen to the sounds of the lungs, heart, and abdomen.

Smell

Smell means to notice odors given off from different areas of the body. You will smell the patient's breath and any discharges from his body.

Use these methods of examination in this order for each system of the body: inspect, palpate, percuss, auscultate, smell.

1.5 EQUIPMENT FOR PERFORMING A PHYSICAL EXAMINATION

Assemble all the equipment that you will use during the physical examination before you begin. Arrange the equipment neatly on a table or small desk next to where the patient will sit or lie down during the examination. Be sure the equipment is within easy reach as you examine the patient.

The following table lists each item of equipment that you will need for the physical examination and its use.

EQUIPMENT	USE
Adult scale	Weigh the patient
Sphygmomanometer	Take the blood pressure
Tape measure	Measure the height
Watch with a second hand	Time the pulse and respirations
Thermometer	Test the hearing
Jar for urine	Take the temperature
Indicator paper for testing urine	Test the urine
Stethoscope	Test the urine
Flashlight	Take the blood pressure Listen to the heart, lungs, and abdomen
	Examine the skin, eyes, mouth, and throat

EQUIPMENT	USE
Nasal speculum	Look into the nostrils
Tongue depressor	Push down the tongue or push aside the cheek to examine the mouth and throat
E chart	Test vision
Cotton	Test sensation
Pin	Test sensation
Gloves	Examine the male and female genitals
Lubricant	Examine the male and female genitals
Vaginal speculum	Examine the female genitals

1.6 PREPARING A PATIENT FOR A PHYSICAL EXAMINATION

Taking some extra time to prepare a patient for a physical examination will help him relax and will ease his anxiety. You will be able to perform a physical examination better. To prepare a patient for a physical examination:

- a. Make the patient as comfortable as possible. Arrange for a quiet, private place in which to examine the patient. Try to choose an area where you can avoid distractions. Provide a place for the patient to sit and lie down during the examination.
- b. Explain to the patient the purpose of the examination. Briefly describe what you will be doing and why.
- c. Ask the patient to remove his clothing. Give him a blanket, a sheet, or articles of his own clothing to drape over himself. The drape will keep him warm and covered for privacy.
- d. Warm the stethoscope and the speculums before using them on the patient. Warm the stethoscope by holding it in your hand. Warm the speculums by placing them in warm water until you need them.
- e. Give clear instructions to the patient before you perform a procedure. For example, before you listen to the patient's lungs

with the stethoscope, say, “I am going to listen to your lungs with a stethoscope. As I am listening, I would like you to take deep breaths through your mouth.” These instructions describe what you will be doing and also tell the patient what he is expected to do.

REVIEW QUESTIONS

Overview of the Physical Examination

1. **Why do you perform a physical examination?**

2. **When do you perform a physical examination?**

3. **What gives you clues to where to look for signs of disease?**

4. **TRUE (T) or FALSE (F)**
 - ___ **Signs can be normal or abnormal.**
 - ___ **Signs are something that the patient describes to you.**
 - ___ **Normal signs are not as important as abnormal signs.**
 - ___ **A change in the body or in its normal functions causes signs of an abnormal condition.**

5. **Write down as many steps for doing a physical examination as you can remember without looking at the Student Text. Then check your answers with the text.**

6. **List the five methods of examination that you should use when you do a physical examination. Briefly describe each.**

7. **Briefly describe how each of these items of equipment is used.**

Tape measure:

Watch with a second hand:

Stethoscope:

Tongue depressor:

Cotton:

Nasal speculum:

Lubricant:

- 8. List at least three ways to prepare a patient for a physical examination.**

REVIEW EXERCISE

Overview of the Physical Examination

Read the following situation. Answer the questions without looking at the Student Text.

You are assigned to work in a new health center. You look at the schedule and see that you will do three medical histories and physical examinations. You proceed to prepare for the medical histories and physical examinations.

You walk around the health center and notice a large waiting room, a small dispensary, and two rooms that could be used for examination rooms. One room has one window with curtains, and a door that can be shut. The other room is slightly larger. It has a window with a curtain, but no door. You see no furniture or equipment in either room.

You notice these pieces of furniture in the large waiting room:

Four long benches

Eight chairs

Two small desks

One examination table

You find several different items of equipment in the dispensary.

1. Which room would you choose as the room for taking medical histories and performing physical examinations? Explain your choice.

2. What furniture will you put in the room? Explain why you chose the furniture.

3. You go to the dispensary to gather the equipment that you will need. Write down all the items of equipment that you should collect.

Unit 2

Performing an Adult Physical Examination

STUDENT GUIDE

OBJECTIVES

1. Describe how to prepare and use the equipment for performing an adult physical examination.
2. Describe how to prepare an adult for a physical examination.
3. Describe how to perform an adult physical examination.
Examine these areas and systems:

Vital signs	Neck
Urine	Respiratory system
General appearance	Heart
Skin	Breasts
Lymph glands	Abdomen
Head	Male genitals
Eyes	Arms and legs
Ears	Musculoskeletal system
Nose	Nervous system
Mouth and throat	Female genitals

4. Describe the normal and abnormal signs that can be detected during a physical examination.
5. Examine each area and system.
6. Discuss how to use the practice guide for performing an adult physical examination.

LEARNING ACTIVITIES

1. Through instructor presentations and class discussions, demonstrations, and small group work, learn:
How to prepare and use the equipment for a physical examination

How to perform a physical examination

How to identify normal and abnormal signs during a physical examination

2. Practice examining other students.
3. Through presentation and class discussions, learn how to use the practice guide for performing an adult physical examination.

ADULT PHYSICAL EXAMINATION PROCEDURES

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Taking the Vital Signs You will take the patient's vital signs, including blood pressure, pulse, respiration rate, temperature, weight, and height.</p> <p>Take the blood pressure Blood pressure is the force of the heart's contractions. It represents the pressure of the blood against the inner walls of the blood vessels. Follow these steps to take a patient's blood pressure.</p> <ol style="list-style-type: none"> a. Ask the patient to sit down with either arm resting on a table. b. Remove any clothing from his upper arm. c. Locate the pulse at the inner elbow. d. Place the cuff of the sphygmomanometer around the patient's upper arm. Position the lower edge of the cuff about one inch above the elbow. e. Wrap the cuff securely around the patient's arm. 		

- f. Palpate the pulse at the inner elbow. Inflate the cuff until the pulse disappears. Inflate the cuff 30 mm of mercury more.
- g. Place the stethoscope over the pulse below the cuff. Slowly deflate the cuff and listen for the return of the pulse.
- h. Note the figure at which you hear the first beat of the pulse. This is the systolic blood pressure.
- i. Continue to deflate the cuff slowly. Note the figure at which you can no longer hear the pulse. This is the diastolic blood pressure.
- j. Record the blood pressure as systolic blood pressure/diastolic blood pressure. For example, if you find the systolic blood pressure to be 120 and the diastolic blood pressure to be 80, record the blood pressure as 120/80.

Take the pulse

The pulse is the regular throbbing of the arteries caused by the contractions of the heart. You can feel the pulse easily at several places on the body. You will usually take a patient's pulse at his wrist, where the radial artery lies near the surface. Follow these steps to take a patient's pulse.

Blood pressure above 90/60 and below 140/90

Increased blood pressure after heavy work

Blood pressure of 140/90 and above is high blood pressure, or hypertension

Blood pressure of 90/60 and below is low blood pressure, or hypotension

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>a. Place the pads of your fingers on the patient's wrist over the radial artery.</p> <p>b. Count the number of pulse beats during fifteen seconds. Use your watch to time the count</p> <p>c. Multiply the number of beats that you have counted by four. The result is the pulse rate per minute.</p> <p>d. Also notice if the pulse rate is regular and steady. Be alert for any missed beats.</p>	<p>Pulse rate between 70 and 90 beats per minute</p> <p>Pulse rate of more than 90 beats per minute after exercise</p> <p>Steady, regular pulse rate</p> <p>No missed beats</p>	<p>Pulse rate of more than 90 beats per minute</p> <p>Pulse rate of less than 70 beats per minute</p> <p>Weak or irregular pulse</p> <p>Missed beats</p>
<p><i>Take the respiration rate.</i> Respirations mean the number of breaths a patient takes in one minute. Follow these steps to take a patient's respiration rate.</p> <p>a. Look at the patient's chest. Count the number of times it rises and falls in thirty seconds. Count each rise and fall of the chest as one respiration.</p> <p>b. Multiply the number of respirations in thirty seconds by two. This will be the number of respirations per minute. Use your watch to time the count.</p>	<p>16 to 20 respirations per minute</p> <p>Increased respirations after exercise</p>	<p>Absence of respiration</p> <p>More than 20 respirations per minute</p>

- c. Listen to the sound of the patient's breathing. Notice how easily he breathes.

Take the temperature.

- a. Wash the thermometer in cold, soapy water.
- b. Shake the mercury inside the thermometer down to the bottom of the tube.
- c. Insert the thermometer into the patient's mouth or rectum, or in his armpit. You will usually take the temperature by mouth. Place the thermometer under the patient's tongue. Ask the patient to keep his mouth closed.
- d. Leave the thermometer under the patient's tongue for five minutes. Remove the thermometer, and read the temperature.
- e. Wash the thermometer in cold, soapy water. Store the thermometer in anti-septic solution.

Breathing without sound
Breathing without effort

Normal temperatures:
Mouth - 37°C
Rectum - 37.5°C
Armpit - 36°C

Deep, gasping, or noisy breaths

Temperature below 36°C or above 37.5°C

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS																																																																				
<p>Weigh the patient Decide whether you will weigh patients with or without shoes. Then always weigh patients that way. Record weights to the nearest kilogram.</p>	<p>Refer to the weight charts for men and women. The charts list the average weight for a person with a medium body frame.</p>	<p>Weight above or below normal</p>																																																																				
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PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Measure the patient's height.</p> <ol style="list-style-type: none"> Attach the tape measure to a wall. Ask the patient to remove his shoes and to stand with his back and heels touching the wall. Place a pencil flat on his head so that it touches the measuring tape. Note the patient's height. 	<p>Adults normally vary in height</p>	<p>A woman who is less than 152.5 cm tall might have difficulty delivering a baby</p>
<p>Testing the Urine</p> <p>You will <i>test the urine</i> for sugar and protein. Follow these steps.</p> <ol style="list-style-type: none"> Carefully read the directions for using the indicator paper for testing urine. Collect the patient's urine in a clean jar. Note the color and amount of urine. Dip a piece of indicator paper into the urine. Note the change of color in the paper. The color will tell you how much sugar and protein are in the urine. 	<p>Clear, light yellow urine</p> <p>No sugar or protein in the urine</p>	<p>Dark amber or red urine</p> <p>Inability to urinate</p> <p>Sugar or protein in the urine</p>

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>e. Use + signs to record how much protein and sugar are present in the urine. The scale ranges from small amounts (+) to large amounts (++++).</p> <p>Examining the General Appearance You will <i>inspect</i> a patient's general appearance. Begin to examine a patient's general appearance as soon as you greet the patient and escort him into the examination room.</p> <p>a. Note the patient's state of health.</p> <p>b. Note the patient's state of nutrition. Observe the patient's weight in relation to his height.</p> <p>c. Note the patient's behavior.</p>	<p>Bright, active appearance No apparent problems Patient sits comfortably</p> <p>Average weight for height</p> <p>Expected reactions to questions and the situation</p>	<p>Listless, worried, or sad appearance Patient grimaces with pain, holds an area of pain, droops in the chair, or shows other signs of distress</p> <p>Extreme thinness Obesity</p> <p>Unusual behavior Strange movements or gestures Shaking Extreme restlessness</p>

d. Note the patient's mental state and level of consciousness.

Patient is alert and awake

Patient is easily distracted

Patient is sluggish

Patient responds appropriately when you speak to him

Patient does not respond appropriately when you speak to him

Patient knows who he is, where he is, and what time it is

Patient does not know who he is, where he is, or what time it is

e. Notice the patient's speech.

Clear, effortless speech

Low pitched voice

Hoarseness

Loss of voice

Hesitant speech

Slow, slurred speech

f. Notice the patient's ability to walk.
Notice how easily the patient moves.

Smooth, coordinated body movements

Slow, uncoordinated body movements

Purposeful body movements

Inability to walk

No need for assistance to move or walk

Need for assistance to move or walk

Examining the Skin

You will *inspect* and *palpate* the skin. Examine the skin with the patient sitting or standing.

Start at the head and proceed down the body to the soles of the feet. Include the

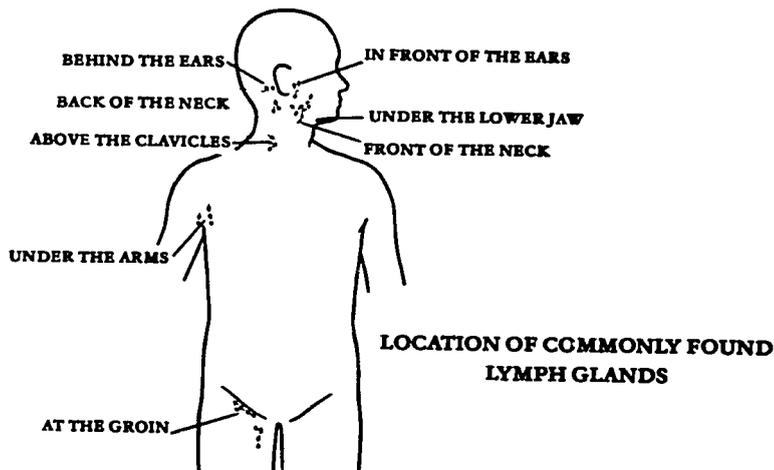
PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>conjunctivae, the mucous membranes of the mouth, the hair, and the nail beds. As you inspect the skin, also palpate the skin. Feel any abnormal looking area.</p> <p>Inspect the skin.</p> <p>a. Check the color of the skin. Look for any yellow, red, or blue color. Look for pallor. Note if a color change occurs all over the body or only in a localized area.</p> <p>b. Look for skin patches or lesions. Note:</p> <p>The location of the lesion</p> <p>The number of lesions</p> <p>The type of lesion</p> <p>Any color change of or around a lesion</p> <p>Whether a lesion is wet or dry</p> <p>Evidence of itching, as shown by scratch marks</p>	<p>Uniform skin color over the entire body</p> <p>No yellowness, redness, blueness, or pallor</p> <p>Normal changes in skin color, such as freckles</p> <p>Normal change in the skin such as moles and other growths</p> <p>No other patches or lesions on the skin</p>	<p>Yellow color, or jaundice, of the eyes, mucous membranes, or surface of the skin</p> <p>Redness, either all over the body or over a localized area</p> <p>Blue color, or cyanosis, of the lips, mucous membranes, nail beds, or surface of the skin</p> <p>Pale face, conjunctivae, mouth, and nail beds</p> <p>Skin patch or lesion</p> <p>A change in color or evidence of wetness of a skin lesion</p> <p>Evidence of itching</p>

Whether the edges of a lesion are sharp		
Evidence of old lesions, such as scars or changes in skin color		
c. Check the eyes, arms, and legs for signs of edema. Edema is too much fluid in the skin.	No edema	Edema of the eyes, arms, or legs
d. Check the moisture of the skin. Notice any excessive sweating or dehydration.	No excessive sweating No dehydration	Excessive sweating Dehydration
e. Notice how the patient's hair is distributed, what color it is, and if it is broken off.	Clean, dry, smooth hair No bald patches, except on the head of a man who would normally lose his hair Gray hair No other change in hair color	Loss of hair Thinning hair Fine, silky hair Brittle, broken hair A change in hair color, such as an unusual reddish color
f. Check the skin for evidence of injury. Look for bleeding, bruising, or laceration.	No bleeding, bruising, or laceration of the skin	Bleeding, bruising, or laceration of the skin
<i>Palpate</i> the skin.		
a. Check the moisture of the skin. Note if it is dry or moist. Pinch the skin of the abdomen or arm. Lift, then release the pinched skin.	Warm, dry skin Pinched skin returns immediately to its usual position, except in the case of an older person	Very moist skin Very dry skin Tenting of the pinched skin

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
b. Feel for a change in temperature of the skin surface. Be sure to touch any red or swollen areas.	Warm, dry skin with no temperature changes	Hot, dry skin Cool, damp skin Warmth over a swollen area
c. Feel the texture of the skin. Notice if the skin is smooth, rough, thick, or swollen. Scrape the skin. Check for scaling.	Smooth, soft skin without roughness, thickening, swelling, or scaling	Rough skin Thick skin Swelling of the skin Scaling of the skin
d. Check any abnormal looking areas of the skin for tenderness.	No tenderness of the skin	Tenderness of an area of the skin

Examining the Lymph Glands

You will *inspect* and *palpate* the lymph glands shown in the diagram. The patient can sit or stand.



Inspect the lymph glands for enlargement or redness.

Palpate the lymph glands for enlargement.

- a. Palpate with the tips of your fingers.
Feel for enlarged lymph glands.
- b. Determine the size of an enlarged lymph gland. Compare the size of the lymph gland to something familiar to you, such as an almond, a lentil, or a pumpkin seed.
- c. Determine if an enlarged lymph gland is hard or soft.
- d. Check for tenderness of the lymph glands.

Examining the Head

You will **inspect** and **palpate** the head and **percuss** the sinuses. Examine the patient's head while he is sitting.

Lymph glands are not visible

Lymph glands are not palpable

No tenderness of the lymph glands

Large, swollen lymph glands
Redness over the lymph glands

Large, swollen lymph glands

Enlarged, hard or soft lymph glands

Tender lymph glands

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Inspect the head.</p> <p>a. Look at the hair. Note the amount of hair. Notice how it is growing. Notice any loss of hair. Notice the texture of the hair.</p> <p>b. Look at the patient's face. Note the expression on his face. Notice if he is in distress. Compare the appearance of the two sides of his face.</p> <p>c. Ask the patient to open and close his eyes. Ask him to pucker his lips. Compare the movements of the two sides of his face.</p> <p>d. Look for any swelling or puffiness of the face.</p>	<p>Clean hair</p> <p>No bald spots or missing hair, except in the case of a man who would normally be bald</p> <p>Relaxed facial expression</p> <p>Uniform appearance of both sides of the face</p> <p>Uniform movement of both sides of the face</p> <p>No swelling or puffiness</p>	<p>Loss of hair, broken hair, or bald spots</p> <p>Rigid smile</p> <p>Distressed expression</p> <p>Dull, uninterested expression</p> <p>One side of the face differs in appearance from the other side</p> <p>One side of the face moves differently from the other side, indicating one-sided paralysis</p> <p>Swollen or puffy face</p>
<p>Palpate the head.</p> <p>a. Feel the skull and scalp with both hands. Check for swellings, depressions, breaks in the skin, or tender areas.</p> <p>b. Feel the texture of the hair.</p>	<p>No swellings, depressions, breaks in the skin, or tender areas</p> <p>Soft, full hair</p>	<p>Swelling, depression, or break in the skin</p> <p>Tender area of the skull or scalp</p> <p>Coarse, brittle hair</p> <p>Fine, silky hair</p> <p>Thinning hair</p>

Percuss the sinuses. Tap lightly over the frontal and maxillary sinuses. Check for tenderness.

Examining the Eyes

You will *test the patient's vision* and *inspect* his eyes. Test the vision with the patient standing. Inspect the eyes with the patient sitting.

Test *vision* using one of the three following methods. The E chart is the most accurate method. Use the other methods only if you do not have an E chart.

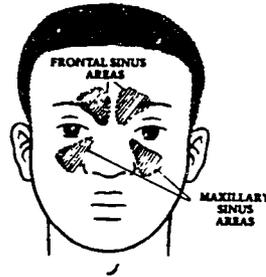
- **E Chart:** Eight rows of the letter E are printed on the chart. The "legs" of the E's in each row point in different directions. The E's get smaller as you move down the chart.

Each row corresponds to the number of meters from the chart at which a person with normal vision can see the E's clearly enough to indicate in which direction the "legs" point. The top row is marked 60 m, the next 30 m, 21 m, and so on down the chart.

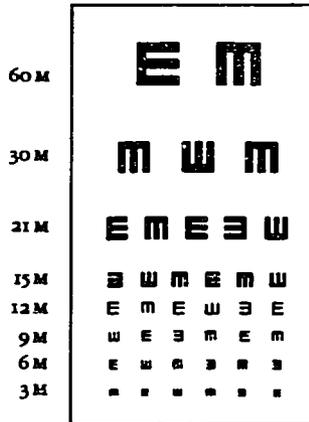
Follow these steps to test a patient's vision with an E chart.

- Attach the chart to a wall in a well-lit area. Place a mark on the floor six meters from the wall.

No tenderness over the sinuses



Tenderness over the sinuses



PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>b. Ask the patient to stand facing the chart with his toes on the mark</p> <p>c. Tell the patient to keep both eyes open. Tell him to lightly cover his left eye with a piece of thick paper held in his left hand. Be sure he does not press too hard on his left eye.</p> <p>d. Point to the top row. Ask the patient to show you with his fingers the direction that the “legs” of the E’s are pointing. Continue to the next row if the patient answers correctly.</p> <p>e. Move to the 12 m row. Point to each E in turn. Be sure to point just below the letter E that you want the patient to look at. Ask the patient to show you the direction that the “legs” of the E are pointing.</p> <p>f. If the patient cannot see the 12 m row, move up to a row that he can see. If he can see the 12 m row, move down to the 9 m row, then the 6 m row. Note the last row that the patient can see.</p>	<p>60 m - Able to see both E's 30 m - Able to see all E's 21 m - Able to see all E's 15 m - Able to see all E's 12 m - May miss seeing one E 9 m - May miss seeing two E's 6 m - May miss seeing two E's 3 m - May miss seeing two or more E's</p>	<p>Patient cannot see the 21 m row</p>

g. Check the vision in the left eye and then in both eyes together in the same way.

h. Determine the patient's vision in each eye. Use two numbers. The first number corresponds to the distance that the patient stood from the chart, or 6 m. The second number corresponds to the last row that he saw.

For example, if the patient could see the 15 m row with his right eye and the 6 m row with his left eye, his vision would be 6/15 in the right eye and 6/6 in the left.

● **Read a book:** If the patient can read, ask him to read any available book or pamphlet.

Tell him to cover first his left eye and then his right. Check to see how well he can read normal sized print.

● **Finger test:** Tell the patient to cover his left eye. Hold two or three fingers up in front of him. Ask him to tell you how many fingers you are holding up. Test the left eye in the same way.

6/3 to 6/15 vision in either eye

Ability to read normal sized print with both eyes

Ability to see all fingers held up

6/21 vision or worse in either eye

Inability to read normal sized print with one or both eyes

Inability to see fingers
Fingers are blurred

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p><i>Inspect the eyes.</i></p> <p>a. Look for bulging of the eyes</p> <p>b. Look at the upper and lower eyelids. Look for redness, swelling, puffiness, and drooping. Check for tearing or discharge.</p> <p>c. Check eye movements. Hold a pencil or your finger at a comfortable distance from the patient. Ask the patient to keep his head straight and still. Ask him to follow the object with his eyes. Move the pencil toward the patient's right ear, toward his left ear, toward the ceiling, and then toward the floor. Watch the patient's eye movements.</p> <p>d. Compare the conjunctivae. Pull down the lower lids. Lift the upper lids. Check for roughness of the upper lids. Check for redness and discharge. Look for dryness and gray spots. Note any pallor. Look for foreign bodies.</p>	<p>Eyes do not bulge</p> <p>No redness, swelling, puffiness, or drooping of the eyelids</p> <p>No tearing or discharge from the eyelids</p> <p>Ability to follow the object in all directions</p> <p>Moist, clear, pink conjunctivae</p> <p>No roughness of the upper lids</p> <p>No redness or discharge</p> <p>No dryness or gray spots</p> <p>No foreign body in the eye</p>	<p>Bulging, staring eyes</p> <p>Red, swollen eyelids</p> <p>Puffy eyelids</p> <p>Drooping eyelids</p> <p>Tearing or discharge from the eyelids</p> <p>Inability to follow the object with his eyes</p> <p>Red, inflamed conjunctivae</p> <p>Pale conjunctivae</p> <p>Roughness of the upper lids</p> <p>Discharge from the conjunctivae</p> <p>Dryness or gray spots</p> <p>Foreign body in the eye</p>

e. Look at the sclerae. Check for any color change or swelling of a blood vessel. Check for cuts or ulcers.

f. Look at the corneas from the front and the side. Check for lacerations, white spots, and blood vessels.

g. Compare the size and shape of the pupils. Check for redness around the pupils.

Check the patient's light reflex. Shine a flashlight into his eyes and then quickly take it away. Watch how the pupils react.

h. Check the lenses. Shine the flashlight at an angle through the pupils. Look at the area just behind each pupil.

Examining the Ears

You will *test the patient's hearing* and *inspect* and *palpate* his ears. Examine the ears with the patient sitting.

White sclerae with few small blood vessels

No cuts or ulcers

Clear corneas

No lacerations, white spots, or blood vessels

Round pupils that are uniform in size and shape

No redness around the pupils

Pupils narrow then enlarge in reaction to the light

Lenses are usually not visible

Red or yellow sclerae

Cut or ulcer of the sclerae

White spots or lacerations on the cornea

Blood vessels visible on the cornea

Irregularly shaped pupils

Pupils that differ in size

Redness around the pupils

Pupils remain small and narrow after the light is removed

One pupil remains larger than the other when a light is shined

White, cloudy lens

- d. Test the hearing in the patient's left ear in the same way.

Inspect the ears.

- a. Check the outside of the ears. Compare the appearance of the ears. Look for lumps and lesions.
- b. Examine the outside of the ear canals. Look for redness or discharge.
- c. Check the mastoid areas for redness or swelling.

Palpate the ears.

- a. Check the outside of the ears. Pull up on the top of each ear. Check for tenderness.



Uniform appearance of the outside of the ears

No lumps or lesions on the ears

No redness of the ear canals

No discharge from the ear canals

No redness or swelling of the mastoid areas

No tenderness when you pull up on the ear

Outside of the ears differ in appearance

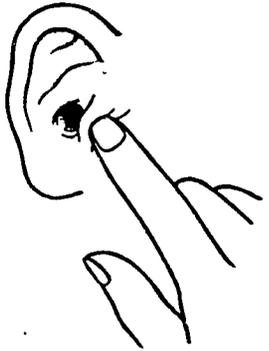
Lump or lesion on the ears

Redness of the ear canals

Clear, blood, or yellow discharge from the ear canals

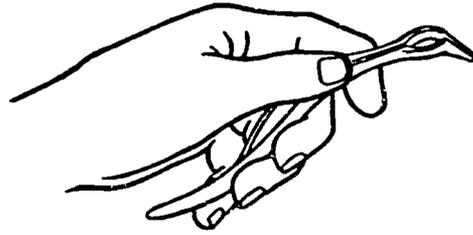
Red or swollen mastoid areas

Tenderness when you pull up on the ear

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>b. Check the outside of the ear canals. Press on the flap of skin in front of each ear canal. Check for tenderness.</p> 	<p>No tenderness when you press on the skin flap in front of each ear canal</p> <p>No tenderness over the mastoid areas</p>	<p>Tenderness when you press on the skin flap in front of an ear canal</p> <p>Tenderness over the mastoid areas</p>
<p>c. Press on the mastoid areas. Check for tenderness.</p> <p>Examining the Nose <i>Inspect the nose.</i></p> <p>a. Check the outside of the nose for flaring. Flaring means that the patient's nostrils close partially when he breathes in. His nostrils return to their original position when he breathes out.</p>	<p>Nostrils do not flare</p>	<p>Flaring nostrils</p>

b. Look inside the nostrils with a nasal speculum. Grasp the nasal speculum in your left hand.

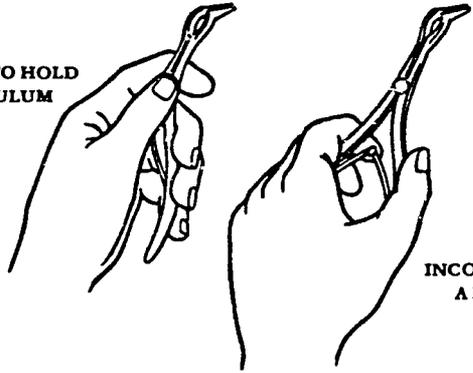
Turn the speculum so that the blades open toward the floor and the ceiling.



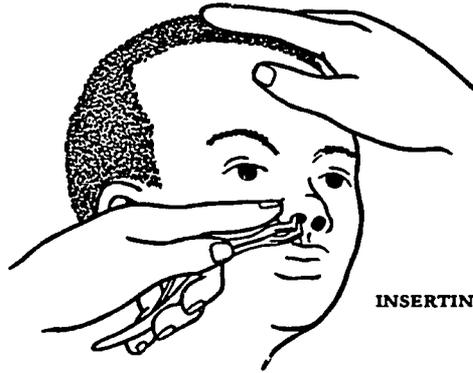
Tip the patient's head back with your right hand. Insert the speculum about 1 cm into the patient's nose.

Gently open the speculum toward the floor and the ceiling.

CORRECT WAY TO HOLD A NASAL SPECULUM



INCORRECT WAY TO HOLD A NASAL SPECULUM



INSERTING THE NASAL SPECULUM

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Remove your right hand from the patient's head. With your right hand, shine the flashlight into the right nostril. Check the mucous membranes for redness, lesions, discharge, and foreign bodies.</p> <p>Remove the speculum from the right nostril. Insert it into the left nostril. Keep the speculum in your left hand. Again, check the mucous membranes for redness, lesions, discharge, and foreign bodies.</p>	<p>Pink, glistening mucous membranes</p> <p>No lesions, discharge, or foreign bodies</p>	<p>Red mucous membranes</p> <p>Lesion</p> <p>Discharge from the mucous membranes</p> <p>Foreign body in the nose</p>

Examining the Mouth and Throat

You will *inspect* and *palpate the mouth*, *inspect the throat*, and *smell the breath*. Examine the patient's mouth and throat while he is sitting.

Inspect the mouth and throat

- a. Check the lips. Note any bluish color around the lips. Look for lesions.
- b. Check the mucous membranes. Tell the patient to open his mouth. Use the tongue depressor to push the sides of his cheeks away from his teeth. Shine a light into his mouth. Note the color of the mucous membranes. Note how much saliva is being formed.
Look for lesions.
- c. Look at the gums. Check for redness or swelling. Check for bleeding or lesions.
- d. Look at the teeth. Note their color. Note any missing teeth. Tap the teeth with the tongue depressor. Check for loose teeth. Ask the patient if he feels any pain.

No bluish color around the lips
No lesions on or around the lips

Pink, moist mucous membranes

No lesions

Pink gums

No redness or swelling

No bleeding or lesions

White teeth

No missing teeth

No loose teeth

No tooth pain

Bluish color around the lips

Lesion on or around the lips

Blue or red mucous membranes

Pale mucous membranes

Increased or decreased amount of saliva

Lesion on the mucous membranes

Red or swollen gums

Bleeding gums or lesions on the gums

Brown teeth or teeth with black spots, indicating cavities

Missing teeth

Loose teeth

Tooth pain

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>e. Look at the throat. Press the patient's tongue down in the back with the tongue depressor. Note the size and color of the tonsils. Look for any discharge on the tonsils.</p> <p>Check the back of the throat. Note the color. Look for any swelling or discharge. Look for foreign bodies.</p> <p>Ask the patient to swallow. Note any difficulty swallowing or throat spasms.</p>	<p>Small, soft, pink tonsils</p> <p>Pink, moist throat</p> <p>No redness, swelling, or discharge</p> <p>No foreign body in the throat</p> <p>No difficulty swallowing</p> <p>No throat spasms</p>	<p>Red or swollen tonsils or throat</p> <p>White, yellow, or gray discharge on the tonsils or throat</p> <p>Foreign body in the throat</p> <p>Difficulty swallowing</p> <p>Throat spasms</p>
<p>Palpate the mouth.</p> <p>a. Touch the gums on both sides of the teeth with your right forefinger. Check for tenderness and swelling.</p> <p>b. Move each tooth with your right forefinger. Check for loose teeth. Ask the patient if he feels any pain when you move a tooth.</p> <p>c. Palpate the cheeks. Put your right forefinger inside the patient's mouth on the right side. Put your right thumb next to his cheek on the outside.</p> <p>Move the cheek back and forth between your two fingers. Feel all of the right cheek. Note any tenderness or swelling.</p>	<p>No tenderness or swelling of the gums</p> <p>No loose teeth</p> <p>No tooth pain</p>	<p>Tender or swollen gums</p> <p>Loose teeth</p> <p>Tooth pain</p>

Move your fingers down and across the front teeth. Continue to feel the cheek between your two fingers. Palpate the left cheek in the same way.

Smell the breath.

Note any foul or fruity odor. Smell for the presence of alcohol.

Examining the Neck

You will *inspect* and *palpate* the neck. Examine the neck with the patient sitting.

Inspect the neck.

- a. Note the position of the head and neck. Tell the patient to hold his head erect and to look straight ahead. Look at his head in relation to his neck.
- b. Look for deformities. Look for lumps or swellings along the spine of the neck.
- c. Check the ability to move the neck. Ask the patient to move his neck up and down and from side to side. Note any neck tenderness or stiffness.

No tenderness or swelling of the cheeks

Food smells on the breath

No foul or fruity odor on the breath

No smell of alcohol on the breath

Head faces forward

No tilt of the head

Ability to hold the head and neck straight

No lumps or swellings along the spine of the neck

Ability to move the neck easily in any direction

No neck tenderness or stiffness

Tender or swollen cheeks

Foul or fruity breath odor

Smell of alcohol on the breath

Tilt of the head

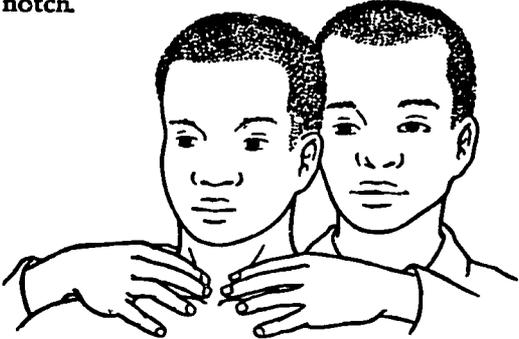
Inability to hold the head and neck straight

Lump or swelling along the spine of the neck

Inability to move the neck

Neck tenderness

Neck stiffness

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>d. Look at the front of the patient's neck. Check for enlargement of the thyroid gland.</p> <p><i>Palpate the neck.</i></p> <p>a. Check the spine and muscles. Feel the back of the neck along the spine and the base of the head. Check for tight muscles, tenderness, and lumps.</p> <p>b. Palpate the thyroid gland. Stand behind the patient. Place your thumbs at the back of his neck. Circle his neck with your hands. Place your forefingers and index fingers on either side of the trachea. Rest your fingers just above the suprasternal notch.</p>	<p>Thyroid gland is not visible</p> <p>No tightness of the neck muscles</p> <p>No tenderness along the spine</p> <p>No lumps along the spine</p>	<p>Enlarged thyroid gland</p> <p>Muscle tightness</p> <p>Tenderness along the spine</p> <p>Lump along the spine</p>
		

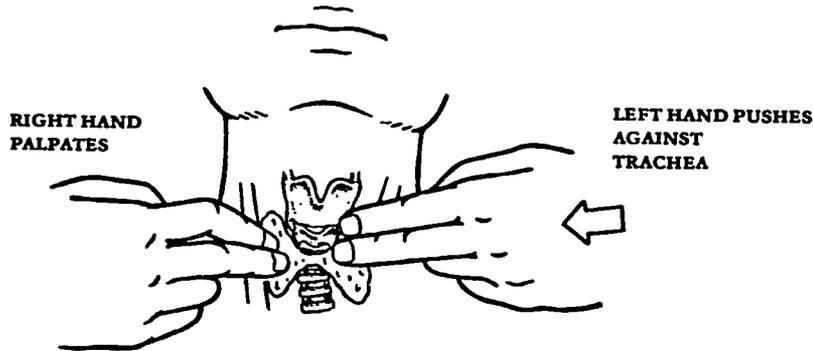
Push on the trachea with the fingers of your left hand. Feel the thyroid gland with the fingers of your right hand. Check for enlargement, nodules, and tenderness.

Ask the patient to swallow. Feel for any thyroid tissue that slips under your fingers.

Change the position of your fingers. Push with your right fingers and palpate with your left. Feel for enlargement, nodules, and tenderness.

Thyroid gland is not palpable
No enlargement, nodules, or tenderness

Enlarged smooth thyroid gland
Enlarged nodular thyroid gland
Tenderness over the thyroid gland



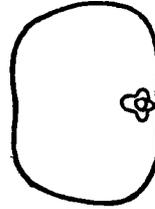
PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the Respiratory System You will <i>inspect, palpate, percuss,</i> and <i>auscultate</i> the respiratory system. The patient will be sitting.</p> <p>Have the patient expose his chest. Be sure to compare one side of the patient's respiratory system to the other side. Work from the shoulders down.</p> <p><i>Inspect</i> the respiratory system.</p> <p>a. Check the rate and rhythm of breathing. Observe how fast and how deeply the patient breathes. Note the relationship of inspiration to expiration.</p> <p>b. Check the ease of breathing. Watch the patient breathe. Notice if he has an obvious breathing problem. Notice how he breathes as he talks and walks. Listen for unusual noises.</p> <p>c. Check the lips, mucous membranes, and nail beds for a blue color, or cyanosis. Cyanosis occurs when the blood lacks oxygen.</p>	<p>16 to 20 breaths per minute</p> <p>Easy, steady breathing rhythm</p> <p>Inspiration slightly longer than expiration</p> <p>No difficulty breathing</p> <p>No shortness of breath while talking or walking</p> <p>Quiet breathing</p> <p>No cyanosis</p>	<p>Absence of respiration</p> <p>Rapid breathing</p> <p>Shallow breathing</p> <p>Expiration longer than inspiration</p> <p>Difficulty breathing</p> <p>Shortness of breath while talking or walking</p> <p>Noisy breathing</p> <p>Cyanosis of the lips, mucous membranes, or nail beds</p>

- d. Look at the shape of the chest. Stand in front of the patient. Look at his chest. Walk around the patient, looking as you walk. Note the distance from the front of his chest to the back, compared to the distance from side to side.

Chest distance from side to side is wider than the distance from front to back

NORMAL ADULT CHEST

CROSS SECTION



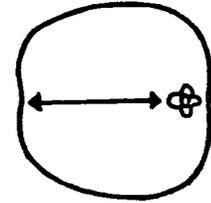
LATERAL VIEW



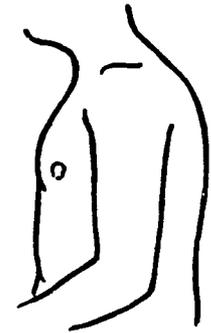
Barrel chest, which means the chest is overexpanded, increasing the distance from front to back

BARREL CHEST

CROSS SECTION



LATERAL VIEW



PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
e. Check chest expansion. Notice if the patient's chest moves in and out evenly as he breathes.	Even expansion of the chest	Uneven expansion of the chest Chest collapses during inspiration and expands during expiration
f. Look at the intercostal spaces, which are the spaces between the ribs and just above the breast bone. Notice if these spaces move in, or retract, when the patient breathes.	No intercostal retraction No retraction above the breast bone	Retraction at the intercostal spaces or above the breast bone
g. Check the nostrils for flaring.	Nostrils do not flare	Flaring nostrils
h. Look for chest wounds.	No chest wounds	Chest wound, especially with frothy bubbles coming from a wound
i. Note any cough	No cough	Cough
j. If the patient has a cough, ask him to try to cough up some sputum. Check the amount and the color of the sputum	No sputum	Clear, white, yellow, green, or bloody sputum
<i>Palpate</i> the respiratory system.		
a. Check the chest walls. Stand behind the patient. With both hands, feel the back of his chest. Start at the shoulders and work down. Check for tenderness.	No tenderness of the chest	Tenderness of the chest
Feel for lumps or depressions along the ribs. Press lightly over any lump or depression.	No lumps or depressions along the ribs	Lump or depression along the ribs

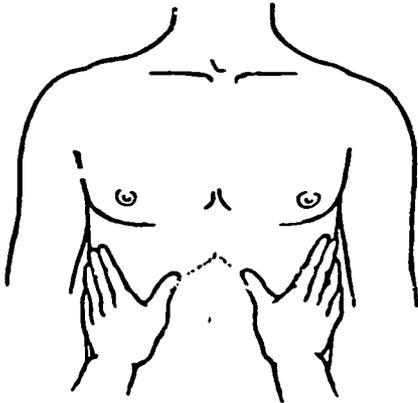
Check for a grating sensation along the ribs.

Move to the front of the patient.

Palpate the front chest wall in the same way.

- b. Check chest expansion. Stand in front of the patient. Place your thumbs along the rib margins at the lower part of his chest. Place your fingers flat against his chest. Ask the patient to take a deep breath.

Watch your thumbs move apart as the patient breathes. Feel his chest expand.



No grating sensation along the ribs

Even expansion of the chest

Grating sensation along the ribs

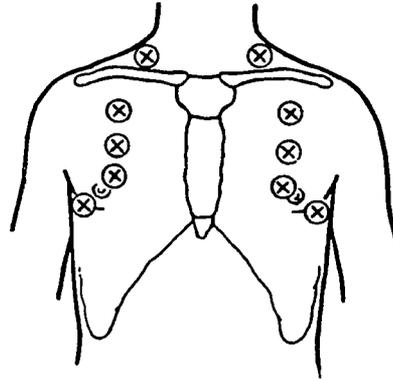
Uneven expansion of the chest

Percuss the chest to find out if the lungs are filled with air, fluid, or pus. You will hear a deep, resonant sound over a lung filled with air. You will hear a dull, flat sound over a lung filled with fluid or pus. You will also hear a dull sound over the heart and the liver.

First, percuss the front of the chest. Follow these steps.

- a. Face the patient. Percuss just above the right then the left clavicle. Compare the sounds.
- b. Percuss just below the left, then the right clavicle. Compare the sounds.
- c. Move down the chest at 4 cm intervals. Percuss first one side of the chest then the other, always comparing the sounds.

Next, percuss the back of the chest. Follow these steps.

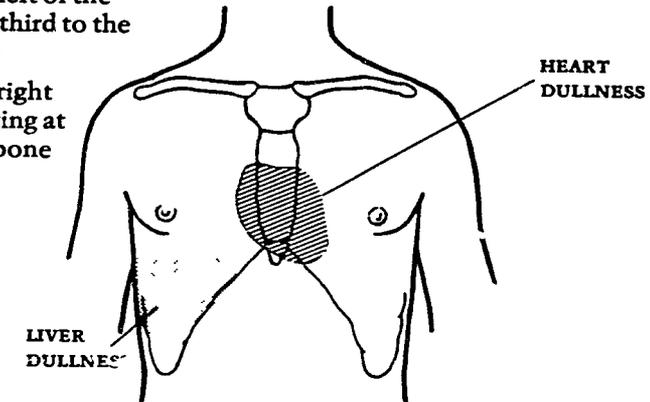


Deep, resonant sound over the lungs

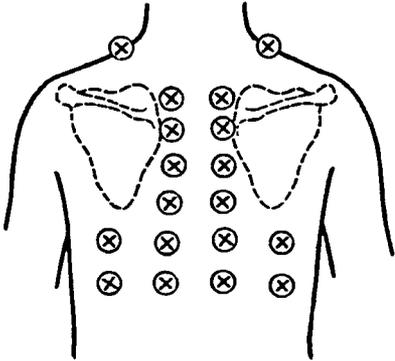
Flat percussion note over the lungs

Heart dullness to the left of the breast bone from the third to the fifth intercostal space

Liver dullness on the right side of the chest, starting at the end of the breast bone



- a. Stand behind the patient. Percuss across the top of each shoulder. Compare the sounds.
- b. Ask the patient to fold his arms in front of his chest. Percuss 4 cm below the shoulders and next to the scapula on the left side. Move to the right side and percuss. Compare the sounds.
- c. Move down the chest at 4 cm intervals next to the scapulae. Percuss first one side of the chest and then the other. Compare the sounds.
- d. Move below the scapulae. Percuss both sides.



PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Auscultate the respiratory system to listen to the sound of air passing through different parts of the lungs. Use a stethoscope. Listen first to the back of the lungs, then to the front. Follow these steps.</p> <ol style="list-style-type: none"> Ask the patient to take deep breaths through his mouth. Listen to the breath sounds in the same areas that you percussed. Start at the shoulders. Listen as you move the stethoscope down the patient's chest. Listen at each area for at least two full breaths. Always compare one side of the chest to the other side. Listen for the breath sounds. Check for decreased breath sounds. Compare inspiration and expiration Check for abnormal breath sounds, such as rales, rhonchi, wheezing, or bronchial breathing. Rales are caused by increased mucus in the aveoli. A rale is a crackling sound. You can hear rales most easily just after a patient coughs. 	<p>Breath sounds can be heard in all parts of the lungs</p> <p>Harsher, louder breath sounds heard near the trachea in the front than in the back</p> <p>Longer inspiration than expiration</p> <p>No rales, rhonchi, or wheezing</p> <p>Bronchial breath sounds heard to the right of the sternum, just over the right bronchus</p> <p>No bronchial breathing anywhere else in the lungs</p>	<p>Absent or decreased breath sounds</p> <p>Prolonged expiration</p> <p>Rales, rhonchi, wheezing, or bronchial breath sounds</p>

Rhonchi are rattling sounds of air rushing across an increased amount of mucus in the bronchi.

Wheezing is a whistling, sighing sound. Wheezing occurs during expiration when the patient forces air out of his lungs past blocked bronchioles.

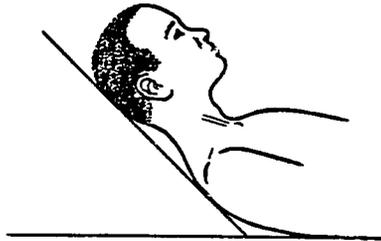
Bronchial breathing sounds like wind blowing through a tunnel. It is a hollow sound.

Examining the Heart

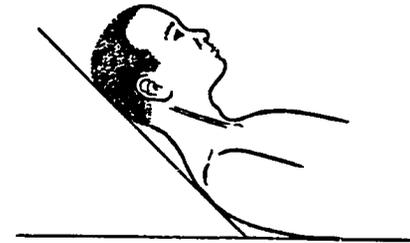
You will *inspect* and *auscultate* the heart. Examine the patient while he is sitting and then leaning back. Continue to have the patient expose his chest.

Inspect the heart.

- a. Ask the patient to sit on the examination table with his legs extended.
- b. Look at the patient's neck. Check for enlarged neck veins. Ask the patient to lean back to a 45° angle. Support the patient in this position by holding his back or raising part of the examination table. Check for distended neck veins.



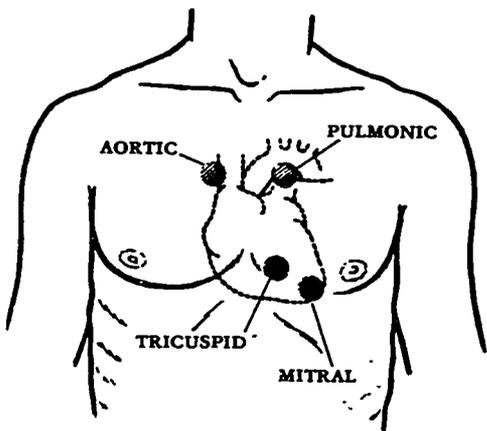
Neck veins slightly distended to about one-fourth the length of the neck



Enlarged neck veins distended to more than one-fourth the length of the neck

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Auscultate the heart. Listen for two heart sounds. Four valves in the heart make the sounds when they close. These valves are the mitral, tricuspid, pulmonic, and aortic valves.</p> <p>The two heart sounds are generally described as “lub-dub” sounds. The “lub” sound is the first sound. It occurs when the mitral and tricuspid valves close. The “dub” sound is the second sound. It occurs when the pulmonic and aortic valves close.</p> <p>To identify the first heart sound, place the flat part of the stethoscope over the patient’s heart at the left chest. The patient can be lying down or sitting up. Listen until you can distinguish two separate heart sounds. Reach up and feel the pulse in the patient’s neck. The first heart sound is the sound that you hear closest to the time that you feel the pulse.</p> <p>Listen to four areas on the chest. These areas correspond to the best areas to hear each of the valves closing. Listen in this order:</p> <ol style="list-style-type: none"> a. Fifth intercostal space at the mid-clavicular line - mitral area 		

- b. Fifth intercostal space just to the left of the breast bone – tricuspid area
- c. Second intercostal space to the left of the breast bone – pulmonic area
- d. Second intercostal space to the right of the breast bone – aortic area



PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Listen to each area, in order, for the first and second heart sounds. Listen to the rhythm of the heart sounds. Notice if the sounds are regular. Be alert for any missed beats. Count the heart rate.</p> <p>Listen for heart murmurs. A murmur occurs when blood flows through the heart with increased turbulence. Murmurs make swooshing sounds.</p>	<p>Clear and regular first and second heart sounds</p> <p>Heart rate of more than 90 beats per minute after exercise</p> <p>Heart rate between 70 and 90 beats per minute</p> <p>No murmurs</p>	<p>Decreased heart sounds</p> <p>Heart sounds cannot be heard</p> <p>Unclear first or second heart sounds</p> <p>Irregular heart beat</p> <p>Missed beats</p> <p>Heart rate of more than 90 beats per minute</p> <p>Heart rate of less than 70 beats per minute</p> <p>Heart murmur</p>
<p>Examining the Breasts</p> <p>You will <i>inspect</i> and <i>palpate</i> a woman's breasts. The patient will be sitting and then lying down.</p>		

Inspect the breasts.

Ask the woman to sit first with her arms at her side, then with her hands on her hips, and then with her arms over her head. Look at and compare the breasts and nipples.

- a. See if both breasts are about the same size. See if both nipples are about the same size.
- b. See if both breasts are about the same shape. See if both nipples are about the same shape. Check for any swellings or lumps.
- c. Note the color of the breasts. Check for redness.
- d. Look for dimpling or puckers of the breasts.
- e. Check for discharge from the nipples.
- f. Check for cracks in the nipples.

Breasts are similar in size
Nipples are similar in size

Breasts are similar in shape
Nipples are similar in shape
No swellings or lumps

Breasts are similar in color
No redness or other differences in color

No dimpling of the breasts

Milky discharge from the nipples of a pregnant or breast-feeding woman

No cracks in the nipples

One breast or nipple is much larger than the other

Irregular shape or swelling of a breast or nipple

Breast lump

Redness or other difference in color

Dimpling of the breasts

Yellow or bloody discharge from the nipple of a woman who is not breast-feeding and not pregnant

Cracks in the nipples

Examining the Abdomen

You will *inspect, auscultate, palpate,* and *percuss* the *abdomen*. You will *palpate* the *liver, spleen, kidneys,* and *bladder*. You will *inspect* the *anus*. You auscultate the abdomen before palpating because the abdominal sounds sometimes diminish after palpation.

Ask the patient to lie on his back with his arms by his sides. Ask him to bend his knees and to place his feet flat on the table. This helps to relax the abdomen.

Inspect the abdomen.

- a. Stand to the side of the patient. Look at the shape of the abdomen. Compare one side to the other. Look for swelling or bulges.
- b. Look for scars on the abdomen.
- c. Look for blood vessels on the abdomen. Look for a large blood vessel pulsating in the upper middle abdomen.

Flat abdomen

Uniform abdominal shape

No swelling or bulges in the abdomen

Usually no scars on the abdomen

No visible blood vessels

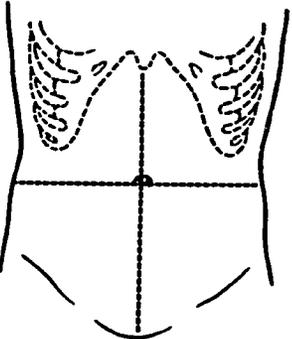
Upper middle abdomen in very thin people pulsates because of a large abdominal blood vessel

Irregular abdominal shape

Swelling or bulge in the abdomen

Scar on the abdomen, indicating previous surgery or injury

Distended abdominal blood vessels

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Auscultate the abdomen. Listen carefully in all areas. Use the flat part of your stethoscope. Notice if abdominal sounds are present, absent, or reduced. Note the types of sounds that you hear.</p> <p>Palpate the abdomen</p> <ol style="list-style-type: none"> Ask the patient to point to any area of the abdomen that hurts. Palpate the opposite area. Palpate the painful area last. In your mind, divide the abdomen into four quadrants. Be sure to palpate in all four quadrants. 	<p>Sounds can be heard in all areas of the abdomen after one minute</p> <p>Loud, frequent abdominal sounds</p>	<p>Absence of abdominal sounds after listening in all areas of the abdomen for five minutes</p> <p>Decreased abdominal sounds</p> <p>Loud, rushing noises followed by tinkling sounds</p>

- c. Palpate with the flat part of your right hand. Keep your fingers together. Use gentle pressure. If the patient tightens his abdominal muscles, ask him to relax. Tell him to take deep breaths through his mouth.
- d. Feel for any masses. Note any tenderness. Gently push on the tender area. Then release the pressure. Sudden pain when you release the pressure is called rebound tenderness.

Palpate the liver.

- a. Stand at the patient's right side. Ask him to take deep breaths.
- b. Palpate with your hand flat, keeping your fingers together. Point your fingers toward the rib margin.
- c. Begin at the middle of the right side of the abdomen. Gently palpate upward as the patient breathes in. With each breath, move your fingers several centimeters higher until you touch the ribs.
- d. Feel for the liver. Notice any enlargement or tenderness of the liver.

No masses
No tenderness in the abdomen
No rebound tenderness

Liver is not palpable
No enlargement or tenderness on palpation

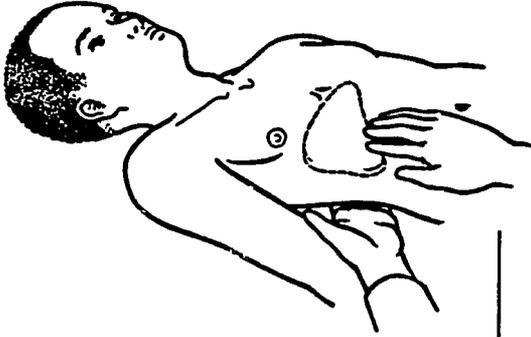
Abdominal mass
Tenderness in any area of the abdomen
Rebound tenderness

Enlarged liver
Tender liver

PROCEDURES

NORMAL SIGNS

ABNORMAL SIGNS

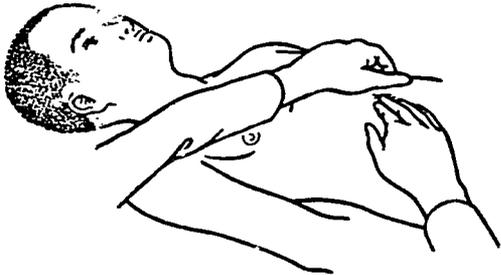


- e. Estimate the amount of liver enlargement. Place the patient's right hand flat on his abdomen. Keep his fingers together and parallel to the rib margin. Find the edge of the liver. Estimate the size of the liver according to the size of the patient's fingers. For example, the liver could be the size of two finger breadths or four finger breadths.

Palpate the spleen.

- a. Place your left hand under the patient's left rib cage. Pull forward.

- b. Palpate gently with your right hand in the upper left part of the abdomen. Begin in the middle of the upper left quadrant and move up.
- c. Feel for enlargement or tenderness of the spleen.



Palpate the kidneys.

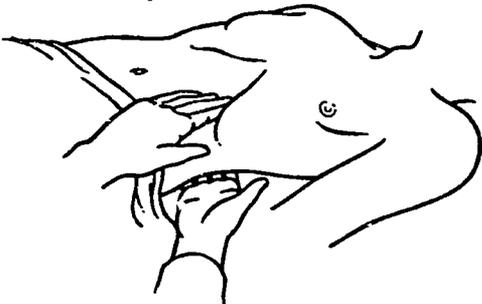
- a. Place your left hand on the patient's back between the lowest ribs and the pelvic bone. Put your right hand below the lower ribs on the patient's right side. Point your fingers to the patient's left side.
- b. Ask the patient to take a deep breath. Press firmly with your right hand. Try to feel the lower end of the right kidney between your fingers. Feel for enlargement or tenderness.

Spleen is not palpable
No enlargement or tenderness on palpation

Enlarged spleen
Tender spleen

Kidneys are not palpable
No enlargement or tenderness on palpation

Enlarged kidney
Tender kidney

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p data-bbox="191 195 655 281">c. Walk around to the other side of the patient. Feel the other kidney in the same way.</p>  <p data-bbox="182 648 409 677"><i>Palpate the bladder.</i></p> <p data-bbox="182 688 673 832">a. Be sure the patient's bladder is empty. Palpate along the middle part of the abdomen with the flat of your fingers. Move your hand toward the pubic bone. Note any tenderness.</p> <p data-bbox="182 855 673 970">b. Note any resistance to the pressure of your fingers. The area of resistance will help you to judge the size of the bladder.</p>	<p data-bbox="718 694 1119 792">An empty bladder is not palpable No enlargement or tenderness on palpation</p>	<p data-bbox="1192 740 1410 809">Enlarged bladder Tender bladder</p>

Percuss the abdomen.

- a. Percuss all areas of the abdomen. Note where a drum-like sound ends and a dull sound begins.
- b. Ask the patient to lie on his side. Percuss all areas of the abdomen again. Notice whether the dullness shifted when the patient moved. Shifting dullness is a sign of fluid in the abdomen.
- c. Ask the patient to sit up. Percuss both loins. Check for kidney tenderness.



No shifting dullness

No tenderness when the loins are percussed

Shifting dullness

Tenderness when the loins are percussed

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Inspect the anus.</p> <ol style="list-style-type: none"> Ask the patient to stand and lean over a table or chair, or to lie on the table on his side. Spread the cheeks of the buttocks. Look for irritation around the anus. Look for cracks or fissures in the mucous membrane. Look for enlarged vessels surrounding the anus. 	<p>No enlarged vessels, irritation, cracks, or fissures in the anus</p>	<p>Enlarged anal vessels Anal irritation Anal cracks Anal fissures</p>
<p>Examining the Male Genitals</p> <p>You will <i>inspect</i> and <i>palpate</i> the male patient's genitals. Ask the man to stand in front of you with his feet spread apart.</p> <p>Inspect the male patient's genitals.</p> <ol style="list-style-type: none"> Inspect the penis. Look for lumps, sores, or lesions. Pull back the foreskin, if present. Look at the urethra. Note any discharge. Look for swelling, redness, or lesions on the scrotum. 	<p>Skin of the penis is loose and soft</p> <p>Foreskin, if present, pushes back easily</p> <p>No lumps, sores, or lesions on the penis</p> <p>No discharge from the penis</p> <p>No swelling or redness of the scrotum</p> <p>No lesions on the scrotum</p>	<p>Foreskin, if present, will not retract</p> <p>Lump, sore, or lesion on the penis</p> <p>Discharge from the penis</p> <p>Swelling or redness of the scrotum</p> <p>Lesion on the scrotum</p>

c. Check for swelling or redness of the groin.

Palpate the male patient's genitals.

a. Gently palpate the skin of the scrotum for thickening or lumps. The scrotum contains two egg-shaped organs, the testes. Feel both. Check for enlargement or tenderness.

Gently palpate the spermatic cord. Check for lumps or twists.

b. Palpate the groin for enlarged lymph glands and tenderness.

c. Palpate the prostate gland. Wear gloves. Lubricate the right forefinger. Ask the patient to lean over the table.

Gently push the end of your finger against his anus. The anus will contract. Wait until you feel the anus relax.

Ask the patient to push down as if he were moving his bowels. Slip your finger gently into his rectum.

Feel the prostate gland on the front wall of the rectum. Palpate it gently. Note if it is smooth and firm or irregular and soft. Note the size of the prostate gland. Check for tenderness.

No swelling or redness of the groin

Skin of the scrotum is thin and loose
No thickening, lumps, or tenderness

Scrotum contains two testes that are equal in size, firm, and smooth

Spermatic cord is smooth without lumps or twists

No large or tender lymph glands in the groin

Smooth, firm prostate gland
No tenderness of the prostate gland

Red or swollen groin

Thick or swollen scrotal skin
Tenderness of the scrotum

One testis is smaller than the other

Lumps or twists in the spermatic cord

Large or tender lymph glands in the groin

Soft, tender prostate gland

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the Arms and Legs</p> <p>You will <i>inspect</i> and <i>palpate</i> the arms and legs. The patient will sit on the edge of the examination table.</p> <p><i>Inspect</i> the arms, hands, legs, ankles, feet, and back for edema.</p> <p><i>Palpate</i> the arms and legs. Press the skin firmly but gently at the arms, hands, legs, ankles, feet, and back. Notice if your fingers leave an impression in the skin, indicating edema.</p>	<p>No edema</p> <p>No impression left in the skin where pressed</p>	<p>Edema of the arms or legs</p> <p>Pitting edema of the arms or legs</p>
<p>Examining the Musculoskeletal System</p> <p>You will <i>inspect</i> and <i>palpate</i> the musculoskeletal system. The patient will be standing.</p> <p><i>Inspect</i> the musculoskeletal system.</p> <p>a. Stand in front of the patient. Look first at his neck, then at his shoulders, arms, hips, knees, legs, ankles, and feet. Compare one side of his body to the other. Look for any bone or joint deformities, joint redness or swelling, or muscle wasting.</p>	<p>No bone or joint deformity</p> <p>No redness or swelling of a joint</p> <p>No muscle wasting</p>	<p>Bone deformity</p> <p>Joint deformity</p> <p>Joint redness or swelling</p> <p>Muscle wasting</p>

- b. Ask the patient to move his neck, shoulders, elbows, wrists, fingers, hips, knees, ankles, and toes, one by one, in all possible positions. Watch for signs of pain.
- c. Move to the side of the patient. Look at his spine.
- d. Move to the back of the patient. Look at his spine. Notice the muscles around his spine.
- e. Ask the patient to bend over from the waist. Notice how easily he bends. Ask him about pain when he bends.
- f. Ask the patient to walk around the room. Watch how he walks. Watch how he balances.

Ability to move joints freely without pain

Spine curves out from the neck and gradually in near the waist

Spine does not curve to either side
No muscle wasting

Ability to bend easily without pain

Steady, well-balanced walk

Limited movement of a joint
Pain when moving a joint

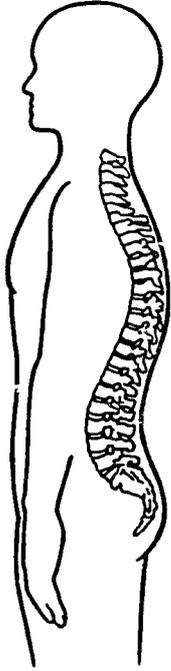
Increase of the curves of the spine
Increase of the curves of the spine

Spine curves to one side
Muscle wasting

Limited ability to bend from the waist
Pain when bending over

Unsteady or uneven walk

ABNORMAL CURVES OF SPINE



NORMAL SIDE VIEW OF SPINE



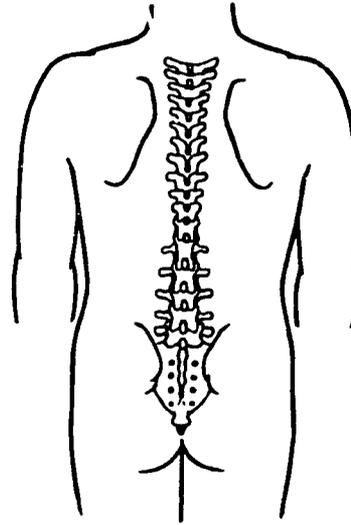
INCREASE OF
OUTWARD CURVE



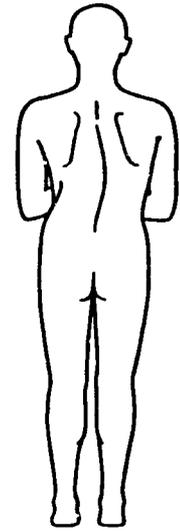
FLATTENING
OF CURVE



INCREASE OF
INWARD CURVE



NORMAL BACK VIEW OF SPINE



SPINE CURVED TO ONE SIDE

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Palpate the musculoskeletal system.</p> <p>a. Hold the patient's neck, shoulders, elbows, wrists, fingers, hips, knees, ankles, and toes, one by one, in your hands. Ask the patient to move each joint as you hold it.</p> <p>b. Note any rough sensation as you move each joint.</p> <p>c. Note any limited movement.</p> <p>d. Feel for swelling. Check for tenderness. Feel for temperature over the joints.</p>	<p>Smooth joint movement</p> <p>No rough sensation when a joint is moved</p> <p>No limited joint movement</p> <p>No joint swelling</p> <p>No joint tenderness</p> <p>Temperature over the joints is the same as over other parts of the body</p>	<p>Rough sensation when a joint is moved</p> <p>Limited movement of a joint</p> <p>Swelling, tenderness, or increased temperature over a joint</p>
<p>Examining the Nervous System</p> <p>An examination of the nervous system involves several special techniques. Ask the patient to sit on the edge of the examination table.</p> <p>Check muscle strength. Tell the patient that you are going to push against parts of his body. He should resist your push.</p>		

- a. Push against his forehead and the back of his head. Test the strength in his head.
- b. Ask the patient to bend his elbows slightly. Try to push down on his lower forearms to test the strength in his upper arms.
- c. Tell the patient to try to push his knees together as you try to separate them. Test the strength in his thighs.
- d. Push against the bottoms of the patient's feet. Ask him to push against your hands to test the strength in his feet.
- e. Place two of your fingers in each of the patient's hands. Ask him to squeeze. Compare the strength in his hands.

Check sensation with a piece of cotton and with a pin.

- a. Ask the patient to close his eyes. Brush the skin of his face, arms, abdomen, back, thighs, and lower legs lightly with a piece of cotton or soft material.
- b. Touch one side of the body and then the other. Ask the patient where he can feel the light brush of the cotton.

Equal strength in both sides of the body

No muscle weakness

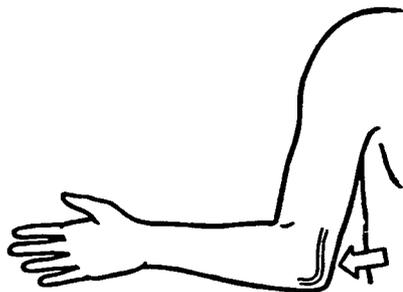
Muscle weakness in one or both sides of the body

Patient feels the light brush of the cotton equally on both sides of his body

Loss of sensation to light touch

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>c. Wash a pin with soap and water. Ask the patient to close his eyes. Tell the patient that you are going to prick his skin lightly.</p> <p>d. Prick very lightly first one side and then the other side of the face, arms, abdomen, back, thighs, lower legs, and feet. Ask the patient where he can feel the prick.</p> <p>Check for enlarged nerves. Palpate the nerves in the neck, elbows, wrists, knees and ankles.</p> <p>a. Ask the patient to turn his head to one side. A nerve crosses a large muscle in the neck. Palpate for nerve enlargement. Feel the other side of the neck in the same way.</p> 	<p>Patient feels the pinprick equally on all parts of his body</p> <p>No nerve enlargement</p>	<p>Loss of sensation to pinprick</p> <p>Enlarged nerves</p>

- b. Hold the patient's right hand with your left. Bend his arm at the elbow. Place your right forefinger on the bone that sticks out on the patient's inner arm. Slide your finger back to the groove behind the bone. Feel for nerve enlargement. Palpate the left elbow in the same way.

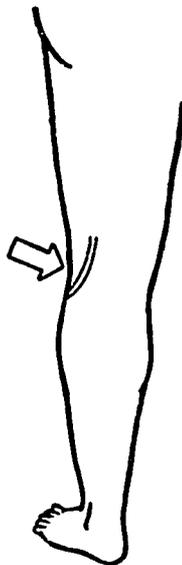


- c. Ask the patient to turn his right hand toward you. Feel the inner side of the middle part of his wrist. Two large tendons cover a nerve. Feel for nerve enlargement. Palpate the left wrist in the same way.



PROCEDURES**NORMAL SIGNS****ABNORMAL SIGNS**

d. Ask the patient to sit and bend his knees slightly. Place your fingers on the bone that sticks out below the outer right knee. Slip your fingers behind the knee. Find a very strong tendon. The nerve is just behind the tendon. Check for enlargement. Feel behind the left knee in the same way.



e. Touch the bone that sticks out on the inner right ankle. Move your fingers to the groove behind the bone. Feel for nerve enlargement. Palpate the left ankle in the same way.

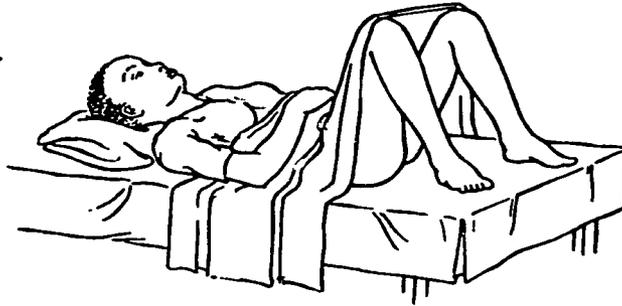


PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Check nerve tenderness. Ask the patient to lie down on the examination table on his right side. Press over the sciatic nerves in both buttocks. Note any tenderness.</p> <p>Ask the patient to lie on his back. Ask him to lift first his right leg and then his left leg straight up. Ask if he has any back or leg pain.</p> <p>Check for irritation of the membranes that cover the brain and spinal cord. With the patient still lying on his back, place one of your hands on the back of the patient's head. Lift his head. Feel for resistance. Ask the patient if he feels any pain.</p>	<p>No tenderness over the sciatic nerves</p> <p>No pain on straight leg raising</p> <p>Patient's head moves easily without pain</p>	<p>Tenderness over the sciatic nerves</p> <p>Pain on straight leg raising</p> <p>Neck stiffness</p> <p>Painful neck movement</p>

Examining the Female Genitals

You will *inspect* and *palpate* the female patient's genitals. You will also *inspect* using a *vaginal speculum*. Follow these steps.

- a. Ask the woman to lie on her back on the table. Ask her to bend her knees and to rest her feet on the table. Ask her to move her buttocks down to the edge of the table and to spread her legs as far apart as possible.



b. Place the vaginal speculum in warm water. Wear gloves. Put your flashlight within easy reach.

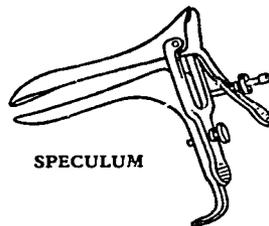
c. Sit in front of the patient. Inspect the outside of her genitals.

Note the color of the labia. Separate the lips of the labia. Look for redness or swelling of the labia.

Check the opening of the urethra for discharge or redness.

Look for discharge or bleeding from the vagina.

d. Remove the speculum from the warm water. Turn it so the blades open towards the walls. Close the blades. Separate the lips over the vagina. Gently insert the speculum into the vagina.



SPECULUM

Labia are the same size and color on both sides

No swelling of the labia

No discharge or redness at the urethra

No unusual discharge from the vagina

No bleeding from the vagina, unless the patient is menstruating

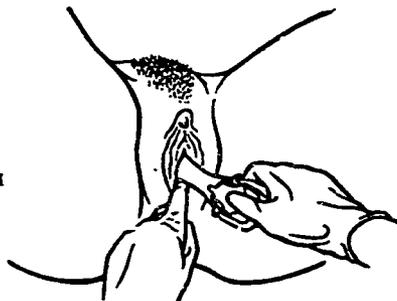
Red or swollen labia

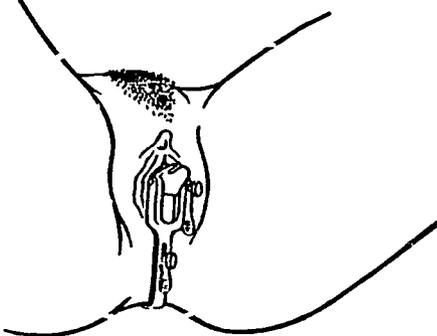
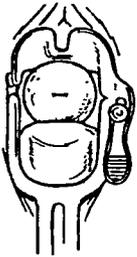
Discharge or redness at the urethra

White, yellow-green, pussy, or frothy discharge from the vagina

Bleeding from the vagina, unless the patient is menstruating

INSERTING THE SPECULUM



PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>e. Turn the speculum so that the handles hang towards the floor. Gradually open the speculum. Shine the light into the vagina.</p> 		
<p>f. Check the cervix for redness, discharge, scars, or bleeding. If the patient has an IUD, look for the strings.</p> 	<p>Pink cervix Small, closed opening of the cervix unless the patient is menstruating No discharge or scars</p> <p>Visible IUD strings</p>	<p>Red cervix Open cervix</p> <p>Yellow, yellow-green, pussy, frothy, or bloody discharge Swelling of the cervix IUD strings are not visible</p>

Check the vagina for redness and discharge.

- g. Close the speculum and turn it sideways. Gently remove it.
- h. Insert your gloved right hand into water or lubricate your fingers. Insert your forefinger and middle finger into the patient's vagina. Feel her cervix. Place your left hand on the patient's abdomen. Locate the uterus between your fingers inside the vagina and your left hand on the abdomen. This is a bimanual examination. Take the cervix between your two fingers in the vagina and move the uterus from side to side. Ask the patient if she feels any pain.
- i. Feel the size of the uterus. Compare the size of the uterus to something that you are familiar with, such as a small lemon, or compare to different sizes of a pregnant uterus.

Dark pink vaginal walls
Small amount of thin, white discharge from the vagina

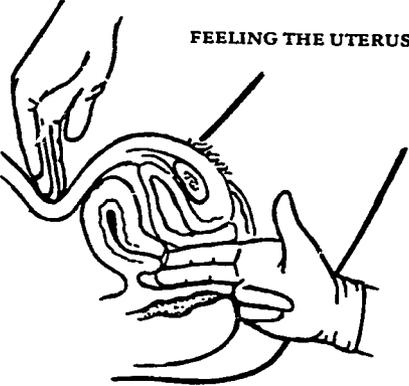
Uterus moves easily without any pain

Small, firm and smooth non-pregnant uterus about the size of a small lemon

Red, inflamed vaginal walls
Yellow, yellow-green, frothy, discharge from the vagina

Pain when you move the uterus

Enlarged non-pregnant uterus

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>j. Feel the shape of the uterus. Feel if the uterus is hard or soft. Ask the woman if she feels any pain as you are palpating.</p>  <p>k. Move your fingers inside the vagina to each side of the cervix. Feel the area on each side of the uterus, near the ovaries and the fallopian tubes. These are the adnexal areas. Note any swelling or tenderness.</p> <p>l. Gently remove your fingers from the patient's vagina.</p>	<p>Even, round uterus</p> <p>No pain on palpation of the uterus</p> <p>Ovaries are about the size of large almonds</p> <p>No swelling or tenderness in the adnexal areas</p>	<p>Irregularly shaped uterus</p> <p>Mass in the uterus</p> <p>Soft uterus</p> <p>Pain on palpation of the uterus</p> <p>Enlarged ovaries</p> <p>Swelling or tenderness in the adnexal areas</p>

This is the end of the physical examination. Allow the patient to dress. Tell the patient the findings from the physical examination. Answer the patient's questions.

Record the findings from the physical examination. Think about what you observed during the examination. Be sure that you have all of the information that you need.

PRACTICE GUIDE FOR PERFORMING AN ADULT PHYSICAL EXAMINATION

This practice guide will help you when you perform an adult physical examination. The guide lists the sequence of steps for performing an adult physical examination. Your instructor will give you a copy of this guide to use when you examine other students in your class and patients in the hospital ward or outpatient clinic. Refer to the practice guide to remind you of the steps for doing an adult physical examination.

VITAL SIGNS: Blood pressure, pulse, respirations, temperature, weight, height

URINE: Color, amount, sugar, protein

GENERAL APPEARANCE: Inspect - state of health, state of nutrition, behavior, mental state, speech, ability to walk

SKIN: Inspect - color, lesions, edema, moisture, hair pattern, evidence of injury

Palpate - moisture, temperature, texture, tenderness

LYMPH GLANDS: Inspect and palpate - in front of the ears, behind the ears, front of the neck, back of the neck, under the lower jaw, above the clavicles, under the arms, at the groin

HEAD: Inspect - hair, face

Palpate - skull, scalp, hair

Percuss - sinuses

EYES: Test vision

Inspect - whole eye, eyelids, eye movements, conjunctivae, sclerae, corneas, pupils, lenses

EARS: Test hearing

Inspect - outside of the ears, outside of the ear canals, mastoid areas

Palpate - outside of the ears, outside of the ear canals, mastoid areas

NOSE: Inspect - outside of the nose, nostrils

MOUTH AND THROAT: Inspect - lips, mucous membranes, gums, teeth, throat

Palpate - gums, teeth, cheeks

Smell - breath

NECK: Inspect - position of the head and neck, deformities, ability to move the neck, thyroid gland

Palpate - spine, muscles, thyroid gland

RESPIRATORY SYSTEM: Inspect - rate and rhythm of breathing, ease of

breathing, cyanosis, shape of the chest, chest expansion, intercostal spaces, nostrils, wounds, cough, sputum

Palpate - back and front chest walls, chest expansion

Percuss - front and back chest for changes in percussion sounds

Auscultate - back and front chest for absent or decreased breath sounds, inspiration compared to expiration, abnormal breath sounds

HEART: Inspect - neck veins

Auscultate - mitral, tricuspid, pulmonic, and aortic areas for rate, rhythm, murmurs

BREASTS: Inspect - breasts and nipples for size, shape, color, dimpling, discharge, cracks

Palpate - breasts, nipples, and lymph glands for lumps, swelling, tenderness

ABDOMEN: Inspect - shape, scars, blood vessels

Auscultate - abdominal sounds

Palpate - four quadrants for masses, tenderness, rebound tenderness

Palpate - liver, spleen, kidneys, bladder for enlargement and tenderness

Percuss - shifting dullness, loin tenderness

Inspect - anus

MALE GENITALS: Inspect - penis, scrotum, groin

Palpate - scrotum, groin, prostate gland

ARMS AND LEGS: Inspect and palpate - arms, hands, legs, ankles, feet, and for edema

MUSCULOSKELETAL SYSTEM: Inspect - muscles, joints, bones, spine

Palpate - muscles, joints, bones

NERVOUS SYSTEM: Check - muscle strength, sensation, enlarged nerves, nerve tenderness, irritation of the membranes that cover the brain and spinal cord

FEMALE GENITALS: Inspect - labia, urethra, vaginal opening

Inspect with vaginal speculum - cervix, vagina

Palpate - uterus, adnexal areas

REVIEW QUESTIONS

Taking the Vital Signs

1. Describe how to take a patient's pulse.
2. What else should you notice when you take a patient's pulse?
3. Check (x) the findings in the following list that you think are normal.
 - An adult with a pulse rate of 44 beats per minute
 - An adult with a pulse rate of 88 beats per minute
 - An adult with 22 respirations per minute right after he ran into the health center
 - An adult with 28 respirations per minute after he had been sitting for a long while
 - An adult with a blood pressure of 150/96
 - An adult with a blood pressure of 120/70
4. What can cause a patient's respiration rate to increase normally?
5. Complete these sentences:
 - a. When measuring the blood pressure, the figure at which you hear the first beat of the pulse is the _____ blood pressure. The figure at which you can no longer hear the pulse is the _____ blood pressure.
 - b. When an adult is resting, his blood pressure should be between ____/____ and ____/____.

- c. High blood pressure is called _____ .
 - d. Low blood pressure is called _____ .
6. Write the normal temperatures for each area:
- Mouth _____
 - Rectum _____
 - Armpit _____

REVIEW QUESTION

Testing the Urine

1. Describe the procedure for testing urine for sugar and protein.

REVIEW QUESTIONS

Examining the General Appearance

1. Check (x) the findings in the following list that you think are abnormal
 - A patient who looks alert and awake
 - A patient who is sluggish and droops in his chair
 - A man who leans to one side when he walks
 - A woman with a hoarse voice
 - A man with slurred speech
 - A man who looks very thin
 - A woman who answers your questions correctly
 - A man who can walk without assistance

2. List the aspects of a patient's general appearance that you can observe during a physical examination.

REVIEW QUESTIONS

Examining the Skin

1. What should you look for when you inspect a patient's skin?

2. Describe where you might find these abnormal signs.

Jaundice:

Cyanosis:

Pallor:

Dehydration:

Sweating:

Thickening:

Tenderness:

Edema:

3. What should you note when you palpate a patient's skin?

REVIEW QUESTIONS

Examining the Lymph Glands

1. List seven areas that you can palpate for lymph glands.
2. What two signs are you looking for when you inspect the lymph glands?
3. How should you describe an enlarged lymph gland?

REVIEW QUESTIONS

Examining the Head

1. Name at least one abnormal sign that you might find in each of these areas.

Hair:

Face:

Skull and scalp:

Sinuses:

2. Name the method that you should use to examine these parts of the head.

Face:

Skull:

Sinuses:

REVIEW QUESTIONS

Examining the Eyes

1. Check (x) the findings in the following list that you think are abnormal

- Vision of 6/9
- Vision of 6/30
- Bulging of the right eye
- A man who cannot follow a pencil with his eyes
- Clear, moist conjunctivae
- Yellow sclera
- Right pupil larger than the left
- Both pupils reacting the same to light
- Redness around the right pupil

2. Describe how you would examine these parts of the eyes.

Conjunctivae:

Pupils:

Eye movements:

3. Describe at least two abnormal signs that you might find in each of these areas.

Eyelids:

Conjunctivae:

Pupils:

4. Explain what the figures 6/6 mean.

REVIEW QUESTIONS

Examining the Ears

- 1. Describe at least one method for testing a patient's hearing.**
- 2. Name the three areas that you should inspect when you examine the ears.**
- 3. Describe two abnormal signs that you might find when you examine each of these areas.**
 - Outside of the ears:**
 - Outside of the ear canals:**
 - Mastoid areas:**

REVIEW QUESTIONS

Examining the Nose

- 1. What parts of the nose should you inspect?**
- 2. Describe how to examine the nose.**
- 3. List at least four abnormal signs that you might find when you examine the nose.**

REVIEW QUESTIONS

Examining the Mouth and Throat

1. List the methods that you should use when you examine the mouth and throat.

2. Describe how to examine these parts of the mouth and throat.
Mucous membranes:

Gums:

Throat:

3. List at least two abnormal signs that you might find when you examine each of these areas.

Lips:

Gums:

Teeth:

Cheeks:

Throat:

REVIEW QUESTIONS

Examining the Neck

1. Check (x) the findings in the following list that you think are abnormal.
 - A man whose head tilts to the right
 - A woman who has a swelling over the thyroid area
 - A man who can move his head in any direction
 - A woman who has a large lump on the spine of her neck
 - A man who has tight neck muscles
 - A woman whose thyroid gland you cannot feel
2. What should you check for when you inspect a patient's neck?
3. Describe how to palpate the neck.

REVIEW QUESTIONS

Examining the Respiratory System

1. List the methods that you should use when you examine a patient's respiratory system.

2. List at least eight things that you should check for when you inspect the respiratory system.

3. Describe how to palpate a patient's chest.

4. Describe what you should observe when you check these parts of the respiratory system.
 - a. Rate and rhythm of breathing:
 - b. Shape of the chest:
 - c. Chest expansion:
 - d. Intercostal spaces:

5. List at least four abnormal findings that you might detect when you palpate the chest.

6. Describe why you percuss the chest.

7. Name two organs that might cause a dull sound when you percuss the chest.

8. What are you listening to when you auscultate the lungs?

9. Why do you listen to the breath sounds?

10. List six abnormal findings that you might detect when you auscultate the lungs.

REVIEW QUESTIONS

Examining the Heart

1. List the methods that you should use when you examine the heart.
2. Describe how to check for neck vein distention.
3. What are you listening for when you auscultate the heart?
4. What causes the heart sounds?
5. Name the valves of the heart.
6. List six abnormal signs that you might find when you examine the heart.

REVIEW QUESTIONS

Examining the Breasts

- 1. List the methods that you should use when you examine a woman's breasts.**
- 2. List six things that you should note when you inspect a woman's breasts.**
- 3. Describe how to palpate a woman's breasts.**
- 4. List at least six abnormal findings that you might detect when you examine the breasts.**

REVIEW QUESTIONS

Examining the Abdomen

1. **Why do you auscultate the abdomen before you palpate or percuss?**

2. **List three things that you should check for when you inspect the abdomen.**

3. **A patient complains of pain in the right upper quadrant. Where should you start to palpate his abdomen?**

4. **What abnormal signs should you listen for when you auscultate the abdomen?**

5. **The patient tightens his abdominal muscles as you are palpating. What should you do?**

6. **Describe where the following organs are located in the abdomen.**
Liver:

Spleen:

Bladder:

7. Check (x) the findings in the following list that you think are abnormal
- The liver is palpable to four of the patient's finger breadths below the edge of the ribs
 - You cannot feel the spleen
 - You cannot feel the liver
 - Rebound tenderness in the right lower quadrant of the abdomen
 - You can see a large blood vessel pulsating in the abdomen
 - A scar in the right lower quadrant of the abdomen
 - Active abdominal sounds
 - Very rapid and noisy abdominal sounds
 - Shifting dullness

8. Describe how to examine for these findings.

Liver size:

Shifting dullness:

Kidney tenderness:

Bladder size:

Irritation in the anus:

REVIEW QUESTIONS

Examining the Male Genitals

1. List three areas of the male genitals that you should inspect.

2. Describe at least four abnormal signs that you might find when you inspect the male genitals.

3. List three parts of the male genitals that you should feel when you palpate the scrotum.

4. Describe how to palpate the prostate gland.

5. List six abnormal signs that you might find when you palpate the male genitals.

REVIEW QUESTIONS
Examining the Arms and Legs

1. What are you looking for when you examine the arms and legs?
2. How can you detect edema of an arm or leg?

REVIEW QUESTIONS

Examining the Musculoskeletal System

1. List the methods that you should use when you examine the musculoskeletal system.

2. List the parts of the body that you should examine as part of the musculoskeletal system.

3. Describe how to check for movement of the joints.

4. List at least four abnormal signs that you might find when you examine the spine.

5. List four abnormal signs that you might find when you palpate the joints.

REVIEW QUESTIONS

Examining the Nervous System

1. List five things that you should check for when you examine the nervous system.

2. Describe how to check for muscle strength in these areas.
Upper arms:
Thighs:
Hands:

3. Describe at least one method for checking sensation.

4. List five areas where you should check for nerve enlargement.

5. Describe at least one method for detecting nerve tenderness.

6. Describe how to detect irritation of the membranes that cover the brain and spinal cord.

7. List at least six abnormal signs that you might find in a nervous system examination.

REVIEW QUESTIONS

Examining the Female Genitals

1. Describe how you should prepare a woman for an examination of her genitals.

2. What can you do to make a woman comfortable during an examination of her genitals?

3. Name five parts of the female genitals that you should inspect.

4. List at least four abnormalities that you might find when you inspect the female genitals.

5. Describe how to insert a vaginal speculum.

6. Name two areas of the female genitals that you should palpate.

7. List five abnormal signs that you might find when you palpate the female genitals.

Unit 3

Recording an Adult Physical Examination

STUDENT GUIDE

OBJECTIVE

Record an adult physical examination on a practice sheet.

LEARNING ACTIVITIES

1. Through an instructor presentation and class discussions, learn how to record an adult physical examination on a practice sheet.
2. Practice recording an adult physical examination on a practice sheet.

3.1 RECORDING AN ADULT PHYSICAL EXAMINATION

Once you have finished examining a patient, you must record the findings. The information will remind you of the details of the examination. The information will also help other health workers who might see the patient later.

Follow these guidelines when you record a physical examination.

a. *Make your Notes Brief and Clear*

The record of a physical examination should be brief, but it should also provide a clear and complete picture of your findings. Another health worker should be able to read your record of an examination and form a picture in his mind of the patient's physical condition.

b. *Give the Details of Any Abnormal Findings*

Describe in detail any abnormal finding that you detect during a physical examination. For example, suppose you see lesions on a patient's mouth. Instead of writing "sores on the mouth," write "two pustules with yellow crusts on the lower lip." These added details may help you diagnose the patient's problem.

c. *Note Both Normal and Abnormal Findings*

When you examine a body system and find no abnormalities, it would seem easiest to write only that the examination was "normal." It is more helpful, however, to briefly detail every normal finding. Such a report will note exactly which areas of the patient's body you examined and which areas were normal. For example, suppose you examine a patient's abdomen and find no abnormalities. You should write, "Abdomen: Flat, no swellings, no scars. Abdominal sounds present and normally active. No enlargement or tenderness of liver, spleen, kidneys, or bladder. No masses. No abnormal percussion noted. No loin tenderness."

It is especially important to write about normal findings when you are trying to locate a patient's problem based on his symptoms. For example, suppose a patient complains of nausea, vomiting, and headache. You examine his head, neck, and abdomen, and find no abnormalities. You should write:

- Head:** No abnormalities of face or scalp. No tenderness, depressions, or signs of injury to skull
- Neck:** Normal position of head and neck. No neck stiffness, deformities, or enlargements
- Abdomen:** Flat, with no swellings or scars. Abdominal sounds present and normally active. No enlargement or tenderness of liver, spleen, kidneys, or bladder. No masses. No loin tenderness

Such a report provides a clear picture of the patient's condition. It also shows the care that you took with the examination.

Use the practice sheet for doing a physical examination in this unit to record the physical examinations that you perform. Follow these instructions for using the practice sheet.

- a. Complete the physical examination. Take notes on a blank sheet of paper to help you remember important points. Be sure that you have all of the information that you need before you record the physical examination on the practice sheet. Refer to the practice guide for performing an adult physical examination to check that you have examined the patient completely. If necessary, examine an area or system again to obtain all of the information that you need. Fill in the appropriate parts of the practice sheet after you complete the examination and review your notes.
- b. Record the patient's name in the space provided after number 1.
- c. Record the vital signs in the appropriate spaces after number 2.
- d. Record the results of the urine test in the space after number 3. Note normal and abnormal findings. For example, write "Urine test paper negative for protein and sugar," or "Urine test paper positive for protein +++, negative for sugar."
- e. Describe the patient's general appearance in the space provided after number 4. Another health worker reading your report should have a clear picture of what the patient looks like. For example, write, "The patient is bent over and is holding his right side. He is unable to walk and has difficulty talking because of pain. He looks anxious and frightened." Or write, "The patient is cheerful, alert, and has no difficulty speaking. He is able to walk without difficulty. He looks relaxed and shows no signs of distress."

- f. Continue through the body systems and areas listed on the practice sheet. In the space provided after number 5, describe any findings of the skin examination. For example, write, "Red, papular rash on face and trunk. Skin very hot and dry." Or write, "No lesions, edema, or changes in skin color. Hair pattern normal. Skin warm and dry."
- g. Note any enlargement, tenderness, or redness of the lymph glands. Give the location of any findings. For example, write, "Almond-sized, tender, and red lymph glands at right groin." Or write, "No lymph gland enlargement or tenderness."
- h. In the space provided after number 7, describe any findings of the examination of the head. Be sure to note any changes in color or hair pattern. Record any signs of injury, depressions of the skull, or tenderness over the sinuses. For example, write, "4 cm laceration with much dried blood at right side of head. No other changes in hair, skull, or sinuses." Or write, "No changes in hair color or pattern. No signs of injury, depressions, or tenderness of face, scalp, sinuses, or skull."
- i. Next, note any vision problems. Describe any changes in the eyelids, eye movements, pupil reactions, conjunctivae, sclerae, corneas, and lenses. Enter the details of any foreign bodies or discharges that you detect.
- For example, write, "Patient unable to see out of right eye. 20/20 vision in left eye. Right eyelid swollen and shut. Laceration of right upper lid with bright red bleeding. Pupil irregular and fixed. Widespread bleeding under conjunctiva. Unable to see lens. No foreign body visible. Some tearing of left eye, but no obvious injury. Left eyelid slightly swollen. Pupil regular, reacts well to light. Conjunctiva appears normal. No foreign body."
- Or, "Vision 20/20 in both eyes. Both eyelids normal, pupils equal and reacting to light. Conjunctivae and sclerae look the same on both sides. No color changes or signs of inflammation. No foreign bodies, tearing, or discharges."
- j. Describe any hearing problems. Describe any changes in the outer ear or over the mastoid areas. For example, write, "Decreased hearing in right ear using the watch tick test. Hearing in left ear normal. Yellow discharge from the right ear canal. Pain when skin flap pushed in front of right ear. No pain in either mastoid area. Left ear normal with no discharge or tenderness." Or write,

“Hearing normal in both ears using the watch tick test. Both outside ear canals normal. No discharge or tenderness. No mastoid tenderness.”

- k. In the space after number 10, note the findings of the nose examination. Give details of any redness, discharge, or bleeding. Note any flaring of the nostrils. Describe any lesions or foreign bodies. For example, write, “Mucous membranes on both sides of the nose are red with much clear discharge. No flaring nostrils, lesions, or foreign bodies.” Or write, “Normal mucous membranes. No flaring nostrils, lesions, redness, discharge, or bleeding.”
- l. Next, record the mouth and throat examination. Describe any changes in the lips, gums, mucous membranes, teeth, or throat. Describe the odor of the breath. For example, write, “Red and swollen gums at right lower jaw. Pain when tapping last tooth at right lower jaw. No other changes in lips, gums, mucous membranes, teeth, or throat.” Or write, “Lips, gums, mucous membranes, teeth, and throat normal. No abnormal breath odor.”
- m. In the space after number 12, describe the head and neck position and neck movement. Note any thyroid gland deformities or enlargement. For example, write, “Right part of the thyroid gland is palpable, but not visible. No thyroid nodules felt. No neck stiffness, deformities, or abnormal position of neck.” Or write, “No abnormal position of neck. Neck moves easily without stiffness. No enlargement of thyroid gland.”
- n. Write the findings of the respiratory system examination next. Record respiratory rate and rhythm, ease of breathing, and shape of chest. Give details of chest expansion, intercostal movements, and nostrils. Note any chest wounds, cough, or presence of sputum. Describe changes on percussion or in breath sounds. For example, write, “Respiratory rate 26 and regular. Patient having some difficulty breathing, with slightly flaring nostrils and intercostal retractions. Chest expands equally on both sides. Flat percussion note at left lower lung. Rales at left base.” Or write, “Respiratory rate 16 and regular. No difficulty breathing, flaring nostrils, or intercostal retractions. Chest shape and expansion normal. No wound, cough, or sputum. Normal percussion. Normal breath sounds.”
- o. Describe the patient’s neck veins and any changes in heart sounds

in the space provided after number 14. For example, write, "Neck veins distended to more than half the neck. Heart rate 92 and irregular. Loud murmur heard at all four areas." Or write, "No neck vein distention. Heart rate 72 and regular. Heart sounds normal with no murmurs."

- p. Note the size, shape, and color of the female patient's breasts in the space after number 15. Describe any dimpling, discharge, cracks, lumps, or tenderness of the breasts or nipples. For example, write, "Left breast - 4 cm, red, tender swelling at left lower quadrant. Bloody discharge mixed with milk from left nipple. No dimpling or cracks. Right breast - normal without redness, tenderness, or swelling. No cracks or lumps. Milky discharge from right nipple."
- q. Give the details of the abdominal examination in the space provided after number 16. Describe the shape of the abdomen. Note any swellings or scars. Record any changes on auscultation. Record any enlargement or tenderness of the liver, spleen, kidneys, or bladder. Make a note of any masses or tenderness anywhere in the abdomen. Describe any changes on percussion. For example, write, "Slight abdominal swelling, no scars. Abdominal sounds present and normally active. Liver enlarged to four of the patient's finger breadths below the rib margin. Liver tender and somewhat soft. No palpable spleen, kidneys, or bladder. Dull percussion note in right upper quadrant to four of the patient's finger breadths below the rib margin. No shifting dullness. No loin tenderness." Or write, "Abdomen flat. No swelling or scars. Abdominal sounds present and normally active. No enlargement or tenderness of liver, spleen, kidneys, or bladder. No masses. No abnormal percussion notes. No loin tenderness."
- r. Describe the groin, penis, scrotum, and prostate gland of the male patient in the space provided after number 18. Note any swelling, color changes, lesions, discharges, or tenderness. For example, write, "Nontender, firm, egg-sized swelling in right scrotum. Groin, penis, and prostate gland normal." Or write, "Groin, penis, scrotum, and prostate gland normal. No swellings, lesions, discharge, or tenderness."
- s. Record the findings of the examination of the arms and legs next. Note any edema of the arms, legs, or back. For example, write, "Pitting edema of ankles and lower back." Or write, "No edema of arms, legs, or back."

- t. Describe the bones, joints, and muscles in the space after number 19. Describe any deformities, swellings, or changes in color or range of motion. Note any muscle spasms or tenderness. For example, write, "Swelling, redness, and tenderness at right knee. Unable to bend at knee. No other joint abnormalities. No muscle spasms or pain." Or write, "No redness, swelling, or tenderness of any joint. Normal movement in all joints. No muscle spasms or tenderness."
- u. Give the details of the nervous system examination after number 20. Describe the patient's level of consciousness, gait, and ability to move. Record details of muscle strength. Note any loss of sensation or irritation of the membranes that cover the brain and spinal cord. Note any pain on straight leg raising. Describe any enlarged or tender nerves.
- For example, write, "Patient is somewhat confused, with rambling, slurred speech. Unable to move right arm and leg. Left side of the face is limp. Normal strength in left arm and leg. Does not feel pinprick on right side. Feels pinprick on left side. No obvious pain when patient's legs lifted. No neck stiffness. No nerve enlargement or tenderness."
- Or write, "Patient awake and alert. Walks well and is able to move arms and legs. Muscle strength good in arms and legs. Normal sensation when skin pricked. No neck stiffness. No pain on straight leg raising. No enlargement or tenderness."
- v. Give the findings of the female genital examination. Describe any changes in the labia, urethra, or vaginal opening. Describe any changes in the cervix, uterus, or adnexal areas. For example, write, "Much yellow discharge from vagina. Urethra red. Labia normal. Cervix red, moves easily. Movement causes pain at right adnexal area. Uterus normal in size and slightly tender. Much right adnexal tenderness without swelling. No left adnexal pain or tenderness." Or write, "Labia, urethra, and vaginal opening normal. Vagina and cervix normal. Uterus small, firm, smooth, and moves easily. No pain or swelling in either adnexal area."

PRACTICE SHEET FOR RECORDING AN ADULT PHYSICAL EXAMINATION

1. Patient's name _____
2. Vital signs: Blood pressure _____ Pulse _____ Weight _____
 Temperature _____ Respirations _____ Height _____
3. Urine test _____
4. General appearance _____

5. Skin _____

6. Lymph glands _____

7. Head _____

8. Eyes _____

9. Ears _____

10. Nose _____

11. Mouth and throat _____

12. Neck _____

13. Respiratory system _____

14. Heart _____

15. Breasts _____

16. Abdomen _____

17. Male genitals _____

18. Arms and legs _____

19. Musculoskeletal system _____

20. Nervous system _____

21. Female genitals _____

Unit 4

Performing and Recording an Adult Physical Examination

STUDENT GUIDE

OBJECTIVES

1. Demonstrate how to prepare and use the equipment for an adult physical examination.
2. Demonstrate how to prepare an adult for a physical examination.
3. Perform an adult physical examination. Examine these areas and systems:

Vital signs	Neck
Urine	Respiratory system
General appearance	Heart
Skin	Breasts
Lymph glands	Abdomen
Head	Male genitals
Eyes	Arms and legs
Ears	Musculoskeletal system
Nose	Nervous system
Mouth and throat	Female genitals
4. Identify normal and abnormal signs that can be detected during a physical examination.
5. Record an adult physical examination on the practice sheet.

LEARNING ACTIVITIES

1. Review with the instructor and the class how to prepare and use equipment, how to prepare a patient, how to perform a physical examination, how to record a physical examination, and how to use the practice guide for performing an adult physical examination.

2. Through presentation and class discussions, learn how to use the adult physical examination skill checklist.
3. Practice performing and recording an adult physical examination.

SKILL CHECKLIST

Performing and Recording an Adult Physical Examination

This checklist has two purposes:

- 1) Students should use it as a guide for checking their own skills or other students' skills
- 2) Supervisors should use it when they evaluate how well students perform and record an adult physical examination.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate
 2 = Needs improvement
 3 = Satisfactory
 4 = Above average
 5 = Excellent

When performing and recording an adult physical examination:

	YES	NO	RATING	COMMENTS
1. Arrange all of the equipment on a table within reach				
2. Prepare the patient for the examination: a. Make the patient comfortable. Arrange for a private area to perform the examination b. Explain the purpose of the examination c. Ask the patient to remove his clothing. Provide a drape d. Warm the equipment e. Give clear instructions				
3. Take these vital signs: Blood pressure Pulse				

YES NO RATING COMMENTS

	YES	NO	RATING	COMMENTS
Respirations Temperature Weight Height				
4. Test the urine				
5. Examine the patient's general appearance. Inspect: State of health State of nutrition Behavior Mental state Speech Ability to walk				
6. Examine the skin a. Inspect for: Color Lesions Edema Moisture Hair pattern Evidence of injury				
b. Palpate for: Moisture Temperature Texture Tenderness				
7. Inspect and palpate these lymph glands: In front of the ears Behind the ears Front of the neck Back of the neck Under the lower jaw Above the clavicles Under the arms At the groin				

YES NO RATING COMMENTS

<p>8. Examine the head</p> <p>a. Inspect: Hair Face</p> <p>b. Palpate: Skull Scalp Hair</p> <p>c. Percuss: Sinuses</p>				
<p>9. Examine the eyes</p> <p>a. Test vision</p> <p>b. Inspect: Whole eye Eyelids Eye movements Conjunctivae Sclerae Corneas Pupils Lenses</p>				
<p>10. Examine the ears</p> <p>a. Test hearing</p> <p>b. Inspect and palpate: Outside of the ears Outside of the ear canals Mastoid areas</p>				
<p>11. Examine the nose</p> <p>Inspect: Outside of the nose Nostrils</p>				
<p>12. Examine the mouth and throat</p> <p>a. Inspect: Lips Mucous membranes</p>				

YES NO RATING COMMENTS

<p>Gums Teeth Throat</p>				
<p>b. Palpate: Gums Teeth Cheeks</p>				
<p>c. Smell the breath</p>				
<p>13. Examine the neck a. Inspect: Position of the head and neck Deformities Ability to move the neck Thyroid gland</p>				
<p>b. Palpate: Spine and muscles Thyroid gland</p>				
<p>14. Examine the respiratory system a. Inspect: Rate and rhythm of breathing Ease of breathing Cyanosis Shape of the chest Chest expansion Intercostal spaces Nostrils Wounds Cough Sputum</p>				
<p>b. Palpate: Back and front chest walls Chest expansion</p>				
<p>c. Percuss: Front chest Back chest</p>				

	YES	NO	RATING	COMMENTS
d. Auscultate: Back chest Front chest				
15. Examine the heart				
a. Inspect neck veins				
b. Auscultate: Mitral area Tricuspid area Pulmonic area Aortic area				
16. Examine the female's breasts				
a. Inspect for: Size Shape Color Dimpling Discharge Cracks				
b. Palpate: Breasts Nipples Lymph glands				
17. Examine the abdomen				
a. Inspect for: Shape Scars Blood vessels				
b. Auscultate all four areas				
c. Palpate all four areas for masses and tenderness				
d. Palpate: Liver Spleen Kidneys Bladder				
e. Percuss all four areas				
f. Inspect the anus				

YES NO RATING COMMENTS

	YES	NO	RATING	COMMENTS
18. Examine the male patient's genitals a. Inspect: Penis Scrotum Groin b. Palpate: Scrotum Groin Prostate gland				
19. Examine the arms and legs Inspect and palpate for edema: Arms and hands Legs and ankles Feet Back				
20. Examine the musculoskeletal system a. Inspect: Muscles Joints Bones Spine b. Palpate: Muscles Joints Bones				
21. Examine the nervous system Check: Muscle strength Sensation Enlarged nerves Nerve tenderness Irritation of the membranes that cover the brain and spinal cord				

YES NO RATING COMMENTS

	YES	NO	RATING	COMMENTS
22. Examine the female genitals a. Inspect: Labia Urethra Vaginal opening b. Inspect with vaginal speculum: Cervix Vagina c. Palpate: Uterus Adnexal areas				
23. Allow the patient to dress				
24. Tell the patient the findings of the physical examination				
25. Answer the patient's questions				
26. Record the physical examination. Develop a clear picture of the patient's condition: a. Write the findings in the appropriate sequence b. Record all of the necessary information c. Make notes brief and clear				

Unit 5

Performing and Recording an Adult Physical Examination; Skill Development

STUDENT GUIDE

OBJECTIVES

1. Prepare and use the equipment for an adult physical examination.
2. Prepare patients for physical examinations.
3. Examine adult patients.
4. Describe the normal and abnormal findings of an adult physical examination.
5. Record adult physical examinations.

LEARNING ACTIVITIES

Participate in one week of clinical practice in a hospital ward or outpatient clinic. During that time you will examine adult patients, using the practice guide for performing an adult physical examination.

Unit 6

Making a Diagnosis and Performing and Recording a Brief Medical History and Physical Examination

STUDENT GUIDE

OBJECTIVES

1. Review the clinical practice experience.
2. Describe how to make a diagnosis.
3. Perform a brief medical history and physical examination.
4. Record a brief medical history and physical examination.

LEARNING ACTIVITIES

1. Take part in a discussion of the clinical practice experience.
2. Through instructor presentation and class discussions, learn how to make a diagnosis.
3. Through instructor presentation and class discussions, learn how to perform and record a brief medical history and physical examination.
4. Practice performing and recording a brief medical history and physical examination.

6.1 MAKING A DIAGNOSIS

A disease or other abnormal condition usually causes changes in the body or in its normal functions. You analyze the relationship between a patient's symptoms and signs to decide why the changes in his body have occurred. You usually decide that the patient has some kind of disease. When you give the disease a name, you are making a diagnosis.

You go through a thinking process to make a diagnosis. First, you take a medical history. You listen to the patient as he tells you about his problem. As you listen, you try to match the patient's symptoms with the symptoms that you know occur with certain diseases. For example, suppose a thirty-five-year-old man says, "Twenty-four hours ago I had a slight pain in my belly near my naval. Two hours ago, the pain became much worse and moved to the right lower part of my belly." You would suspect that the patient might have appendicitis because he has described the typical symptoms of that disease.

Next you do a physical examination. You examine the patient's body to look for abnormal signs. You try to match any signs of abnormal conditions with the signs that you know occur with certain diseases.

For example, suppose you examine the same thirty-five-year-old man and find the following:

Temperature:	38°C
Pulse:	92
Respirations:	22
Abdominal examination:	Abdomen flat. Abdominal sounds present. Percussion note resonant. Guarding and pain in right lower quadrant, with rebound tenderness

These signs match the typical signs of appendicitis.

Now you think about the symptoms that the patient has described. You consider what you detected and observed during the physical examination. You compare the patient's symptoms and signs with what you know to be the typical symptoms and signs of certain diseases. Then you make a diagnosis.

6.2 PERFORMING A BRIEF MEDICAL HISTORY AND PHYSICAL EXAMINATION

Learning how to take a complete medical history and do a complete physical examination has prepared you to interview and examine any patient who comes to your health center. However, performing a complete medical history and physical examination takes a great deal of time and is often not necessary. Instead, you can perform a brief medical history and physical examination. This means focusing your attention on only the most important symptoms and signs that you learn about and detect. For example, suppose a patient comes in with a laceration on his right arm. You find out how and when the laceration occurred. You examine the injured arm. You do not need to do a complete medical history and physical examination to diagnose and treat this patient's problem.

TAKING A BRIEF MEDICAL HISTORY

When you take a brief medical history, you direct your interview to the patient's immediate problem. You still do a thorough interview. But you ask questions that relate only to the patient's presenting complaint. Follow these steps to take a brief medical history:

- a. Obtain the patient identification information.
- b. Find out the presenting complaint.
- c. Take the history of the present problem. Find out the details of the patient's symptoms. Find out in what sequence the symptoms occurred. Ask questions about the onset, duration, location, frequency, and description of the symptoms. Learn if anything makes the symptoms better or worse. Find out about associated symptoms, a history of similar symptoms, and contacts.
- d. Take the past medical history. Focus your interview only on those questions that will help you understand the patient's present problem. For example, suppose a patient complains of nausea, vomiting, and diarrhea. You should ask this patient about drug allergies, previous adult illnesses, and housing. You always want

to know if a patient is allergic to any medications. You ask about adult illnesses because other illnesses may affect a patient's present health. You ask about housing because food or water often cause gastrointestinal symptoms.

PERFORMING A BRIEF PHYSICAL EXAMINATION

A brief physical examination follows the same guidelines as a brief medical history. Always take the patient's vital signs and observe his general appearance. Then direct the physical examination to only the body areas and systems that are associated with the patient's symptoms. The medical history will guide you to the areas and systems that you need to examine. For example, suppose you obtain this brief medical history from a twenty-one-year-old patient:

Presenting complaint:	Sore throat and runny nose for two days.
History of the present problem:	Two days ago the patient developed a mild sore throat, runny nose, and slight fatigue. Gradually, over the past two days, he has developed muscle aches, fever, and a loss of appetite. The patient has been in bed for the past twenty-four hours. He feels better when he lies down and takes long naps.
	The patient has no headaches or pain over his sinuses. No pain or discharge from his ears. No cough, no difficulty breathing, no chest pain. The patient had similar symptoms one year ago. Symptoms subsided completely in one week.
	The patient's wife had the same symptoms for one week. She is feeling much better now.
Past medical history:	Drug allergies: None known
	Adult illnesses: No hypertension, diabetes, heart disease, tuberculosis, filariasis, malaria, or cancer. No other diseases.
	Personal habits: Smokes twelve cigarettes a day. Drinks two to three bottles of beer a week.

You should take the patient's vital signs and examine his general appearance. Then focus your examination. Check only his lymph glands, head, ears, nose, throat, respiratory system, and heart.

Performing a brief medical history and physical examination requires a great deal of practice. You will increase your interviewing and examination skills later in your training when you study the clinical modules.

6.3 RECORDING A BRIEF MEDICAL HISTORY AND PHYSICAL EXAMINATION

Once you have completed the brief medical history and physical examination, you must record the information that you have obtained. This information will be a permanent record of the patient's problems. It will also be a record of how you treated each problem. Such a record is an important document in a patient's health care.

Recording the medical history and physical examination can also help you. Writing about the medical history helps you organize the information that you have obtained and think more clearly about what the patient said and how he said it. Writing about the physical examination allows you to consider the abnormal findings that you detected and observed. Writing clear, accurate records helps you think clearly and organize your information to make a correct diagnosis.

Recording a complete medical history and physical examination is not always necessary, however. If you do a complete medical history and physical examination, you should write a complete report. If you do a brief medical history and physical examination, you should write a brief report.

Writing a brief report means focusing on the patient's present problem. Write a complete but brief description of what you learned during the brief medical history and detected during the brief physical examination. Your report should be clear enough to give anyone reading it a clear picture of the patient's problem. Record the brief medical history and physical examination on the Patient Card that the patient keeps with him. Follow these steps:

- a. Fill in the patient identification information.
- b. Fill in the information about the patient's past medical history in the appropriate space as you obtain the information.

- c. Write your brief report in the section labeled “Symptoms, Signs, Diagnosis, and Patient Care.”

Record the date of the patient’s visit.

Write “PC,” the symbol for “presenting complaint.” Record the presenting complaint in the patient’s own words.

Write “Hx,” the symbol for “history.” Give a brief history of the present problem. Include the onset, duration, location, frequency, and description of symptoms, things that make the symptom better or worse, associated symptoms, history of similar symptoms, and contacts. Then record the parts of the past medical history that relate to the patient’s present problem.

Write “PE,” the symbol for “physical examination.” Under this heading, write “Vital signs.” Record the vital signs that you took. If you tested the urine, write the heading “Urine.” Record the results. Write the appropriate heading for each system that you examined. After each heading, record what you observed and detected.

Write “Dx,” the symbol for “diagnosis.” Record the diagnosis.

Write “Rx,” the symbol for “patient care and medications.” Record the treatment that you plan to give the patient. Write your advice to the patient about his condition and its care. Record any medications that you gave the patient or any procedures that you performed. Note when the patient is to return for a follow-up visit.

See Section 8.2 of the Operations manual for other medical shorthand symbols.

- d. Return the card to the patient. Remind him to bring the card with him whenever he visits the health center.

Unit 7

Performing and Recording a Child Physical Examination

STUDENT GUIDE

OBJECTIVES

1. Prepare a child for a physical examination.
2. Perform a child physical examination.
3. Identify the normal and abnormal signs that can be detected during a child physical examination.
4. Record a child physical examination.

LEARNING ACTIVITIES

1. Through instructor presentations and class discussions, learn:
 - How to prepare a child for a physical examination
 - How to perform a child physical examination
 - How to identify the normal and abnormal signs that can be detected during a child physical examination
 - How to record a child physical examination
2. Observe the instructor while he examines a child.
3. Use role-play to practice examining a child.
4. Examine children during a one-day clinical practice.

7.1 INTRODUCTION

You perform a child physical examination in much the same way that you perform an adult physical examination. But some procedures and techniques will be changed because of differences in a child's size and stage of development.

You will use the same methods of examination. You will inspect, palpate, percuss, auscultate, and smell. The signs that you observed in the adult will be the same for some systems in the child but different for others. You ask many questions about a child's growth and development when you take a child medical history. During the physical examination you will make observations to determine if a child is growing and developing normally.

7.2 STEPS FOR PERFORMING A CHILD PHYSICAL EXAMINATION

The child examination does not follow the same steps as the adult physical examination. Any procedures that are likely to upset the child are done at the end of the examination.

You can perform the physical examination in any of several sequences. As you gain experience in examining children, you will develop a sequence that works for you. This is a suggested sequence to use until you develop your own.

- a. Arrange on a table within easy reach all of the equipment that you will use during the examination.
- b. Prepare the child for the physical examination:
 - Choose a private area for the examination. Let the young child sit on his parent's lap
 - Ask the parent to assist you
 - Explain the purpose of the examination and the procedures that you will perform

Let the child become familiar with the examination equipment

Do not use quick or hurried movements

Talk to the child during the examination

Ask the parent to help undress the child. Provide a drape

- c. Inspect the child's general appearance.
- d. Check the child's development skills.
- e. Examine the child's:

Skin	Abdomen
Lymph glands	Neck
Head	Musculoskeletal and nervous systems
Eyes	Arms and legs
Ears	Male genitals
Nose	Female genitals
Heart	Mouth and throat
Respiratory system	

- f. Take the vital signs.
- g. Explain the findings to the parent.
- h. Record the physical examination.

7.3 EQUIPMENT FOR PERFORMING A CHILD PHYSICAL EXAMINATION

Assemble all of the equipment that you used for an adult physical examination. Obtain the additional items of equipment listed in the table.

EQUIPMENT	USE
Infant scale	Weigh the infant
Cup	Test development
Spoon	Test development
Raisin or small piece of fruit	Test development

EQUIPMENT	USE
Piece of clothing with a button and hole	Test development
Ball	Test development
Paper	Test hearing

7.4 PREPARING A CHILD FOR A PHYSICAL EXAMINATION

The physical examination will be more pleasant for the child, the parent, and you if the child cooperates willingly. Each child will respond differently to being examined. Some children will be accepting. Others will be quite frightened. Do all that you can do to make the child feel at ease. Follow these guidelines to prepare a child for a physical examination:

- a. Choose a private area in which to examine the patient. Provide a place for the child and his parent to sit and lie down. Let the young child sit on his parent's lap. Use the parent's lap as your examination table.
- b. Ask the parent to assist you as much as possible. The child will feel more reassured if the parent participates in the examination.
- c. Explain to the parent and the child the purpose of the examination. Describe each procedure.
- d. Show the child each item of equipment before you use it in the examination. For example, let the child play with the stethoscope while you examine his head, eyes, ears, and nose. He will then be familiar with it by the time you need to listen to his heart, lungs, and abdomen.
- e. Do not use quick or hurried movements.
- f. Talk to the child as much as possible as you are doing the procedures.
- g. Ask the parent to remove the child's clothing. Give the child a blanket, a sheet, or articles of his own clothing to use as a drape. The drape will keep the child warm and covered. Unfasten an infant's diaper and leave it beneath him.
- h. Proceed with the physical examination procedures as outlined below.

CHILD PHYSICAL EXAMINATION PROCEDURES

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the General Appearance You will <i>inspect</i> a child's general appearance. Begin to examine a child's general appearance as soon as you greet him and his parents.</p> <p>a. Note the child's state of health.</p> <p>b. Note the child's state of nutrition. Observe the child's weight in relation to his age.</p> <p>c. Note the child's behavior</p> <p>d. Notice the child's mental state and level of consciousness.</p>	<p>Bright, active appearance</p> <p>Child may be wary, but responds well</p> <p>Average weight for age</p> <p>Shy, hesitant behavior</p> <p>Child is alert and awake</p> <p>Child responds when you speak to him</p>	<p>Listless, sad, or drooping appearance</p> <p>Child shows obvious signs of distress</p> <p>Uncontrollable crying and writhing</p> <p>Extreme thinness</p> <p>Obesity</p> <p>Unusual behavior</p> <p>Strange movements</p> <p>Shaking or rocking</p> <p>Child is sluggish</p> <p>Child does not respond when you speak to him</p>

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Testing Development</p> <p><i>Evaluate a child's development until he reaches the age of five. Use a child development guide similar to the one that you learned to use in the Medical History module.</i></p> <p>Follow these steps.</p> <ol style="list-style-type: none"> a. Note the child's age. b. Look at the child development guide. Find the section that corresponds to the child's age. Gather the necessary equipment. 		

CHILD DEVELOPMENT GUIDE

AGE RANGE IN WHICH SKILLS SHOULD BE ATTAINED	SOCIAL SKILLS	PHYSICAL SKILLS	LANGUAGE SKILLS
Birth to first few minutes of life		Moves arms and legs	Cries
6 weeks to 20 months	Smiles in response to mother's smile	Can lift head when on belly	Listens to sounds
3 to 5 months	Smiles on own	Good head control Rolls over Plays with hands Grasps objects	Laughs and squeals Follows object with eyes

6 to 8 months	Feeds self biscuit Shy with strangers	Sits without support Stands with support	Makes babbling sounds Turns toward voice
8 to 11 months	Copies mother clapping hands	Crawls Pulls self to stand	Imitates sounds Says one word of one syllable
12 to 14 months	Drinks from a cup	Stands alone Walks holding on Grasps small object with thumb and forefinger Bangs two objects together	Says “mama” or “dada” to the correct person
18 to 20 months	Imitates mother doing house work	Walks alone Walks up stairs Walks backwards	Says two to three words other than mama and dada
24 to 30 months	Uses spoon Washes and dries hands Removes clothing	Jumps in place Kicks and throws ball	Follows simple directions Points to body parts named Can say about twenty-five words
3 to 3½ years	Dresses self with help Separates from mother easily	Climbs Stands on one foot Plays actively	Knows and can say name Talks well in sentences Asks many questions
4 to 4½ years	Buttons clothes	Hops on one foot	Can explain what he wants when he is cold, tired, or hungry Gives both names
5 to 5½ years	Dresses without help	Catches a bounced ball	Understands what “on,” “under,” “in,” “over,” and “behind” mean

Palpate the skin.
 Check the moisture, temperature, and texture of the skin. Check for tenderness.

Normal changes in the skin

No other patches or lesions on the skin

No edema

No excessive sweating

No dehydration

No bleeding, bruising, or laceration of the skin

Warm, dry skin

Pinched skin returns immediately to its usual position

No temperature changes of the skin

Smooth, soft skin without roughness, thickening, swelling, or scaling

No tenderness of the skin

Blue color, or cyanosis, of the lips, mucous membranes, nail beds, or surface of the skin

Pale face, conjunctivae, mouth, and nail beds

Skin patch or lesion

A change in color or evidence of wetness of a skin lesion

Evidence of itching

Edema of the eyes, arms, or legs

Excessive sweating

Dehydration

Bleeding, bruising, or laceration of the skin

Very moist or dry skin

Tenting of the pinched skin

Hot, dry skin

Cool, damp skin

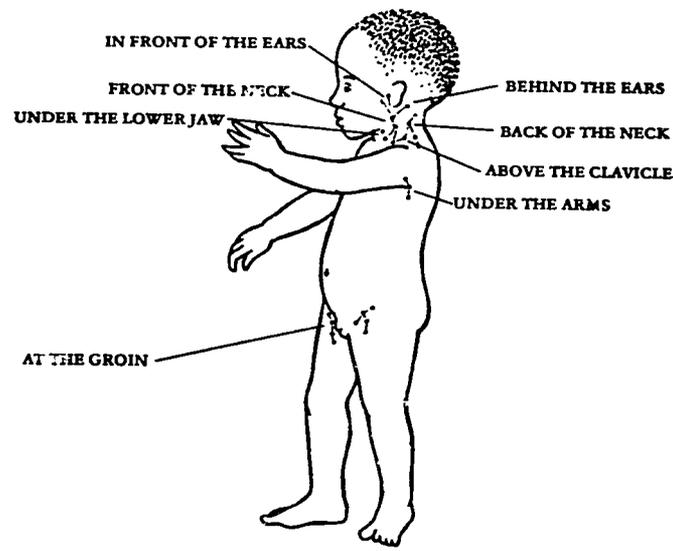
Warmth over a swollen area

Rough or thick skin

Swelling of the skin

Scaling of the skin

Tenderness of an area of the skin

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the Lymph Glands You will <i>inspect</i> and <i>palpate</i> the lymph glands shown in the diagram</p>  <p>IN FRONT OF THE EARS FRONT OF THE NECK UNDER THE LOWER JAW BEHIND THE EARS BACK OF THE NECK ABOVE THE CLAVICLES UNDER THE ARMS AT THE GROIN</p> <p>Check for enlargement, redness, tenderness, softness, and hardness</p>	<p>Small, moveable, non-tender, lymph glands up to 3 mm in size Neck and groin lymph glands up to 1 cm in size</p>	<p>Large, warm, or tender lymph glands</p>

Examining the Head

You will *inspect* and *palpate* the head.

Inspect the head.

Note the expression on the child's face.
Check for alertness and response to others.

Palpate the head.

a. Feel the fontanelles and the rest of the skull.

b. Feel the scalp for lumps or swellings.

Examining the Eyes

You will *test the child's vision* and *inspect* his eyes.

Test vision according to the child's age:

Alert, responsive facial expression

Round, even skull

Anterior fontanelle closes at about nine to eighteen months

Posterior fontanelle closes at about two to eight months

Anterior fontanelle may bulge when the infant cries

Anterior fontanelle may pulsate

No lumps or swellings of the scalp

Dull facial expression

Child does not respond appropriately to others

Abnormal or unevenly shaped skull

Fontanelles close before they are expected to

Fontanelles do not close when expected

Bulging or sunken anterior fontanelle

Lump or swelling of the scalp

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Birth to one month – Direct the beam of your flashlight slightly over the newborn’s head. Do not shine it directly into his eyes. Notice if he stares at the light.</p>	<p>Newborn stares at the light</p>	<p>Newborn does not stare at the light</p>
<p>One to three months – Wiggle your fingers in front of the infant. Notice if he stares at your fingers.</p>	<p>Infant stares at the wiggling fingers</p>	<p>Infant does not stare at the wiggling fingers</p>
<p>Three to six months – Pass an object, such as a cup, in front of the infant’s face. Notice if he follows the object with his eyes.</p>	<p>Infant follows the object for at least a short while</p>	<p>Infant does not follow the object with his eyes</p>
<p>Six to twelve months – Hold a bright, shiny object in front of the infant. Notice if he looks at it and then reaches for it.</p>	<p>Infant looks at the object and reaches for it</p>	<p>Infant does not look at or reach for the object</p>
<p>One to three years – Shine a light above the child’s head. Move the light in several different directions. Notice if the child follows the light in all directions with his eyes.</p>	<p>Child follows the light in all directions</p>	<p>Child does not follow the light</p>
<p>Three years and older – Use the E chart.</p>		

Inspect the eyes.

Check the eyelids, conjunctivae, sclerae, corneas, pupils, and lenses.

No redness, swelling, puffiness, or drooping of the eyelids

No tearing or discharge

Moist, clear, pink conjunctivae

No discharge from the conjunctivae

No roughness of the upper lids

No dryness or gray spots

No foreign body

White sclerae with few small blood vessels

No cuts or ulcers

Clear corneas

No lacerations, white spots, or blood vessels

Round pupils that are uniform in size and shape

No redness around the pupils

Pupils narrow then enlarge in reaction to light

Lenses are usually not visible

Red, swollen, or puffy eyelids

Drooping eyelids

Excessive tearing or discharge

Red, inflamed conjunctivae

Pale conjunctivae

Discharge from the conjunctivae

Roughness of the upper lids

Dryness or gray spots

Foreign body in the eye

Red or yellow sclerae

Cut or ulcer of the sclerae

Whit spots or lacerations on the cornea

Blood vessels visible on the cornea

Irregularly shaped pupils

Pupils that differ in size

Redness around the pupils

Pupils remain small and narrow after a light is removed

One pupil remains larger than the other when a light is shined

White, cloudy lens

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the Ears</p> <p>You will <i>test the child's hearing</i> and <i>inspect</i> and <i>palpate</i> his ears.</p> <p><i>Test hearing</i> according to the child's age:</p> <p>Birth to four months – Clap your hands together loudly near the infant.</p> <p>Four months to two years – Ask the parent to hold the child in her lap. Stand behind the child. Rattle a piece of paper behind the child on his right side. Notice if he turns towards the sound. Test the left side in the same way.</p> <p>Two years and older – Use the whisper or the watch tick test.</p> <p><i>Inspect</i> the ears. Check the outside of the ears, the outside of the ear canals, and the mastoid areas.</p>	<p>Startled reaction to a loud clap</p> <p>Child turns toward the sound</p> <p>Child hears the whisper or watch tick</p> <p>Uniform appearance of the outside of the ears</p> <p>No lumps or lesions on the ears</p> <p>No redness of the ear canals</p> <p>No discharge from the ear canals</p> <p>No redness or swelling of the mastoid areas</p>	<p>No reaction to a loud clap</p> <p>Child does not turn toward the sound</p> <p>Child does not hear the whisper or watch tick</p> <p>The outside of the ears differ in appearance</p> <p>Lump or lesion on the ears</p> <p>Redness of the ear canals</p> <p>Clear, bloody, or yellow discharge from the ear canals</p> <p>Red or swollen mastoid areas</p>

Palpate the ears.

Check the outside of the ears. Pull on the ears. Press on the skin flap and the mastoid areas.

Examining the Nose

You will inspect the nose.

- a. Check the outside of the nose for flaring.
- b. Look inside the nostrils. Use a nasal speculum only if you need to remove a foreign body. Otherwise, use a flashlight to inspect a child's nostrils.

Place your right thumb on the tip of the child's nose. Place your fingers on his forehead. Push up on the tip of the nose with your thumb. Look for redness, lesions, discharge, bleeding, and foreign bodies.

No tenderness when you pull the ear up

No tenderness when you press on the skin flap in front of the ear canal

No tenderness over the mastoid areas

Nostrils do not flare

Pink, glistening mucous membranes

No lesions, discharge, bleeding, or foreign bodies

Tenderness when you pull the ear up

Tenderness when you press on the skin flap in front of the ear canal

Tenderness over the mastoid areas

Flaring nostrils

Red mucous membranes

Lesion in the nose

Discharge or bleeding from the mucous membranes

Foreign body in the nose

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the Heart</p> <p>You will <i>auscultate</i> the heart. You may have difficulty distinguishing the two heart sounds at first because a child's heart beats more rapidly than an adult's. Listen carefully at the mitral area first. Then listen at the tricuspid, pulmonic, and aortic areas.</p>	<p>Clear and regular first and second heart sounds</p> <p>No murmurs</p>	<p>Decreased heart sounds</p> <p>Heart sounds cannot be heard</p> <p>Unclear first or second heart sounds</p> <p>Irregular heart beat</p> <p>Missed beats</p> <p>Heart murmur</p>
<p>Examining the Respiratory System</p> <p>You will <i>inspect, palpate, percuss,</i> and <i>auscultate</i> the respiratory system.</p> <p><i>Inspect</i> the respiratory system. Check the respiratory rate and rhythm of breathing, ease of breathing, cyanosis, shape of the chest, chest expansion, intercostal spaces, and nostrils. Note wounds, cough, and sputum.</p>	<p>Easy steady breathing</p> <p>Inspiration slightly longer than expiration</p> <p>No difficulty breathing</p> <p>No shortness of breath</p> <p>Quiet breathing</p> <p>No cyanosis</p>	<p>Absence of respiration</p> <p>Rapid breathing</p> <p>Shallow breathing</p> <p>Expiration longer than inspiration</p> <p>Difficulty breathing</p> <p>Shortness of breath</p> <p>Noisy breathing</p> <p>Cyanosis of the lips, mucous membranes, or nail beds</p>

Palpate the respiratory system.
Check chest expansion. Palpate the back and front chest walls for abnormalities and tenderness.

Percuss the chest.
Check the front and back chest for changes in percussion sounds.

No barrel chest
Even expansion of the chest
No intercostal retraction
No retraction above the breast bone

Nostrils do not flare
No chest wounds
No cough
Inability to cough up sputum

Even expansion of the chest
No lumps or depressions along the ribs
No grating sensation along the ribs
No tenderness of the chest

Deep, resonant sound over the lungs
Heart dullness
Liver dullness

Barrel chest
Uneven expansion of the chest
Retraction at the intercostal spaces or above the breast bone

Flaring nostrils
Chest wound
Cough
Clear, white, yellow, green, or bloody sputum

Uneven expansion of the chest
Lump or depression along the ribs
Grating sensation along the ribs
Tenderness of the chest

Flat percussion note over the lungs

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Auscultate the lungs. Listen for absent or diminished breath sounds, inspiration compared to expiration, and abnormal breath sounds.</p>	<p>Longer expiration than inspiration in small children</p> <p>Louder, harsher breath sounds than in adults</p> <p>Breath sounds sometimes diminished if the child turns his head away</p> <p>Breath sounds heard easily between the noise of crying</p>	<p>Prolonged inspiration</p> <p>Absent or decreased breath sounds</p> <p>Rales, rhonchi, wheezing, or bronchial breath sounds</p>
<p>Examining the Abdomen You will <i>inspect</i>, <i>auscultate</i>, and <i>palpate</i> the abdomen. Examine the abdomen of an infant in his parent's arms. Older children can lie down on the examination table.</p>	<p>"Pot belly"</p> <p>Uniform abdominal shape</p> <p>Heavy abdominal breathing up to the age of three</p> <p>No scars</p>	<p>Irregular abdominal shape</p> <p>Abdominal breathing after age three</p>
<p>Inspect the abdomen. Have the child lie flat on the table or on his parent's knees. Note the shape of the abdomen. Check for scars and abdominal breathing.</p>	<p>No scars</p>	<p>Scar on the abdomen</p>
<p>Auscultate the abdomen. Have the child continue to lie flat. Listen for abdominal sounds.</p>	<p>Abdominal sounds can be heard</p>	<p>Abdominal sounds absent, increased, or decreased</p>

Palpate the abdomen.

Ask the parent to hold the infant or young child. The child should face his parent with his arms around her neck. Palpate the abdomen of an older child as you would an adult.



Palpate the four quadrants of the abdomen for masses, tenderness, and rebound tenderness. Palpate the liver, spleen, bladder, and kidneys.

Percuss a child's abdomen only if you suspect fluid in the abdomen.

No masses

No abdominal tenderness

Abdominal organs are palpable

No shifting dullness

Abdominal mass

Tenderness or rebound tenderness

Enlarge. liver, spleen, kidneys, or bladder

Shifting dullness

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the Neck</p> <p>You will <i>inspect</i> the neck. Check the position of the head and neck. Look for deformities or an enlarged thyroid gland. Check neck movement according to the child's age:</p> <p>Birth to two months – Lay the infant on his stomach on the table. Notice if he lifts his head.</p> <p>Two to five months – Lay the infant on his stomach on the table. Notice if he lifts his head and holds it up.</p> <p>Six to eight months – Lay the infant on his back. Hold his arms and pull him up. Notice if his head follows his body.</p> <p>Eight months or older – Observe the child move his neck up and down and from side to side. Note any neck tenderness or stiffness.</p>	<p>Head faces forward</p> <p>No tilt of the head</p> <p>No lumps or swellings of the neck</p> <p>Thyroid gland is not visible</p> <p>Infant can lift his head but is very wobbly</p> <p>Infant lifts his head and holds it up</p> <p>Infant's head follows his body</p> <p>Ability to move the neck easily in any direction</p> <p>No neck tenderness or stiffness</p>	<p>Tilt of the head</p> <p>Lump or swelling of the neck</p> <p>Enlarged thyroid gland</p> <p>Inability to lift head</p> <p>Inability to lift head and hold it up</p> <p>Infant's head droops backwards</p> <p>Inability to move the neck</p> <p>Neck tenderness or stiffness</p>

Examining the Musculoskeletal and Nervous Systems

You will *examine* the musculoskeletal and nervous systems together according to the child's age:

Birth to three months -

- a. Lay the infant on his back. Inspect all of his bones and joints from head to toe. Look for swelling, redness, and deformities.
- b. Watch the infant move his arms and legs.
- c. Move all of the infant's joints. Notice any limited movement or signs of joint pain.
- d. Hold the infant's hands and lift him up to a sitting position.
- e. Hold the infant under his arms and lift him up. Pretend to walk the infant on the table top.
- f. Test for sensation with a pinprick only if you suspect paralysis.

No redness or swelling of a joint
 No bone or joint deformity
 Legs bowed
 Feet turned inward

Ability to move arms and legs freely without signs of pain

Smooth, easy joint movement

Good muscle tone
 Infant tenses somewhat and seems to help pull himself up slightly

Infant makes slight walking steps

Infant cries and draws up in response to a pinprick

Joint redness or swelling
 Bone or joint deformity
 Marked bowing of legs
 Feet turned markedly inward or outward

Limited movement of an arm or leg
 Signs of pain when moving an arm or leg

Inability to move a joint
 Limited movement of a joint
 Signs of joint pain

Poor muscle tone
 Infant remains limp and floppy

Infant makes no walking steps

No apparent response to a pinprick

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
g. Pick up the infant and hold him on his abdomen. Examine his spine for deformities.	No spinal deformities	Spinal deformity
Three to six months -		
a. Lay the infant on his back. Inspect all of his bones and joints from head to toe.	No redness or swelling of a joint No bone or joint deformity	Joint redness or swelling Bone or joint deformity
b. Watch the infant move his arms and legs.	Ability to move arms and legs freely without signs of pain	Limited movement of an arm or leg Signs of pain when moving an arm or leg
c. Move all of the infant's joints. Notice any limited movement or signs of joint pain.	Smooth, easy joint movement	Inability to move a joint Limited movement of a joint Signs of joint pain
d. Hold the infant by his hands and try to pull him up.	Good muscle tone Infant pulls himself up to sitting position	Poor muscle tone Infant needs help to pull himself up
e. Hold the infant under his arms and put him in a sitting position.	Infant sits by himself for a short while	Infant slumps and is unable to sit
f. Walk the infant on the table top.	Infant supports his body somewhat with his legs, as long as you hold on to him	Inability to support his body with his legs
g. Turn the infant on his stomach on the table top. Watch how he holds his head. Check his spine for deformities.	Infant holds his head up No spinal deformities	Inability to hold his head up Spinal deformity
h. Test for sensation with a pinprick only if you suspect paralysis.	Infant cries and draws up in response to a pinprick	No apparent response to a pinprick

Six months and older –

Examine children six months and older just as you would an adult.

Inspect the musculoskeletal system for bone or joint deformities, joint redness or swelling, muscle wasting, and ease of movement.

Palpate the musculoskeletal system for ease of movement, swelling, tenderness, and temperature changes.

Check the nervous system for muscle strength, sensation, enlarged nerves, nerve tenderness, and irritation of the membranes that cover the brain and spinal cord.

No bone or joint deformities
No redness or swelling of a joint
No muscle wasting

Ability to move all joints freely without pain

Steady, well-balanced body movement

Smooth joint movement

No limited movement of a joint
No joint swelling or tenderness
Temperature over the joints is the same as over other parts of the body

Equal strength in both sides of the body

No muscle weakness

No loss of sensation to light touch on any part of the body

No nerve enlargement

Bone or joint deformity

Red or swollen joint

Muscle wasting

Limited movement of a joint

Pain when moving a joint

Unsteady or uneven body movement

Rough sensation when a joint is moved

Limited movement of a joint

Swelling, tenderness, or increased temperature over a joint

Muscle weakness in one or both sides of the body

Loss of sensation to light touch

Enlarged nerves

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the Arms and Legs You will <i>inspect</i> and <i>palpate</i> the arms, hands, legs, ankles, feet, and back for edema.</p> <p>Examining the Male Genitals You will <i>inspect</i> and <i>palpate</i> the male child's genitals.</p> <p><i>Inspect</i> the penis and the scrotum. Note the position of the urethral opening. Check for swelling of the scrotum.</p> <p><i>Palpate</i> the penis and the scrotum. If the child has not been circumcised, try to pull back the foreskin of the penis. Check the scrotum for swellings. Do not palpate the prostate gland.</p>	<p>No tenderness over the sciatic nerves</p> <p>No pain on straight leg raising</p> <p>Child's head moves easily without pain</p> <p>No edema</p> <p>Urethral opening is in the middle of the tip of the penis</p> <p>No swelling of the scrotum</p> <p>Foreskin pushes back easily</p> <p>The testes of a boy under five move up and down from the abdomen to the scrotal sac</p> <p>At age five, the testes descend permanently to the scrotum</p>	<p>Tenderness over the sciatic nerves</p> <p>Pain on straight leg raising</p> <p>Neck stiffness</p> <p>Painful neck movement</p> <p>Edema</p> <p>Urethral opening is in any other position but the middle</p> <p>Swelling of the scrotum</p> <p>Foreskin will not retract</p> <p>Mass in the scrotum</p> <p>Testes not descended after age five</p>

Examining the Female Genitals

You will *inspect* the external female genitals. Do not do a speculum examination of a child. Do not palpate the vagina, uterus, or adnexal areas.

Inspect the external female genitals for discharge or signs of irritation.

Examining the Mouth and Throat

You will *inspect* and *palpate* the *mouth* and *inspect* the *throat*.

Children do not like to have their mouths and throats examined. Do this part of the examination last. Ask for the parent's assistance. The child should sit on the parent's lap. Ask the parent to hold the child's wrists in one hand and to hold the child's forehead with the other. Ask her to press the back of the child's head against her chest. Use your flashlight and tongue depressor.

Inspect the mouth and throat. Check the lips, mucous membranes, gums, teeth, and throat.

No discharge or irritation

Discharge or irritation

No bluish color around the lips

Bluish color around the lips

No lesions

Lesion

Pink, moist mucous membranes

Blue or red mucous membranes

Pale mucous membranes

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Palpate the mouth. Check the gums, teeth, cheeks, and palate.</p>	<p>Pink gums No swelling or bleeding of gums White teeth</p> <p>No tooth pain Small, soft, pink tonsils Pink, moist throat No redness, swelling, or discharge on the tonsils or throat No foreign body in the throat No difficulty swallowing</p> <p>No tenderness or swelling of the gums No tooth pain No tenderness or swelling of the cheeks No deformities of the palate</p>	<p>Red or swollen gums Bleeding gums Teeth with black spots Brown teeth Tooth pain Red or swollen tonsils or throat</p> <p>White, yellow, or gray discharge on the tonsils or throat Foreign body in the throat Difficulty swallowing Throat spasms</p> <p>Tender or swollen gums</p> <p>Tooth pain Tender or swollen cheeks</p> <p>Deformities of the palate</p>

Taking the Vital Signs

You will *take the vital signs*, including pulse, respirations, temperature, weight, height, and arm circumference.

Take the *pulse*.

Palpate or auscultate the heart of a child up to age five. Take the radial pulse of a child aged five or older.

Pulse increases very quickly with excitement or exercise
Pulse goes down easily during rest or sleep

Pulse rate above or below normal

Normal pulse rates:

Birth to 1 month	100 - 130	beats per minute
1 to 12 months	90 - 120	beats per minute
1 to 2 years	90 - 105	beats per minute
2 to 5 years	80 - 100	beats per minute
5 to 12 years	70 - 96	beats per minute
12 years and older	70 - 90	beats per minute

Take the *respiration rate*.

Look at the child's chest. Count the respirations.

Respirations increase with excitement or exercise

Respiration rate above or below normal

Normal respiration rates:

Birth to 1 month	30 - 40	respirations per minute
1 to 12 months	30	respirations per minute
1 to 5 years	26	respirations per minute
5 to 12 years	20	respirations per minute

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Take the temperature. Take the temperature of a young child in the rectum or armpit. Take the temperature of a child aged five or older by mouth. If you take the temperature in the rectum or armpit, let the parent hold the child and the thermometer.</p> <p>Weigh the child. Use an infant scale for an infant. Use an adult scale for an older child.</p> <p>Measure the child Follow these steps to measure an infant.</p> <ol style="list-style-type: none"> a. Ask for the parent's assistance. b. Place the table against a wall. Place the tape measure on the table with the zero point next to the wall. Lay the tape measure out straight along the table. c. Lay the infant on the table. Place his head next to the wall at the zero point on the tape measure. d. Hold the infant's head and straighten his legs. Read the measurement at his heels. 	<p>Normal temperatures: Armpit - 36°C Rectum - 37.5°C Mouth - 37°C</p> <p>Normal weight range birth to five years. See Growth Chart.</p>	<p>Temperature below 36°C or above 37.5°C</p> <p>Weight above or below normal</p>

To measure a child, attach a tape measure to the wall. Ask the child to remove his shoes and to stand straight with his back and heels touching the wall. Place a pencil on his head, so that it touches the measuring tape. Record the child's height.

AVERAGE HEIGHT FOR BOYS

Birth	50.5 cm
3 months	60.5
6 months	66
9 months	71
12 months	75
18 months	82
2 years	87
3 years	96
4 years	103
5 years	110

AVERAGE HEIGHT FOR GIRLS

Birth	50.0 cm
3 months	60
6 months	65
9 months	70
12 months	74
18 months	79
2 years	87
3 years	95.5
4 years	103
5 years	109.5

Measure the arm circumference.

Measure the upper arm of a child aged one to five. Use your tape measure.

- Be sure the child's arm is hanging by his side. Choose a point halfway between the shoulder and the elbow.
- Measure the circumference of the arm with the tape measure. Put the band firmly around the arm but not tight enough to cause wrinkles.
- Record the measurement

Explain all findings to the parent. Record abnormal findings in clear detail. Record normal findings as appropriate to give a clear picture of the child's condition.

14 cm arm circumference

12.5 to 13.5 cm arm circumference may indicate moderate malnutrition
Under 12.5 cm may indicate severe malnutrition

PRACTICE GUIDE FOR PERFORMING A CHILD PHYSICAL EXAMINATION

This practice guide will help you when you perform a child physical examination. The guide lists the sequence of steps for doing a child physical examination. Your instructor will give you a copy of this guide to use when you examine children. Refer to the practice guide to remind you of the steps for doing a child physical examination.

GENERAL APPEARANCE: Inspect – state of health, state of nutrition, behavior, mental state

DEVELOPMENT: Check – social, physical, and language skills

SKIN: Inspect – color, lesions, edema, moisture, evidence of injury

Palpate for – moisture, texture, temperature, tenderness

LYMPH GLANDS: Inspect and palpate – in front of the ears, behind the ears, front of the neck, back of the neck, under the lower jaw, above the clavicles, under the arms

HEAD: Inspect – face

Palpate – skull and fontanelles, scalp

EYES: Test vision

Inspect – eyelids, conjunctivae, sclera, corneas, pupils, lenses

EARS: Test hearing

Inspect and palpate – outside of the ears, outside of the ear canals, mastoid areas

NOSE: Inspect – outside of the nose, nostrils

HEART: Auscultate – mitral, tricuspid, pulmonic, and aortic areas for rate, rhythm, murmurs

RESPIRATORY SYSTEM: Inspect – rate and rhythm of breathing, ease of breathing, cyanosis, shape of the chest, chest expansion, intercostal spaces, nostrils, wounds, cough, sputum

Palpate – chest expansion, back and front chest walls

Percuss – front and back chest for changes in percussion sounds

Auscultate – back and front chest for absent or decreased breath sounds, inspiration compared to expiration, abnormal breath sounds

ABDOMEN: Inspect – shape, scars, abdominal breathing

Auscultate – abdominal sounds

Palpate – four quadrants for masses, tenderness, rebound tenderness

Palpate – liver, spleen, kidneys, bladder for enlargement and tenderness

Percuss – only when fluid is suspected in the abdomen

NECK: Inspect – position of the head and neck, deformities, ability to move the neck, thyroid gland

MUSCULOSKELETAL AND

NERVOUS SYSTEMS: Inspect – muscles, joints, bones, spine

Palpate – joints

Check – muscle strength; sensation only if necessary

ARMS AND LEGS: Inspect and palpate for edema

MALE GENITALS: Inspect and palpate – penis, scrotum

FEMALE GENITALS: Inspect for discharge and irritation

MOUTH AND THROAT: Inspect – lips, mucous membranes, gums, teeth, throat

Palpate – gums, teeth, cheeks, palate

VITAL SIGNS: Pulse, respirations, temperature, weight, height, arm circumference

REVIEW QUESTIONS

Performing and Recording a Child Physical Examination

1. List as many of the steps for doing a child physical examination as you can.

2. Describe how to prepare a child for a physical examination.

3. A mother brings in a child who has had diarrhea for three days. List the most important areas and systems that you should examine.

4. A mother brings in a six-year-old child. The child complains of feeling hot and tired. His right wrist and left knee are painful and swollen. You saw the child three weeks ago for tonsillitis and gave him penicillin. His mother gave him only three days of the treatment. What are the most important areas and systems that you should examine?

5. Describe how to test the skill development of a twelve-month-old child.

6. Describe how to test the vision of a twelve-month-old child.

7. List at least two abnormal signs that you might find in each of these areas when you examine a five-year-old child.

General appearance:

Skin:

Eyes:

Respiratory system:

Heart:

Abdomen:

8. TRUE (T) or FALSE (F)

- ___ You should examine all children on an examination table.
- ___ A three-year-old child has to be lying down when you palpate his abdomen.
- ___ You do not use a nasal speculum to inspect a child's nose unless you are removing a foreign body.
- ___ You palpate a child's abdomen before you auscultate.
- ___ It is normal to find small, moveable, non-tender lymph glands up to 3 mm in the neck of a four-year-old child.
- ___ The posterior fontanelle usually closes at eighteen months.

SKILL CHECKLIST

Performing and Recording a Child Physical Examination

This checklist has two purposes:

- 1) Students should use it as a guide for checking their own skills or other students' skills
- 2) Supervisors should use it when they evaluate how well students perform and record a child physical examination.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate
 2 = Needs improvement
 3 = Satisfactory
 4 = Above average
 5 = Excellent

When performing and recording a child physical examination:

	YES	NO	RATING	COMMENTS
1. Arrange all of the equipment on a table within reach				
2. Prepare the child for the examination				
3. Examine the general appearance. Include: State of health State of nutrition Behavior Mental state				
4. Check development skills. Include: Social skills Physical skills Language skills				
5. Examine the skin				

	YES	NO	RATING	COMMENTS
a. Inspect for: Color Lesions Edema Moisture Evidence of injury b. Palpate for: Moisture Texture Temperature Tenderness				
6. Inspect and palpate these lymph glands: In front of the ears Behind the ears Front of the neck Back of the neck Under the lower jaw Above the clavicles Under the arms				
7. Examine the head a. Inspect the face b. Palpate: Skull and fontanelles Scalp				
8. Examine the eyes a. Test vision b. Inspect: Eyelids Conjunctivae Sclerae Corneas Pupils Lenses				
9. Examine the ears a. Test hearing b. Inspect and palpate: Outside of the ears Outside of the ear canals Mastoid areas				

	YES	NO	RATING	COMMENTS
10. Examine the nose Inspect: Outside of the nose Nostrils				
11. Examine the heart Auscultate: Mitral area Tricuspid area Pulmonic area Aortic area				
12. Examine the respiratory system a. Inspect: Rate and rhythm of breathing Ease of breathing Cyanosis Shape of the chest Chest expansion Intercostal spaces Nostrils Wounds Cough Sputum b. Palpate: Chest expansion Back and front chest walls c. Percuss: Front chest Back chest d. Auscultate: Back chest Front chest				
13. Examine the abdomen a. Inspect: Shape Scars Abdominal breathing b. Auscultate all four areas				

	YES	NO	RATING	COMMENTS
c. Palpate all four areas				
d. Palpate: Liver Spleen Kidneys Bladder				
e. Percuss only when fluid is suspected				
14. Examine the neck Inspect: Position of the head and neck Deformities Ability to move the neck Thyroid gland				
15. Examine the musculoskeletal and nervous systems				
a. Inspect: Muscles Joints Bones Spine				
b. Palpate the joints				
c. Check muscle strength				
d. Check sensation only if necessary				
16. Examine the arms and legs. Inspect and palpate for edema				
17. Examine the male genitals Inspect and palpate: Penis Scrotum				
18. Examine the female genitals Inspect for discharge and irritation				

	YES	NO	RATING	COMMENTS
19. Examine the mouth and throat a. Inspect: Lips Mucous membranes Gums Teeth Throat b. Palpate: Gums Teeth Cheeks Palate				
20. Take these vital signs: Pulse Respirations Temperature Weight Height Arm circumference				
21. Allow the child to dress				
22. Explain the findings of the physical examination to the parent				
23. Answer the parent's questions				
24. Record the findings of the physical examination. Develop a clear picture of the child's condition: a. Write the findings in the appropriate sequence b. Record all the necessary information c. Make descriptions brief and clear				

APPENDIX
SPECIAL ASSESSMENT
PROCEDURES

Procedure for Assessing a Pregnant Woman

You assess a pregnant woman to:

Determine whether the woman is pregnant

Identify any problems that would place the woman in a high risk group or that might otherwise affect the safety of the woman or the fetus

Determine the stage of fetal development

Determine the position of the fetus

Procedures for assessing a pregnant woman will be taught as part of the Prenatal Care module. Follow these steps to assess a pregnant woman.

- 1. Take and record a prenatal medical history.**
 - a. Record the patient identification information.**
 - b. Take the history of the woman's present condition. Find out:**
 - The date and characteristics of the woman's last menstrual period**
 - Whether the woman has any problems or discomfort related to pregnancy**
 - Whether the woman is using a contraceptive method or taking any drugs or medicines**
 - Whether the woman smokes or drinks**
 - The name of the woman's traditional birth attendant, if she has one**
 - What the woman has been eating**
 - Whether the woman is taking iron and folic acid tablets regularly, and whether she needs more tablets**
 - Whether she wants this pregnancy**
 - c. Take the history of the woman's previous pregnancies. Find out:**

Whether the woman has been pregnant before

The outcomes of previous pregnancies, including miscarriages, stillbirths, and infant deaths

The lengths of pregnancies and labor

Whether the woman has had any complications of pregnancy and delivery, instrument deliveries, or episodes of severe bleeding

Whether the woman has had a cesarean section delivery

Whether the woman's other children are alive and healthy

d. Take the woman's past medical history. Find out:

Whether the woman has any allergies

What childhood and adult illnesses the woman has had

What immunizations the woman has had

Whether the woman has had any operations, accidents, or injuries, especially involving the pelvis or abdomen

Whether any family members have diabetes, high blood pressure, or tuberculosis

e. Record the prenatal medical history on the Maternity Card

2. Assemble these items of equipment for performing a prenatal physical examination:

Adult scale

Sphygmomanometer

Stethoscope

Thermometer

Indicator paper for testing urine

Fetoscope

Flashlight

Sterile gloves

Antiseptic solution

Cotton balls

Bowl of clean water

Centimeter rule

3. Prepare the woman for a prenatal physical examination by describing the purpose and parts of the examination.

4. Ask the woman to empty her bladder. Collect a urine specimen.

5. **Ask the woman to remove her clothing. Provide a drape. Examine her on an examination table or bed in a well-lighted room.**
6. **Proceed with the prenatal physical examination procedures as outlined below.**

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Calculating the Expected Date of Delivery</p> <p>You will <i>calculate the expected date of delivery</i>. Follow these steps.</p> <ol style="list-style-type: none"> Ask the woman for the date of the start of her last normal menstrual period. Add seven to the first day of her last normal menstrual period. Count nine months ahead. Correct for the year, if necessary. For example, suppose the woman's last normal menstrual period started on 18 May 1982. Adding seven to eighteen gives twenty-five. Count ahead nine months from 25 May, to get 25 February. Add one year. The expected date of delivery, then, is 25 February 1983. Explain and discuss the expected date of delivery with the woman. <p>Taking the Vital Signs</p> <p>You will <i>take the vital signs</i>, including blood pressure, temperature, pulse, respirations, weight, and height.</p>	<p>Weight gain of two to three pounds per month for a total of twenty-five pounds during the pregnancy</p>	<p>Blood pressure above 140/90</p> <p>Weight gain of two pounds in one week or five pounds per month</p> <p>Weight loss</p> <p>Height under 152.5 cm</p>

Testing the Urine

You will *test the urine*. Note the color of the urine. Test for sugar and protein in the urine.

Performing Other Examination Procedures

You will follow the procedures outlined for the adult physical examination to examine these areas and systems:

General appearance

Eyes

Ears

Nose

Mouth and throat

Neck

Respiratory system

Heart

Breasts

Clear yellow urine

No sugar or protein in the urine

Thyroid gland is slightly enlarged

Slightly enlarged, darkened nipples

Enlarged, slightly tender breasts

Inability to pass urine

Dark amber urine

Sugar or protein in the urine

Fatigue

Pale conjunctivae

Very enlarged thyroid gland

Distended neck veins

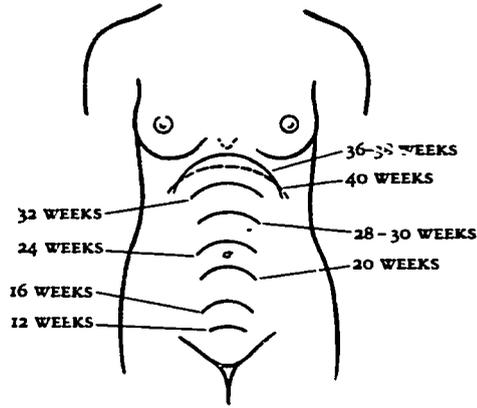
Heart murmur

Flat nipples

Cracks in the nipples

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the Abdomen</p> <p>You will <i>inspect</i>, <i>palpate</i>, and <i>auscultate</i> the abdomen. <i>Inspect</i> the abdomen for uterine shape. <i>Palpate</i> the abdomen to determine the size of the uterus and the position of the fetus. <i>Auscultate</i> the abdomen for fetal heart sounds.</p> <p>Ask the woman to lie down on the examination table. Uncover her abdomen from her breasts to her hips.</p> <p><i>Inspect</i> the abdomen. Stand at the woman's right side, facing the table. Look for scars on her lower abdomen. Note the shape of her abdomen. Look at the top of the uterus. Note its shape. Look for jerky movements of the fetus after about the 16th to 20th week of pregnancy.</p> <p><i>Palpate</i> the abdomen to determine the size of the uterus. <i>Palpate</i> to determine the position of the fetus after about the 20th week of pregnancy. Follow these four steps.</p>	<p>No scars on the lower abdomen</p> <p>Uterus is longer than wide</p> <p>Jerky movements in one area</p>	<p>Scar on the lower abdomen, indicating a previous cesarean section delivery</p> <p>Uterus is smaller or larger than expected for the expected date of delivery</p>

- a. Face the woman's head. Place your hands on the top of her abdomen. Curve your fingers around the top. Note the shape and firmness of the uterus. Determine the size of the uterus. Estimate the length of pregnancy. Compare your estimate with the expected date of delivery.



Determine which part of the fetus is in the top of the uterus

Firm uterus

Size of the uterus is consistent with the expected date of delivery

Fetus' head is palpable at the top of the uterus until about the 24th to 28th week. The head feels round, hard, and moveable

Fetus' buttocks are palpable at the top of the uterus by the 28th week. Buttocks are irregular, soft, and not moveable

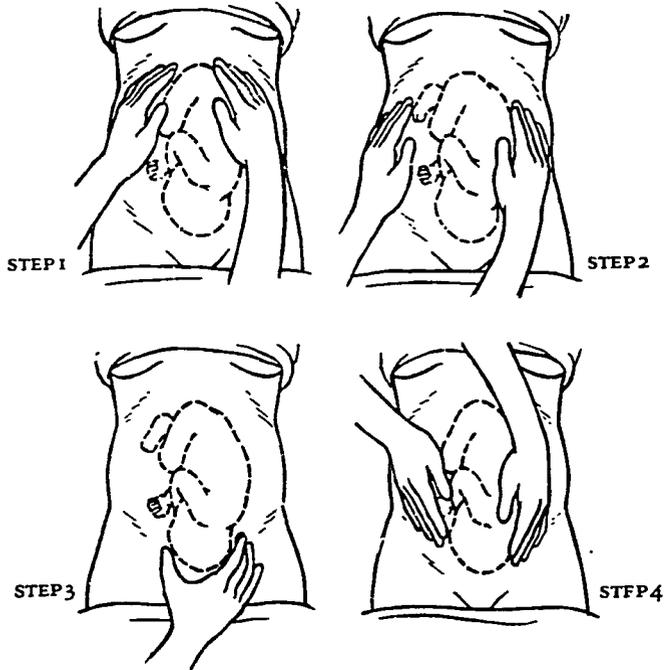
Soft, boggy uterus

Uterus is smaller or larger than expected for the expected date of delivery

Fetus' head is palpable at the top of the uterus after the 28th week

- d. Face the woman's feet. Place your hands on the top of her abdomen and move them towards her pelvis. Repeat the palpations. Confirm your findings.

4 PALPATION STEPS TO DETERMINE THE POSITION OF THE FETUS



PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Auscultate the abdomen for fetal heart sounds. You can usually hear fetal heart sounds after the 20th to the 24th week of pregnancy.</p> <ol style="list-style-type: none"> Use a fetoscope or stethoscope. Listen carefully in all four quadrants of the abdomen. Determine the fetal heart rate. Count the number of beats per minute. Check the rate by feeling the mother's radial pulse. The fetal pulse and the mother's pulse should be different. Fetal heart sounds in two places may mean twins. 	<p>Fetal heart sounds can be heard after the 20th week</p> <p>120 to 140 beats per minute</p>	<p>No fetal heart sounds after the 24th week</p> <p>Fewer than 120 beats per minute</p> <p>More than 140 beats per minute</p>
<p>Examining the Arms and Legs</p> <p>You will <i>inspect and palpate</i> the arms and legs.</p> <p><i>Inspect</i> the woman's face, hands, back, legs, and ankles.</p> <ol style="list-style-type: none"> Check for edema. Check for swollen, twisted veins in the legs. <p><i>Palpate</i> the woman's face, hands, back, legs, and ankles for edema.</p>	<p>No edema</p> <p>No swollen, twisted veins</p> <p>No edema</p>	<p>Edema</p> <p>Swollen, twisted veins</p> <p>Edema</p>

Examining the Musculoskeletal System

You will inspect the musculoskeletal system. Look for deformities of the legs, back, or pelvis. A deformity may indicate an abnormal pelvic opening. Vaginal delivery may be difficult or impossible.

Examining the Female Genitals

You will inspect and palpate the genitals to check for abnormalities and signs of infection, determine the size of the uterus, and evaluate pelvic size. Follow these steps.

- a. Ask the woman to lie down on her back on the table. Ask her to bend her knees and to rest her feet on the table. Ask her to move her buttocks down to the edge of the table and to spread her legs as far apart as possible.
- b. Put the flashlight within reach. Have a bowl of warm water nearby to use as a lubricant.
- c. Sit in front of the woman. Inspect her labia and her vaginal opening for swelling, discharge, and bleeding.

No deformities of the legs, back, or pelvis

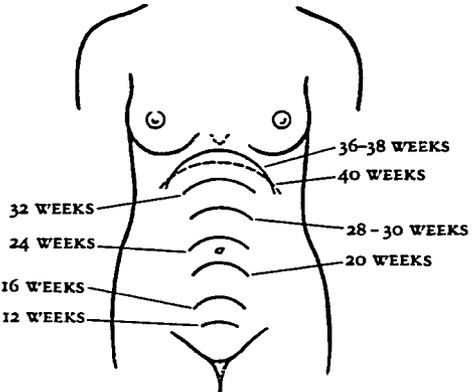
No swelling or bleeding of the labia or vaginal opening

Small amount of clear or white discharge from the vagina

Deformity of the legs, back, or pelvis

Swelling or bleeding of the labia or vaginal opening

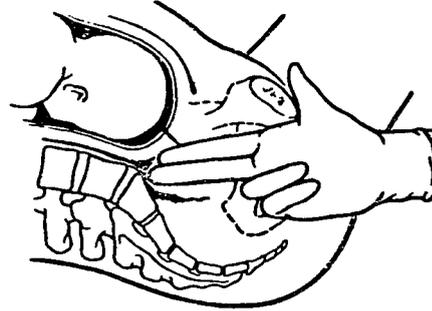
Yellow, white curdy, green, or frothy discharge from the vagina

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>d. Put on sterile gloves. Lubricate the gloved fingers of your right hand with warm water.</p> <p>e. Insert the index and middle fingers of your right hand into the woman's vagina.</p> <p>Feel the cervix with the tips of your fingers. Feel if the cervix is hard or soft. Note if the cervix is closed or open.</p> <p>f. Feel the size of the uterus. Estimate the duration of the pregnancy according to the size of the uterus. Compare the size of the uterus to the expected date of delivery.</p> 	<p>Soft cervix Closed cervix</p> <p>Size of the uterus is consistent with the expected date of delivery</p>	<p>Hard cervix Open cervix</p> <p>Uterus is smaller or larger than expected for the expected date of delivery</p>

g. Evaluate pelvic size. First, determine the diagonal pelvic diameter of the pelvis. The diagonal diameter extends from the underside of the pubic arch to the middle of the sacral promontory. Reach back slowly, gently and steadily into the woman's vagina until you touch the sacral promontory. Mark the place where your hand touches the lower edge of the pubic bones. Measure in centimeters from your fingertips to the place you marked on your hand.

h. Sweep your fingers backward to check the curve of the spine to the tip of the coccyx. Note if the spine is well curved, flat, or irregularly shaped. Describe the coccyx.

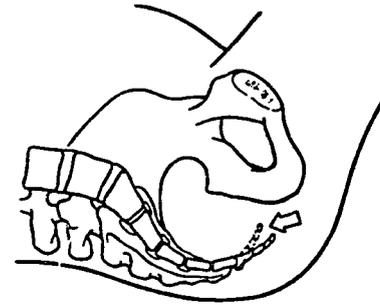
Diagonal diameter of 12 cm or more

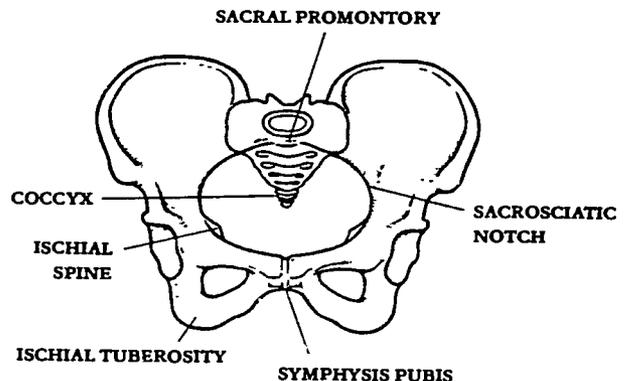


Diagonal diameter of less than 12 cm

Spine is well curved outward
Coccyx follows curve

Flat or irregularly shaped spine
Coccyx is bent inward



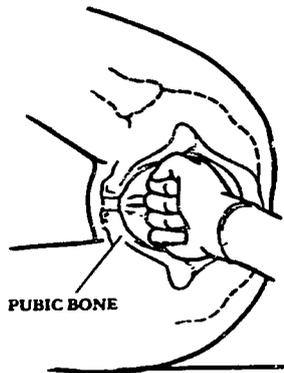
PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>i. Palpate the ischial spines on each side. The ischial spines are the small bumps on either side of the inner wall of the pelvis. They are located about half way between the ischial tuberosities and the coccyx as you sweep your fingers around the inner curve of the pelvis. Note if the ischial spines are blunt or sharp. Note if they project into the pelvic space.</p>	<p>Blunt and palpable left and right ischial spines Ischial spines do not project into the pelvic space</p>	<p>Sharp ischial spines that project into the pelvic space</p>
<p style="text-align: center;">SACRAL PROMONTORY</p> 		
<p>j. Measure the sacrosciatic notch with your fingers. Note if the notch admits two fingers easily.</p>	<p>Sacrosciatic notch admits two fingers</p>	<p>Sacrosciatic notch admits only one finger</p>

k. Measure the angle of the pubic arch, called the sub-pubic angle, with your fingers. Note if the angle admits two fingers easily.

l. Measure the outlet. Withdraw your hand. Ask the woman to lie on her side with her knees drawn up. Place the knuckle of your middle finger on the back edge of her anus. Push steadily backward until you feel two bones, the ischial tuberosities. Move your fist back and forth. Determine the distance in centimeters between the tuberosities. This is the outlet.

Sub-pubic angle admits two fingers

Outlet is 9 cm or more



Sub-pubic angle admits only one finger

Outlet is less than 9 cm

Remove your hand from the woman's vagina. Remove your gloves. Allow the woman to dress.

Explain to the woman the findings of the medical history and physical examination. Answer her questions.

Record the findings on the Maternity Card. Check off any high risk factors that you have identified.

Procedure for Assessing a Woman in Labor

You assess a woman in labor to:

Determine the stage and progress of labor

Determine the position of the fetus

Identify any problems that might affect the safety of the woman or the fetus

Procedures for assessing a woman in labor are taught as part of the Labor and Delivery module. Follow these steps to assess a woman in labor.

1. Record on the Labor Chart:

- a. When the woman began to have labor pains and how often the pains occur
- b. Whether the woman has been to a prenatal clinic
- c. Whether the woman's bag of waters has broken or whether she has had any bloody show
- d. When the woman last ate
- e. When the woman last passed stool
- f. Whether the woman has had any medicine to either increase or decrease labor
- g. The name of the woman's traditional birth attendant, whether the traditional birth attendant knows the woman is in labor, and where the traditional birth attendant can be reached
- h. Whether the woman has bled from her vagina

2. Assemble these items of equipment for examining a woman in labor:

Sphygmomanometer

Stethoscope

Thermometer
Fetoscope
Sterile gloves
Antiseptic solution
Cotton balls
Sterile bowl
Clean cloth
Centimeter rule

3. Prepare the woman for a physical examination by describing the purpose and parts of the examination.
4. Ask the woman to empty her bladder.
5. Help the woman remove her clothing. Cover her with a clean cloth. Ask her to lie on an examination table or bed in a well-lighted room.
6. Proceed with the physical examination procedures as outlined below.

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Taking the Vital Signs You will <i>take the vital signs</i>, including blood pressure, temperature, and pulse. Record the woman's blood pressure and pulse every half hour during labor. Always take the pulse between contractions. Record the temperature every two hours during labor.</p> <p>Examining the Respiratory System You will <i>inspect</i> and <i>auscultate</i> the respiratory system. <i>Inspect</i> the respiratory system. Observe how fast and how deeply the woman breathes between and during contractions</p> <p>Notice how easily the woman breathes between and during contractions.</p> <p><i>Auscultate</i> the lungs. Listen to the breath sounds.</p>	<p>Blood pressure between 90/60 and 140/90</p> <p>Pulse rate between 70 and 90 beats per minute</p> <p>Average temperature of 37.5°C</p> <p>16 to 20 respirations per minute between contractions</p> <p>20 to 40 respirations per minute during contractions</p> <p>Easy, regular respirations between contractions</p> <p>Easy, rapid respirations during contractions</p> <p>No difficulty breathing</p> <p>Clear lungs</p> <p>No abnormal breath sounds</p>	<p>Blood pressure of 140/90 and above</p> <p>Blood pressure of 90/60 and below</p> <p>Pulse rate continuously above 90 or below 70 beats per minute</p> <p>Temperature above 37.5°C</p> <p>More than 40 respirations per minute between or during contractions</p> <p>Difficulty breathing</p> <p>Abnormal breath sounds</p>

Examining the Heart

You will *inspect* and *auscultate* the heart.

Inspect for neck vein distention.

Auscultate for heart sounds and heart murmurs. Check the heart rate.

Examining the Abdomen

You will *inspect*, *palpate*, and *auscultate* the abdomen to determine the stage of labor, the progress of labor, and the condition of the fetus. *Inspect* the abdomen for uterine shape. *Palpate* the abdomen to time the contractions and determine the position of the fetus. *Auscultate* the abdomen for fetal heart sounds.

Inspect the woman's abdomen. Stand at her right side, facing the table. Note the shape of her abdomen. Look for jerky movements of the fetus. Look for contractions. A contraction is a movement which changes the shape of the abdomen. The uterus tightens and moves upward. Contractions begin at the top of the uterus and spread downward.

No neck vein distention

Regular heart rate between contractions

90 or more heart beats per minute during contractions, decreasing between contractions

No heart murmurs

Uterus is longer than wide

Jerky movements in one area

Distended neck veins

Irregular heart rate

Heart rate continuously above 90 or below 70 heart beats per minute

Heart murmur

Uterus is wider than long

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p><i>Palpate</i> the abdomen to determine the strength and length of the woman's contractions. Follow these steps:</p> <ol style="list-style-type: none"> Place the flat of your hands firmly on the woman's uterus. Judge the strength of her contractions. Time the length of her contractions. Note how often the contractions occur. Record these times in minutes on the Labor Chart. 	<p>Strong, sustained contractions at regular intervals</p> <p>Contractions lasting about one minute each</p> <p>Contractions occurring fifteen minutes apart at the beginning of labor, and gradually more often as labor progresses</p>	<p>Weak contractions at irregular intervals</p> <p>Continuous weak contractions or weak contractions lasting only a few seconds</p>
<p><i>Palpate</i> the abdomen to determine the position of the fetus. Follow these four steps:</p> <ol style="list-style-type: none"> Face the woman's head. Place your hands on the top of her abdomen. Curve your fingers around the top. Palpate for shape, size, firmness, and mobility. Determine which part of the fetus is in the top of the uterus 	<p>Fetus' buttocks are irregular, soft, and not moveable</p>	<p>Fetus' head feels round, hard, and moveable</p> <p>Top of the uterus feels empty or irregular</p>

b. Move your hands to the sides of the woman's abdomen. Push gently with one hand to move the fetus to the other side. Palpate to determine the position of the fetus.

c. Ask the woman to bend her knees. With your right hand, gently grasp the part of the fetus that is in the lowest part of the woman's abdomen. Decide which part of the fetus is in the lower abdomen. This is the presenting part.

Most commonly, the head is the presenting part. This is a vertex presentation. A breech presentation means that the buttocks or legs are presenting. A transverse presentation means that the fetus is lying sideways in the uterus. Neither the head nor the buttocks will be palpable in the pelvis.

If the head is the presenting part, try to move it back and forth. If the head cannot be moved, it is engaged.

Fetus' back feels firm, smooth, and curved

Fetus' feet, knees, and elbows feel small, bumpy, and irregular

Vertex presentation

Engagement occurring two to three weeks before delivery during a woman's first pregnancy

Engagement occurring at any time before or after labor begins in women who have had babies before

Fetus' back is not palpable on either side

Breech presentation

Transverse presentation

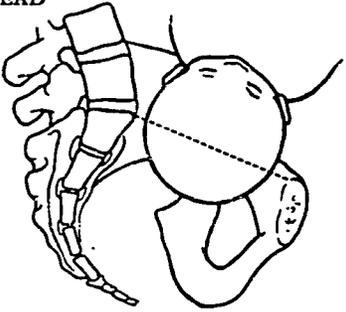
Engagement has not occurred by term during a woman's first pregnancy

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
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ENGAGEMENT OF BABY'S HEAD



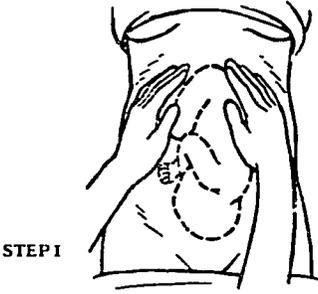
FRONT VIEW



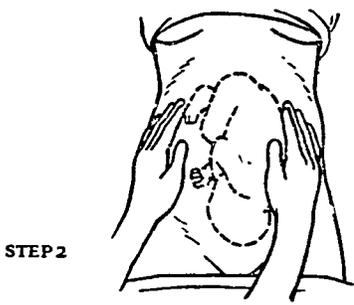
SIDE VIEW

d. Face the woman's feet. Place your hands on her abdomen and move them toward her pelvis. Repeat the palpations. Confirm your findings.

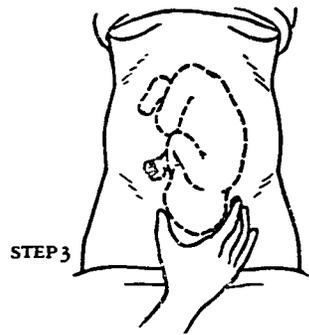
4 PALPATION STEPS TO DETERMINE THE POSITION OF THE FETUS



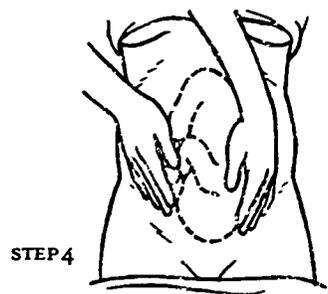
STEP 1



STEP 2



STEP 3



STEP 4

Auscultate the abdomen for fetal heart sounds.

- a. Use a fetoscope or stethoscope to listen for fetal heart sounds over the chest or back of the fetus.
- b. Listen carefully in all four quadrants of the abdomen.
- c. Determine the fetal heart rate. Count the number of beats per minute between contractions. Draw a diagram that shows the place you heard the heart.

Listen every half hour during the first stage of labor. Listen every fifteen minutes through the second stage. Fetal heart sounds in two places may mean twins.

Record the abdominal examination findings on the Labor Chart. Explain the findings to the woman.

Examining the Female Genitals

You will *inspect* and *palpate* the female genitals to determine the progress of labor. Explain each step to the woman.

120 to 160 beats per minute

Fewer than 120 or more than 160 beats per minute

Irregular fetal heart rate

Sudden changes in fetal heart rate

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>First, clean the genital area.</p> <ol style="list-style-type: none"> Ask the woman to lie on her back with her knees bent and her legs spread apart. Wash the woman's genital area with soap and water. Wash your hands with soap and water. Put on sterile gloves. Use cotton balls and antiseptic solution to wipe the woman's genital area from front to back. Repeat the wiping from front to back with clean cotton balls until the genital area is clean. <p><i>Inspect</i> the woman's genitals. Check for discharge. A thick, green discharge from the vagina may be a sign of fetal distress.</p> <p><i>Palpate</i> the woman's genitals. Follow these steps.</p> <ol style="list-style-type: none"> Dip the index and middle fingers of your right gloved hand into the antiseptic solution. Hold the woman's labia apart with the thumb and index finger of your left hand. Gently insert the two fingers of your right hand into the woman's 		<p>Thick, green vaginal discharge</p>

vagina. Once your fingers are inserted, do not withdraw them until the examination is over. This decreases the risk of infection.

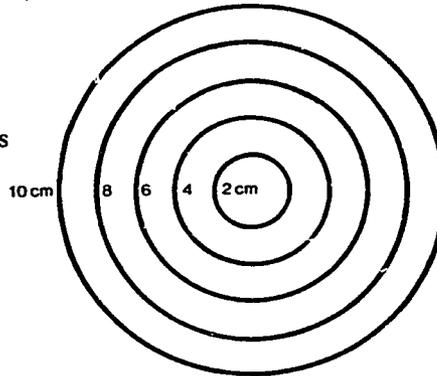
- c. Feel the woman's vagina. Move your fingers around the vaginal wall. Check for hard scarring. Move your fingers to the back of the vagina. Feel for stool in the rectum.
- d. Palpate the cervix with the tips of your fingers. Check its firmness and thickness. Determine how much the cervix has thinned. Thinning of the cervix is effacement. Determine how much the cervix has opened. Opening of the cervix is dilation

Effacement and dilation allow the fetus to pass out of the uterus. Full effacement occurs when the cervix is only slightly palpable. Describe effacement as "none," "partial," or "complete."

Complete dilation occurs when the cervix is no longer palpable. Measure dilation in centimeters. Complete dilation is 10 cm.

No scarring of the vaginal wall
No stool in the rectum

Firm, closed cervix before labor
Thin, soft cervix during labor



DILATION OF THE CERVIX

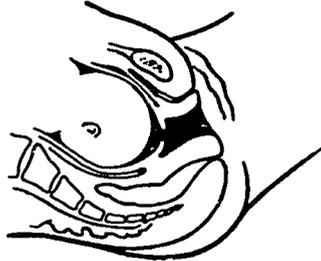
No dilation or effacement of the cervix during labor



1. CERVIX THICK AND CLOSED



2. CERVIX THINNED



3. CERVIX THINNED
AND DILATED 2 - 3 CM



4. CERVIX HALF DILATED



5. CERVIX FULLY DILATED
AND FUNNELED BACK

DILATION OF THE CERVIX

e. Check the bag of waters. The bag of waters should remain intact until the cervix is fully dilated. The bag of waters feels like a full balloon.

Bag of waters is tense during contractions

Bag of waters breaks before labor begins

- f. Determine the presenting part of the fetus. That is, decide which part of the fetus' body is at the cervix. A vertex presentation means that the head is presenting. A breech presentation means that the buttocks or legs are presenting. A transverse presentation means that the fetus is lying sideways in the uterus. An arm or shoulder is presenting.

If the head is at the cervix, feel the fontanelles. The anterior fontanelle is a diamond shaped joining of four sutures. The posterior fontanelle is a triangular joining of three sutures.

- g. Determine the station, which is how far the presenting part has dropped in the pelvis. Estimate in centimeters how far above or below the ischial spines the presenting part is.

The station is zero when the presenting part is at the level of the ischial spines. Above the ischial spines, the station is -1, -2, and so on, depending on how many centimeters above the ischial spines the presenting part is. Below the spines, the station is +1, +2, and so on. The presenting part is crowning when you can see it at the vaginal opening.

Vertex presentation

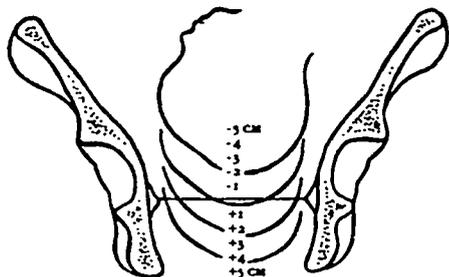
Breech presentation

Transverse presentation

PROCEDURES

NORMAL SIGNS

ABNORMAL SIGNS



STATIONS OF THE HEAD

- h. Check for prolapse of the umbilical cord. The cord is prolapsed when it drops through the cervix before the presenting part. It will feel soft and pulsating.

Remove your hand from the woman's vagina. Allow the woman to return to a comfortable position.

Record the findings on the Labor Chart.
Explain the findings to the woman.

Prolapsed cord

Procedure for Determining a Newborn's APGAR Score

The APGAR score is a system of assessing a newborn's condition immediately after birth. The APGAR score is based on five signs and a scoring of 0 to 10. Newborns with low scores need immediate attention if they are to survive. Determine a newborn's APGAR score one minute after birth and again at five minutes after birth. Procedures for determining a newborn's APGAR score are taught as part of the Labor and Delivery module. Follow the steps outlined below.

PROCEDURES

NORMAL SIGNS

ABNORMAL SIGNS

A— Appearance: Look at the color of the newborn's skin.

P— Pulse: Listen to the newborn's heart with a stethoscope. Count the number of beats per minute.

G— Grimace: Rub back and forth on the soles of the newborn's feet with one of your fingers. Observe the reaction on his face. Or, notice the newborn's reaction when you suck the mucus from his mouth and throat.

A— Activity: Watch the newborn move his arms and legs. Or, pull an arm or a leg away from his body. Note how his arms and legs move in response to the stimulation.

R— Respirations: Look at the newborn's chest and abdomen. Watch him breathe.

SCORE:

1 - Pink body, blue arms and legs
Pale body and face

2 - Completely pink body and face

1 - 100 beats per minute or less
Weak heart beat

2 - More than 100 beats per minute
Strong heart beat

1 - Grimace or puckering of the face

2 - Crying, coughing, or sneezing

1 - Some movement in response to stimulation

2 - Active movement
Waving of arms and legs

1 - Slow, irregular breathing
Retracting of chest wall
Grunting or weak cry

2 - Strong cry

SCORE:

0 - Pale or blue body and face

0 - No heart beat

0 - No response

0 - Limp arms and legs
No movement in response to stimulation

0 - No breathing
No cry

Total the APGAR score. Record the score on the mother's Labor Chart.

APGAR score of 7 to 10

APGAR score of 0 to 6

Procedure for Assessing a Newborn

You assess a newborn to:

- Check for injuries that occurred during birth
- Find any birth defects
- Find any signs of illness

Assess newborns delivered at the health center within the first six hours after birth. Assess newborns delivered at home within the first six weeks after birth. Assess all newborns who are brought to a postnatal clinic or under five clinic.

Procedures for assessing a newborn are taught as part of the Postnatal Care module. Follow these steps to assess a newborn.

1. Arrange to use a warm, well-lighted room.
2. Assemble these items of equipment:
 - Stethoscope
 - Flashlight
 - Rectal thermometer

Make sure your stethoscope works properly.
3. Take the newborn's medical history by asking the mother about breast-feeding, and about sleeping, crying, or any other problems she might have noticed in her newborn.
4. Wash your hands with soap and water.
5. Keep the newborn warm during the examination. Do not completely undress him.
6. Proceed with the newborn physical examination procedures as outlined below.

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the General Appearance You will <i>inspect</i> the newborn's general appearance. Look at how the newborn holds his body. Note any tremors or convulsions.</p>	<p>Arms and legs are usually flexed and close to the body Clenched fists No tremors No convulsions</p>	<p>Rigid posture Tremors Convulsions</p>
<p>Examining the Skin You will <i>inspect</i> the skin.</p> <p>Note the color of the newborn's skin, especially at the lips and ears. Look for cyanosis, jaundice, or pallor. The cheesy, whitish, greasy material covering the skin is the vernix caseosa. It protects the skin and helps prevent infection.</p>	<p>Spotty pink or red skin Jaundice occurring after the first day of life and lasting one week No cyanosis except if cold No pallor</p>	<p>Jaundice appearing within the first twenty-four hours after birth Jaundice lasting more than one week Cyanosis Pallor</p>
<p>Examining the Head You will <i>inspect</i> and <i>palpate</i> the head.</p> <p><i>Inspect</i> the newborn's head for an irregular shape or bruised, swollen area.</p> <p><i>Palpate</i> the skull for molding at the suture lines. Feel the fontanelles.</p>	<p>No bruised, swollen areas Considerable molding at the suture lines except with breech and cesarean section deliveries Soft, open anterior and posterior fontanelles</p>	<p>Bruised, swollen area on the head Hard fontanelles Closed fontanelles Bulging fontanelles Sunken fontanelles</p>

Examining the Eyes

You will *inspect* the eyes. If the newborn's eyes are not open, gently open the lids.

- a. Check the conjunctivae. Note any redness, bleeding, or discharge.
- b. Check the sclerae for jaundice.
- c. Shine a light into the eyes and quickly move it away. Note how the pupils react.
- d. Shine a light into the eyes to look at the lenses.

Examining the Ears

You will *inspect* the ears. Note their condition and shape.

Examining the Nose

You will *inspect* the nose. A newborn usually prefers to breathe through his nose. Shine a light into the nose. Look for an obvious blockage that could interfere with breathing.

Clear, moist conjunctivae

White sclerae

Pupils react equally to light

Clear lenses

Regularly shaped ears

No blockage

Red conjunctivae

Discharge or bleeding from the conjunctivae

Yellow, jaundiced sclerae

No reaction of pupils to light

Cloudy lenses

Irregularly shaped ears

Missing ears

Blockage

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Examining the Mouth You will <i>palpate</i> the mouth. Feel the inside of the newborn's mouth with your finger.</p> <ol style="list-style-type: none"> Look for clefts in the lips that might interfere with sucking Run your finger along the gum ridges. Check for clefts or breaks that might interfere with sucking. Feel the palate for clefts. Feel the tongue for breaks that might interfere with sucking. Check to see if the newborn sucks on your finger. 	<p>No clefts in the lips</p> <p>Smooth, continuous gum ridges Small cysts on the gums</p> <p>No clefts in the palate</p> <p>Smooth tongue with no breaks</p> <p>Strong sucking response</p>	<p>Cleft in the lips</p> <p>Cleft or break in the gum ridges Irregular gum ridges</p> <p>Cleft palate</p> <p>Break on the tongue surface</p> <p>Weak sucking response No sucking response</p>
<p>Examining the Respiratory System You will <i>inspect</i>, <i>palpate</i>, and <i>auscultate</i> the respiratory system.</p> <p><i>Inspect</i> the newborn's respiratory system.</p> <ol style="list-style-type: none"> Check the rate and rhythm of the newborn's breathing. Look at his chest and abdomen. Count the respirations. 	<p>30 to 60 respirations per minute Irregular breathing rhythm Abdominal breathing</p>	<p>Absence of respirations Fewer than 30 or more than 60 respirations per minute</p>

- b. Check for obvious breathing problems.
- c. Check the nostrils for flaring.
- d. Look for retraction at the spaces between the ribs and just above the breast bone.
- e. Listen for obvious breath sounds

Palpate the newborn's chest. Check for deformities of the chest wall.

Auscultate the newborn's lungs. Listen to the breath sounds with a stethoscope.

Examining the Heart

You will **auscultate** the heart. Listen to the heart sounds with a stethoscope. Count the heart beats. Listen for heart murmurs.

Examining the Abdomen

You will **inspect**, **auscultate**, and **palpate** the abdomen. You will **check** for vomiting and **inspect** the anus.

Inspect the newborn's abdomen. Note its shape.

Breathes easily

Nostrils do not flare

Fleeting intercostal retractions

No retractions above the breast bone

Sighs or squeaking noises

No deformities of the chest wall

Harsh bronchial breath sounds

Breath sounds can be heard throughout both lungs

130 heart beats per minute

90 to 180 heart beats per minute for short periods

No heart murmurs

Flat abdomen at birth

Slightly swollen abdomen soon after birth

Difficulty breathing

Flaring nostrils

Continuous intercostal retractions

Retractions above the breast bone

Gasps, groans, or grunting noises

Deformity of the chest wall

Absence of breath sounds

Breath sounds cannot be heard throughout both lungs

No heart beat

Fewer than 90 or more than 180 heart beats per minute

Heart murmur

Extremely flat or swollen abdomen

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Check the umbilical stump for redness. Check for discharge from or around the stump. Check for bleeding.</p>	<p>No redness of the umbilical stump No discharge from or around the stump No bleeding from or around the stump</p>	<p>Redness of the umbilical stump Discharge from or around the stump Bleeding from or around the stump</p>
<p><i>Auscultate</i> the abdomen for abdominal sounds.</p>	<p>Abdominal sounds present</p>	<p>Absence of abdominal sounds</p>
<p><i>Palpate</i> the abdomen on both sides for masses. Feel the liver, kidneys, and spleen.</p>	<p>Edge of the liver is palpable below the intercostal margin Both kidneys are palpable Edge of the spleen is palpable below the intercostal margin</p>	<p>Enlarged liver One or both kidneys not palpable Enlarged spleen</p>
<p>Check for vomiting. Note any blood in the vomit.</p>	<p>Vomiting of mucus and a slight amount of ingested maternal blood during the first day of life</p>	<p>Persistent or forceful vomiting Large amounts of blood in the vomit</p>
<p><i>Inspect</i> the anus. Be certain it is open.</p>	<p>Open anus</p>	<p>Closed anus</p>
<p>Examining the Male Genitals You will <i>inspect</i> and <i>palpate</i> a male newborn's genitals.</p>		

Inspect the penis.

Try to pull back the foreskin. It may or may not retract. Do not force it. Check the location of the urethra.

Palpate the scrotum. Check the testes. Note any swelling.

Examining the Female Genitals

You will **inspect** a female newborn's genitals. Check the opening of the vagina. Look for bleeding.

Examining the Musculoskeletal System

You will **palpate** the musculoskeletal system. Follow these steps.

- b. Run your fingers over the newborn's arms, clavicles, and legs. Check for breaks and dislocations.

If it does not retract, foreskin is open enough to allow urine to pass

If it does retract, foreskin slips back easily over the penis

Urethra is in the middle of the tip of the penis

Testes are usually in the scrotum, but easily slip out and move up into the abdomen

No swelling of the scrotum

Slight amount of watery white discharge from the vagina

Slight bleeding from the vagina

No breaks or dislocations

Foreskin is so tightly shut that urine cannot pass

Foreskin will not slip back over the penis

No urethra

Urethra is not at the tip of the penis

Swelling of the scrotum

Broken bone

Dislocation of a joint

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>b. Check for dislocated hips. Lay the newborn on his back. Gently pull both legs until his feet are side by side and his legs are straight. Check the wrinkles in his thighs.</p> <p>Release the legs. Place your index and middle fingers on the baby's outer hips. Wrap your hand around each of the baby's legs, just below the knee. Place your thumb on the thigh near the groin. Feel the hips between your thumbs and fingers.</p> <p>Gently apply pressure to push the hips into their sockets. At the same time, gently pull the thighs. Feel for a snap, indicating a dislocated hip.</p> <p>c. Count the fingers and toes.</p>	<p>Wrinkles occur in the same places on both thighs</p> <p>No snap of the hips</p> <p>Ten fingers and ten toes</p> <p>No abnormalities of the fingers or toes</p>	<p>Wrinkles do not occur in the same places on both thighs</p> <p>Snap of the hip</p> <p>Fewer or more than ten fingers or toes</p> <p>Abnormality of the fingers or toes</p>
<p>Taking the Vital Signs</p> <p>You will <i>weigh</i> the newborn and <i>take</i> his <i>temperature</i>.</p>	<p>Weight of 2.5 to 5 kg</p> <p>Average weight of 3.4 kg</p> <p>Rectal temperature of 37.5°C</p>	<p>Weight less than 2.5 kg</p> <p>Weight more than 5 kg</p> <p>Rectal temperature above 37.5°C or below 37°C</p>

Procedure for Assessing a Postnatal Woman

You assess a postnatal woman to identify any problems that may have developed after delivery. Procedures for assessing a postnatal woman will be taught as part of the Postnatal Care module. Follow these steps to assess a postnatal woman.

1. Take a postnatal medical history.
 - a. Ask the woman about any problems related to her delivery.
 - b. Ask the woman about her lochia or any other vaginal discharge.
 - c. Ask the woman whether she had an episiotomy or cesarean section and whether it is causing any pain.
 - d. Ask the woman whether she is breast-feeding and producing enough milk for her newborn.
 - e. Ask the woman whether her breasts or abdomen are tender.
 - f. Ask the woman whether she has had any fever.
 - g. Ask the woman whether she smokes tobacco or is taking any medicine.
 - h. Ask the woman about her diet.
 - i. Ask the woman whether she has been taking folic acid and iron tablets.
2. Perform a postnatal physical examination.
 - a. Assemble these items of equipment:
 - Sphygmomanometer
 - Stethoscope
 - Vaginal speculum
 - Gloves
 - Flashlight
 - Bowl of clean water
 - b. Prepare an examination table in a well-lighted room.

- c. Explain to the woman the purpose and parts of the examination.
- d. Ask the woman to empty her bladder. Collect a urine specimen.
- e. Ask the woman to remove her clothing. Provide a drape.
- f. Proceed with the physical examination procedures as outlined below.

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Taking the Vital Signs You will <i>take</i> the <i>vital signs</i>, including blood pressure, weight, and temperature.</p>	<p>Blood pressure between 90/60 and 140/90</p> <p>Weight loss of 20 to 25 pounds within six weeks after delivery</p> <p>Oral temperature of 37° C</p>	<p>Blood pressure above 140/90 or below 98/60</p> <p>Weight gain since delivery</p> <p>Weight loss of more than 20 to 25 pounds within six weeks of delivery</p> <p>Temperature above or below 37° C</p>
<p>Testing the Urine You will <i>test</i> the <i>urine</i>. Note the color of the urine. Test for sugar and protein in the urine.</p>	<p>Clear yellow urine</p> <p>No sugar or protein in the urine</p>	<p>Dark amber urine</p> <p>Inability to pass urine</p> <p>Pain on urination</p> <p>Sugar or protein in the urine</p>
<p>Performing Other Examination Procedures You will follow the procedures outlined for the adult physical examination to examine these areas and systems:</p> <ul style="list-style-type: none"> General appearance Eyes Ears Mouth and throat Neck Respiratory system Heart 	<p>Thyroid gland is not enlarged</p>	<p>Enlarged thyroid gland</p>

c. Sit in front of the woman. Inspect the labia and the vaginal opening for swellings, discharge, and bleeding.

Look for tears around the vaginal opening.

Check any episiotomy repair.

d. Remove the speculum from the warm water. Gently insert the speculum into the woman's vagina. Open the speculum slowly. Shine the light into the vagina.

No swelling of the labia or vaginal opening

Red, bloody discharge for the first 3 days after delivery

Pink discharge 4 to 7 days after delivery

Pink, yellow, white discharge 8 to 10 days after delivery

Creamy white discharge 11 to 18 days after delivery

No discharge after 18 days post delivery

Minor superficial tears around the vaginal opening

Episiotomy is healing well

Repair edges are well aligned, with no gaps

Swelling of the labia or vaginal opening

Heavy bleeding after delivery

Bright red discharge 4 days after delivery

Pussy, white curdy, green, or frothy discharge

Foul smelling discharge

Severe tears around the vaginal opening

Repair edges are red and inflamed

Repair edges are not well aligned

Puckers in the repair edges

Gaps or separations in the repair edges

PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Check the vagina. Look for swelling, discharge, and tears.</p> <p>Check the cervix. Look for swellings, discharge, and tears.</p>	<p>Vagina is slightly swollen immediately after delivery</p> <p>Vagina is larger than usual for the first 21 days after delivery</p> <p>Vagina returns to non-pregnant appearance after 21 days, but is usually larger</p> <p>No tears in the vaginal walls</p> <p>Cervix is swollen immediately after delivery</p> <p>Swelling decreases within the first day post delivery</p> <p>No tears in the cervix</p>	<p>Tears in the vaginal walls</p> <p>Continued swelling of the cervix after the first day post delivery</p> <p>Tears in the cervix</p>
<p>e. Remove the speculum. Put on gloves. Lubricate the gloved fingers of your right hand with warm water. Insert the index and middle fingers of your right hand into the woman's vagina.</p> <p>Palpate the vagina. Feel for swellings. Check the tone.</p>	<p>Vagina feels very stretched and smooth for the 24 hours after delivery</p> <p>Decreased vaginal tone begins to improve after one day</p> <p>Tone returns to normal by 21 days post delivery</p>	<p>Vaginal swelling after one day post delivery</p> <p>Decreased vaginal tone after 21 days</p>

Feel the cervix

Cervix feels soft and floppy for the first 24 hours after delivery

Cervix admits 2 to 3 fingers for the first 24 hours after delivery

Cervix is firmer and admits only one finger by the end of 1 week

Cervix returns to non-pregnant state by the end of the 4th week

No tenderness of the uterus

Firm uterus

Size of the uterus is consistent with the days post delivery

Soft, open cervix after 4 weeks post delivery

Tenderness of the uterus

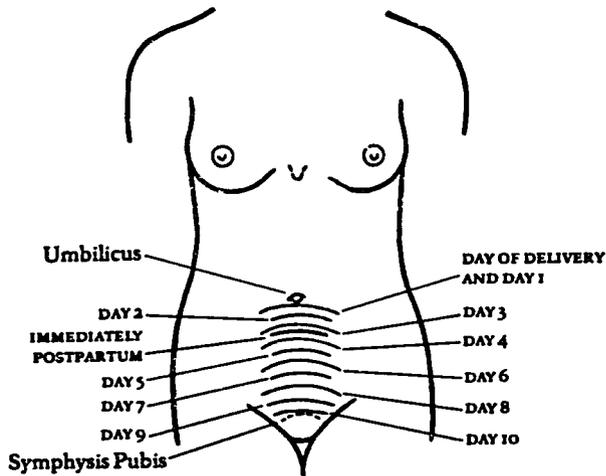
Soft, spongy uterus

Uterus is larger than expected for the days post delivery

Feel for tenderness of the uterus.

Check firmness.

Feel the size of the uterus. The uterus shrinks at a regular rate after delivery.



PROCEDURES	NORMAL SIGNS	ABNORMAL SIGNS
<p>Check the adnexal areas. Move your fingers inside the vagina to the right side of the cervix. Feel the areas around the ovary and fallopian tube. Do the same on the left side. Feel for any tenderness or swelling.</p> <p>Remove your hand from the woman's vagina. Remove your gloves. Allow the woman to dress.</p> <p>Explain to the woman the findings of the medical history and physical examination. Answer her questions. Record the findings on the Maternity Card.</p>	<p>Ovaries may be palpable</p> <p>Each ovary is about the size of a large almond</p> <p>Fallopian tubes are not palpable</p> <p>No tenderness or swelling of the adnexal areas</p>	<p>Tenderness or swelling of the adnexal areas</p>