



# ACE Group Fitness Instructor University Curriculum

## Chapter 9: Emergency Procedures



# Learning Objectives

- Upon completion of this chapter, you will be able to:
  - Maintain a first-aid kit
  - Take steps to implement emergency policies and procedures for fitness facilities
  - Perform an emergency assessment
  - Activate emergency medical services (EMS)
  - List the principles of cardiopulmonary resuscitation (CPR)
  - Identify common medical emergencies and injuries
  - Practice universal protection strategies against bloodborne pathogens

# Introduction

- Overall, exercise can greatly improve health and wellness.
- However, there are inherent risks involved with exercise due to the physical demands placed on the body.
  - Therefore, fitness professionals work in an environment where they might be called upon to react to an emergency as a first responder.
- Having a systematic approach for handling emergencies requires training and practice.

# Maintaining a First-aid Kit

- Dealing with emergencies begins with protecting one's own safety.
- A first-aid kit should be systematically maintained and include supplies to address the following situations:
  - Airway management
  - Assessing circulation
  - General wound management
  - Suspected sprain or fracture management

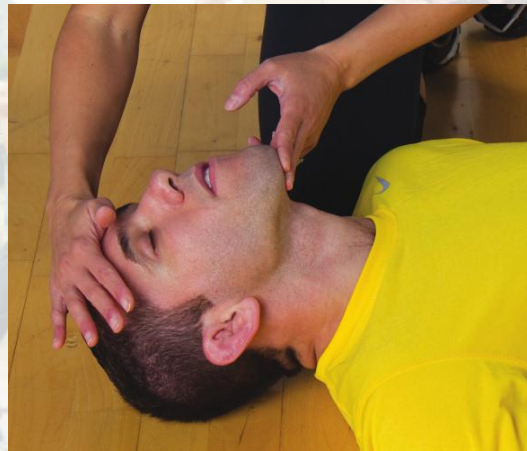


# Emergency Policies and Procedures for Fitness Facilities

- The best approach to dealing with emergencies is to be prepared.
- A fitness facility can minimize risk by following certain strategies.
  - Train all employees in first aid, CPR, and automated external defibrillator (AED) usage.
  - Ensure that fitness staff hold current accredited certifications.
  - Screen new members.
  - Take steps to minimize additional risks.
  - Develop and train all employees on an emergency action plan.

# Emergency Assessment

- Some emergencies are easily recognizable as life-threatening, while others may not be.
- Primary assessment
  - Determine if the victim is conscious or unconscious
  - Assess airway
  - Assess respiration
- Secondary assessment
  - Head-to-toe inspection for additional injuries
  - Assess vital signs such as pulse, blood pressure, and skin color and temperature



# Activating EMS

- Before activating EMS, it is helpful to determine the likely cause of the emergency.
- Important issues to consider when activating EMS:
  - When to call 9-1-1
    - Appropriate when there is a life-threatening situation or anything that requires immediate medical attention
  - Land lines versus cell phones
    - Land lines are always more reliable than cell phones.
  - Emergency call center technology
    - Public dispatchers do not have the same technology as callers.
  - Do not hang up until the dispatcher tells you to do so.

# Initial Response

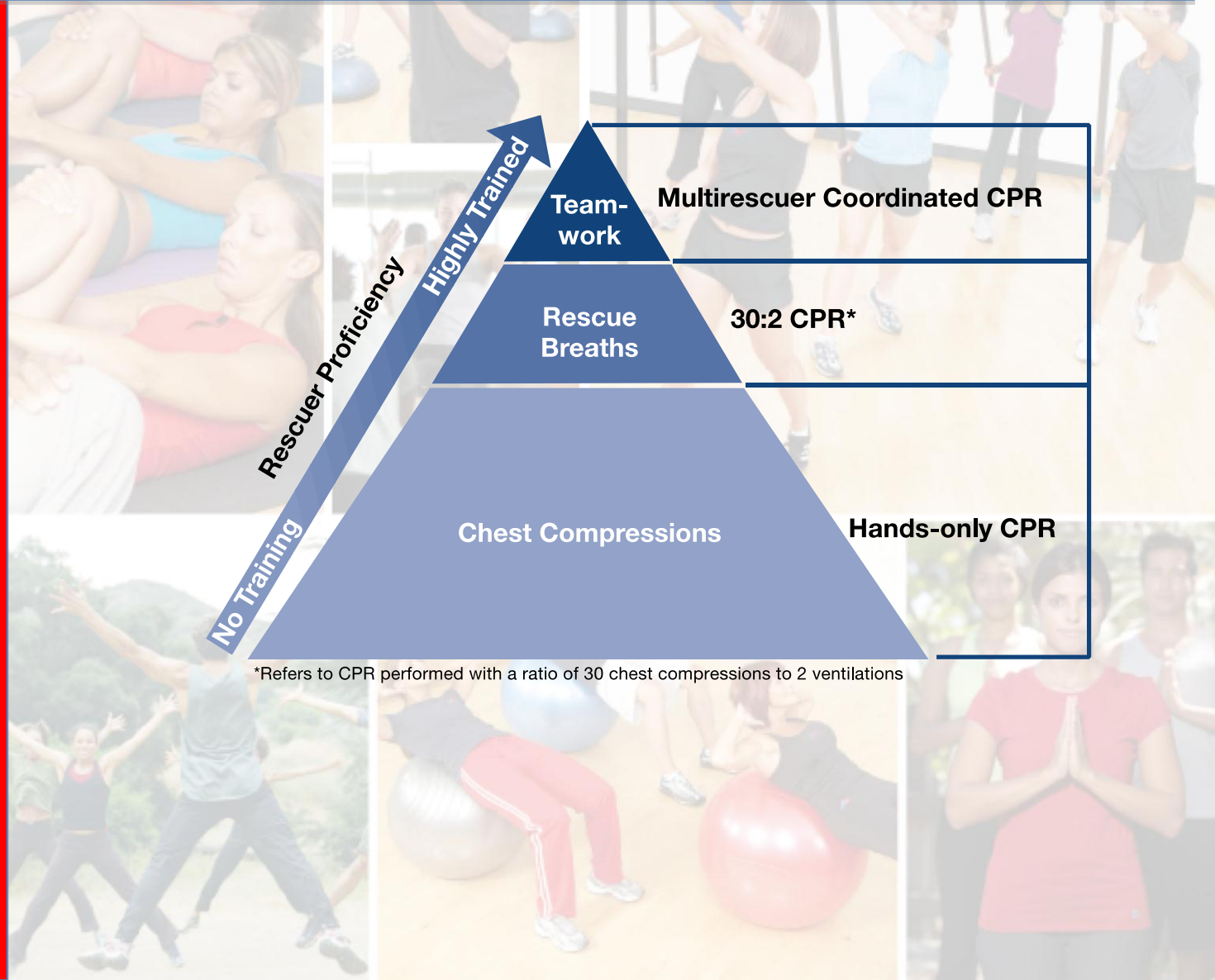
- A rescuer's initial response can improve a victim's chance for survival.
- Links in the Chain of Survival:
  - Immediate recognition of cardiac arrest
  - Early cardiopulmonary resuscitation (CPR)
  - Rapid defibrillation
  - Integrated post-cardiac arrest care
- Automated external defibrillation (AED)
  - The use of an AED can convert ventricular fibrillation back to a normal heart rhythm.
  - Many states have passed legislation requiring at least one AED in health clubs.



# Hands-only CPR

- The major reason bystanders do not attempt to perform CPR is because they panic.
- In some instances, CPR can be effective by simplifying it to performing chest compressions only.
  - Referred to as “hands-only CPR”
- Although it is just as effective in some circumstances, hands-only CPR does not replace traditional CPR in situations where oxygen is needed.
- A figure depicting the building blocks of CPR is presented on the next slide.

# Building Blocks of Cardiopulmonary Resuscitation



\*Refers to CPR performed with a ratio of 30 chest compressions to 2 ventilations

# Common Medical Emergencies and Injuries

- GFIs should be aware of how common medical emergencies and injuries might manifest themselves in class.
- **Dyspnea**
  - Could result from vigorous exercise, physical or emotional trauma, asthma, and airway obstruction
  - Severe breathing difficulty is a priority for EMS rescuers
- **Choking**
  - Severe choking can lead to hypoxia
  - GFIs can perform the Heimlich maneuver
- **Syncope**
  - Could result from various physical causes or from medication
  - Syncope associated with exercise is serious

# Common Medical Emergencies and Injuries

- Seizures
  - Occur when there is abnormal and excessive electrical activity in the brain
  - Normal breathing typically returns in the postictal state.
- Soft-tissue injuries
  - Skin, muscle tissue, tendons, and ligaments are potential injury sites.
  - General primary treatment is RICE or PRICES
- Fractures
  - Closed fracture versus open fracture
    - Immediate care involves preventing further injury and immobilizing the fractured limb.
  - Stress fracture



# Common Medical Emergencies and Injuries

- Head injuries
  - Concussions can cause short- and long-term problems.
  - No concussion is ever minor.
  - Injuries to the eyes, nose, and teeth may require specialized medical attention.
- Neck and back injuries
  - Sprains and strains to the soft tissues
  - With suspected neck injuries, the victim's head should be immobilized.
- Shock
  - Serious condition that requires immediate medical attention
  - A GFI should be aware of the signs and symptoms of shock.



# Universal Protection Against Bloodborne Pathogens

- Due to the threat of communicable disease, it is necessary to take universal precautions when dealing with another person's blood or body fluids.
- Precautions include:
  - Wearing gloves
  - Using a protective barrier device when performing CPR
  - If there is potential for blood to splash on the rescuer, wearing a gown and eye protection
  - Disposing of anything that touched blood or body fluid in biohazard bags or sealable plastic bags
  - Washing the hands with soap and warm water for at least 10 to 15 seconds afterward, whether or not gloves were worn

# Summary

- This chapter covered:
  - Maintaining a first-aid kit
  - Implementing emergency policies and procedures for fitness facilities
  - Performing an emergency assessment
  - Activating emergency medical services (EMS)
  - The principles of cardiopulmonary resuscitation (CPR)
- Common medical emergencies and injuries
- Universal protection against bloodborne pathogens