

# Home Health Aide Training

## Module 10. Body Systems and Common Diseases

### Goal

The goal of this module is to enable participants to gain a basic understanding of how the body works, in order to better understand health, diseases, and the role of the personal care aide in supporting the health and wellness of clients.

### Time

3 hours

Activities	Teaching Methods	Time
1. Body Systems	Interactive presentations, large-group work, and small-group work	1 hour and 30 minutes
2. Common Diseases	Interactive presentation, small-group work, and group presentations	1 hour and 30 minutes

## Module 10. Body Systems and Common Diseases

### Supplies

- Pencils or pens
- Flip chart, tape, and markers (enough for each group to have one in Activity 2, Option B)
- Lamination equipment, if available
- **Teaching Tools, Activity 1. Body System Images (without labels)** [*see separate section “Body System Teaching Tools” after this module*]
- **Teaching Tools, Activity 1. Body Systems: Common Problems**
- **Teaching Tools, Activity 2. How You Can Assist Clients Who Have Common Diseases**

### Learner’s Book

1. Introduction to Body Systems
  - 2a. The Circulatory System
  - 2b. The Digestive System
  - 2c. The Endocrine System
  - 2d. The Nervous System
  - 2e. The Reproductive System
  - 2f. The Respiratory System
  - 2g. The Skeletomuscular System
  - 2h. The Skin
  - 2i. The Urinary System
3. Helping Clients with Illness
  - 4a. Alzheimer’s Disease
  - 4b. Arthritis
  - 4c. Cancer
  - 4d. CVA (Stroke)
  - 4e. Diabetes
  - 4f. Heart Disease
  - 4g. Lung Disease
  - 4h. Multiple Sclerosis (MS)
  - 4i. Parkinson’s Disease

# Module 10. Body Systems and Common Diseases

## Worksheets

- Worksheet 1. Main Parts of the Body Systems
- Worksheet 2. Body Systems and What They Do
- Worksheet 3. Name That Body System!

## Handouts

- Handout 1. Body Systems
- Handout 2. Common Diseases

## Advance Preparation

Review all the training instructions and learner’s materials for this module. Note that icons are used to remind the trainer of the following:



When you are *presenting* or covering Key Content *in the discussion*. (Key Content is also addressed in the Learner’s Book and the handouts, but we use the “key” icon only when it is covered elsewhere in the learning process.)



When it is important to ask a particular question to get participants’ input.



When it is time to refer to the Learner’s Book.



When it is time to distribute a worksheet.



When it is time to distribute a handout.

Copy all the worksheets and **STAPLE them together**—one set for each participant.

Copy the handouts for participants.

Gather all necessary supplies and equipment.

Please note that the Key Content is meant to be background information for the trainer. **DO NOT READ OUT LOUD TO PARTICIPANTS.**

## Module 10. Body Systems and Common Diseases

### Activity 1. Body Systems

Make sure the three worksheets have been stapled together—to make one set for each participant.

Prepare the following flip chart pages:

- “Learning Agenda” (Step 1)
- “Names of Body Systems” (Step 3)

Make one copy of each full-page body system illustration in the **Teaching Tools, Activity 1. Body System Images (without labels)** [see separate section “Body System Teaching Tools” after this module]. [Or, you may laminate these illustration pages and use the same set for every training.]

Make enough copies of the **urinary system** illustrations, so that each group can have one page (either male or female) for the demonstration.

The **Teaching Tools, Activity 1. Body Systems: Common Problems** is not meant to be distributed for this activity. Instead, it is an optional activity for you to use if you have time left over at the end of Activity 1. (See the Teaching Tip for Step 16.)

### Activity 2. Common Diseases

Prepare the following flip chart pages:

- “Disease” (Step 1)
- [Option A] “Common Diseases Presentations” (Step 5)
- [Option B] “Group Reports on Common Diseases” (Step 5)

Read the descriptions of Option A and Option B carefully, and decide which approach you will use.

## Module 10. Body Systems and Common Diseases

### Activity 1. Body Systems

**1 hour and 30 minutes**

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#### Learning Outcomes

By the end of this activity, participants will be able to:

*Define “body systems” and describe the types of body parts that make up body systems.*

*Identify at least six body systems.*

*Describe the general functions and the main parts of each system.*



#### Key Content

- A body system is a group of body parts that work together to perform a specific function or task.
- All body systems are composed of cells, tissues, membranes, glands, and organs.
- Body cavities are spaces within the body that are protected by the skeleton and are occupied by components of the body systems. The major cavities are: cranial, spinal, thoracic, abdominal, and pelvic.
- Nine body systems are discussed in this module: circulatory, digestive, endocrine, nervous, reproductive, respiratory, skeletomuscular, the skin (integumentary), and urinary. All the body systems are interrelated, and they all slow down as a normal part of aging.
- Each system has important functions. Each also has unique problems and diseases.
- Knowing the basics about how these systems work will help the home health aide to learn, remember, and carry out his or her role in assisting clients to keep these systems healthy and to manage the problems.

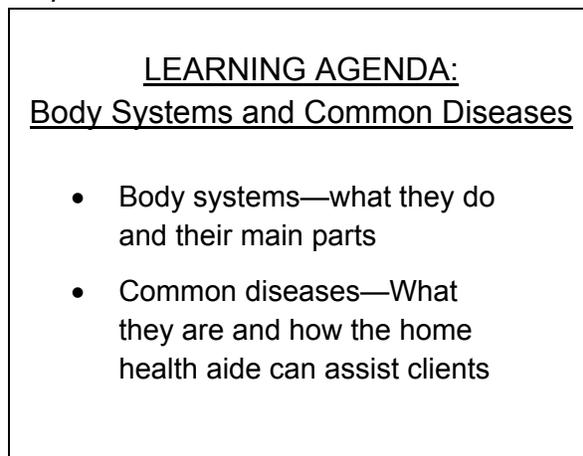
## Module 10. Body Systems and Common Diseases

### Activity Steps

#### **Interactive Presentation—20 minutes**

- 1. Introduce the module and learning agenda.** Explain that the goal is to help participants develop a basic understanding of the different body systems and how they work. This will enable them to better understand how to keep the body working well, how common diseases affect the body, and how to carry out their role as home health aides in maintaining health and coping with disease. Post and review the “Learning Agenda” flip chart page.

#### *Flip Chart*



- 2. Define “body system.”** Explain that a body “system” is a group of body parts that work together to perform a specific function or task. Note that since everyone *has* a body, participants all probably have a lot of knowledge about the systems of the body, whether they realize it or not!
- 3. Read the list of body systems.** Post and read the flip chart page with the list of body systems. Explain that these may sound strange now, but this activity will help them see that they already know a lot about many of these systems. Note that there are other body systems, but these are the ones they will cover today.

#### **Teaching Tip**

*Do not describe or explain any of these systems!* The main purpose of this list is to help participants *read and pronounce* the names of each system.

## Module 10. Body Systems and Common Diseases

### *Flip Chart*

Names of Body Systems

- Circulatory system
- Digestive system
- Endocrine system
- Nervous system
- Reproductive system
- Respiratory system
- Skeletomuscular system
- The skin
- Urinary system

4.  **Review 1. Introduction to Body Systems** in the Learner’s Book. Ask if there are any questions before moving on to the next step.

### **Large-Group Work—10 minutes**

#### **Teaching Tips**

This activity uses small-group work to focus on eight of the nine systems listed—circulatory, digestive, nervous, reproductive, respiratory, skeletomuscular, the skin, and urinary—with the endocrine system being covered by an interactive presentation after the group work.

5. **Introduce this activity.** Explain that the purpose of this activity is to introduce participants to the body systems, through working in small groups. You will demonstrate how to do the activity by having them all work on one body system together. After that they will work on the rest of the body systems in their small groups.

## Module 10. Body Systems and Common Diseases

6.  **Set up small-group work.** Ask participants to close their Learner’s Books and keep them closed throughout the small-group work. Split participants into groups of two or three—with *no more than seven groups*. Distribute **Worksheets 1, 2, and 3** to each participant. (They should be stapled together.)
7. **Distribute sample body system image.** Give each group one of the body system images for the urinary system (either male or female—see Advance Preparation). **DO NOT TELL THEM WHAT SYSTEM THIS IS!** Ask them to note the letter in the header for this body system image—H1 or H2. Explain that there are two images for this system, because the main parts look slightly different for men and for women. But every group has the same body system for this demonstration.
8.  **Demonstrate how to do Worksheet 1.** Explain that you all will work together on **Worksheet 1** to figure out which of the “Main Parts” descriptions best matches the colored body parts in their picture. Ask participants:

 *Does anyone know what these body parts are called?*

If someone does know, then you can start reading aloud each answer on Worksheet 1, until you find those body parts. If they do not know, start reading the Main Parts answers out loud and ask, after each one, if this sounds like the body parts in their pictures. Once they find the correct answer, ask them all to put the letter H in the box in front of that answer.

### **Teaching Tip**

We selected the urinary system for this demonstration because we felt that participants might have a harder time identifying the main parts from this image than they would for other body system images. So you may have to help them figure out what these parts are. Use clues like asking what body part sits low in their bellies and has a tube coming out between their legs (*bladder*). Also, you can ask what the shape of the two parts higher up in the body looks like (*a bean*), and what kind of bean (*kidney*)? Then ask them to find those words in the “Main Parts” answers. You may want to write those words on a flip chart page, to help them find the words in writing.

The correct answer is #4.

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9.  **Demonstrate how to do Worksheet 2.** Ask each group to turn to **Worksheet 2**. Now that they have identified the main parts, they need to find the answer for what those body parts (and that system) **DO** for the body. Explain that, like before, there are two strategies—if they know the answer, then they look for it in Worksheet 2. If they don't know the answer, then they start reading each one until they find one that makes sense. Begin by asking:

 *Does anyone know what the bladder, kidneys, ureters, and urethra do for the body?*

If you get some ideas about getting liquids out of the body, tell them that's right! Then ask them to scan Worksheet 2 for that answer. If they don't have any idea what these body parts do, then start reading and asking after each one if it sounds right. Again, they will put the letter H (for their body system image) in front of the correct answer.

### **Teaching Tip**

This time, the correct answer is #12. Hopefully you can give enough clues so they will recognize this as the right answer and you won't have to read through the whole list.

10.  **Demonstrate how to do Worksheet 3.** Ask each participant to turn to **Worksheet 3**. Now that they have identified the main parts, and what they do for the body, it's time to name the body system. Note that some of these systems have **VERY** long names, but the names may actually contain clues. Ask:

 *Does anyone think they already know the name of this body system?*

If they are right, tell them so and ask them to help you find that system on the list in Worksheet 3. If no one has any idea, read through the list out loud until you get to a name that they think makes sense for this body system. As before, they will put the letter H in front of the correct answer.

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### Teaching Tip

If they don't know the name of this system, you will read through the whole list before you get to "Urinary System."

Even if they DO know this answer right away, read through the body system list one more time, to reinforce how these words are pronounced. Ask participants to repeat the body system name after you read it out loud. This may be very helpful for participants with lower reading levels.

### Small-Group Work—35 minutes

**11. Give instructions.** Explain that you want them to repeat this process with seven more body systems. You will give a body system image to each group now (a different one to each group). They will have 5 minutes to work together to fill in Worksheets 1, 2, and 3 for their new body system image—just the same way you showed them for the urinary system. After 5 minutes, you will ask them to stop. They will hand in their body system image and get a new one. Ask if there are any questions.

### Teaching Tip

Note that the endocrine system is not included among the body system images. This is because the body parts that are unique to this system are very small and obscure, and it is unlikely that students will be able to identify them. The bigger organs (pancreas, ovaries, and testicles) are parts of other body systems, and will be identified when reviewing those other systems.

The endocrine system will, however, be covered in the interactive presentation that follows this small-group activity (see step 16).

**12. Distribute the body system images and ask groups to start.** Give a different body system image to each group. Ask them to note the letter at the top of the page—that is what they should put next to the right answers on their worksheets.

### Teaching Tip

Quickly check on each group, to make sure they understand the instructions. The first two or three body systems may take longer than 5 minutes, but the later ones will take less time, as they narrow down their options!

If you have more than one trainer available, have them also checking on the groups. It would be good to help the groups to get the first one or two body

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systems correct. If not, their wrong answers in the early stages will cause problems later on, when they become aware that they don't have the right answers remaining on their worksheets.

- 13. Call time and redistribute the body system images.** Call time after 5 minutes, but see if any groups need a couple more minutes to complete at least Worksheets 1 and 2. After that, collect the body system image from one group and pass it to another, so that they all have new body system images to work on. Ask the groups to start on their new body systems.

### **Teaching Tip**

Keep checking on the groups, to help them get these first body systems correct.

With the final two or three body systems, groups may realize that they made a mistake on an earlier body system. If that happens, make an announcement that they should choose the answers that they think are correct for the new body system—even if they have already chosen that answer for an earlier system. Reassure them that this will all get worked out in the discussion.

With an average of 5 minutes per body system, you will need 35 minutes for seven body systems in this exercise. They will need more than 5 minutes in the beginning, but less at the end.

### **Interactive Presentation—25 minutes**

- 14. Facilitate discussion about the correct answers for each body system.** Begin with one of the more obvious body systems—for example, skeletomuscular. Hold up the body system image and note the letter “A” on the page. Ask one group to volunteer their answer for the “main parts” for this body system. After you get the correct answer, ask another group to volunteer their answer for “what it does.” After you get the correct answer, ask another group to volunteer their answer for the name of this body system.

### **Teaching Tip**

If you hear groans, this means some group(s) did not get the correct answers for this body system. Note that they should mark the correct body system on their worksheets.

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- 15. Continue with the rest of the body systems.** Repeat this process with the remaining body systems. Try to involve every group in sharing their answers. When you are done, thank the groups for their good efforts on this exercise!

### **Teaching Tip**

If there are a lot of groups who did not get the correct answers for their body systems, stop asking them to share their reports. Instead, give groups a chance to figure out the correct answers for a new body system image after you show it.

- 16.**  **Review the endocrine system.** Tell participants they can now open their Learner's Books. Refer to sections **2a** to **2i**. Note that there is more detail here about what each body system does and the main parts. Ask participants to turn to section **2c. The Endocrine System**; briefly review.

### **Teaching Tip**

If you have enough time remaining, you can briefly review each section on the body systems.

Another option, if you have time left over, is to review the “Common Problems” boxes from **Teaching Tool, Activity 1. Body Systems: Common Problems**. Without giving the name of the system, you can read the list of “common problems” and ask participants to say which body system they think this would apply to. (These could also be made into cards and given to the small groups, for them to guess which body system it applies to.)

## Module 10. Body Systems and Common Diseases

### Activity 2. Common Diseases

1 hour and 30 minutes

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#### Learning Outcomes

By the end of this activity, participants will be able to:

*List at least five common diseases and describe the signs indicating that someone has the disease.*

*Describe the role of the home health aide when assisting clients who have common diseases, including what to observe, record, and report.*



#### Key Content

- Diseases are conditions that impair or damage the normal function of body systems.
- The diseases commonly encountered by home health aides include cardiovascular (heart) diseases, cancer, stroke, chronic obstructive pulmonary (lung) disease, diabetes, arthritis, Alzheimer’s disease, multiple sclerosis, and Parkinson’s disease. Knowing some of the basic features of each disease will help the home health aide to learn, remember, and carry out his or her role in assisting the client to cope with the disease.
- The role of the home health aide in regard to diseases, in general, is to:
  - Observe and report changes in physical, emotional, and behavioral status of the client.
  - Maintain a safe environment for the client.
  - Assist with activities of daily living, encouraging independence as much as possible.
  - Provide good nutrition.
  - Use standard (universal) precautions.
  - Provide emotional support to client, as necessary.

## Module 10. Body Systems and Common Diseases

### Activity Steps

#### Interactive Presentation—25 minutes

1. **Lead large-group discussion.** Ask participants:

**?** *What does the word “disease” mean to you?*

**?** *How does a disease hurt the body?*

After a few responses, post the prepared flip chart page with the definition of “disease.” Point out to participants that they will be better able to understand how diseases affect the body now that they know how body systems are supposed to work.

#### *Flip Chart*

<p style="text-align: center;"><u>DISEASE</u></p> <p style="text-align: center;">When a body system cannot work the way it is supposed to</p> <p style="text-align: center;"><u>Common diseases:</u></p>
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2. **Brainstorm a list of diseases.** Ask participants to name all the diseases they have heard of. List their responses on the same flip chart page, under the definition.
3. **Lead large-group discussion.** Ask the following questions:

**?** *Have you ever been around a family member or friend who had one of these diseases?*

**?** *What kind of assistance did they need?*

**?** *How do you think a home health aide can assist a client who has one of these diseases?*

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-  **Review 3. Helping Clients with Illness** in the Learner’s Book. After the brief discussion in Step 3, section 3 in the Learner’s Book will help participants reinforce what they already know or have just learned.

### **Small-Group Work and Presentations—60 minutes**

Option A: Trainer presents information about each disease; participants report “How You Can Assist.”

#### **Teaching Tips**

In this option, the trainer takes the lead in reviewing the information about the nine diseases (from sections 4a-i in the Learner’s Book). It allows the participants to focus more on thinking about how they can assist with one or two assigned diseases. If there are enough participants, you can have nine groups (pairs or triads), with each group assigned to discuss one disease. With fewer small groups, you can decide to keep each group focused on one disease, or assign them two diseases to consider “how they can assist.”

### **Option A: Small-Group Work—15 minutes**

-  **Set up small-group work.** Split participants into groups of two or three. Assign one of the diseases to each group (or more—see Teaching Tip, above). Post the “Common Diseases Presentation” flip chart page. Explain that you will present information on the first three bullets to the whole class, and they will present what they discussed about “how the HHA can assist.” Refer them to sections 4a-i in the Learner’s Book. Explain that they will have 15 minutes to review the section of the Learner’s Book on their disease and prepare notes for their part of the presentation (“How the HHA can assist”).

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### *Flip Chart*

COMMON DISEASES  
PRESENTATION

- What is it? Definition or description of the disease.
- Signs that a person has the disease.
- What to Observe, Record, and Report
- How the home health aide can assist someone who has this disease.

### **Option A: Interactive Presentation—45 minutes**

- 6. Give a brief presentation about each disease and facilitate small-group reporting.** Review information from the Learner’s Book about each disease, following the first three bullets on the flip chart page. Then ask the small group that focused on this disease to share their thoughts about how the HHA can assist. Spend only five minutes total on each disease.

#### **Teaching Tip**

Refer to **Teaching Tool, Activity 2. How You Can Assist Clients Who Have Common Diseases**, for essential points. Fill in as needed after the small-group report.

- 7. Address remaining diseases.** If all nine diseases were NOT assigned to groups, cover all four bullets on the remaining diseases.

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Option B: Participants present all information about assigned diseases, including “How You Can Assist.”

### **Teaching Tips**

This option allows participants to learn more about one assigned disease and to share their learning with their peers. The activity is designed for six small groups, to focus on six diseases—arthritis, cancer, diabetes, heart disease, lung disease, and stroke. (Alzheimer’s disease will be covered in detail in another module. Multiple sclerosis and Parkinson’s disease can be covered by the trainer in Step 7, following the group presentations.)

With a larger class, you may want to include all nine diseases in this activity, forming more than six small groups and allowing more time for group reports—about 5 minutes per disease. With a smaller class, you may want to have fewer than six groups, and assign more than one disease to each group and/or have the trainer cover more diseases during the interactive presentation after the group reports.

### **Option B: Small-Group Work—20 minutes**

- 5)  **Set up small-group work.** Split participants into six groups. Distribute flip chart paper and markers to each group. Assign one of the diseases to each group. Post and review the “Group Reports on Common Diseases” flip chart page with topics for them to cover. Explain that they have 20 minutes to prepare a flip chart page with the summary information about their disease to present as a group. Refer to sections **3a–i** in the Learner’s Book and note that the information needed can be found there. As with **Activity 1. Body Systems**, you (or another trainer) will be sitting at the “help desk” to answer questions.

## Module 10. Body Systems and Common Diseases

### *Flip Chart*

GROUP REPORTS ON COMMON  
DISEASES

- What is it? Definition or description of the disease.
- Signs that a person has the disease.
- What to Observe, Record, and Report
- How the home health aide can assist someone who has this disease.

### **Option B: Small-Group Reporting—40 minutes**

- 6) **Facilitate reporting back to the large group.** Ask each small group to take 5 minutes to post their flip chart page and present their disease. Thank each group and correct misinformation as necessary.

#### **Teaching Tip**

Basic information about how the HHA can help is provided in **Teaching Tools, Activity 2. How You Can Assist Clients Who Have Common Diseases.**

- 7) **Address remaining diseases.** After all the group presentations are completed, present the information about any diseases that were not covered.

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### **Both Options A & B: Interactive Presentation—5 minutes**

- 8. Review ways the HHA can assist sick clients.** Refer to “How You Can Assist” from section **3. Helping Clients with Illness** in the Learner’s Book. Ask:



*How can you use what you have learned today to help you to carry out this role?*

- 9.  Summarize the module.** Distribute and review **Handout 1. Body Systems** and **Handout 2. Common Diseases**. Ask participants if they have any questions.

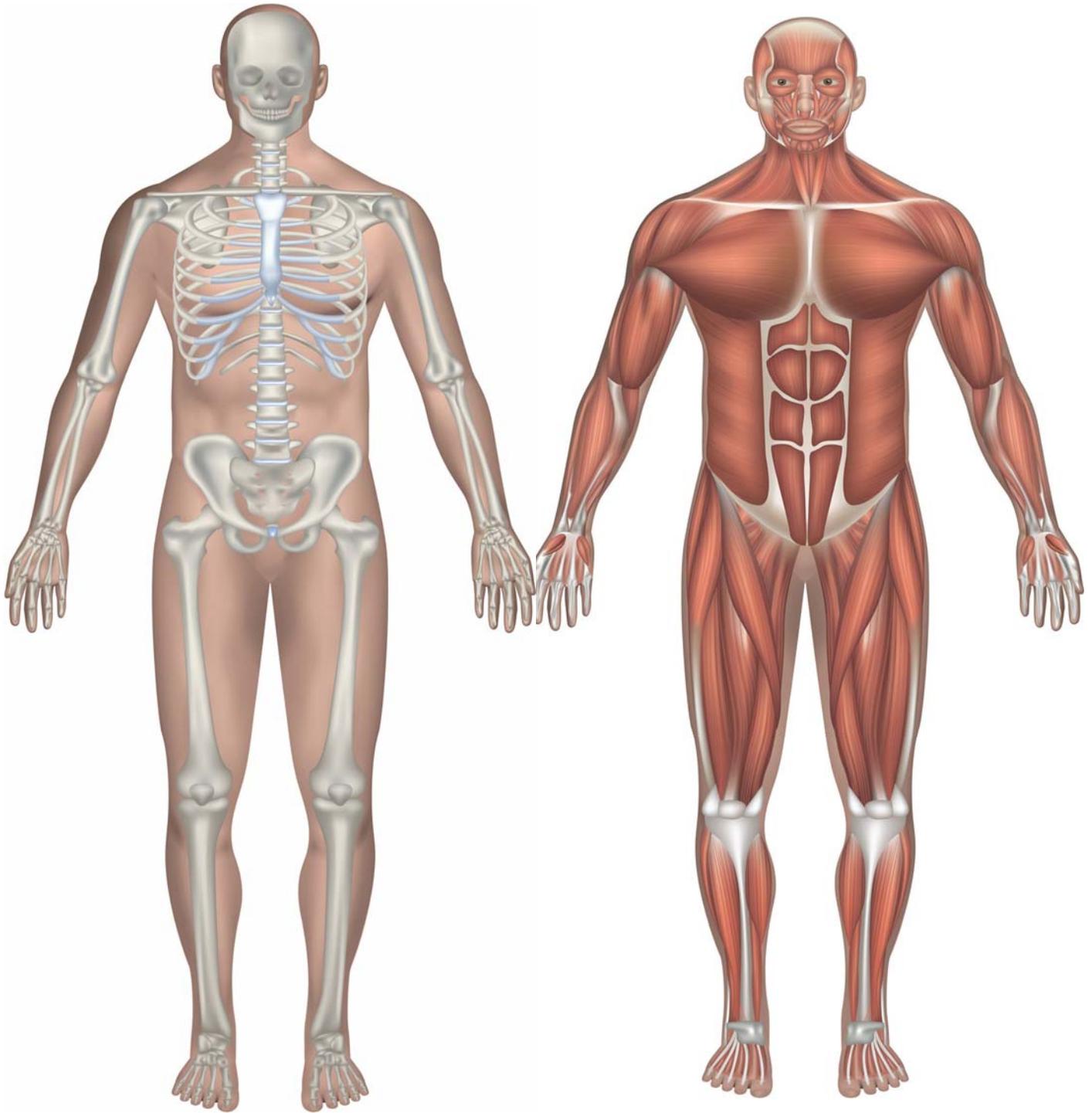
## Module 10. Body Systems and Common Diseases

### TEACHING TOOLS, Activity 1

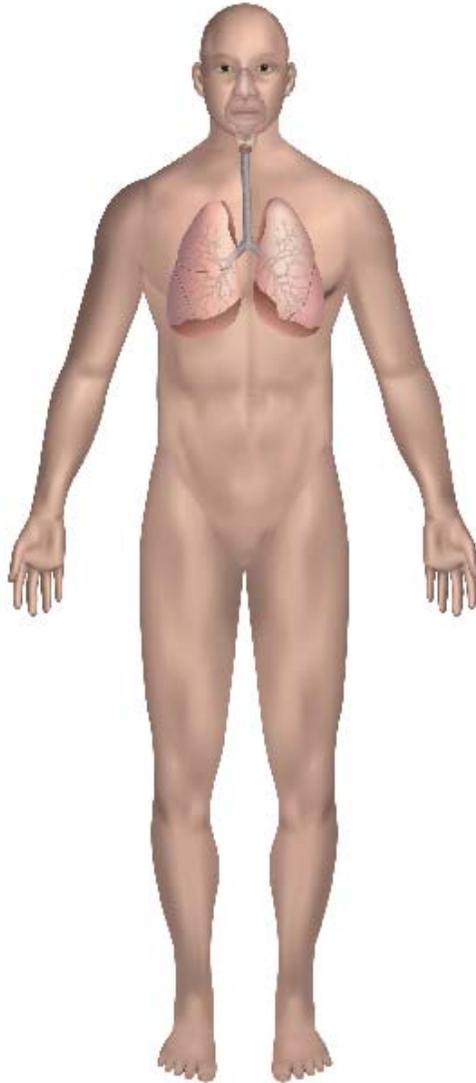
#### Body System Images (without labels)

- Skeletomuscular (p. 22)
- Respiratory (p. 23)
- Nervous (p. 24)
- Circulatory (p. 25)
- Digestive (p. 26)
- The Skin (p. 27)
- Female Reproductive System (p. 28)
- Male Reproductive System (p. 29)
- Female Urinary System (p. 30)
- Male Urinary System (p. 31)

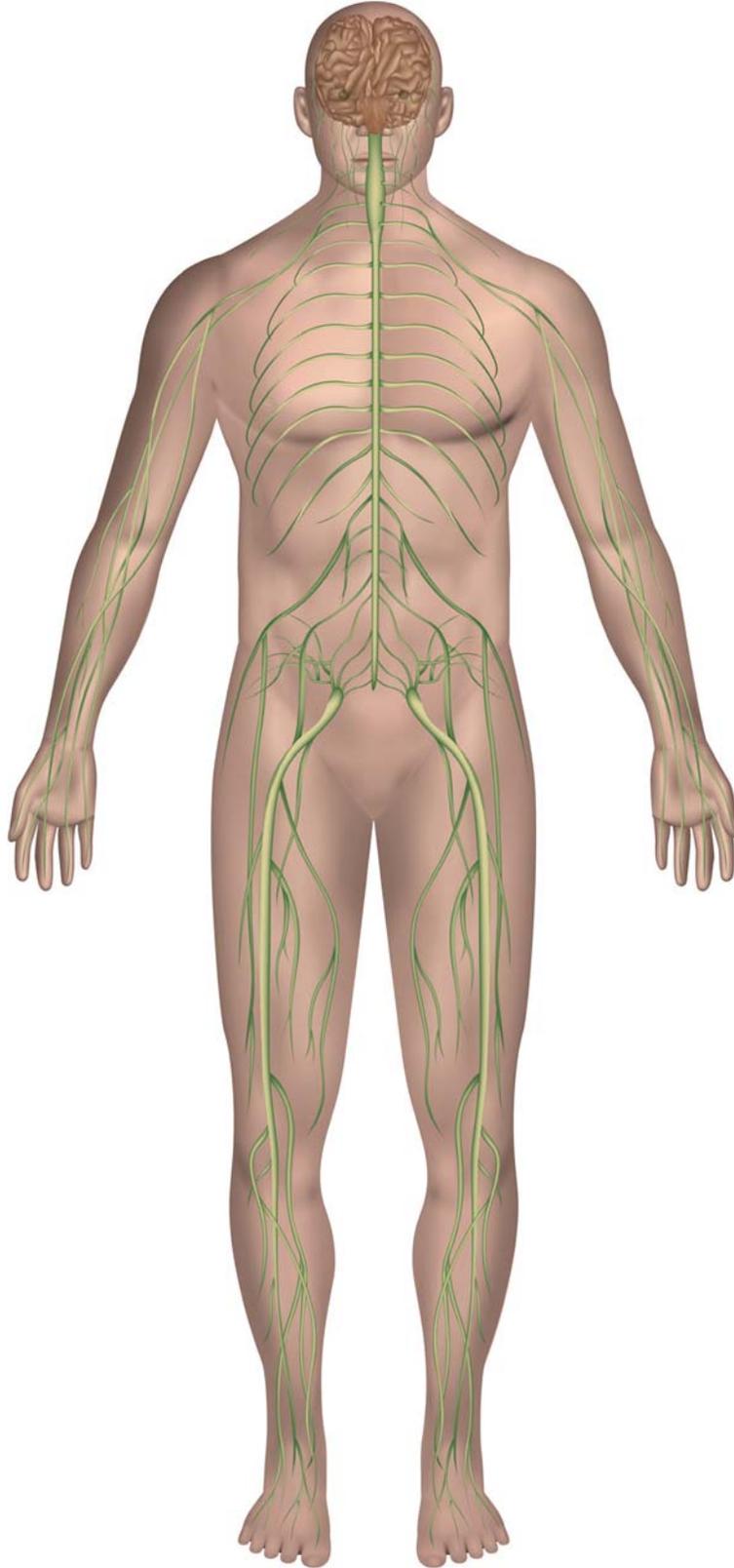
## Body System A



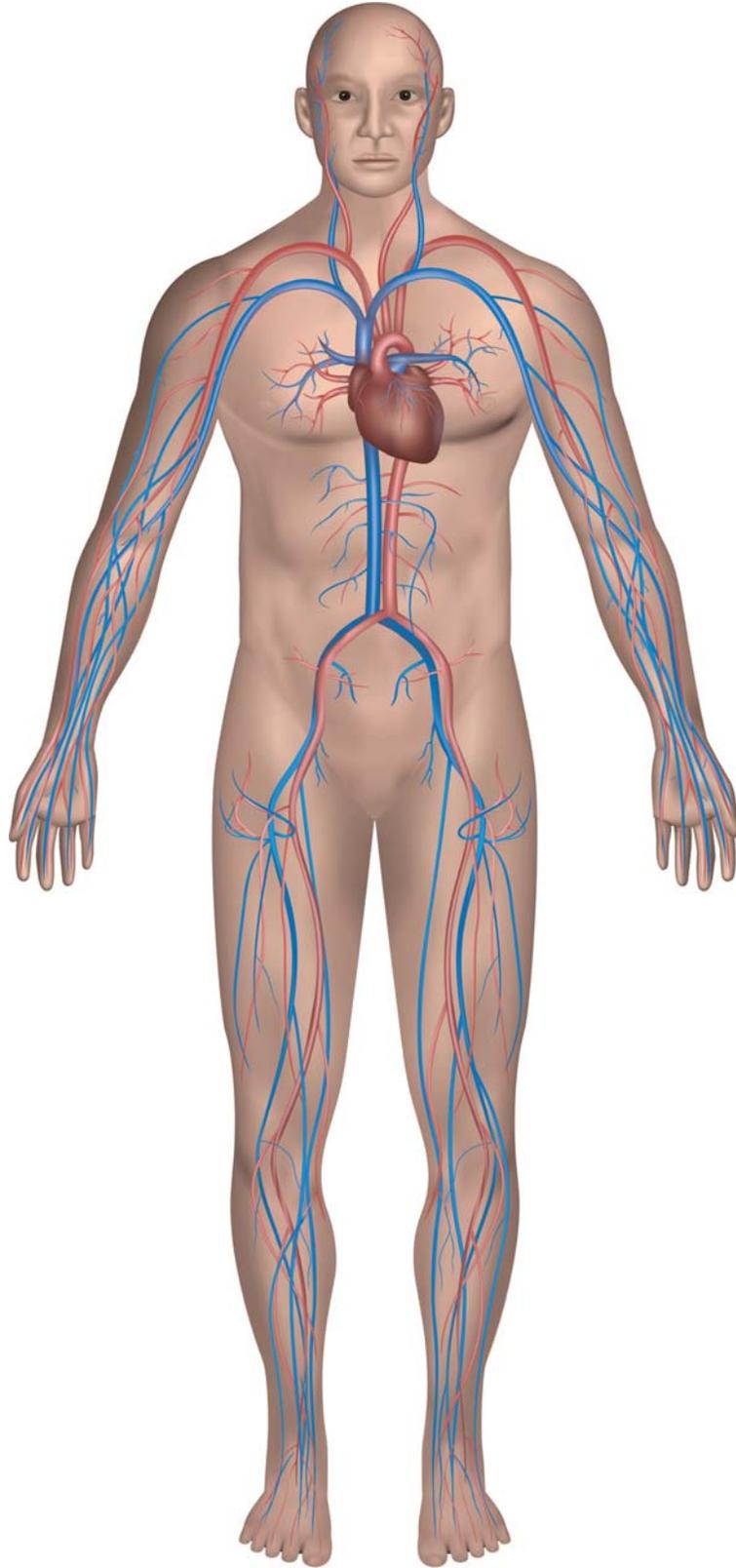
## Body System B



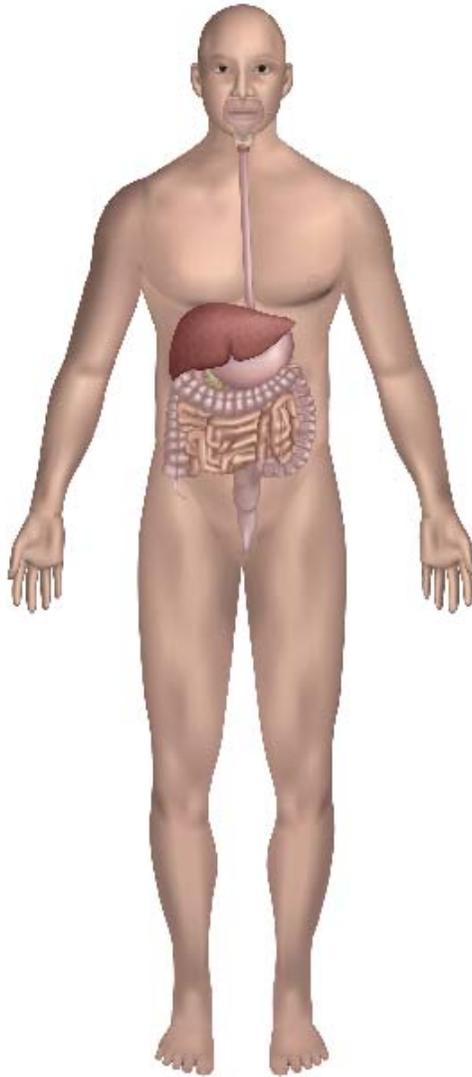
## Body System C



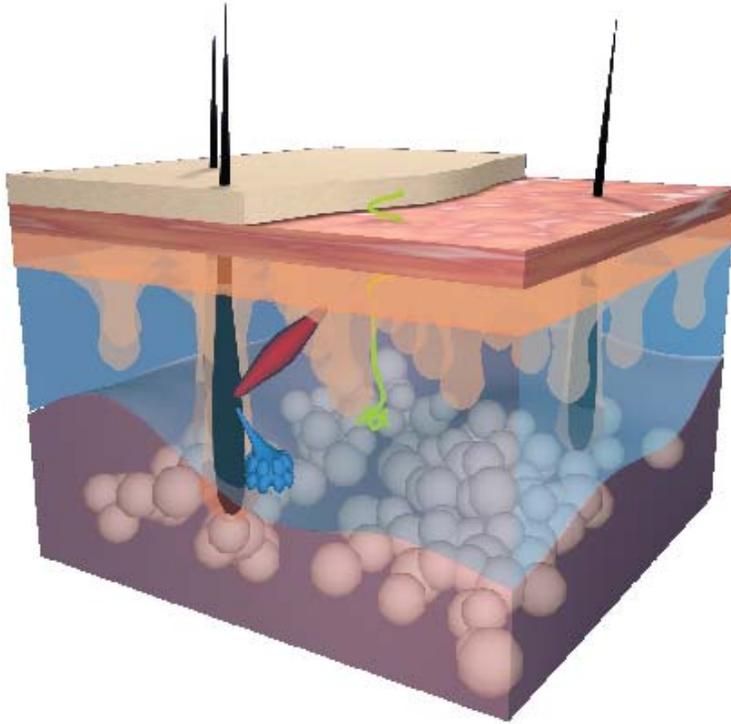
## Body System D



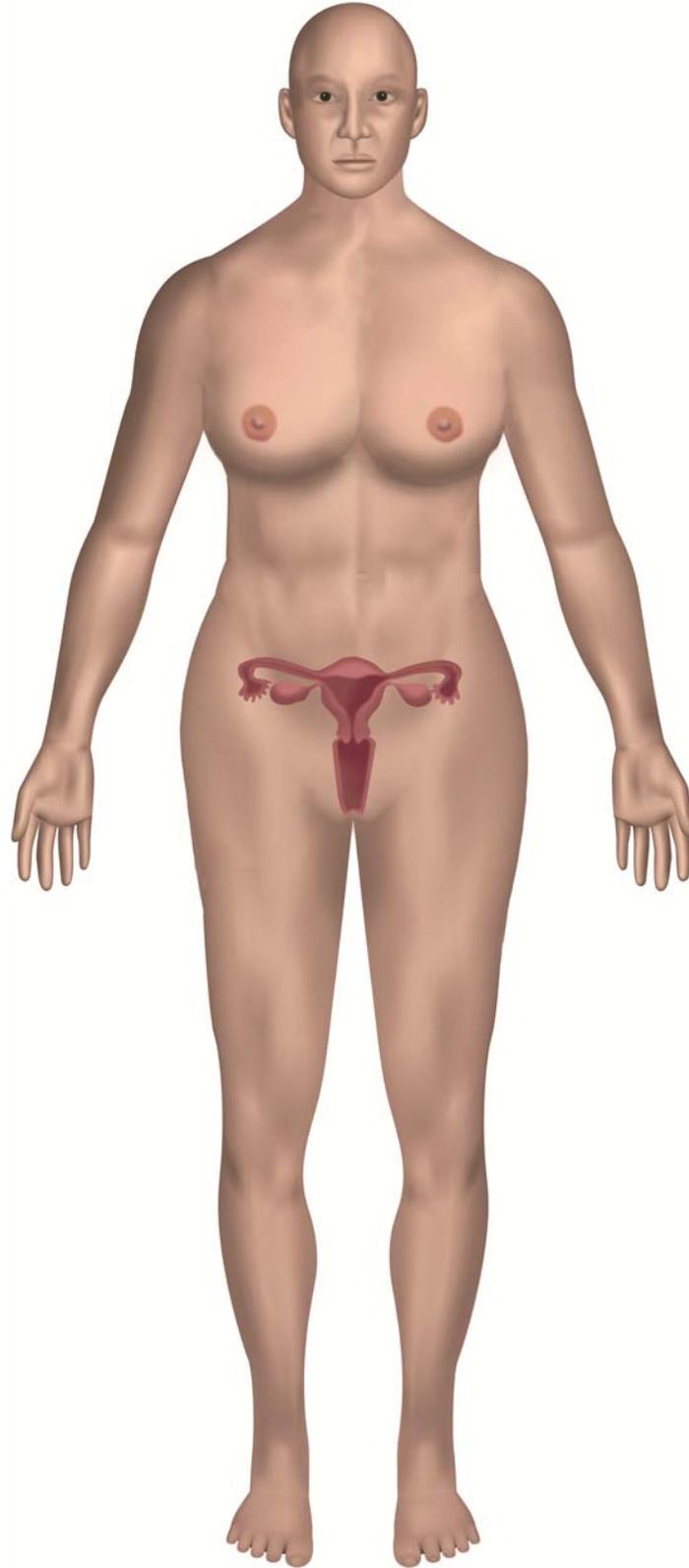
## Body System E



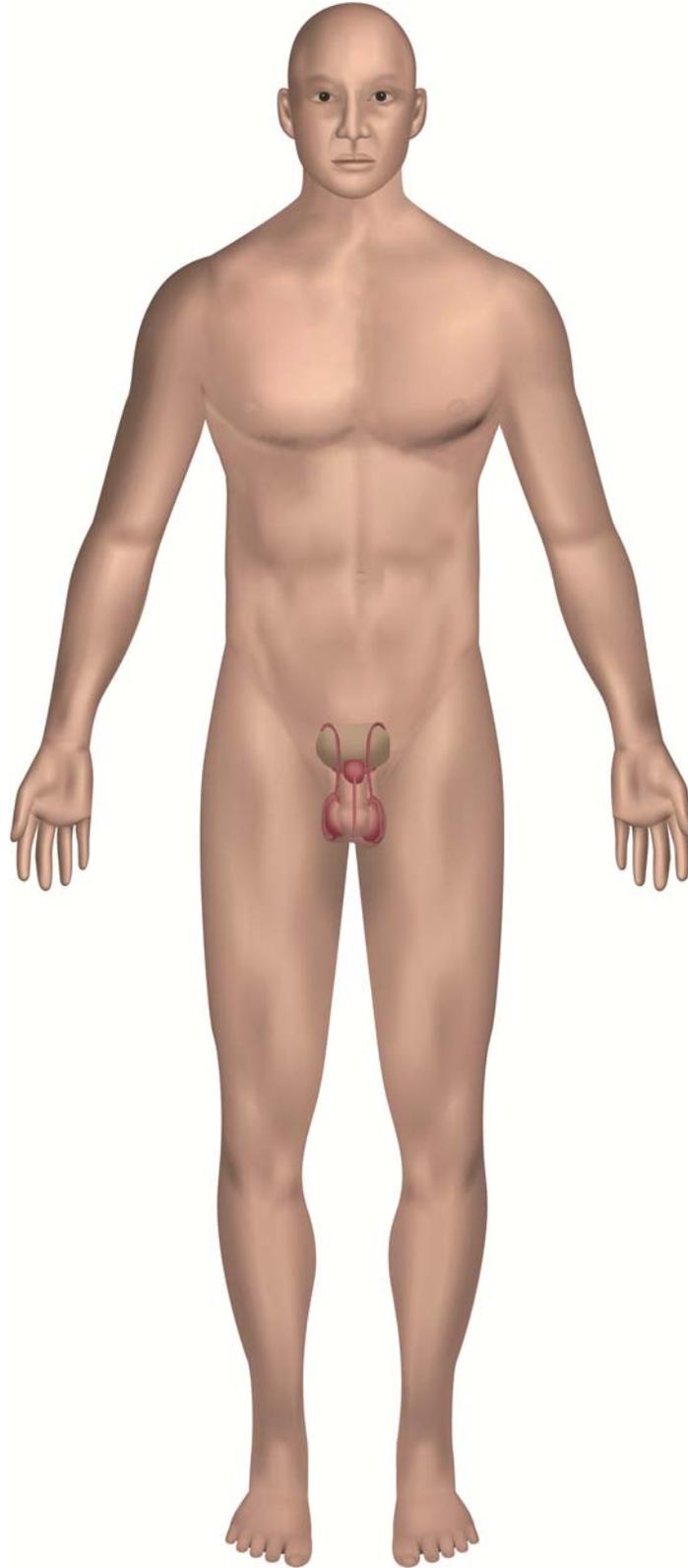
## Body System F



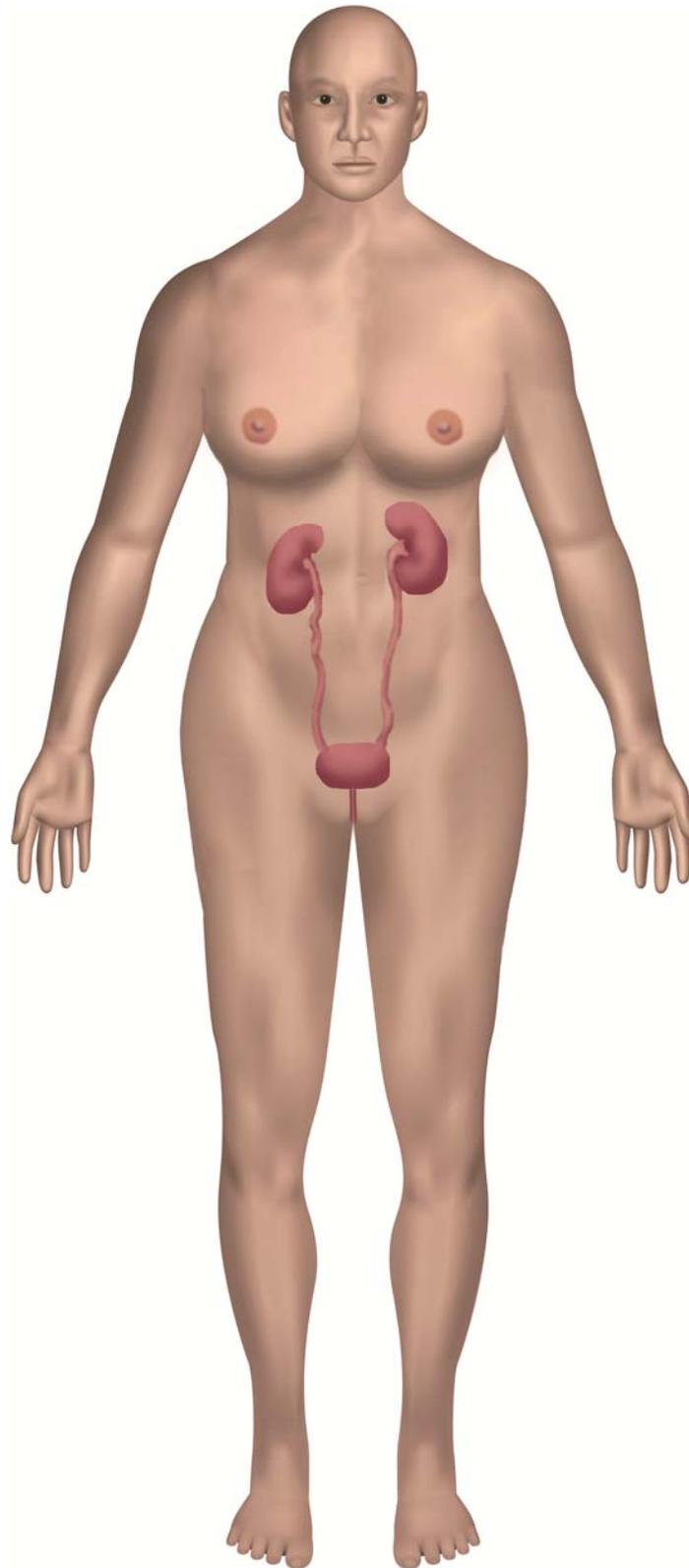
## Body System G1



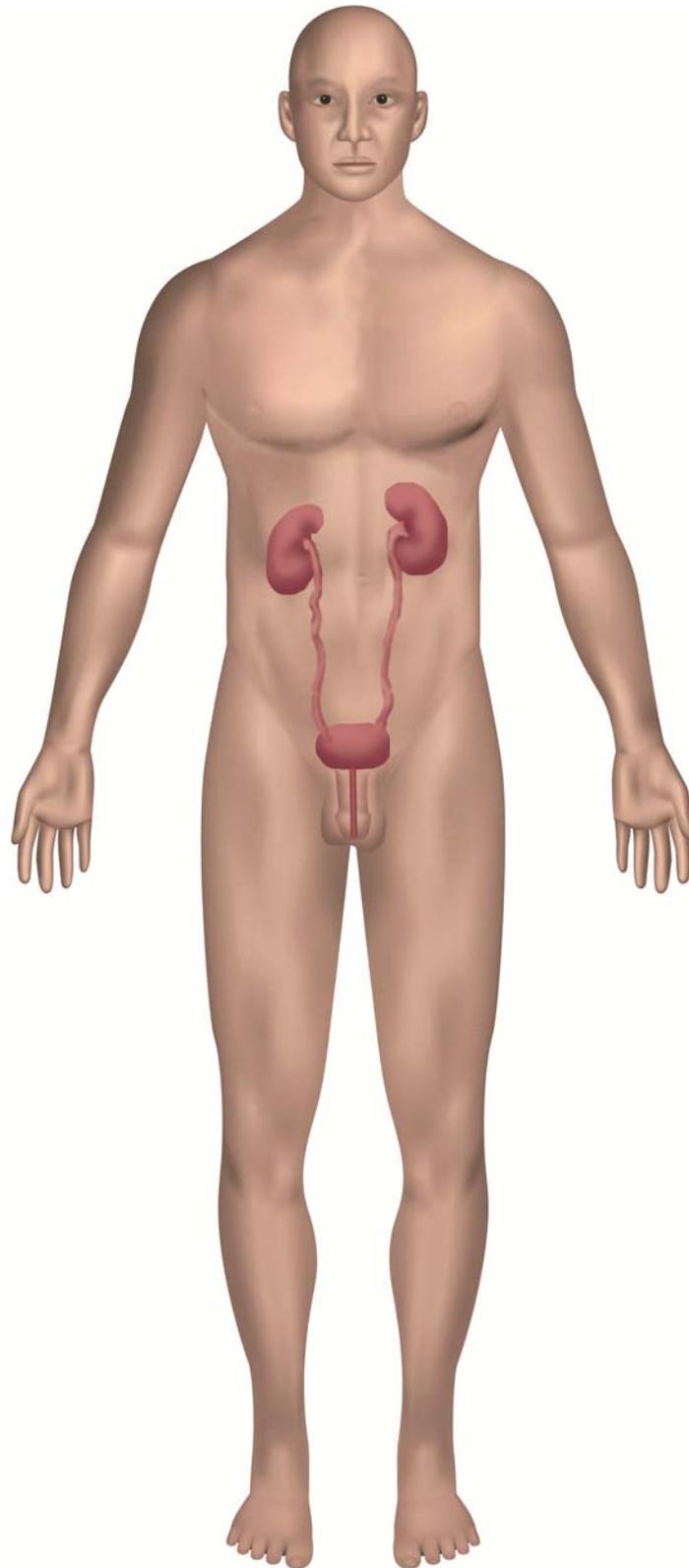
## Body System G2



## Body System H1



## Body System H2



## Module 10. Body Systems and Common Diseases

### TEACHING TOOLS, Activity 1 Body Systems: Common Problems

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**Instructions:** This information is meant to be used by the trainer. If there is time left at the end of Activity 1, each box can be read out loud, for participants to guess which body system they apply to.

#### Common Problems of the Circulatory System

A client may:

- Feel very weak
- Have a heartbeat that is too fast, too slow, or uneven
- Have arteries clogged with fat (**atherosclerosis**) or with bits of minerals (**arteriosclerosis**)
- Have blood pressure that is too high or too low.  
Blood pressure is the force of blood against artery walls.

#### Common Problems of the Digestive System

- **Constipation** is hard stools.
- **Diarrhea** is loose stools.
- **Nausea or vomiting**
- **Heartburn** happens when stomach acid goes into the throat.
- **Hemorrhoids** are swollen veins at the end of the large intestine. They cause itching of the anus.
- **Stomach pain** can happen for a number of reasons.

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### **TEACHING TOOLS, Activity 1 Body Systems: Common Problems**

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#### **Common Problems of the Endocrine System**

**A client may:**

- Feel very tired
- Gain or lose weight
- Heal more slowly than usual

#### **Common Problems of the Nervous System**

**A client may have:**

- A prickly feeling
- Headaches or other pain
- Trouble controlling their bowel or bladder
- Trouble seeing, hearing, touching, tasting, or smelling.
- Trouble thinking

#### **Common Problems of the Reproductive System**

**A client may have:**

- Enlarged prostate gland
- Fluid that comes out of the penis or vagina
- Menstrual problems
- Problems with sex
- Red, swollen vagina or labia
- Swollen testicles

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### TEACHING TOOLS, Activity 1 Body Systems: Common Problems Page 3 of 4

#### Common Problems of the Respiratory System

**A client may:**

- Cough
- Have a runny nose
- Have trouble breathing
- Make a whistling sound when they breathe

#### Common Problems of the Skeletomuscular System

**A client may:**

- Sprain a joint or ligament
- Strain a muscle
- Have joint or muscle pain
- Have decreased range of motion
- Have a **contracture**. That's when flexing muscles get short. This makes it hard to move. There is no cure.
- Break a bone

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### **TEACHING TOOLS, Activity 1 Body Systems: Common Problems**

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#### **Common Skin Problems**

**A client may have:**

- Dry skin
- Cuts and bruises
- Rashes, blisters, warts, or boils
- Thinning and falling out hair
- Itchy scalp or skin
- Sores

#### **Common Problems of the Urinary System**

**A client may have:**

- Trouble controlling their bladder
- Painful urination
- Dry mouth
- Dry skin
- No tears
- Change in color, smell, or consistency of the urine
- Fever
- Cognitive changes and dizziness

## Module 10. Body Systems and Common Diseases

### TEACHING TOOLS, Activity 2

#### How You Can Assist Clients Who Have Common Diseases

Page 1 of 4

**Instructions:** This information is also meant to be used by the trainer, when facilitating group reporting, in order to make sure the key points are covered.

#### **How You Can Assist a Client with Alzheimer’s Disease:**

- Speak clearly to help clients understand you.
- Post signs to assist their memory.
- Keep clients safe.
- Help clients with daily tasks.
- Help clients get to a toilet in time.
- Give praise.
- Help clients who wander.
- Pull back from your own emotional responses.
- Support the family.

#### **How You Can Assist a Client with Arthritis:**

- Help clients with daily tasks.
- Help clients take medicine.
- Help clients move their joints.
- Keep clients safe.
- Move clients gently.
- Use hot and cold pads, if allowed.
- Help clients feel better.

## Module 10. Body Systems and Common Diseases

### **TEACHING TOOLS, Activity 2** **How You Can Assist Clients Who Have Common Diseases** Page 2 of 4

#### **How You Can Assist a Client with Cancer:**

- Support clients.
- Listen to clients.
- Keep track of pain.
- Keep germs from spreading.
- Be gentle with gums.
- Leave colored lines after treatment.
- Help clients eat and drink in small amounts.

#### **How You Can Assist a Client Who Has Had a CVA:**

- Keep clients safe.
- Help clients relax.
- Help clients with daily tasks.
- Don't grab clients.
- Be aware of sight problems.
- Help clients eat.
- Prevent pressure ulcers.
- Help clients rest.

#### **How You Can Assist a Client with Diabetes:**

- Keep clients safe.
- Help clients protect their feet.
- Watch out for germs.
- Help clients eat right.
- Help clients check their blood sugar.

## Module 10. Body Systems and Common Diseases

### **TEACHING TOOLS, Activity 2** **How You Can Assist Clients Who Have Common Diseases** Page 3 of 4

#### **How You Can Assist a Client with Heart Disease:**

- Help clients eat right.
- Help clients with daily tasks.
- Help clients get moving.
- Help clients rest.
- Help clients change position slowly.
- Help clients put up their feet.
- Help clients keep their head up.

#### **How You Can Assist a Client with Lung Disease:**

- Follow safety rules for germs.
- Help clients with daily tasks.
- Be calm and positive.
- Help clients rest.
- Help clients breathe and cough right.

#### **How You Can Assist a Client with Multiple Sclerosis:**

- Help clients take medicine.
- Help clients with daily tasks.
- Help clients rest.
- Keep clients safe.
- Prevent pressure ulcers.
- Help clients exercise.
- Protect clients' skin.
- Help clients eat and drink right.
- Help clients feel better.

## Module 10. Body Systems and Common Diseases

### **TEACHING TOOLS, Activity 2** **How You Can Assist Clients Who Have Common Diseases** Page 4 of 4

#### **How You Can Assist a Client with Parkinson's Disease:**

- Be patient with clients.
- Help clients feel better.
- Help clients with daily tasks.
- Offer plenty of fluids.
- Offer foods that are easy to eat.
- Keep clients safe.

**Module 10. Body Systems and  
Common Diseases**

**Activity 1. Body Systems**

**1. Introduction to Body Systems**

**2a. The Circulatory System**

**2b. The Digestive System**

**2c. The Endocrine System**

**2d. The Nervous System**

**2e. The Reproductive System**

**2f. The Respiratory System**

**2g. The Skeletomuscular System**

**2h. The Skin**

**2i. The Urinary System**

**Activity 2. Helping Clients with Illness**

**3. Helping Clients with Illness**

**4a. Alzheimer's Disease**

**4b. Arthritis**

## Module 10. Body Systems and Common Diseases

**4c. Cancer**

**4d. CVA (Stroke)**

**4e. Diabetes**

**4f. Heart Disease**

**4g. Lung Disease**

**4h. Multiple Sclerosis (MS)**

**4i. Parkinson's Disease**

# Module 10. Body Systems and Common Diseases

## 1. Introduction to Body Systems

Page 1 of 2

It's important to understand body systems and how they work. This can help you to assist a client to live a healthier and more active life. It can also help you and the client deal with health problems when they come up.

A **body system** is a group of body parts. The parts work together to do a job.

There are 10 body systems (all of the ones studied here, plus the Immune System). Each body system affects every other system. All the body systems slow down as people get older.

### **Body Parts**

Each body system has a different function, but they all are made of the same types of body parts.

#### **There are 5 types of body parts:**

- **Cells** are the smallest part of the body. They make up all the other parts.
- **Tissues** are the same type of cells joined together.
- **Membranes** are large sheets of tissue. They often link other body parts, cover organs, or line body openings.
- **Glands** are groups of cells that make something.
- **Organs** are different types of tissue that work together to do a job.

# Module 10. Body Systems and Common Diseases

## 1. Introduction to Body Systems

Page 2 of 2

### Body Cavities

**Body cavities** are spaces inside the body. They hold and protect the body systems.

**There are 5 main body cavities:**

- The **cranial cavity** is the space inside the skull. It holds the brain.
- The **spinal cavity** is the space inside the backbone. It holds the spinal cord.
- The **thoracic cavity** is the space inside the chest. It holds the heart, lungs, trachea, and esophagus.
- The **abdominal cavity** is the space below the thoracic cavity. It holds the stomach, liver, gallbladder, and upper part of the intestines.
- The **pelvic cavity** is below the abdominal cavity. It holds the bladder, lower part of the intestines, and organs for making babies.

## Module 10. Body Systems and Common Diseases

### 2a. The Circulatory System

**What It Does—The circulatory system:**

- Pumps blood with food and oxygen around the body.
- Takes wastes out of cells.
- Brings wastes to the lungs and kidneys.

#### **Main Parts of the Circulatory System**

Blood has 3 parts.

- **Red blood cells** bring oxygen to cells. They also bring carbon dioxide to the lungs.
- **White blood cells** fight germs.
- **Platelets** help cuts stop bleeding.
- **Plasma** is the liquid part of blood.

There are 3 types of blood vessels.

- **Arteries** take blood away from the heart.
- **Veins** bring blood back to the heart.
- **Capillaries** are the smallest blood vessels. They bring food and oxygen to cells. They take wastes out of cells. And they link arteries and veins.

The **heart** is the strongest muscle in the body. It pumps blood to the lungs to get oxygen. Then it pumps blood around the body.

## Module 10. Body Systems and Common Diseases

### 2b. The Digestive System

**What It Does—The digestive system:**

- Breaks down food into tiny bits that the body can use.

#### **Main Parts of the Digestive System**

The **upper body** contains several parts:

- Digestion starts in the **mouth**. Here, saliva and chewing break down food.
- Next, food goes through the **esophagus**. That's a tube that links the throat to the stomach.
- Food is broken down more in the **stomach**. Here, food is churned and mixed with juices.

The **lower body** contains several parts:

- The **small and large intestines** are tubes. They digest food as it goes through.
- **The liver, the gallbladder, and pancreas** are organs. They make chemicals that digest food.
- The **alimentary canal** is a long tube. It links all parts of the digestive system.

## Module 10. Body Systems and Common Diseases

### 2c. The Endocrine System

#### **What It Does—The endocrine system:**

- Helps control what the body does.
- Makes hormones and releases them into the blood.

#### **Main Parts of the Endocrine System**

##### **These body parts make hormones:**

- Adrenal glands
- Ovaries—in girls and women
- Pancreas
- Parathyroid
- Pituitary gland
- Testicles—in boys and men
- Thymus
- Thyroid gland

## Module 10. Body Systems and Common Diseases

### 2d. The Nervous System

#### What It Does—The nervous system:

- Controls all the other body systems.
- Brings messages from the rest of the body to the brain.
- Controls things you choose to do with your body, such as running. These are called **voluntary functions**.
- Controls things your body does on its own, such as breathing. These are called **involuntary functions**.

#### Main Parts of the Nervous System

- The **brain** controls the whole system.
- **Nerves** are fibers. These carry messages around the body.
- The **sense organs** are the eyes, ears, skin, mouth, and nose. They get information about the world around you.
- The **spinal cord** runs from the bottom of the brain to the bottom of the spine. Bones called vertebrae protect it. The spinal cord is the main path for nerves going to and from the brain.

# Module 10. Body Systems and Common Diseases

## 2e. The Reproductive System

### What It Does—The reproductive system:

- Produces the male and female cells that start a new human life, and brings these cells together.
- Protects and nourishes the new life growing inside the female.
- Provides a way for the new life to be born (in females).
- Nourishes the new life after birth (in females).

### Main Parts of the Reproductive System

<p><b>These are the main parts in a woman:</b></p> <p>The <b>breasts</b> make milk for a baby to drink.</p> <p>The <b>ovaries</b> make eggs and hormones. These make it possible for a woman to become a mother.</p> <p>The <b>uterus</b> is the place where a baby grows.</p> <p>The <b>fallopian tubes</b> bring eggs from the ovaries to the uterus.</p> <p>The <b>vagina</b> is a stretchy tunnel that links the uterus to the outside of the body. It's the place where sperm go in and babies come out.</p> <p>The <b>labia</b> are the lips of vagina. There are outer and inner labia.</p> <p>The <b>perineum</b> is the area between the labia and the anus.</p>	<p><b>These are the main parts in a man:</b></p> <p>The <b>testicles</b> make sperm and hormones. These make it possible for a man to become a father.</p> <p>The <b>scrotum</b> is a sack of skin that holds the testicles.</p> <p>The <b>prostate gland</b> makes a fluid that sperm swim in.</p> <p>The <b>vas deferens</b> is a tube that sperm go through.</p> <p>The <b>urethra</b> is a tube that brings sperm out of the body.</p> <p>The <b>penis</b> is the usual way sperm get into a woman's vagina.</p>
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## Module 10. Body Systems and Common Diseases

### 2f. The Respiratory System

**What It Does—The respiratory system:**

- Brings oxygen into the body.
- Gets rid of carbon dioxide.

#### **Main Parts of the Respiratory System**

- The **nose** is the sense organ that lets you smell.
- The **sinus cavities** are holes in the skull near the nose.
- **Lungs** are like balloons. They fill up with air when you breathe in.
- The **throat** is in the neck.
- The **larynx** is a tube in the throat. Air passes through it. It is also called the voicebox.
- The **trachea** is a tube in the throat. Air passes through it. It is also called the windpipe.
- **Bronchi** and **bronchioles** are tubes. They link the trachea to the lungs.
- **Alveoli** are air sacs in the lungs.

## Module 10. Body Systems and Common Diseases

### 2g. The Skeletomuscular System

#### **What It Does—The skeletomuscular system:**

- Holds up the body.
- Protects parts inside the body.
- Lets people move.

#### **Main Parts of the Skeletomuscular System**

There are 3 types of bones.

- **Long bones** are in the arms and legs. They let people move in big ways.
- **Short bones** are in the hands and feet. They let people move in small ways.
- **Flat bones** include the ribs, skull, pelvis. They protect spaces inside the body.

**Muscles** are linked with bones. They let people move.

**Tendons** are tough bands of tissue. They link muscles and bones.

**Joints** are places where 2 or more bones meet.

**Ligaments** are bands of tissue. They connect bones with other bones.

**Cartilage** is tissue at the end of bones. It keeps bones from rubbing against other bones.

# Module 10. Body Systems and Common Diseases

## 2h. The Skin

The skin is also called the “integumentary system.” It’s the largest system of the body.

### **What It Does—The skin:**

- Protects the inside of the body from germs.
- Keeps the body from getting too hot or too cold.
- Holds in body fluids.
- Sends the brain messages about pain, cold, heat, pressure, and touch.

### **Main Parts of the Skin**

- The **epidermis** is the top layer. It contains skin pores and hair.
- The **dermis** is the second layer. It contains hair roots, nerves, glands, and blood vessels.
- The **subcutaneous layer** is the third layer. It contains fatty tissue.
- **Hair** and **nails** are also parts of the integumentary system.

## Module 10. Body Systems and Common Diseases

### 2i. The Urinary System

#### **What It Does—The urinary system:**

- Gets wastes out of the blood.
- Gets wastes out of the body.
- Helps keeps the right amount of fluids and chemicals in the body.

#### **Main Parts of the Urinary System**

- The **kidneys** make urine.
- The **bladder** holds urine.
- The **ureters** bring urine from the kidneys to the bladder.
- The **urethra** brings urine out of the body.

## Module 10. Body Systems and Common Diseases

### 3. Helping Clients with Illness

Read how these workers help clients who are sick.

**Lou’s tip—Watch for changes and report them.**

“I keep an eye on clients—the way they look, the way they act. I look for any changes, and I let my supervisor know.”

**Jen’s tip—Encourage independence whenever possible.**

“My clients feel so good when they can do something like feed themselves or get dressed. I think it gives them hope.”

**Joe’s tip—Help clients eat right.**

“Healthy food can make all the difference. I help clients stay on the diet that’s right for them.”

**Barb’s tip—Keep germs (pathogens) from spreading.**

“Germs are the last things sick clients need. So I always follow the rules for keeping germs under control.”

**John’s tip—Be open to the feelings of clients and their families.**

“Part of the job is dealing with feelings—of both clients and their families. Sometimes I just listen, and it shows I care.”

**Review—How You Can Help Clients with Illness:**

- Watch for changes and report them.
- Encourage independence whenever possible.
- Help clients eat right.
- Keep germs (pathogens) from spreading.
- Be open to the feelings of clients and their families.

## Module 10. Body Systems and Common Diseases

### 4a. Alzheimer's Disease

Page 1 of 2

#### **What Is Alzheimer's Disease?**

Alzheimer's disease happens when brain cells slowly die. Over time, people with Alzheimer's have more and more trouble thinking. For some people, their personality changes. There is no cure for Alzheimer's.

#### **Signs of Alzheimer's Disease**

Signs of Alzheimer's disease vary from person to person and from day to day. The changes start slowly and keep getting worse. The signs of disease are often worse at the end of the day than in the morning.

##### **A client may:**

- Act like a different person
- Be confused about time and place
- Forget how to do daily tasks
- Lose their memory
- Swing quickly from one mood to another
- Wander

##### **A client may have trouble:**

- Finding the right words
- Finishing a sentence
- Keeping their train of thought
- Making choices
- Thinking

## Module 10. Body Systems and Common Diseases

### 4a. Alzheimer's Disease

Page 2 of 2

#### **Observe, Record, Report**

**Tell your supervisor right away if a client with Alzheimer's disease:**

- Acts more confused
- Has more trouble with daily tasks
- Wanders more
- Will **not** take their medicine

## Module 10. Body Systems and Common Diseases

### 4b. Arthritis

Page 1 of 2

#### **What Is Arthritis?**

Arthritis is a disease that can hurt the joints, cartilage, and connective tissues. It can cause pain and trouble moving. Arthritis is the top cause of disability in the United States.

#### **There are two types of arthritis:**

- **Osteoarthritis** happens when joints get stiff.
- **Rheumatoid arthritis** happens when joints swell. It can affect muscles, too. It can also affect organs, such as the heart, lungs, and eyes.

#### **Signs of Arthritis**

##### **A client may:**

- Feel tired all the time
- Get stiff or have trouble moving after being still
- Have swollen, sore, or painful joints all the time

##### **A client may have trouble:**

- Doing daily tasks
- Moving their joints
- Sleeping

## Module 10. Body Systems and Common Diseases

### 4b. Arthritis

Page 2 of 2

#### **Observe, Record, Report**

**Tell your supervisor right away if a client with arthritis:**

- Has hurt skin
- Has more pain and trouble moving
- Has swollen or red joints
- Seems very worried or sad
- Shows signs of infection

## Module 10. Body Systems and Common Diseases

### 4c. Cancer

Page 1 of 2

#### **What Is Cancer?**

Cancer happens when cells grow and spread out of control. This stops parts of the body from doing their jobs. Cancer can start in almost any body part. Cancer cells may spread to other parts of the body and may cause death.

#### **Signs of Cancer**

Signs of cancer depend on what part of the body is affected, and what happens when that body part stops working. They also depend on how far along the cancer is.

#### **Cancer Treatment**

**There are 2 main types of cancer treatment:**

- **Radiation** uses X-rays to kill cancer cells.
- **Chemotherapy** uses strong chemicals to kill cancer cells.

These treatments can kill healthy cells too. This causes side effects.

## Module 10. Body Systems and Common Diseases

### 4c. Cancer

Page 2 of 2

#### Side Effects of Cancer Treatment

##### **A client may:**

- Be in pain
- Eat too little
- Feel sick to their stomach, or throw up
- Feel very tired
- Lose their hair

##### **A client may have:**

- Cuts in their mouth, or bleeding gums
- Hard stools
- Sore skin where they get radiation
- Trouble tasting and smelling

#### Observe, Record, Report

##### **Tell your supervisor right away if a client who has cancer:**

- Has cuts or bruises
- Has hard or loose stools
- Has trouble swallowing, eating, or drinking
- Is in pain, and their medicine does not stop it
- Shows signs of infection in their mouth

## Module 10. Body Systems and Common Diseases

### 4d. CVA (Stroke)

Page 1 of 2

#### What Is a CVA?

CVA is short for **cerebral vascular accident**. It's also called a stroke. A CVA happens when not enough blood gets to parts of the brain.

#### Signs of CVA (Stroke)

You may be with someone when a CVA happens. If you know the signs, you can get help quickly and maybe the damage to the brain will be less.

##### A client may have:

- A severe headache
- A tingly feeling in some parts of the body
- Drooping eyelid, mouth, or face muscles
- Trouble seeing

##### A client may have trouble:

- Seeing out of one or both eyes
- Gripping things with one or both hands
- Moving one side of the body
- Moving their arms, fingers, legs, or toes
- Talking, or understanding other people when they talk
- Understanding what's going on

### **ACT FAST!**

**If a client shows signs of a CVA (stroke), call 9-1-1 right away. The faster you act, the less their brain will be hurt.**

## Module 10. Body Systems and Common Diseases

### 4d. CVA (Stroke)

Page 2 of 2

#### **Observe, Record, Report**

Someone who has had a CVA may not be able to tell you how they are feeling. So watch carefully and report these changes.

**Tell your supervisor right away if a client who is recovering from a CVA:**

- Cannot control their bowel or bladder
- Coughs or chokes when they chew or swallow
- Has hard stools
- Has skin changes
- Is sad or in pain
- Shows signs of germs in their body (infection)

## Module 10. Body Systems and Common Diseases

### 4e. Diabetes

Page 1 of 3

#### **What Is Diabetes?**

Diabetes happens when the pancreas doesn't make enough insulin. Insulin is a hormone that helps the body use the sugar in the blood (glucose) for energy. For a client with diabetes, it's a problem if the blood sugar is too high, or if it's too low. Both conditions can make the client pass out. This is very dangerous.

#### **Signs of Diabetes**

##### **A person may:**

- Be very hungry or thirsty
- Be very tired
- Urinate often
- Have sudden changes in their vision
- Have tingling or numbness in hands or feet
- Have very dry skin
- Have sores that are slow to heal

##### **People with diabetes are more likely to:**

- Get sick from germs (pathogens)
- Get sores on their legs and feet
- Go blind

##### **People with diabetes are more likely to have:**

- A heart attack or CVA (stroke)
- Damaged nerves in their hands and feet
- Damaged kidneys
- Trouble healing

## Module 10. Body Systems and Common Diseases

### 4e. Diabetes

Page 2 of 3

**Type 1 diabetes** usually starts in childhood or early adulthood. People with Type 1 diabetes take insulin shots every day.

**Type 2 diabetes** is more common than Type 1 and it usually starts later in life. It can be controlled through diet and taking medications by mouth.

#### **Signs of High Blood Sugar** (hyperglycemia)

High blood sugar is caused by having too little insulin. The client can pass out from high blood sugar. Signs include:

- Hunger
- Weakness
- Breath that smells sweet or fruity
- Dry skin and flushed cheeks

#### **Signs of Low Blood Sugar** (hypoglycemia)

Low blood sugar is caused by taking too much insulin or getting too little food. The client can also pass out from low blood sugar. This is called insulin shock, or insulin reaction. **THIS IS AN EMERGENCY SITUATION!** Signs include:

- Feeling very hungry or weak
- Feeling nervous, confused, or dizzy
- Headache
- Sweating
- Shaking
- Numbness of lips and tongue

## Module 10. Body Systems and Common Diseases

### 4e. Diabetes

Page 3 of 3

#### **EMERGENCY--ACT FAST!**

**If a client with diabetes has signs of low blood sugar, act right away! Here's what to do:**

- If the client can swallow, give them 4 ounces of orange juice. Then tell your supervisor.
- If the client **cannot** swallow, call 9-1-1 right away. Do what they say. Then tell your supervisor.

#### **Observe, Record, Report**

Unless it's an emergency situation (see above), watch for the following signs and report to your supervisor.

- Changes in blood sugar readings
- Nausea and throwing up
- Being very thirsty
- Breath smells like fruit
- Breathing fast
- Being confused
- Being extremely tired
- Diarrhea
- Not being hungry
- Sores on skin
- Foot problems—rashes, sores, open skin
- Signs of infection

## Module 10. Body Systems and Common Diseases

### 4f. Heart Disease

Page 1 of 2

#### What Is Heart Disease?

Heart disease is when the heart muscle has trouble pumping blood to all parts of the body. Heart disease is also called **cardiovascular disease**. It is the leading cause of death in the U.S.

#### Types of heart disease include:

- **Congestive heart failure** is when the heart muscle gets weaker and weaker and can't pump blood to all parts of the body as well as it should.
- **Coronary artery disease**, or **CAD** for short. This happens when the blood vessels get harder and more narrow. The heart has to work harder to get the blood through the vessels.

#### Signs of Heart Disease

##### A client may:

- Cough because of fluid in their lungs
- Feel pain or pressure in their chest
- Feel very tired or worried
- Have puffy feet and ankles
- Have trouble breathing, even when they don't move

## Module 10. Body Systems and Common Diseases

### 4f. Heart Disease

Page 2 of 2

#### Observe, Record, Report

**Tell your supervisor right away if a client who has heart disease:**

- Coughs up blood
- Feels weak
- Gains weight
- Takes short, fast breaths
- Has a fast heartbeat
- Has little urine
- Sweats a lot
- Has blue lips, skin, or fingers (under the nails)

## Module 10. Body Systems and Common Diseases

### 4g. Lung Disease

#### What Is Lung Disease?

Lung disease makes it hard to get air into or out of the lungs. Lung disease is also called **Chronic Obstructive Pulmonary Disease**, or **COPD** for short. Chronic means it does not go away.

#### Types of lung disease include:

- Asthma
- Chronic bronchitis
- Emphysema

#### Signs of Lung Disease

##### A client may:

- Breathe through their mouth
- Have trouble breathing
- Make a whistling sound when they breathe

#### Observe, Record, Report

**Tell your supervisor right away if a client who has lung disease has:**

- Bluish skin color
- Changes in how they breathe or cough
- Severe difficulty with ADL's
- Extreme sadness

# Module 10. Body Systems and Common Diseases

## 4h. Multiple Sclerosis (MS)

Page 1 of 2

### **What Is Multiple Sclerosis (MS)?**

MS causes changes in the brain and spinal cord. These changes make people weak and have trouble moving. MS is usually diagnosed when people are young adults.

### **Signs of MS**

Signs of MS vary from person to person. They also vary from day to day. Sometimes the client seems much better. This is called remission. Sometimes the client gets worse. This is called exacerbation.

#### **A client may:**

- Be weak
- Feel very sad
- Have stiff or weak arms or legs

#### **A client may have trouble:**

- Controlling their bowel or bladder
- Moving, or moving the way they want to
- Walking or seeing

## Module 10. Body Systems and Common Diseases

### 4h. Multiple Sclerosis (MS)

Page 2 of 2

#### **Observe, Record, Report**

**Tell your supervisor right away if a client with MS:**

- Has more problems than usual with their condition
- Shows big changes in feelings or behavior
- Has hard stools
- Shows signs of a urinary tract infection
- Shows other signs of infection
- Has skin breakdown

## Module 10. Body Systems and Common Diseases

### 4i. Parkinson's Disease

#### **What Is Parkinson's Disease?**

Parkinson's disease causes changes in the brain, spinal cord, and nerves. These changes make people feel stiff, move slowly, and shake. It usually starts after age 50 and slowly gets worse.

#### **Signs of Parkinson's Disease**

##### **A client may:**

- Drool
- Have shaking hands
- Have stiff muscles
- Move, walk, and speak slowly
- Show no feelings with their face

#### **Observe, Record, Report**

##### **Tell your supervisor right away if a client with Parkinson's disease:**

- Has trouble getting around or eating
- Has problems going to the bathroom
- Loses weight
- Seems very sad, worried, or cut off from other people
- Shows signs of infection

# Module 10. Body Systems and Common Diseases

## Handout 1. Body Systems

Page 1 of 3

If you understand body systems and how they work, it can help you to assist a client to live a healthier and more active life. It can also help you and the client deal with health problems when they come up.

A **body system** is a group of body parts. The parts work together to do a job. Each body system has a different function, but they all are made of the same types of body parts:

- **Cells** are the smallest part of the body. They make up all the other parts.
- **Tissues** are the same type of cells joined together.
- **Membranes** are large sheets of tissue. They often link other body parts, cover organs, or line body openings.
- **Glands** are groups of cells that make something.
- **Organs** are different types of tissue that work together to do a job.

There are 10 body systems (all of the ones studied in this training, plus the immune system):

### **Circulatory system**

Pumps blood throughout the body. The blood carries food and oxygen to the cells and takes waste away from the cells. Main parts include the heart, blood, and blood vessels (arteries, capillaries, and veins).

### **Digestive system**

Breaks down food into tiny bits that the body can use. Main parts include: the mouth, the stomach, the small and large intestines, the liver, the gallbladder, and the pancreas.

### **Endocrine system**

Helps control what the body does by making hormones and releasing them into the blood. Main parts include the adrenal glands, the pituitary gland, and the thyroid gland.

# Module 10. Body Systems and Common Diseases

## Handout 1. Body Systems

Page 2 of 3

### **Nervous system**

Controls all other body systems by bringing messages from the rest of the body to the brain. Controls both voluntary and involuntary functions. Main parts include the brain, nerves, the sense organs (eyes, ears, nose, tongue), and the spinal cord.

### **Reproductive system**

Produces the male and female cells that start a new human life, and brings these cells together. Also protects and nourishes the new life growing inside the female, provides a way for the new life to be born, and nourishes the new life after birth. Main parts for the woman include: breasts, ovaries, fallopian tubes, uterus, cervix, and vagina. Main parts for the man include: scrotum, testicles, vas deferens, prostate gland, and penis.

### **Respiratory system**

Brings oxygen into the body and gets rid of carbon dioxide. Main parts include the nose, the trachea, and the lungs.

### **Skeletomuscular system**

Holds up the body and protects the parts inside. It's what makes people able to move. Main parts include bones, muscles, joints, cartilage, ligaments, and tendons.

# Module 10. Body Systems and Common Diseases

## Handout 1. Body Systems

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### **The skin**

Protects the body from germs, keeps the body from getting too hot or too cold, holds in body fluids, and sends the brain messages about pain, cold, heat, pressure, and touch. Also called the “integumentary system.” The main parts: a top layer, with pores and hair (epidermis); a second layer, with hair roots, nerves, blood vessels, and sweat glands (dermis); and a third layer with fatty tissue (subcutaneous layer).

### **Urinary system**

Gets wastes out of the blood and the body, and helps keep the right amount of fluids and chemicals in the body. Main parts are the kidneys, the bladder, ureters, and the urethra.

# Module 10. Body Systems and Common Diseases

## Handout 2. Common Diseases

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When a client has an illness, you can assist in several important ways:

- Watch for changes and report them (ORR).
- Assist with ADLs, and encourage independence as much as possible.
- Help clients eat right.
- Maintain a safe environment for the client.
- Keep germs (pathogens) from spreading.
- Be open to the feelings of clients and their families.

### Some common diseases

- **Alzheimer's disease** happens when brain cells slowly die. Over time, people with Alzheimer's have more and more trouble thinking. For some people, their personality changes. There is no cure for Alzheimer's.
- **Arthritis** is a disease that can hurt the joints, cartilage, and connective tissues. It can cause pain and trouble moving. Arthritis is the top cause of disability in the United States.

There are two types of arthritis:

- **Osteoarthritis** happens when joints get stiff.
  - **Rheumatoid arthritis** happens when joints swell. It can affect muscles, too. It can also affect organs, such as the heart, lungs, and eyes.
- **Cancer** happens when cells grow and spread out of control. This stops parts of the body from doing their jobs. Cancer can start in almost any body part. Cancer cells may spread to other parts of the body and cause death.
  - **CVA** is short for **cerebral vascular accident**. It's also called a stroke. A CVA happens when not enough blood gets to parts of the brain. It can lead to paralysis, difficulty speaking, and sometimes death.

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- **Diabetes** happens when the pancreas doesn't make enough insulin. Insulin is a hormone that helps the body use the sugar in the blood (glucose) for energy. For a client with diabetes, it's a problem if the blood sugar is too high, or if it's too low. Both conditions can make the client pass out. This is very dangerous.
- **Heart disease** is when the heart muscle has trouble pumping blood to all parts of the body. Heart disease is also called **cardiovascular disease**. It is the leading cause of death in the U.S.

Types of heart disease include:

- **Congestive heart failure** is when the heart muscle gets weaker and weaker and can't pump blood to all parts of the body as well as it should.
- **Coronary artery disease**, or **CAD** for short. This happens when the blood vessels get harder and more narrow. The heart has to work harder to get the blood through the vessels.
- **Lung disease** makes it hard to get air into or out of the lungs. Lung disease is also called **Chronic Obstructive Pulmonary Disease**, or **COPD** for short. Chronic means it does not go away.
- **Multiple Sclerosis (MS)** causes changes in the brain and spinal cord. These changes make people weak and have trouble moving. MS is usually diagnosed when people are young adults.
- **Parkinson's disease** causes changes in the brain, spinal cord, and nerves. These changes make people feel stiff, move slowly, and shake. It usually starts after age 50 and slowly gets worse.

# Module 10. Body Systems and Common Diseases

## Worksheet 1. Main Parts of the Body Systems

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<b>Letter of Drawing</b>	<b>Main Parts</b>
	1. The main parts of this body system are: <ul style="list-style-type: none"><li>• Bones</li><li>• Muscles</li><li>• Joints, ligaments, and tendons</li></ul>
	2. The main parts of this body system are: <ul style="list-style-type: none"><li>• A top layer, with pores and hair</li><li>• A second layer, with hair roots, nerves, and sweat glands</li><li>• A third layer, with fatty tissue</li></ul>
	3. The main parts of this body system are: <ul style="list-style-type: none"><li>• The brain</li><li>• Nerves</li><li>• The sense organs</li><li>• The spinal cord</li></ul>
	4. The main parts of this body system are: <ul style="list-style-type: none"><li>• The kidneys</li><li>• The bladder</li><li>• The ureters and urethra</li></ul>

## Module 10. Body Systems and Common Diseases

### Worksheet 1. Main Parts of the Body Systems

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Letter of Drawing	Main Parts
	5. The main parts of this body system are: <ul style="list-style-type: none"><li>• Blood</li><li>• Blood vessels</li><li>• The heart</li></ul>
	6. The main parts of this body system include: <ul style="list-style-type: none"><li>• For the woman: breasts, vagina, uterus, fallopian tubes, ovaries, and cervix</li><li>• For the man: testicles, scrotum, penis, vas deferens, prostate gland</li></ul>
	7. The main parts of this body system are: <ul style="list-style-type: none"><li>• The mouth</li><li>• The stomach</li><li>• The small and large intestines</li><li>• The liver, the gallbladder, and the pancreas</li></ul>
	8. The main parts of this body system include: <ul style="list-style-type: none"><li>• The nose</li><li>• The trachea</li><li>• The lungs</li></ul>

## Module 10. Body Systems and Common Diseases

### Worksheet 2. Body Systems and What They Do

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Letter of Drawing	What the Body System Does
	9. This body system: <ul style="list-style-type: none"><li>• Controls all the other body systems.</li><li>• Brings messages from the rest of the body to the brain.</li></ul>
	10. This body system: <ul style="list-style-type: none"><li>• Pumps blood with food and oxygen to the cells.</li><li>• Takes wastes away from the cells.</li></ul>
	11. This body system: <ul style="list-style-type: none"><li>• Produces the male and female cells that start a new human life</li><li>• Protects and nourishes the new life growing inside the woman</li><li>• Provides a way for the new life to be born</li></ul>
	12. This body system: <ul style="list-style-type: none"><li>• Gets liquid wastes out of the body.</li><li>• Helps keeps the right amount of fluids and chemicals in the body.</li></ul>

## Module 10. Body Systems and Common Diseases

### Worksheet 2. Body Systems and What They Do

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<b>Letter of Drawing</b>	<b>What the Body System Does</b>
	13. This body system: <ul style="list-style-type: none"><li>• Holds the body up-right.</li><li>• Protects organs inside the body.</li><li>• Lets people move their bodies.</li></ul>
	14. This body system: <ul style="list-style-type: none"><li>• Breaks down food into tiny bits that the body can use.</li></ul>
	15. This body system: <ul style="list-style-type: none"><li>• Brings oxygen into the body.</li><li>• Gets carbon dioxide out of the body.</li></ul>
	16. This body system: <ul style="list-style-type: none"><li>• Protects the inside of the body from germs.</li><li>• Keeps the body from getting too hot or too cold.</li><li>• Sends the brain messages about pain, cold, heat, and touch.</li></ul>

## Module 10. Body Systems and Common Diseases

### Worksheet 3. Name That Body System!

\_\_\_\_\_ 17. The Circulatory System

\_\_\_\_\_ 18. The Digestive System

\_\_\_\_\_ 19. The Nervous System

\_\_\_\_\_ 20. The Reproductive System

\_\_\_\_\_ 21. The Respiratory System

\_\_\_\_\_ 22. The Skeletomuscular System

\_\_\_\_\_ 23. The Skin

\_\_\_\_\_ 24. The Urinary System