Meets First Aid & CPR Guidelines 2005
Meets Paramedic Association of Canada National Occupational Competency Profile for EMR

Canadian Red Cross

Emergency Care Workbook

A comprehensive resource for First Responders and Emergency Medical Responders

Canadian Red Cross

EMERGENCY CARE WORKBOOK

StayWell

Cette publication est disponible en français.

The terms "he" and "she" have been used throughout the document to ensure representation of both genders.

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CONTENTS

The Responder

For Your Review
Read Chapter 1 of the *Emergency Care Manual*, then complete the following activities.

Key Terms
Referring to your *Emergency Care Manual*, define the following terms:

Abandonment: _____

Confidentiality: _____

Consent: _____

Duty to act: _____

Emergency medical responder (EMR): _____

Emergency medical services (EMS) system: _____

First responder: _____

Good Samaritan laws: _____

Interpersonal communication: _____

Medical control: _____

Negligence: _____

Refusal of care: _____

Standard of care: _____

Do You Know...

1. Word Search: Characteristics of a Responder
   Here are some of the traits a responder should have. In the letters below, circle these words or phrases. They may be found horizontally, vertically, or diagonally.

Communication Skills
Compassion
Competence
Confidence
Diplomacy
Discretion
Empathy
Good Health
Sympathy
Tact
Technical Skills

S G D L D K Y X T N T T Y G C S A I S O
A L E O W I Z H O E C O O I O L M C T D
E W L Y F G S I T A V O V T M L H B M U
F J E I A X S C T A D G B E P I M A P B
G N A O K S V R R H P V H L E K U Z U L
N X Z F A S O C E E S M E I T S U S G D
U T F P F W N A Y T T K Y A E L M L X I
L Z M E W Z L O A I W I T S N A S Q F L
Y O E A U T R Z I W Q K O H C C R I D X
C K J J H G R J L T A P C N E I D U E W
K I R H Q K Y H A V A W E A F N U N X B
B E M W G F H M K Z J C X L E H D Z R L
N L P Z F K T T P H U F I U N C F X E D
A M K R T I A Y D O U G H N B E S K K N
G N D A S C P Q H C V X E K U T I P A L
R Q Y V L Q M F J X D I M L F M Z W I O
C O N F I D E N C E K U O J W A M D X Q
R N C A Q J M Q Y I E A T L L L Z O N H
B B T C Z W T R M B G H R R A E R X C A
Y C A M O L P I D O S N A D L I A A G N

What Would *You* Do?
Read the following scenario and answer the questions below.

While you are driving to work one morning, you see someone has fallen off his bicycle and seems to be bleeding from his leg quite severely. As you get closer, you notice that the bike is badly damaged and the person has several cuts and scrapes all over him.

1. In this situation, do you have a duty to act? If so, why? If not, why not?

2. If you do decide to act in this situation, your first concern should be to:
   a. Bandage the wounds
   b. Determine if there are any other injuries you can't see
   c. Ensure your safety and the safety of any bystanders
   d. Call work and tell them you will be late
3. What types of hazards may be present? What can you do to protect yourself from these?

Test Your Knowledge
Circle the best answer to each of the following questions.

1. Which of these is not a level recognized by the Paramedic Association of Canada?
   a. Primary Care Paramedic
   b. Initial Care Paramedic
   c. Critical Care Paramedic
   d. Emergency Medical Responder
2. As a responder, you should have good communication skills. Which of the following people is a responder least likely to need to communicate with?
   a. The ill or injured person and his family
   b. His partner or co-workers
   c. Bystanders
   d. The lawyer of the ill or injured person
3. When obtaining consent before caring for someone, which of the following do you NOT have to do?
   a. Have the person sign the Acceptance of Treatment form
   b. Identify yourself with your name
   c. Indicate what you think may be wrong and what you plan to do
   d. State your level of training
4. All documentation should be:
   a. Perfectly handwritten, accurate, and without error
   b. Bulleted, with the diagnosis clearly indicated
   c. Legible, professional, and complete
   d. Typed, on time, and signed by the ill or injured person
5. Ending care of an ill or injured person without his consent, or without ensuring that someone with equal or more advanced care will continue the care, is called:
   a. Abandonment
   b. Refusal of care
   c. Transfer of function
   d. Competence
6. What are the first two critical actions that someone from the general public should take in an emergency?
   a. Recognize that an emergency exists and begin prompt care
   b. Recognize that an emergency exists and obtain more advanced medical care
   c. Obtain more advanced medical care and move the ill or injured person out of any hazardous situations
   d. Transport the ill or injured person to a hospital and wait until the family arrives

The Emergency Scene

For Your Review
Read Chapter 2 of the *Emergency Care Manual*, then complete the following activities.

Key Terms
Referring to your *Emergency Care Manual*, define the following terms:

Emergency move: _____

Hazardous materials: _____

Do You Know…

1. What hazards do you see at this scene?

2. What would you do to control this scene?

3. At the site of a collision, list the three situations in which you might park in a roadway to block traffic.

   i. _____

   ii. _____

   iii. _____

4. List the five key elements a responder should pay attention to when approaching an emergency scene.

   i. _____

   ii. _____

   iii. _____

   iv. _____

   v. _____

Fill in the Blanks

1. Complete the Table
   Fill in the situations that correspond to each appropriate set of precautions to take.

Situation	Precautions
	a. Check doors before opening them, stay close to the floor, avoid using elevators
	b. Ensure the scene is safe, avoid touching anything unless it hinders care, document everything
	c. Put up reflectors, flares, or lights well back from the scene, for visibility
	d. Look for placards on transportation vehicles, clues such as spilled substances, leaking containers, or unusual odours
	e. Get directions from the incident commander; triage appropriately

What Would *You* Do?

Read the following scenario and answer the questions below.

You arrive at the scene of a motor vehicle collision. One car is perched on its side, and on the other side of the road, a truck has hit a large tree, snapping the trunk and causing the top of the tree to be angled over the truck.

1. Ideally, what personal protective equipment should you wear to ensure your safety at the scene?

   i. _____

   ii. _____

   iii. _____

   iv. _____

   v. _____

2. As you approach the scene, you see a placard indicating a flammable substance is on board. Which of the following would be an appropriate action to take?
   a. Open the truck doors and investigate what the substance is
   b. Ensure that the appropriate services to deal with hazardous materials have been notified
   c. Have bystanders gather buckets of water in case of fire
   d. Check to see if any houses nearby have a chainsaw so you can cut down the tree

3. Appropriate resources are on scene, dealing with the truck and directing traffic. You are clear to begin necessary treatment. The truck driver appears uninjured, and he exits the truck on his own power, where another responder tends to him. You now make your way toward to the car and its passengers. What should be your first step?
   a. Climb into the car to assess the people
   b. Ask the people in the car to climb out
   c. Ensure the car has been stabilized
   d. Gather people to help you roll the car upright

Test Your Knowledge

Circle the best answer to each of the following questions.

1. Which of the following is NOT a primary responsibility of the responder at an emergency scene?
   a. Ensure safety for yourself and any bystanders
   b. Gain access to the ill or injured person(s)
   c. Contact the friends and/or family of the ill or injured person
   d. Determine any threats to the ill or injured person's life

2. If there is a downed electrical wire at an emergency scene, how far away should the bystanders be moved?
   a. Twice the length of the span of the wire
   b. There is no specific place to which they should be moved
   c. Half the distance between the two poles from which the broken wire has been strung
   d. The distance from the break in the wire to the closest power pole

3. If you are in a burning building, which is the best way to get out safely?
   a. Cover your mouth and nose with a moist cloth and walk to the nearest exit
   b. Jump out the nearest window
   c. Cover your mouth and nose with a moist cloth and stay close to the floor
   d. None of the above

4. Which of the following are clues that a hazardous material may be present at an emergency?
   a. Chemical transport tanks and/or placards
   b. Clouds of vapour or spilled solids or liquids
   c. Unusual odours
   d. All of the above

5. An emergency that may overwhelm the capabilities of an EMS system is called:
   a. Simple Triage And Rapid Treatment (START)
   b. Triage
   c. A multiple casualty incident
   d. Critical incident stress

6. The system used to control and direct the resources at an emergency scene is referred to as the:
   a. Incident command system
   b. Simple Triage And Rapid Treatment system
   c. Emergency medical services system
   d. Dispatch system

7. To have an effective plan of action, which of the following are crucial?
   a. Advanced care training and a large human resource base
   b. Advance preparation and periodic rehearsal
   c. A complex medical communication network
   d. Specialized equipment and vehicles

8. When pulling someone out of deep water, it is important to:
   a. Enter the water and hold onto the person securely
   b. Yell for help as you wade in to get the person
   c. Keep as low as possible and use something to reach the person from a stable point
   d. Both a and b

Preventing Disease Transmission

For Your Review
Read Chapter 3 of the *Emergency Care Manual*, then complete the following activities.

Key Terms
Referring to your *Emergency Care Manual*, define the following terms:

AIDS (acquired immune deficiency syndrome): _____

Airborne transmission: _____

Bacteria: _____

Blood-borne pathogens: _____

Direct contact transmission: _____

Hepatitis: _____

Herpes: _____

HIV (human immunodeficiency virus): _____

Immune system: _____

Immunization: _____

Indirect contact transmission: _____

Infection: _____

Infectious disease: _____

Meningitis: _____

Pathogen: _____

Tuberculosis: _____

Vector transmission: _____

Virus: _____

Do You Know…

1. The four conditions that must be present for an infection to be transmitted to someone are:
   i. _____
   _____
   ii. _____
   _____
   iii. _____
   _____
   iv. _____
   _____
2. List five precautions you can take to prevent disease transmission:
   i. _____
   _____
   ii. _____
   _____
   iii. _____
   _____
   iv. _____
   _____
   v. _____
   _____
3. An exposure control plan should include the following elements:
   i. _____
   _____
   ii. _____
   _____
   iii. _____
   _____

What Would *You* Do?

Read the following scenario and answer the questions below.

You are called to a residence because a 15-year-old teenager is worried about her grandfather, who has fallen and cut his leg. Upon talking to her, you learn that her grandfather has been coughing more than usual, and at times there has been blood on the tissues he uses. She attributed this to his age. As you approach him, he is coughing.

1. What precautions, if any, should you take when caring for the grandfather?
2. Aside from the cut on his leg, what ailment might the grandfather be suffering from?
   a. Meningitis
   b. Tuberculosis
   c. Kidney stones
   d. Chickenpox/shingles
3. If someone catches an infection from particles expelled during coughing, what method of disease transmission would this be?
   a. Direct contact
   b. Indirect contact
   c. Vector-borne transmission
   d. Airborne transmission

Test Your Knowledge

Circle the best answer to each of the following questions.

1. Which of the following can be transmitted by airborne particles?
   a. HIV/AIDS
   b. Hepatitis and meningitis
   c. Meningitis and tuberculosis
   d. Herpes and tuberculosis

2. If you think you have been exposed to an infectious disease at an emergency scene, the first step you should take is:
   a. Go to a hospital to be tested
   b. Notify your supervisor and any other responder personnel involved
   c. Determine what type of disease it is
   d. Contact the Poison Control Centre

3. In which of the following cases should you wear full protective equipment (gloves, gown, mask, and eyewear)?
   a. When wiping down a blood pressure cuff after a call
   b. When caring for bleeding that is spurting
   c. When caring for someone with signs of an infectious respiratory illness
   d. Both b and c

4. Which of the following can be transmitted by contaminated food?
   a. Tuberculosis and rubella
   b. Typhus and diphtheria
   c. Meningitis and hepatitis
   d. Meningitis and herpes

5. Which of the following are basic components of the immune system?
   a. White blood cells
   b. Platelets
   c. Antigens
   d. Red blood cells

6. Immunizations are available for which of the following diseases?
   a. Hepatitis A and B, polio, and mumps
   b. Herpes, meningitis, and hepatitis C
   c. Influenza, rubella, and tetanus
   d. Both a and c

Human Body Systems

For Your Review
Read Chapter 4 of the *Emergency Care Manual*, then complete the following activities.

Key Terms
Referring to your *Emergency Care Manual*, define the following terms:

Body system: _____

Cell: _____

Circulatory system: _____

Digestive system: _____

Endocrine system: _____

Genitourinary system: _____

Integumentary system: _____

Musculoskeletal system: _____

Nervous system: _____

Organ: _____

Respiratory system: _____

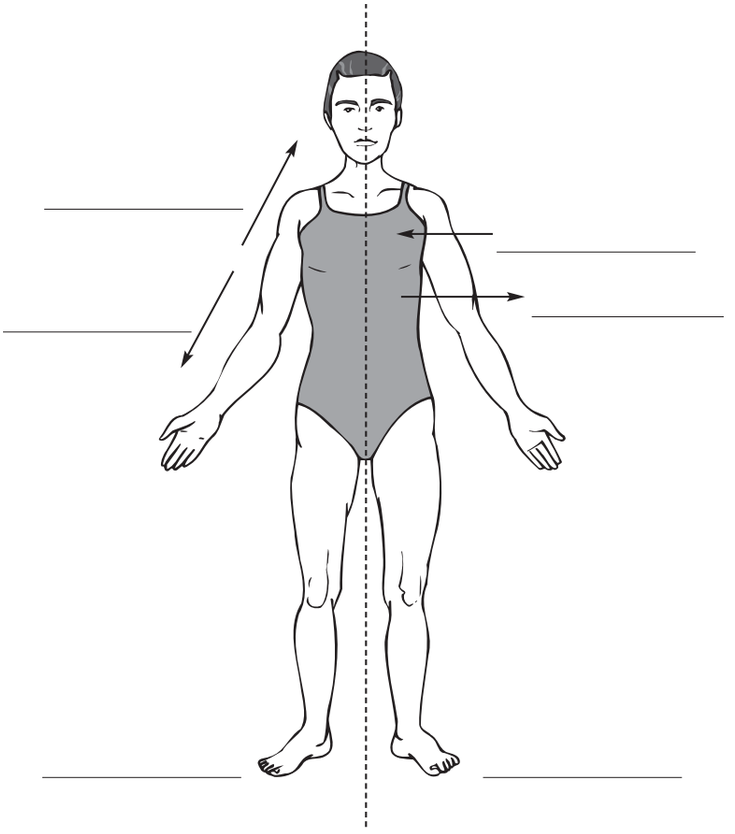
Tissue: _____

Vital organs: _____

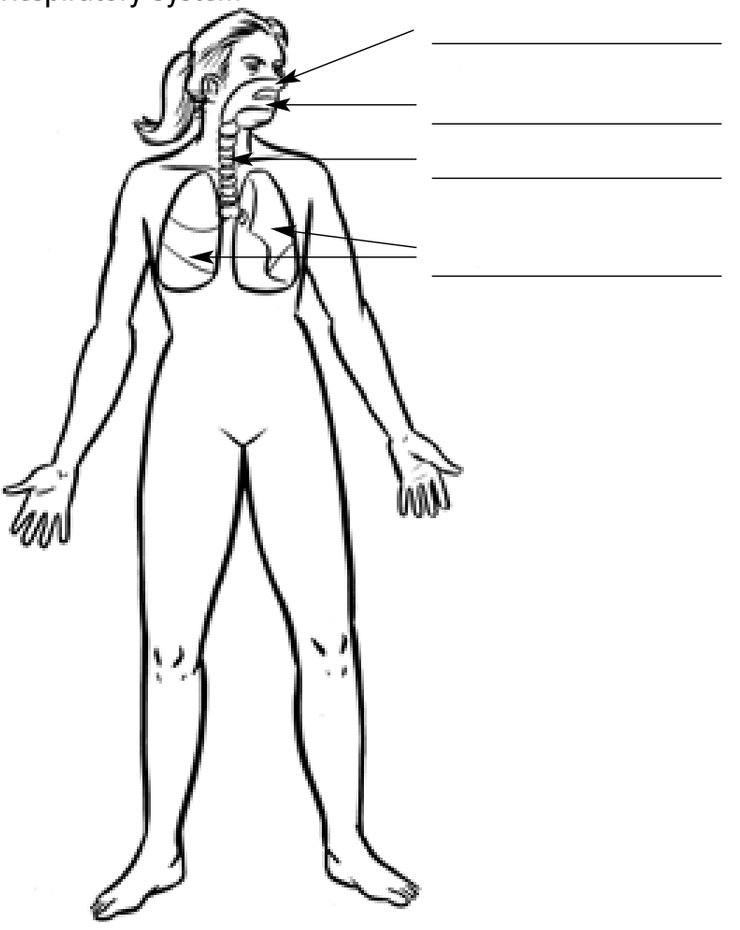
Fill in the Blanks

1. Fill in the blanks with the correct body parts and other terminology below.

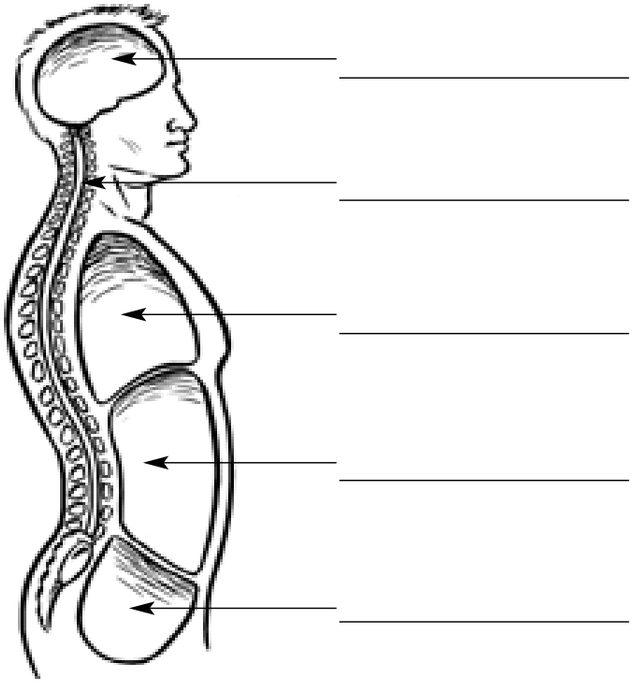
Directional Terms



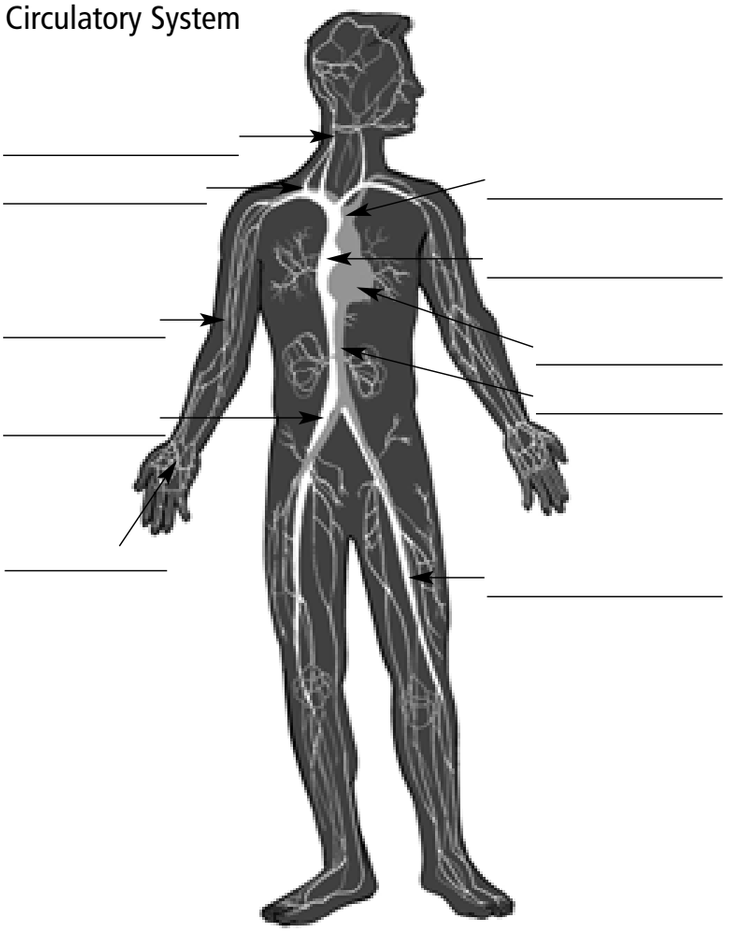
Respiratory System



Body Cavities



Circulatory System



2. "Anatomical position" is:

3. Complete the chart below:

Body System	Major Components	Purpose
		Supplies the body with oxygen through breathing
	Bones, muscles, joints, ligaments, tendons	
Nervous		
		Breaks down food and eliminates waste
Integumentary		
	Heart, arteries, veins, capillaries, blood	
Endocrine		
	Uterus and genitalia	
	Kidneys and bladder	

4. Complete the chart below with the names of each body cavity and the major structures within each cavity.

Body Cavity	Major Structures in the Cavity
a.	
b.	
c.	
d.	
e.	

What Would *You* Do?
Read the following scenarios and answer the questions below.

Scenario 1
While at work at a machine shop, a man is turning a piece of steel on a lathe. The chuck is not tight enough, and when the tool makes contact with the steel, the steel projects itself toward the man. He puts his arm up to block his face, and the steel makes a deep laceration in the back of his upper arm.

1. Using correct terminology, describe the location of the injury in relation to these other body structures:
   a. Elbow: _____
   b. Shoulder: _____
2. Is the injury superior or inferior to the pelvis?

   _____
3. Which two body systems will interact to alert the man to his injury?
   a. Nervous and respiratory
   b. Endocrine and nervous
   c. Nervous and integumentary
   d. Circulatory and digestive

Scenario 2
Read the following scenario and answer the questions below.

You are called to a school where a teenaged boy is having a severe allergic reaction and has used his prescribed epinephrine auto-injector. He has a MedicAlert® medical identification product around his neck that indicates he has a severe allergy to peanuts. The person sitting beside him in the cafeteria was eating a granola bar.

1. Anaphylaxis is a reaction that can affect which of the following body systems?
   a. Nervous, endocrine, and genitourinary
   b. Integumentary, endocrine, musculoskeletal, and nervous
   c. Digestive, respiratory, and genitourinary
   d. Integumentary, respiratory, cardiovascular, and digestive
2. Hives or redness of the skin may be the visual signs of anaphylaxis on the skin. What signs may be present that indicate an effect on the digestive system?

3. Epinephrine opens the airway and stimulates the heart to continue beating. Which two body systems does this indicate that epinephrine affects?

Test Your Knowledge

Circle the best answer to each of the following questions.

1. The epiglottis prevents liquids and solids from entering what?
   a. The stomach
   b. The lungs
   c. The esophagus
   d. The intestines

2. Where do arteries carry blood?
   a. From the heart to the body tissues
   b. From the lungs to the heart
   c. From the heart to the lungs
   d. Both a and c

3. The integumentary system has many functions. Its main function(s) is(are) to:
   a. Prevent infection
   b. Secrete hormones
   c. Produce white blood cells
   d. All of the above

4. In comparison with the chest, the neck is described as _____, whereas the abdomen is described as_____.
   a. Anterior, posterior
   b. Medial, lateral
   c. Superior, inferior
   d. Proximal, distal

5. The respiratory system and cardiovascular system work together to:
   a. Provide oxygen to the cells of the body
   b. Keep hormones distributed throughout the body
   c. Regenerate nervous tissue after injury
   d. Regulate blood flow to the digestive system

6. Which of the following is not in the pelvic cavity?
   a. Rectum
   b. Spleen
   c. Bladder
   d. Reproductive organs

7. Which of the following is one of the quadrants of the abdomen?
   a. Dorsal quadrant
   b. Superior quadrant
   c. Upper midline quadrant
   d. Lower right quadrant

Assessment

For Your Review
Read Chapter 5 of the *Emergency Care Manual*, then complete the following activities.

Key Terms
Referring to your *Emergency Care Manual*, define the following terms:

Blood pressure (BP): _____

Brachial artery: _____

Carotid artery: _____

Glasgow Coma Scale (GCS): _____

Head-tilt/chin-lift: _____

Jaw thrust: _____

Level of consciousness (LOC): _____

Mechanism of injury (MOI): _____

Primary survey: _____

Respiratory rate: _____

Secondary survey: _____

Signs: _____

Symptoms: _____

Vital signs: _____

Do You Know…

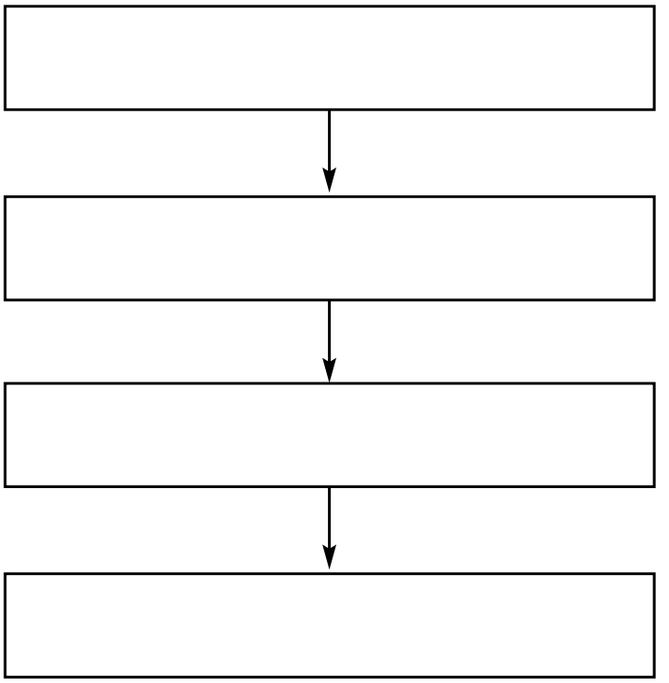
1. What are the three parts of the secondary survey?
   i. _____
   ii. _____
   iii. _____
2. If you need to call for further help, what are the seven pieces of information you will need to tell the dispatcher?
   i. _____
   ii. _____
   iii. _____
   iv. _____
   v. _____
   vi. _____
   vii. _____
3. If you are not transporting the ill or injured person yourself, you will need to obtain more advanced medical care in some cases. List five conditions in which you would do this.
   i. _____
   ii. _____
   iii. _____
   iv. _____
   v. _____
4. List the equipment you would ideally have to completely check vital signs.

   _____

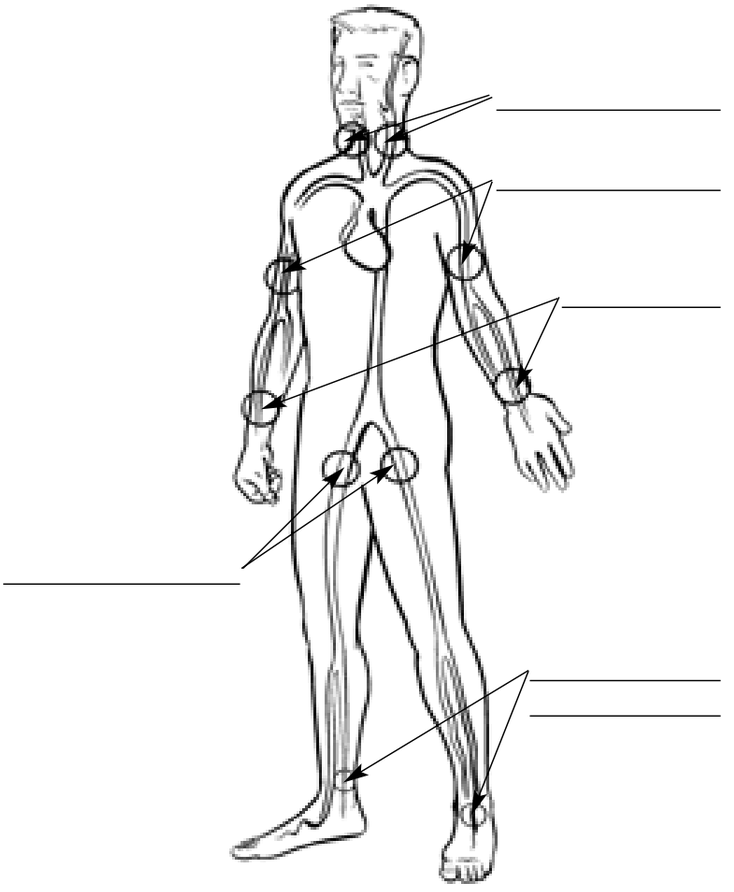
   _____

Fill in the Blanks

1. The Assessment Process
   Fill in the boxes to show the steps involved in assessment.



2. Label the pulse points in the diagram.



3. Commonly used assessment mnemonics. Complete the words or phrases represented by each mnemonic.

ABC

A _____

B _____

C _____

SAMPLE

S _____

A _____

M _____

P _____

L _____

E _____

AVPU

A _____

V _____

P _____

U _____

OPQRST

O _____

P _____

Q _____

R _____

S _____

T _____

APGAR (See Chapter 19 on childbirth.)

A _____

P _____

G _____

A _____

R _____

Some other assessment mnemonics you may hear in the field are:

Why might a person have an altered level of consciousness?

Alcohol
Epilepsy
I nsulin (diabetic)
Overdose
Uremia

Trauma
I nfection
Psychiatric/**P**oison
Stroke (cardiovascular)

When doing a secondary survey, remember to:
Inspect for CLAPS

Contusions
Lacerations
Abrasions
Punctures/**P**enetrations
Swelling/**S**ubcutaneous emphysema

and palpate for TICS

Tenderness
I nstability
Crepitus
Swelling/**S**ubcutaneous emphysema

or DCAP and BLS

Deformities
Contusions
Abrasions
Punctures/**P**enetrations

Burns
Lacerations
Swelling

When doing a secondary survey, look for DOTS (signs of injury)

Deformities
Open wounds
Tenderness
Swelling

4. Vital Signs

Fill in the name of the vital sign that corresponds to the number or observation written here.

Observation	Vital Sign
120/72	
Alert and oriented	
Equal and reactive to light	
14, regular, and deep	
Dilated and fixed	
93, weak, and thready	
130/P	
Pale, cool, and clammy	
GCS of 13	
Red, hot, and dry	
76, regular, and full	
Unresponsive	

5. Assess Your Classmates

Fill in the names of your classmates. Then take the following vital signs and fill in your findings for each classmate.

Name	Respirations	Pulse	Skin	Blood Pressure	Pupils

What Would *You* Do?
Read the following scenario and answer the questions below.

You are called to the local park, where a child has collapsed in the sandbox. The child is not responsive. You confirm that the child is breathing and has a pulse.

1. What are the next three steps you should take?
   i. _____
   ii. _____
   iii. _____
2. You check the child's vital signs and find the following. Put an 'X' next to the vital signs that are probably not normal for this child and a '✓' next to those that are probably normal.

Vital Sign	Normal vs. Not Normal
Level of consciousness: unresponsive	
Breathing: 10, shallow, and regular	
Pulse: 100, strong, and regular	
Skin: pale, cool, and clammy	
Blood pressure: 120/60	
Pupils: equal and reactive to light	

3. The child's babysitter is able to answer any questions you have regarding the child. Circle the letter beside the item with questions you would ask her:
   a. The child's sleeping patterns, eating times, and vaccination records
   b. The child's allergies, current medications, and the last time the child ate or drank anything
   c. The child's age, address, and where she/he goes to school
   d. The child's medical conditions, activities before the emergency, and normal breathing rate
4. After completing your secondary survey, you perform another vital sign check and observe the following. Put an 'X' next to the vital signs that are probably not normal for this child and a '✓' next to those that are probably normal.

Vital Sign	Normal vs. Not Normal
Level of consciousness: reactive to verbal stimuli	
Breathing: 14, strong, and regular	
Pulse: 100, strong, and regular	
Skin: warm and pink	
Blood pressure: 110/60	
Pupils: equal and reactive to light	

Test Your Knowledge
Circle the best answer to each of the following questions.

1. If you check capillary refill and the nail bed does not return to normal colour after you release, what does this mean?
   a. The person has insufficient circulation
   b. You pressed on the fingernail too hard
   c. You did not press on the fingernail hard enough
   d. The person's heart is not beating
2. Which of the following should you treat before performing a secondary survey?
   a. A fracture/sprain of the elbow
   b. An impaled object through the right hand
   c. Severe bleeding from the left leg
   d. None of these should be treated until after the secondary survey
3. When doing a head-to-toe survey of an unconscious person, you should:
   a. Look for medical insurance and check to see if anyone knows what happened
   b. Inspect the arms first as this can give you a good indication of injuries to the torso
   c. Ask the person to take a deep breath in and then exhale
   d. Inspect the person using sight and touch
4. When surveying the scene, which of the following should you NOT need to ask yourself?
   a. Is the scene safe?
   b. Can bystanders help?
   c. What might have happened?
   d. Do I have all the right equipment?

5. When forming a general impression, which of the following do you NOT need to determine?
   a. If the person is ill or injured
   b. The person's gender and approximate age
   c. If the person takes any medications
   d. The person's chief complaint

6. Which of the following would indicate a need for more advanced care?
   a. A 30-year-old woman who has a bruise on her leg from a soccer ball
   b. A 50-year-old man experiencing numbness and tingling on the right side of his body
   c. A 10-year-old girl who is crying because of a bee sting
   d. A 65-year-old man experiencing stiffness in his back after swimming 30 lengths of the pool

7. When assessing a child or baby, which of the following should you NOT do?
   a. Speak loudly and forcefully so she sees that you know what you are doing
   b. Use the child or baby's name and get down to her eye level
   c. Approach slowly and allow the child or baby time to get used to you
   d Explain what you are doing and allow her to inspect equipment

8. What are the purposes of the primary and secondary surveys?
   a. Determine if the person is in shock; identify if the person is still in shock or if your treatment has helped
   b. Identify any hazards that are a threat to those at the scene; determine what else might be wrong with the ill or injured person
   c. Determine the initial vital signs to compare with during later monitoring; identify any allergies or medications the person might have
   d. Identify conditions that are an immediate threat to life or could become an immediate threat to life; identify conditions that are not immediately life-threatening

Skill Review

To review your skills, see the review section in Chapter 5 of the *Emergency Care Manual.*

Respiratory Emergencies

For Your Review
Read Chapter 6 of the *Emergency Care Manual*, then complete the following activities.

Key Terms
Referring to your *Emergency Care Manual*, define the following terms:

Acute pulmonary edema: _____

Airway obstruction: _____

Anaphylaxis: _____

Aspiration: _____

Asthma: _____

Breathing emergency: _____

Bronchitis: _____

Chronic obstructive pulmonary disease (COPD): _____

Cyanosis: _____

Emphysema: _____

Epinephrine: _____

Finger sweep: _____

Hyperventilation: _____

Metered-dose inhaler (MDI): _____

Pneumonia: _____

Pulmonary embolism: _____

Rescue breathing: _____

Respiratory arrest: _____

Do You Know…

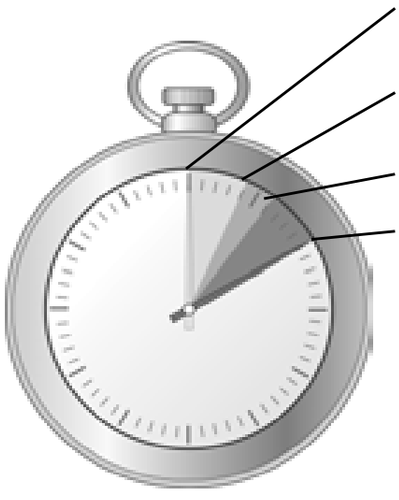
1. What are the two types of airway obstruction?
   i. _____
   ii. _____
2. What are the signs and symptoms of a breathing emergency?

3. When is it appropriate to stop rescue breathing?

4. What technique should be attempted first to open the airway of someone with a head or spine injury?

Fill in the Blanks

1. Fill in the appropriate times below and indicate the significance of each time.



_____

_____

_____

_____

2. Respiratory Emergencies
   Fill in the type of emergency that corresponds to each description.

Type of Emergency	Description
	1. An obstruction in the airway
	2. A narrowing of the air passages
	3. A disease in which carbon dioxide/oxygen exchange is not effective
	4. Swelling of the air passages due to a reaction to an allergen
	5. A disease causing increased mucous secretions in the air passages
	6. Breathing faster than normal

What Would *You* Do?

Read the following scenario and answer the questions below.

You are called to a restaurant where someone is choking. More advanced care is also on the way. You arrive to find out the choking person has gone into the washroom to avoid embarrassment. The woman is visibly pregnant and quite far along. She is looking pale and anxious and is making high-pitched wheezing sounds.

1. After identifying yourself and explaining what you are going to do, you should:
   a. Get her to lie on the ground and begin chest compressions
   b. Stand behind the woman and begin abdominal thrusts
   c. Do nothing until she stops making sounds
   d. Stand behind the woman and begin chest thrusts
2. The woman goes unconscious. You protect her head and lower her to the ground. You open her airway using a head-tilt/chin-lift and check for breathing. You find she is not breathing. You should:
   a. Attempt to give her a ventilation
   b. Check for a pulse
   c. Begin chest compressions
   d. Do a finger sweep of the mouth

3. At one point, your ventilation goes in and you see the chest just begin to rise. You should:
   a. Do 30 more chest compressions
   b. Give another ventilation
   c. Roll her into the recovery position
   d. Recheck her ABCs

4. If you find that the woman is not breathing, but she has signs of circulation (including a pulse), you should give her one ventilation every three to five seconds. True or false?

Test Your Knowledge

Circle the best answer to each of the following questions.

1. A person with anaphylaxis may carry a(n):
   a. Glucometer
   b. Epinephrine auto-injector
   c. Pulse oximeter
   d. Metered-dose inhaler

2. You are giving care for someone who is unconscious and choking. If your FIRST breath does not go in, you should:
   a. Begin chest compressions
   b. Attempt another ventilation, with slightly more force
   c. Do a finger sweep of the mouth
   d. Re-tilt the head and attempt another ventilation

3. General care for any breathing emergency can include:
   a. Assisting the person to take her prescribed medication; reassuring the person
   b. Performing rescue breathing; giving high-flow oxygen
   c. Making the person lie down; keeping the person cool
   d. Ensuring the area is well ventilated; performing abdominal thrusts

4. When performing back blows and chest thrusts on a conscious choking baby, how should you position the baby?
   a. On a flat surface such as a table
   b. Turned on her side for easy access to the back and chest
   c. Resting on your thigh with the head lower than the body
   d. Upside down so gravity has the most effect

5. After finding no breathing and giving two one-second ventilations, what is the next step?
   a. Check for signs of circulation, including a pulse, for no more than 10 seconds
   b. Check for level of consciousness
   c. Re-tilt the head and give one more ventilation
   d. Begin 30 chest compressions

6. If an unconscious person vomits while you are performing rescue breathing, this is probably because:
   a. The smell of the mask is bothering the person
   b. The head wasn't tilted back appropriately or you were ventilating too forcefully
   c. The person had been poisoned and the ventilations caused the stomach to expel the poison
   d. The lungs are reacting to the positive pressure of the ventilations

7. If a person is wearing dentures and you need to perform rescue breaths, you should:
   a. Always remove them; they are a choking hazard
   b. Always keep them in; if you take them out they will most likely get lost or broken
   c. Leave them in unless they have become loose; having them in will give you a better seal around the mouth
   d. Check the person's wallet for a card that expresses what they want a rescuer to do with the dentures in case of emergency

8. Breathing emergencies can be life-threatening because:
   a. The airway is always blocked, not allowing oxygen to get to the lungs
   b. The process of oxygen getting into the lungs, exchanged into the blood, and getting to the body cells is disrupted
   c The lungs are no longer working
   d. There are no treatments for breathing emergencies

Skill Review

To review your skills, see the review section in Chapter 6 of the *Emergency Care Manual.*

Airway and Ventilation

For Your Review
Read Chapter 7 of the *Emergency Care Manual*, then complete the following activities.

Key Terms
Referring to your *Emergency Care Manual*, define the following terms:

Bag-valve-mask (BVM) resuscitator: _____

Flowmeter: _____

Hypoxia: _____

Nasal cannula: _____

Nasopharyngeal airway (NPA): _____

Non-rebreather mask: _____

Oropharyngeal airway (OPA): _____

Oxygen cylinder: _____

Oxygen delivery device: _____

Pressure regulator: _____

Resuscitation mask: _____

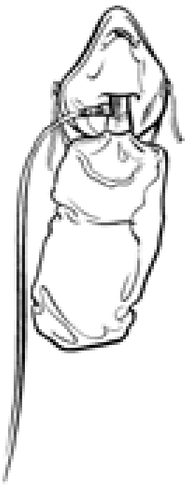
Suctioning: _____

Ventilation: _____

Ventilation devices: _____

Do You Know…

1. What safety precautions should be followed when administering oxygen?



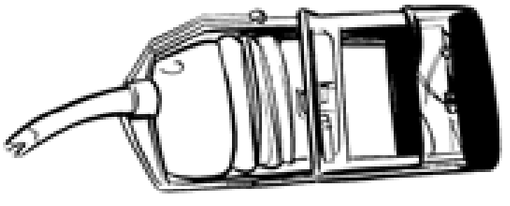
_____

_____

Fill in the Blanks

1. Identify the appropriate equipment by filling in the blanks.

_____



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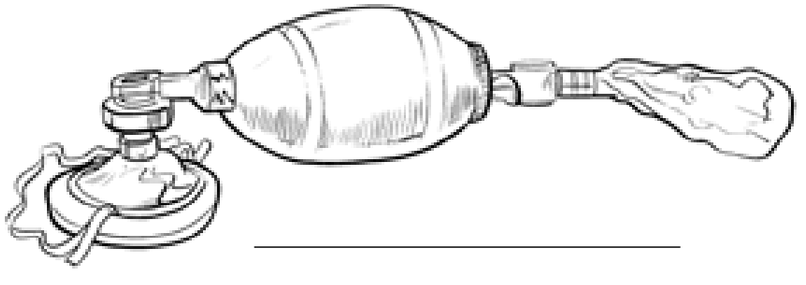


_____

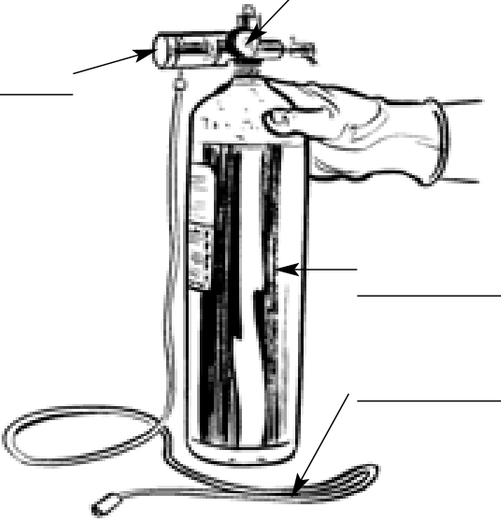
2. Identify the parts of an oxygen tank by filling in the blanks.

_____

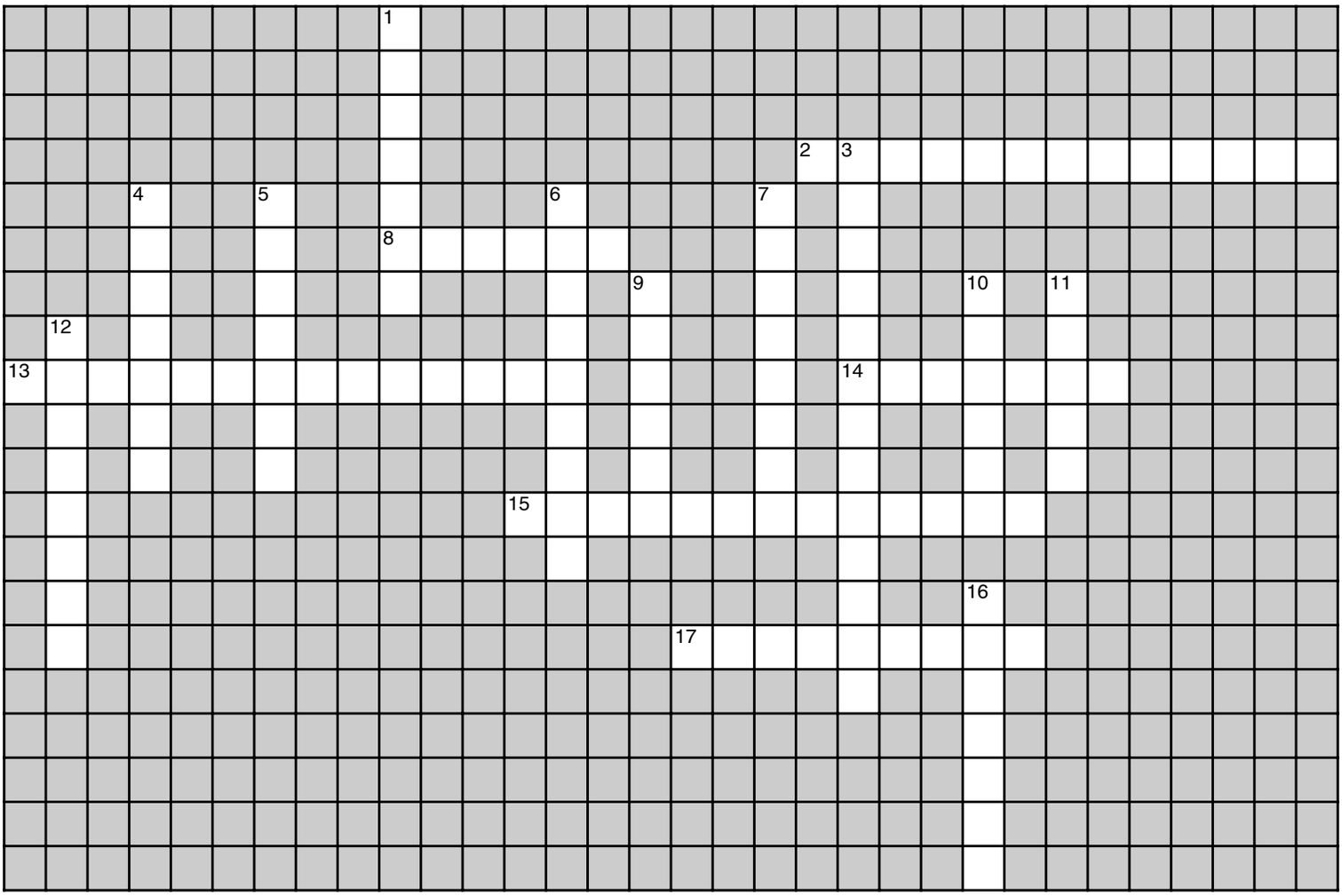
_____

_____

_____



3. **Crossword**



Across

2. An airway inserted into the mouth of someone who is unconscious, to help keep an airway open
8. A gas beneficial in treating shock
13. A device inserted into the nose to help keep an open airway
14. Nasal_____: a tube through which low-flow oxygen can be administered
15. A mask used on a person who is breathing on her own
17. Never use grease, oil, or _____ products to lubricate regulator parts

Down

1. The motion used to open the mouth when using the crossed-finger technique
3. This type of mask is used on someone who is not breathing
4. An oropharyngeal airway is measured from the corner of the mouth to this
5. Using a resuscitation mask or bag-valve-mask limits the possibility of _____ transmission
6. Device that reduces the delivery pressure of oxygen
7. The container in which oxygen is stored
9. A bag-valve-mask delivers a _____ concentration of oxygen than that delivered during mouth-to-mask resuscitation
10. Oxygen is measured in litres per _____
11. Bag-_____-mask
12. The tip of a portable suction device
16. The action of removing foreign matter, such as vomit, from the back of the throat by a portable device

What Would *You* Do?

Read the following scenario and answer the questions below.

You arrive at a scene to find a woman unconscious on the floor. She is not breathing but has a pulse. You have all your oxygen equipment with you.

1. After assessing the woman's level of consciousness, you determine that she has no response to pain and is deemed to be unresponsive. You can:
   a. Insert an oropharyngeal airway
   b. Start chest compressions
   c. Take a blood pressure
   d. Put a non-rebreather on the woman
2. Which of the following devices would you use in conjunction with oxygen to deliver the highest concentration of oxygen to the woman?
   a. Non-rebreather mask
   b. Bag-valve-mask
   c. Resuscitation mask
   d. Nasal cannula
3. What flow of oxygen should be used in conjunction with ventilations?
   a. 1–4 lpm
   b. 4–10 lpm
   c. 10+ lpm
   d. More than 25 lpm
4. What concentration of oxygen should this woman receive with the device and flow rate chosen?
   a. 16–20%
   b. 24–36%
   c. 35–55%
   d. 90+%
5. How often should you give a ventilation?
   a. Every second
   b. Every 3–5 seconds
   c. Every 5–6 seconds
   d. Every 10 seconds
6. The woman vomits. What steps should you take to clear the vomitus from the mouth?

Test Your Knowledge

Circle the best answer to each of the following questions.

1. To select the appropriate oropharyngeal airway, you should:
   a. Size it from the person's earlobe to the corner of the mouth
   b. Size it from the person's earlobe to the point of the chin
   c. Size it from the tip of the person's nose to the front teeth
   d. Select the one designated for a person of that age
2. In which of the following cases would you need to assist a person to breathe?
   a. If the person is coughing and wheezing
   b. If the person is breathing more than 30 times per minute
   c. If the person is breathing less than 10 times per minute
   d. Both b and c
3. Immediately after you have completed suctioning using a mechanical suctioning device, you should:
   a. Keep the person in the recovery position
   b. Begin chest compressions
   c. Administer high-flow supplemental oxygen
   d. Reassess ABCs
4. When using a resuscitation mask, the best way to keep the airway open is to:
   a. Tilt the person's head back
   b. Lift the jaw upward
   c. Keep the person's mouth open
   d. All of the above
5. Which of the following devices are effective ONLY when used on someone who is breathing?
   a. Oropharyngeal airway; bag-valve-mask resuscitator; non-rebreather mask
   b. Resuscitation mask; nasal cannula
   c. Non-rebreather mask; nasal cannula
   d. None of the above should be used on someone who is breathing
6. Which of the following will cause a risk of explosion if put on the oxygen pressure regulator?
   a. Carbon dioxide
   b. Petroleum products
   c. Water
   d. Nitrogen

7. If someone has a stoma:
   a. Cover the stoma and ventilate into the mouth
   b. Attach oxygen tubing directly to the stoma
   c. Ventilate into the stoma as if it were the person's mouth
   d. Place the oropharyngeal airway or nasopharyngeal airway into the stoma
8. Using a resuscitation mask when giving rescue breaths:
   a. Reduces the risk of disease transmission between the rescuer and the ill or injured person
   b. Prevents airway obstruction from occurring
   c. Reduces the volume of air required to inflate the lungs
   d. None of the above
9. When should the gasket ('O-ring') be placed on the oxygen cylinder?
   a. After the delivery device has been put on the person
   b. After the regulator is secured to the oxygen cylinder
   c. After you have listened for any leaks
   d. After you have opened the oxygen cylinder for one second
10. When manually clearing vomitus from a person's mouth, you should:
    a. Lift the person into a sitting position and let the mouth drain
    b. Roll the person to one side and sweep out the mouth
    c. Do a jaw thrust and sweep the vomitus out
    d. Do nothing; it is important not to stop ventilations

Skill Review

To review your skills, see the review section in Chapter 7 of the *Emergency Care Manual.*

Circulatory Emergencies

For Your Review
Read Chapter 8 of the *Emergency Care Manual*, then complete the following activities.

Key Terms
Referring to your *Emergency Care Manual*, define the following terms:

Angina: _____

Asystole: _____

Automated external defibrillator (AED): _____

Cardiac arrest: _____

Cardiopulmonary resuscitation (CPR): _____

Cardiovascular disease: _____

Cholesterol: _____

Circulatory emergencies: _____

Congestive heart failure: _____

Coronary arteries: _____

Dysrhythmia: _____

Heart: _____

Heart attack: _____

Nitroglycerin: _____

Risk factors: _____

Stroke: _____

Transient ischemic attack (TIA): _____

Ventricular fibrillation: _____

Ventricular tachycardia: _____

Do You Know…

1. If a person is having chest pain, what six key questions should you ask him about the pain?
   - i. _____
   - ii. _____
   - iii. _____
   - iv. _____
   - v. _____
   - vi. _____
2. When is it appropriate to stop CPR?
3. What three tests can you perform to assess someone with a suspected stroke?
   - i. _____
   - ii. _____
   - iii. _____
4. Heart attack is to angina as stroke is to _____.
5. List six factors that increase the risk of cardiovascular disease.
   - i. _____
   - ii. _____
   - iii. _____
   - iv. _____
   - v. _____
   - vi. _____

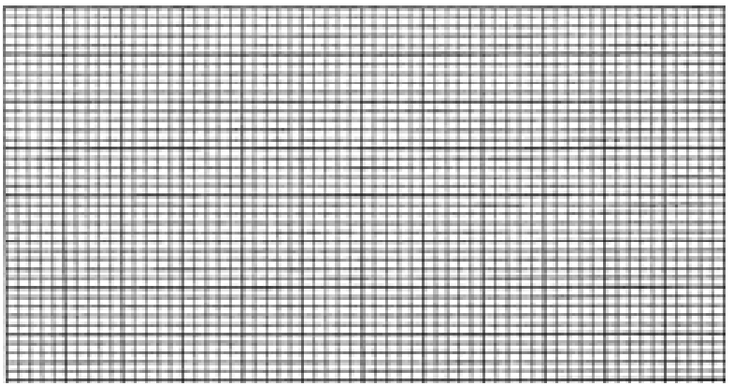
Fill in the Blanks

1. Fill in all the missing elements in the chart below.

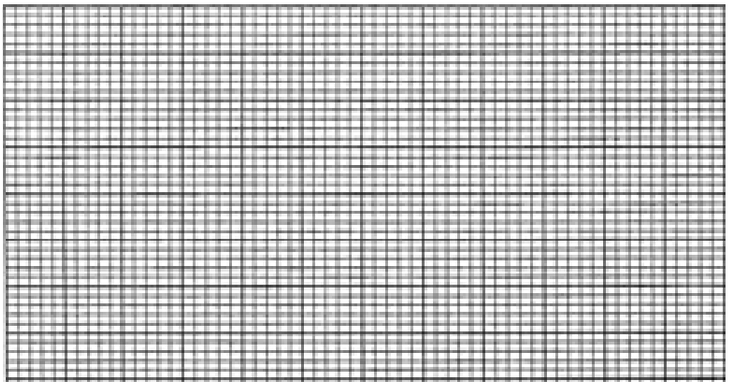
CPR Chart						
Age	**Adult**		**One-Year-Old to Puberty**		**Baby**	
	1-Rescuer		1-Rescuer	2-Rescuer		2-Rescuer
Compressions		30	30			
Ventilations	2				2	
Depth of compressions						$\frac{1}{2}$ to $\frac{1}{3}$ depth of the chest
Compression rate		100 per minute	100 per minute			
Hand/finger arrangement	Two hands in middle of chest		One or two hands in middle of chest			

2. Heart Rhythms

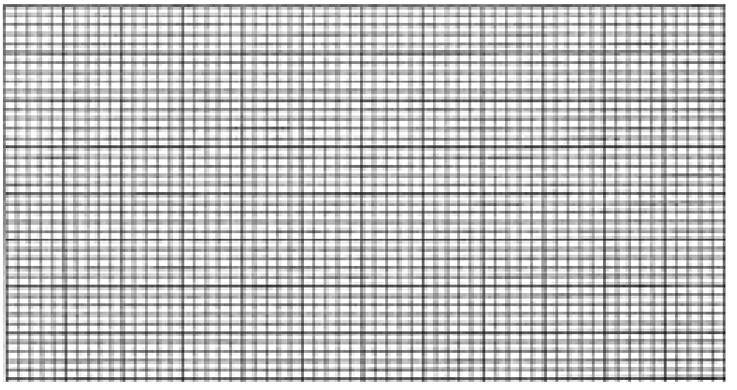
Draw or describe the various heart rhythms onto the heart monitor paper as follows:



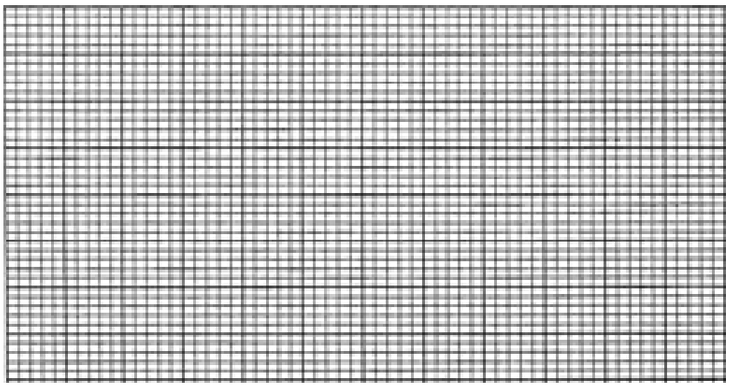
Normal sinus rhythm



Ventricular fibrillation

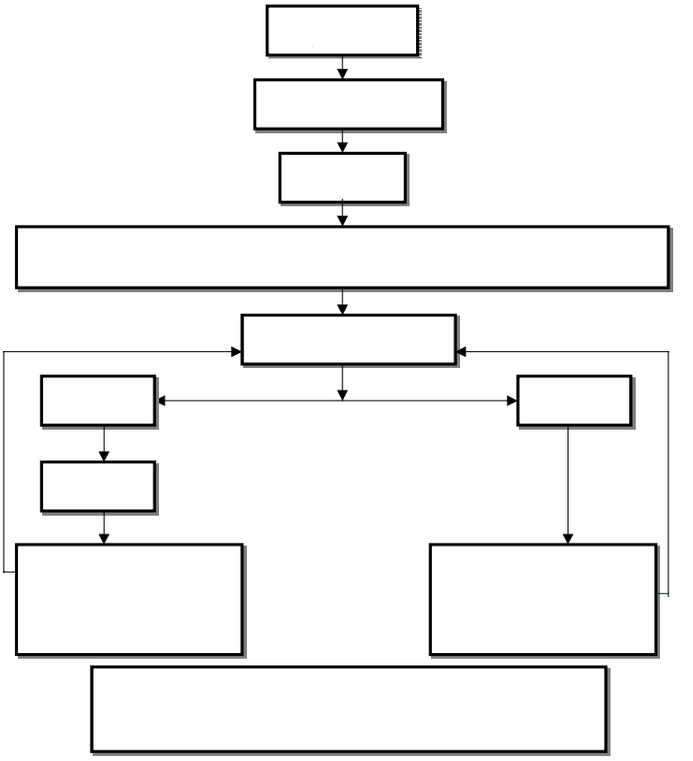


Ventricular tachycardia



Asystole

3. Fill in the steps for the AED protocol.



What Would *You* Do?

Read the following scenarios and answer the questions below.

Scenario 1

You are called to a scene with a woman having chest pain radiating into her back and neck. It seems to get slightly better with rest but does not go away completely. She is sitting as comfortably as possible, but she looks pale and is short of breath.

1. Upon interviewing her, you find out that this has happened to her in the past, and her physician has prescribed her "some sort of medication" for when she feels like this. She keeps the medication in her purse. You find her purse and bring it to her. She takes out a bottle of nitroglycerin. The label identifies it as hers, and it has not expired. List three pieces of information you must determine before suggesting she take her nitroglycerin.

   i. _____

   ii. _____

   iii. _____

2. The first dose of nitroglycerin does not relieve the signs and symptoms. You have already obtained more advanced medical care. What is the next step you should take?
   a. Have her take another dose of nitroglycerin right away.
   b. Have her chew some ASA after determining she has no allergy to it, does not have asthma, and has no recent significant bleeding.
   c. Have her chew some acetaminophen after ensuring she has no allergy to it, does not have asthma, and has no recent significant bleeding.
   d. Give chest compressions to assist the blood in circulating through the body.

3. List three other actions you would take in caring for this woman.

   i. _____

   ii. _____

   iii. _____

4. If this is a heart attack, why is it important that advanced medical care be obtained quickly?

Scenario 2

You are sent to a house after a frantic mother has called to say her baby isn't breathing. The mother was giving the baby a bath, and she left the baby for just a few moments to get a dry towel from the closet down the hall. When she got back, the baby's face was in the water and the baby wasn't moving. The mother pulled the baby out of the water, and she has just passed the baby to you, telling you to "do something."

1. After checking for breathing and not finding any, you should:
   a. Check for a pulse
   b. Begin chest compressions
   c. Give two ventilations
   d. Pick the baby up and begin back blows and chest thrusts

2. Where will you check the baby's pulse?
   a. At the radial artery in the wrist
   b. At the brachial artery in the arm
   c. At the carotid artery in the neck
   d. In the femoral artery at the groin

3. You begin CPR. What ratio of compressions to ventilations would you do?
   a. 5:1
   b. 15:2
   c. 30:1
   d. 30:2

4. Your partner has calmed the mother and has come to help you with CPR until you can obtain more advanced medical care. One of you resumes compressions while the other does ventilations. What ratio of compressions to ventilations would you do?
   a. 5:1
   b. 15:2
   c. 30:1
   d. 30:2

5. How does the hand position of the person doing compressions change when doing two-rescuer CPR?

Scenario 3

You and your partner have responded to a cardiac arrest. Your partner has already started CPR, and you are now arriving with the AED. As you approach, you see your partner performing CPR on a young boy of approximately six years of age. You expose his chest and see a MedicAlert® medical identification product around his neck and lying on his chest. The necklace says he has a heart problem.

1. What should you do?
   a. Nothing, as you should not use an AED on a child
   b. Nothing, as you should not use an AED on someone with a pre-determined heart problem
   c. Use the AED on the child
   d. Stop CPR
2. Before using the AED on the child, what precautions should you take?

3. Upon preparing to put the electrode pads on the child's chest, you notice that the child is quite small, and the two pads are almost touching. You should:
   a. Use only one electrode pad
   b. Move the lower electrode pad down further toward the abdomen to make space between the pads
   c. Do not use the AED on the child
   d. Put one electrode pad on the chest and one on the back
4. The AED analyzes and charges. You ensure everyone is clear and then hit the "shock" button. What is your next step?

Test Your Knowledge

Circle the best answer to each of the following questions.

1. Children's and babies' hearts usually stop because:
   a. Their heart is not fully developed yet
   b. There are a large number of diseases that often affect their heart
   c. Their brain is not yet fully programmed to regulate the heart's electrical system
   d. Their breathing stops
2. Cardiovascular disease is one of the leading causes of death in adults in Canada. T or F
3. Some people do not recognize they are having a heart attack because:
   a. They may have "soft signs" or no pain at all
   b. The signs and symptoms present the same as having heat exhaustion
   c. The signs and symptoms of a heart attack go away in less than five minutes
   d. No one really knows what the signs and symptoms of heart attacks are
4. You suspect an older gentleman has had a stroke. He is unconscious but breathing. You should position him:
   a. On his back
   b. On his unaffected side
   c. On his affected side
   d. In a semi-sitting position
5. High blood pressure can be controlled by:
   a. Taking prescribed medication
   b. Getting regular exercise and eating a healthy diet
   c. Keeping stress levels down
   d. All of the above
6. During two-rescuer CPR, the ventilator should:
   a. Periodically check the effectiveness of the compressions by checking the pulse
   b. Have the compressor stop every minute to reassess the ABCs
   c. Give one ventilation every five compressions
   d. All of the above

7. The purpose of CPR is to:
   a. Restart the heart in someone in cardiac arrest
   b. Keep oxygenated blood circulating to the vital organs of the body
   c. Prevent clinical death from occurring
   d. None of the above

8. An AED will shock a heart that is in asystole. T or F

9. Which of the following are major factors in determining the success of defibrillation?
   a. Type of defibrillator
   b. Time to defibrillate
   c. The person's age
   d. The number of shocks that can be given in five minutes

10. An older adult is found unconscious outside in a cold snowbank. When checking for circulation, you should:
    a. Check the pulse for no more than 10 seconds
    b. Warm the person up before checking for a pulse
    c. Skip the pulse check and go directly to compressions
    d. Check the pulse for up to 45 seconds

11. The primary signs of cardiac arrest are:
    a. Unconsciousness and absence of blood pressure
    b. No breathing and pulse present
    c. Unconsciousness, no breathing, and no pulse
    d. Blue around the lips, cool skin, and frothing at the mouth

Skill Review

To review your skills, see the review section in Chapter 8 of the *Emergency Care Manual.*

Bleeding

For Your Review
Read Chapter 9 of the *Emergency Care Manual*, then complete the following activities.

Key Terms
Referring to your *Emergency Care Manual*, define the following terms:

Arteries: _____

Blood volume: _____

Capillaries: _____

Clotting: _____

Direct pressure: _____

External bleeding: _____

Hemorrhage: _____

Internal bleeding: _____

Pressure bandage: _____

Pressure points: _____

Tourniquet: _____

Veins: _____

Do You Know…

1. List the components of blood.
   i. _____
   ii. _____
   iii. _____
   iv. _____
2. List the three major functions of blood.
   i. _____
   ii. _____
   iii. _____
3. List the signs and symptoms of severe internal bleeding.

What Would *You* Do?

Read the following scenario and answer the questions below.

You respond to a call to an open field near a country home, where a man was making a fire to rid his garage of old papers, wood from his latest home improvement project, and some old wooden furniture. He threw some debris in the fire, and, shortly thereafter, there was an explosion. An aerosol can must have gotten mixed in with the material he was burning. He was hit by flying debris and thrown, landing forcefully. As you approach, you notice he is lying on his back, looking anxious and in pain, with a large wound in his left leg, which seems to be bleeding uncontrollably. Your partner takes spinal precautions.

1. Before applying direct pressure to the wound, you should:
   a. Ensure you have gloves on
   b. Check his vital signs
   c. Ask SAMPLE questions
   d. Conduct a secondary survey
2. It seems the direct pressure is not stopping the bleeding, even with additional dressings and a pressure bandage. Which pressure point could you use in conjunction with direct pressure to slow bleeding?
   a. Brachial
   b. Femoral
   c. Radial
   d. Carotid
3. While you are conducting a secondary survey, you notice the man is getting drowsy and is complaining of thirst and nausea. You expose his abdomen and notice it is bruised and swollen. This would indicate:
   a. He has been doing a lot of sit-ups lately
   b. He has eaten something recently that has made him sick
   c. He is bleeding internally
   d. He was burned by the fire
4. What other care would you give for this man?

Test Your Knowledge

Circle the best answer to each of the following questions.

1. A sign of severe external bleeding is:
   a. Blood oozing from a wound
   b. Blood that fails to clot after you have tried to control it
   c. Blood spurting from a wound
   d. Both b and c
2. Which is NOT involved in the care for severe internal bleeding?
   a. Obtain more advanced medical care
   b. Administer supplemental oxygen
   c. Give the person sips of water
   d. Treat the person for shock
3. What are the three types of vessels that carry blood?
   a. Arteries, capillaries, and veins
   b. Arteries, alveoli, and veins
   c. Atria, capillaries, and ventricles
   d. Arteries, bronchioles, and veins

4. If a person has severe blood loss, the blood pressure should:
   a. Go up
   b. Drop
   c. Remain normal
   d. Demonstrate an increasing gap between the systolic and the diastolic pressure

5. If blood is uncontrollably spurting from a wound, which of the following personal protection items should you wear?
   a. Gloves
   b. Gown
   c. Protective eyewear and mask
   d. All of the above

6. If a person is severely bleeding internally from a fall, which of the following personal protection items should you wear?
   a. Gloves
   b. Gown
   c. Protective eyewear and mask
   d. All of the above

7. If pressure points, along with direct pressure and pressure bandages, do not stop the bleeding, which of the following can be used as a last resort, by trained personnel only?
   a. Arterial clamping
   b. Tourniquet
   c. Elastic bandaging
   d. Hyperbaric recompression

Shock

For Your Review
Read Chapter 10 of the *Emergency Care Manual*, then complete the following activities.

Key Terms
Referring to your *Emergency Care Manual*, define the following terms:

Shock: _____

Do You Know…

1. Matching
   Draw a line to match each type of shock on the left with its cause on the right.

TYPE	CAUSE
Neurogenic	Failure of the heart to effectively pump blood to all parts of the body
Psychogenic	Severe bleeding; dehydration
Septic	Factors such as emotional stress cause blood to pool in the body in areas away from the brain because of vessels dilating
Anaphylactic	Poisons caused by severe infections that cause blood vessels to dilate
Cardiogenic	Life-threatening allergic reaction to a substance
Hypovolemic	Failure of the lungs to transfer sufficient oxygen into the bloodstream
Respiratory	Failure of the nervous system to control the size of blood vessels, causing them to dilate

2. List five things you can do to care for shock.
   i. _____
   ii. _____
   iii. _____
   iv. _____
   v. _____

3. List at least six signs and symptoms of shock. Underline the two that are the best early indicators of shock.

What Would *You* Do?
Read the following scenario and answer the questions below.

You are called to the scene of a motor vehicle collision where a pedestrian was hit in the thigh while crossing the street. The driver of the vehicle is speaking with the law enforcement officer. You find the teenager lying on his back on the ground, propped up on one elbow, wincing in pain.

1. You take a set of vital signs and find his pulse to be 130, weak, and regular, and he has a blood pressure of 86/58. This most likely indicates:
   a. He may be losing blood internally and his heart is compensating for this by beating faster
   b. He has a severe infection that is affecting his cardiovascular system
   c. He is mad at the driver for hitting him and his stress level is high
   d. Nothing is wrong as these vital signs are normal for a male teenager

2. What steps would you take to care for the boy?

3. When you take the next set of vital signs, his pulse is 150, regular, and weak; his breathing is ineffective and at a rate of 30 times per minute; and his blood pressure is 74/42. When you assess his level of consciousness, he does not respond to your voice. What is the next step to take?
   a. Shake him to wake him up
   b. Increase the flow of oxygen
   c. Apply a painful stimulus and look for a response
   d. Take note of this and move on to check his pupils

4. The teenager begins to gasp for air and then stops breathing. You reassess his ABCs and find he is in cardiac arrest. What is your next step?
   a. Take a blood pressure
   b. Recheck his vital signs
   c. Suction the airway and then increase oxygen flow
   d. Begin CPR/AED

Test Your Knowledge

Circle the best answer to each of the following questions.

1. Shock is life-threatening because:
   a. The blood becomes poisonous
   b. The vital organs are not getting adequate oxygen-rich blood
   c. There is not enough blood in the circulatory system
   d. Carbon dioxide is not being released from the tissues in large enough quantities

2. Why does the skin of someone in shock appear pale and feel cool?
   a. The heart beats faster; therefore, the body's heat is used as energy
   b. The heart slows down; therefore, less heat is produced
   c. The blood vessels constrict in the arms, legs, and skin
   d. The body cools itself to conserve energy

3. Which of the following situations is likely to lead to shock?
   a. A teenager damages her spine in a diving incident
   b. A worker loses his arm in a piece of farming equipment
   c. A child who has the flu has been unable to keep fluids down for several days
   d. All of the above

4. In cases of serious illness or injury, shock is usually the final stage before death. T or F

5. Someone in shock should be positioned:
   a. On her back with the head elevated
   b. Flat on her back
   c. Sitting in a chair
   d. On a long spine board

6. Which of the following is NOT included in the general care for shock?
   a. Administer oxygen
   b. Maintain normal body temperature
   c. Give assisted ventilations
   d. Rest and reassurance

7. You have to identify the specific nature of the illness or injury before you can provide care for shock. T or F

8. If an injury causes severe blood loss, this will cause:
   a. The blood pressure to increase
   b. The skin to become red and warm
   c. The heart rate to drop
   d. The blood volume to drop

9. Do not wait for shock to develop before providing care. T or F

10. Why is it important to help someone with shock rest comfortably?
    a. It may minimize pain
    b. It reduces the workload on the heart
    c. It allows the blood vessels to constrict
    d. Both a and b