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Diving Emergency Management Provider (DEMP)

Overview

The Diving Emergency Management Provider course teaches participants to recognize common presentations of dive injuries and provide emergency first aid for these situations. Combining the knowledge and skills from four first aid courses, DEMP adds context to add streamlines instruction for the care that may be necessary in a dive accident.

DEMP includes skills from each component course but skills contained in multiple courses are conducted only once. Skills are incorporated into the sequence as presented in the DEMP student handbook.

As noted in the component course instructor guides, scenarios included in each skill are only suggestions and may be altered to more closely reflect the diving environment where the course is conducted and to meet the needs of course participants.

Anyone (divers or non-divers) who might come in contact with divers or diving related injuries is encouraged to participate in this course. This course is specifically designed as lay provider training and is written to meet the 2015 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care.

The time needed to teach the course varies and depends on many factors including the number of students and their ability to process the educational components of the program. Instructors who want to include subjects or training beyond the course requirements may do so only before or after the course. Any additional training must not be required for completion of course requirements.
Standards and Procedures

This Instructor Guide is for instructors who are authorized to conduct all of the following courses: Basic Life Support: CPR & First Aid, Neurological Assessment, Emergency Oxygen for Scuba Diving Injuries, and First Aid for Hazardous Marine Injuries. This combination of credentials allows the instructor to offer the Diving Emergency Management Provider course. There is not a separate DEMP Instructor certification.

This Instructor Guide is to be used in conjunction with the General Standards and Procedures section of the Instructor Manual which provides general course guidelines, equipment configuration descriptions, and instructor-student ratios. The individual course instructor guides provide the skill development sessions utilized for this course.

Special Note: Other CPR Credentials

A CPR component is required at the beginning of the course sequence. While Basic Life Support: CPR & FA is the preferred CPR course, students who already have a current CPR provider credential from other training may use it instead. Earning a DEMP credential essentially resets these students’ CPR provider status, so the instructor needs to verify their skill competency via a performance review and knowledge base. Review CPR with these course participants to verify competent skill techniques and have them complete the DEMP version of the BLS: CPR & FA final assessment.
Standards Summary

Course Prerequisites: None
Age: No minimum age requirement
Note: Some countries, states and local municipalities may have minimum age stipulations.

Student-to-Instructor Ratio: 12:1 during skills development sessions

Recommended hour for full course: Seventeen-Eighteen (17-18) hours
If online knowledge development is used: Seven (7) hours

BLS recommended course hours: Seven (7) hours
- Knowledge development (lecture) hours = 5 hours
- Skills development (practice) hours = 2 hours

Neurological Assessment recommended course hours: Four (4) hours
- Knowledge development (lecture) hours = 2.5 hours
- Skills development (practice) hours = 1.5 hours

EO2 recommended course hours: Three-Four (3-4) hours
- Knowledge development (lecture) hours = 2.0 hours
- Skills development (practice) hours = 1.5 hours

HMLI recommended course hours: Three (3) hours
- Knowledge development (lecture) hours = 1 hour
- Skills development (practice) hours = 2 hours

Required student materials:
- Diving Emergency Management Provider Student Handbook (digital or print)
- Oronasal resuscitation mask or other face shield intended for rescue breathing (one for each student)
- Non-Rebreather mask (one for each student)
**Required instructor materials:**
- Core Instructor Manual
- *Diving Emergency Management Provider* Instructor Guide
- Instructor Guides from *BLS: CPR & First Aid, Neurological Assessment, Emergency Oxygen for Scuba Diving Injuries, and First Aid for Hazardous Marine Life Injuries*
- *Diving Emergency Management Provider* student handbook (digital or print)
- Slates from *BLS: CPR & FA, Neurological Assessment, Emergency Oxygen for Scuba Diving Injuries, and First Aid for Hazardous Marine Life Injuries*

**Required audiovisual materials:**
- *Diving Emergency Management Provider* instructor slides and videos
  - or -
  *Diving Emergency Management Provider* Online Knowledge Development

**Required equipment and supplies:**
- Adult CPR manikin
- Non-latex medical gloves
- AED trainer
- Neurological Assessment slate
- Dive accident management slate or note-taking supplies
- DAN oxygen unit or equivalent as noted in General Standards and Procedures
- Manually triggered ventilator (MTV) &/or Bag Valve Mask (BVM) (both preferred)
- Epinephrine auto-injector trainer
- First aid supplies including dressing and bandaging materials, splints (commercial or improvised), commercial tourniquet (trainer) or materials to improvise a tourniquet

**Final Evaluation:**
Minimum score of 80% (16 correct) or above on each section of the DEMP final assessment.

The instructor must review any missed questions on the examination or any information that is unclear with each participant to ensure 100 percent understanding of the material.

**Retraining required:** 24 months
Conducting the DEMP Course

Knowledge Development
Students may complete the DEMP online course module before coming to class or the instructor may present the DEMP PowerPoint slides and video. Utilizing the DEMP Instructor audio-visual materials will facilitate the course sequence and streamlined content for in-class presentations.

Skills Sequence for DEMP
Use the individual skills from the component course instructor guides as noted below and follow the presentation outline from the CORE instructor Manual. This includes skill objective, rationale and key points as well as the real-time and talk-through demonstrations.

BLS: CPR & First Aid
- Scene Safety Assessment
- Doffing and Donning Gloves
- Initial Assessment
- Recovery Position
- Chest Compressions
- Ventilations
- Full CPR
- Automated External Defibrillator (AED)
- Foreign-Body Airway Obstruction
- Secondary Assessment

Neurological Assessment
- F-A-S-T Assessment
- Taking a History
- Taking Vital Signs
- Mental Function
- Cranial Nerves
- Motor Function (Strength)
- Coordination and Balance
Emergency Oxygen for Scuba Diving Injuries
Oxygen Equipment Identification, Disassembly and Assembly
Demand Inhalator Valve
Non-rebreather Mask
Resuscitation with a Bag Valve Mask
Using a Manually Triggered Ventilator

First Aid for Hazardous Marine Life Injuries
Shock Management
Injury Management
Pressure Immobilization Technique
Traumatic Injuries (Control of External Bleeding)
Applying a Tourniquet
Severe Allergic Reaction
Emergency Assistance Plan

Conduct Final Scenarios
Once students have completed all components of the DEMP program and practiced all skills to competency, conduct a final scenario that encompasses multiple aspects of the program. The instructor guide includes sample final scenarios but you may create your own. Remember to make it realistic - not too difficult, but not too simplistic either. The point of these scenarios is to help students realize that all of these skills work together and simply treating one situation may neglect others.

Final Assessment
Abridged versions of the individual course final assessments are compiled in a single set of exams for DEMP. These assessments can be found in the Dive Emergency Management Provider Instructor Guide. Students must score 80% or better on each of the four assessments to pass the DEMP program.

After the Final Assessments
- Remediate skills or assessments as necessary.
- Remind students retraining is required within 24 months
- Submit the online roster for students who passed the DEMP program.
Suggested DEMP Scenarios

Scenario 1

You have just completed a boat dive when you see a diver surface quickly. He is holding his hands together above his head. Immediately upon surfacing, he spits out his regulator and yells to the boat that he has been bitten by a moray eel and is bleeding.

**Student Action:** SAFE and control bleeding.

While treating the diver for blood loss, he tells you he panicked and swam for the surface as hard as he could. Now he doesn’t feel so good.

**Student Action:** Administer oxygen by demand valve and activate EAP.

The first diver’s buddy tells you he chased the first diver to the surface and now he doesn’t feel good.

**Student Action:** Conduct a neurological assessment. Administer oxygen to the second diver using a non-rebreather mask.

The first diver suddenly loses consciousness and stops breathing.

**Student Action:** Initiate CPR providing ventilations using the MTV-100 or the bag valve mask and attach the AED. Follow prompts.

**Variations:** The scenario works just as well if the diver didn’t panic, but has an allergic reaction to an envenomation. Or you can set up a scenario that involves three of the four situations; they do not all have to be present in every scenario.

Scenario 2

You are preparing to enter the water when a diver pops quickly to the surface near your boat. He is floating motionless and other divers bring him to the boat.

**Student Action:** SAFE. Check for unresponsiveness.

The diver is unresponsive.

**Student Action:** Call for help/Activate EAP including EMS. Initiate CPR while waiting for emergency equipment.
Oxygen unit and first aid kit arrives. Oxygen kit has a MTV (or Bag Valve Mask).

**Student Action:** Ask a second rescuer to assist in providing ventilations (if within the scope of his training) by maintaining an open airway and holding the mask in place.

Use either the manual triggered ventilator or the bag valve mask.

AED is now available.

**Student Action:** Turn on the AED and follow the prompts.

**Scenario 3**

You have enjoyed a relaxing night dive. As you and your buddy complete your safety stop, your buddy begins rubbing his bare arms. After exiting the water, your buddy says he thinks he was stung by something. You can see red streaks on his arm, and what appears to be tentacles adjacent to red streaks.

**Student Action:** SAFE. Retrieve first-aid supplies and don gloves. Soak victim’s arm with vinegar for 30 minutes. Remove tentacles with tweezers. Treat for pain as necessary.

**Scenario 4**

As you are relaxing on the boat during your surface interval, another buddy pair surfaces adjacent to the boat with Buddy 1 clinging to Buddy 2. Buddy 2 says Buddy 1 was having trouble with his buoyancy, and ascended “pretty fast”. Buddy 1 is conscious, his skin is pale, and he appears to be struggling to breath. He is unable to talk because of his difficulty breathing and is spitting up blood.

**Student Action:** SAFE. Call for help. Initiate emergency oxygen. Place injured diver in position of comfort. Activate EAP including EMS. Continually monitor diver for changes in his condition.
**Scenario 5**

You are with a group wreck diving in rough seas. The exit ladder is bouncing and difficult to ascend. One diver is tossed from the ladder to the deck as she exits the water, catching herself on her hands. She cries out, and immediately grabs her wrist, which is rapidly swelling and appears deformed.

**Student Action:** SAFE. Assess the injured wrist. Splint the wrist with available materials. (Use your imagination for splinting materials.) Activate EAP.

**Scenario 6**

As you and your buddy wade out of moderate surf over a rocky shore, a wave knocks your buddy is knocked to his knees. He has abrasions across both hands from the rocks.

**Student Action:** SAFE. Assess for bleeding. Wash the abrasion with soap and water. Place gauze on scrapes and apply direct pressure. Bandage as appropriate. Seek medical attention for evaluation for tetanus booster. Monitor for infection.

**Scenario 7**

You are with a group on a boat following a drift dive, snacking on fruit as the boat heads to shore. As you approach the dock, a wave rocks the boat. One of the other divers drops his apple and grabs his throat.

**Student Action:** SAFE. Ask if he is choking. Ask if you can help. Diver nods his head emphatically.

**Student Action:** Perform the abdominal thrusts to remove the airway obstruction.

**Scenario 8**

Three hours after a dive, you and your buddy have had a nap in preparation for a night dive. You notice your buddy rubbing his arm. He states “I must have slept on it wrong”. Twenty minutes later, he says it’s getting worse. His shoulder aches, and his arm is numb and tingling.

**Student Action:** SAFE. Conduct a neurological assessment. Initiate emergency oxygen use; activate EAP. Assist the diver to the nearest appropriate medical facility for evaluation by a medical professional for possible DCS.
Diving Emergency Management Provider Final Assessments:
Basic Life Support: CPR & First Aid Final Assessment

The following questions have only one correct answer.

1. What is the first link in the chain of survival?
   a. rapid initiation of CPR
   b. rapid activation of EMS
   c. post cardiac-arrest care
   d. advanced Life Support

2. The mnemonic S-A-F-E is used to:
   a. protect the rescuer from injury or impairment
   b. assist with circumstances surrounding the injured person
   c. remind the rescuer of important equipment and supplies
   d. all of the above

3. Personal safety is your number one priority when providing care. What are possible concerns?
   a. traffic at the scene of a collision
   b. animals
   c. toxic gas, such as carbon monoxide
   d. all of the above

4. Personal protective equipment which can help prevent infection while providing care includes:
   a. gloves
   b. mask or face shield for CPR
   c. resuscitation mask
   d. all of the above

5. Gas exchange takes place at the:
   a. trachea and intrapulmonary bronchi
   b. long bone joints
   c. alveolar-capillary membrane
   d. muscle-nerve junctions

6. Place an injured, unresponsive but breathing person in what position?
   a. supine (on their back)
   b. sitting up
   c. recovery position
   d. prone (on their stomach)
7. The goal of CPR is to maintain adequate circulation of oxygenated blood to vital organs
   a. True
   b. False

8. What is the most effective way to open the airway for ventilations?
   a. Keep the head still and open the mouth.
   b. Tilt the head back while lifting the chin.
   c. Tilt the head back while flexing the neck with your hand.
   d. They all work just fine.

9. Ventilations should be given for about ____ second(s) using a ______ breath to make the chest rise.
   a. 2, deep
   b. 1, normal
   c. 1, deep
   d. 2, normal

10. Compression-to-ventilation ratio in single rescuer CPR is 30:2. What is the rate per minute for chest compressions?
    a. as fast as you can push
    b. 100-120
    c. 70-80
    d. 180-200

11. Chest compressions should be delivered to a depth of
    a. 1-1 ½ inches (3 cm)
    b. 2-2 ½ inches (5 cm)
    c. 3-4 ½ inches (7.5 cm)
    d. Depth is not important as long as compressions are being done.

12. The chance of survival in cardiac arrest can decrease by _____ for each minute defibrillation is not available.
    a. 50%
    b. 15%
    c. 7-10%
    d. 20%

13. You must use an AED and it advises to deliver a shock. Which is the most appropriate next step after pressing the shock button?
    a. Turn off the AED so it will not interfere with CPR.
    b. Check for breathing.
    c. Immediately resume CPR, beginning with compressions.
    d. Place the victim in the recovery position.
14. With drowning victims, if you are alone
   a. Perform CPR using the A-B-C protocol for 2 minutes then call EMS.
   b. Call EMS then wait for their arrival.
   c. Use the same protocols as with any unresponsive person.
   d. Perform CPR for 1 minute then reassess the victim.

15. What are some differences between a mild and severe airway obstruction in choking?
   a. Mild obstruction means the person can effectively cough and should be encouraged to do so.
   b. Severe obstruction means the person cannot effectively cough or speak and first-aid intervention must be provided.
   c. It does not matter if the choking is mild or severe
   d. a and b only

16. If a choking victim loses consciousness you should:
   a. begin CPR
   b. activate EMS if not already done
   c. try to remove objects from throat you cannot see
   d. a and b only

17. What is not part of a secondary assessment?
   a. SAMPLE
   b. head to toe physical exam
   c. ongoing assessment including any changes to initial assessment
   d. moving the person to a more comfortable location

18. An individual who has become severely hypothermic is at risk for cardiac arrest if not handled gently.
   a. True
   b. False

19. Heat stroke requires
   a. cool drinks and rest
   b. aggressive intervention and cooling
   c. lots of water with salt mixed in
   d. moving the victim to an air condition room and see how he does

20. Injured persons should not be moved unless there is a threat of further harm to themselves or the rescuers.
   a. True
   b. False
Neurological Assessment Final Assessment

The following questions have only one correct answer.

1. The brain, spinal cord and nerves make up the:
   a. circulatory system
   b. respiratory system
   c. nervous system
   d. skeletal system

2. Decompression illness includes both arterial gas embolism and decompression sickness.
   a. True
   b. False

3. Common warning signs of decompression illness include
   a. pain, numbness and tingling
   b. dizziness and vertigo
   c. fatigue
   d. all of the above

4. F-A-S-T stands for
   a. facts, attitude, sensitivity, talent
   b. face, arms, speech, time
   c. feet, arms, spine, toes
   d. face, ankles, stability, touch

5. F-A-S-T is a quick assessment to determine if a neurological injury is a possibility. If any portion of the assessment shows deficits, call EMS immediately.
   a. True
   b. False

6. Which one of the following is not an area evaluated as part of a neurological assessment?
   a. mental function
   b. coordination
   c. cranial nerves
   d. skin sensation

7. In the neurological assessment, the tests to assess mental function include
   a. coordination and flexibility
   b. memory and speech
   c. SAT scores
   d. none of the above
8. Recording an individual’s level of consciousness is accomplished using which of the following acronyms?
   a. A-V-P-U
   b. S-A-M-P-L-E
   c. F-A-S-T
   d. none of the above

9. Testing an injured person’s motor function includes providing pressure that they must resist and evaluating if there is a significant difference in strength from one side to the other.
   a. True
   b. False

10. Motor functions are classified as normal, evidence of weakness, or paralysis.
    a. True
    b. False

11. Taking a history helps determine if signs and symptoms present may be due to a previous injury or illness.
    a. True
    b. False

12. If the injury may be related to a scuba diving incident, you need to document:
    a. all dives for 24 hours before the injury
    b. symptom onset time
    c. pre-existing conditions
    d. all of the above

13. Conducting a neurological assessment may convince an injured diver of the need for oxygen first aid.
    a. True
    b. False

14. Testing an injured person’s mental function includes asking the patient to count backward from 100 by
    a. 2s
    b. 3s
    c. 7s
    d. 9s

15. Tests of an injured person’s cranial nerves include
    a. eye control
    b. facial control
    c. hearing
    d. all of the above
16. The Romberg test assesses  
a. motor function  
b. cranial nerves  
c. mental status  
d. balance

17. Assessment of hearing on an injured diver can be performed by holding your hand about 12 inches away from the person’s ear and rubbing together your thumb, index and middle fingers.  
a. True  
b. False

18. The neurological assessment should be repeated every ______ minutes, barring evident changes in the patient’s condition.  
a. 15  
b. 30  
c. 60  
d. Never

19. Neurological symptoms tend to be fixed when they develop and never change until definitive treatment has begun.  
a. True  
b. False

20. Information gathered during a neurological assessment helps a patient’s physician understand the extent of the injury and determine how it has changed over time.  
a. True  
b. False
Emergency Oxygen for Scuba Diving Injuries Final Assessment

The following questions have only one correct answer.

1. The atmosphere is comprised of what percent of oxygen, nitrogen and inert gases?
   a. 21% O₂, 78% N₂, 1% inert gases
   b. 15% O₂, 65% N₂, 20% inert gases
   c. 25% O₂, 74% N₂, 1% inert gases
   d. 33% O₂, 33% N₂, 34% inert gases

2. A diver with suspected decompression illness (DCI) may benefit from breathing 100 percent inspired oxygen before medical treatment, because
   a. symptoms may be relieved and results of recompression treatment may be enhanced.
   b. it may make recompression treatment unnecessary.
   c. oxygen stimulates breathing.
   d. all of the above

3. When faced with a fellow diver who presents with symptoms that might be related to DCI, the correct course of action may include
   a. placing them on oxygen
   b. alerting local emergency services first and call DAN
   c. getting the diver to a medical facility
   d. all of the above

4. The delivery device that delivers the highest possible concentration of inspired oxygen to a breathing injured diver is the
   a. nasal cannula
   b. oronasal resuscitation mask with supplemental oxygen.
   c. non-rebreather mask
   d. demand inhalator valve and mask.

5. Before providing oxygen to an injured diver using a non-rebreather mask, the mask must be
   a. cleaned with a 10 percent bleach solution to prevent contamination
   b. primed by inflating the reservoir bag
   c. attached to the primary threaded DISS outlet by the clear oxygen tubing
   d. none of the above
6. When choosing an oxygen cylinder for use in a diving emergency, what should you consider?
   a. type of oxygen delivery device or mask
   b. cylinder capacity
   c. time and distance to the next level of emergency response.
   d. all of the above

7. A breathing injured diver who is in danger of vomiting should be placed
   a. in the supine position (on his or her back)
   b. in someone else's boat
   c. in the recovery position (on his or her side with head supported)
   d. in a litter and made ready for helicopter evacuation

8. While the immediate first aid for AGE and DCS is emergency oxygen, symptoms of these conditions often occur at which different times following decompression?
   a. DCS symptoms typically occur within 6 hours
   b. AGE symptoms occur within 15 minutes
   c. neither a nor b because the statement above is not true
   d. both a and b

9. The dive boat is three hours from shore and your emergency oxygen unit has a single full oxygen cylinder that will only last one hour. When providing oxygen first aid to a breathing injured diver with suspected DCI, you should use the
   a. demand inhalator valve continuously for as long as the oxygen supply lasts
   b. non-rebreather mask at a reduced flow rate so that the oxygen will last
   c. oronasal resuscitation mask at a minimum continuous flow rate of 10 LPM
   d. demand inhalator valve only until the injured diver feels better

10. In an emergency, it is not necessary to distinguish between decompression sickness and arterial gas embolism.
    a. True
    b. False
11. The primary reason to provide the highest concentration of oxygen possible is to speed inert gas washout/removal and slow symptom progression.
   a. True
   b. False

12. Effective oxygen administration may result in symptom resolution. In such cases divers should still receive medical evaluation and potentially hyperbaric oxygen therapy.
   a. True
   b. False

13. The initial oxygen flow rate for the non-rebreather mask is
   a. 2-4 LPM
   b. 10-15 LPM
   c. 20-25 LPM
   d. the rate the injured diver will tolerate

14. Oxygen should be provided only to injured divers in or around:
   a. confined areas without ventilation
   b. petroleum products
   c. open, well-ventilated areas
   d. burning materials or other ignition sources

15. The pin indexing system is one method used to:
   a. prevent the use of nonoxygen-compatible regulators with oxygen cylinders
   b. prevent oxygen from flowing from an open threaded DISS outlet
   c. hold oxygen-compatible washers in place
   d. hold one-way valves on the non-rebreather mask

16. A BVM can also be used to ventilate an inadequately breathing diver.
   a. True
   b. False

17. Before using a MTV, its function should be checked by
   a. connect the hose to a barbed outlet
   b. setting the constant flow to 10 lpm
   c. testing the safety shut off against the palm of your hand
   d. priming the unit with several breaths
18. If symptoms of possible DCI occur following a dive, DAN advises in addition to emergency oxygen to
   a. go to the nearest emergency facility for evaluation
   b. refrain from proceeding directly to the closest known chamber which may not be open, available, or have staff on duty
   c. contact DAN early so we may assist you and medical personnel who may not be familiar with diving medicine
   d. all of the above

On your answer sheet, identify the component parts of the DAN Oxygen Unit:

19. ____ Tru-Fit® mask
20. ____ Oxygen cylinder and valve
21. ____ DISS hose connector
22. ____ T-Handle
23. ____ Handwheel wrench
24. ____ Constant flow controller
25. ____ Barbed constant-flow outlet
26. ____ Demand inhalator valve
27. ____ Multifunction regulator
28. ____ Oronasal resuscitation mask with oxygen inlet
29. ____ Non-rebreather mask
30. ____ Intermediate pressure hose
31. ____ Pressure gauge
32. ____ Manually triggered ventilator
First Aid for Hazardous Marine Life Injuries Final Assessment

The following questions have only one correct answer.

1. The general categories of marine life injuries are
   a. envenomations
   b. traumatic injuries
   c. seafood poisonings
   d. all of the above

2. Marine animal bites are usually the result of
   a. hungry animals
   b. defensive action by the animal
   c. humans feeding marine life
   d. b and c

3. Food contamination with bacteria, parasites, viruses, or toxins is the most common cause of seafood poisonings.
   a. True
   b. False

4. Envenomations occur by means of
   a. spoiled food or bacteria
   b. improperly stored food.
   c. stings, spines, bites, barbs
   d. b and c

5. The severity of envenomations is affected by
   a. potency and volume of toxin injected
   b. time and storage method since the marine animal was caught
   c. victim’s health status and sensitivity to the venom
   d. a and c

6. First aid for injuries from venomous fish starts with
   a. applying direct pressure and bandaging to control bleeding
   b. applying topical ointments
   c. washing the area thoroughly
   d. pain-control measures

7. The pressure immobilization technique is recommended for which of the following types of injuries?
   a. lionfish stings, sea urchin punctures and bristle worm contact
   b. cone snail, sea snake, blue-ring octopus bites
   c. bites from triggerfish, moray eels and grouper
   d. bluebottle jellyfish, sea stars and fire coral stings
8. In general, jellyfish stings should be treated using which of the following sequences?
   a. treat symptoms, remove tentacles, soak affected area in hot water
   b. remove tentacles, rinse with vinegar, manage pain
   c. inactivate nematocysts, remove tentacles, wash area, manage pain
   d. manage pain, remove tentacles, inactivate nematocysts

9. Which is the first step in first-aid treatment of contact injuries?
   a. control bleeding
   b. wash the area with soap and water
   c. getting the injured individual to an emergency room
   d. none of the above

10. Marine animal bites are of particular concern due to the resulting high volume of blood loss.
    a. True
    b. False

11. Bites from marine animals should be followed up with a medical evaluation in part because a tetanus booster may be indicated.
    a. True
    b. False

12. Signs of infection include
    a. pain, redness and swelling
    b. loss of function and increased heat in the affected area.
    c. tissue blanching and poor circulation
    d. a and b

13. Symptoms of a life-threatening allergic reaction include
    a. raised, itching rash
    b. pus and foul smell
    c. airway narrowing and difficulty breathing
    d. none of the above

14. Emergency medical services should be called if you suspect a severe allergic reaction.
    a. Yes, call EMS immediately.
    b. No, wait to see if the symptoms get better.
    c. Depends on what triggered the reaction.
    d. Most allergies are seasonal and will go away on their own.

15. Control of external bleeding begins with the use of direct pressure.
    a. True
    b. False
16. Hypovolemic shock is the result of a sudden decrease in circulating blood. In the marine environment, this is usually due to bites from large marine animals.
   a. True
   b. False

17. Which of the following are medical emergencies that necessitate immediately calling emergency medical services?
   a. sudden, itchy hives; rashes that do not respond to topical ointments
   b. accidental contact with fire coral; minor cuts and scrapes
   c. anaphylactic shock, cardiogenic shock, hypovolemic shock
   d. all of the above

18. Seafood poisoning is the result of
   a. toxins stored in skin and muscles of seafood
   b. bacteria, parasites, viruses or toxins
   c. spoilage from improper storage
   d. a and b

19. Many contaminatees that can cause seafood poisoning can be eliminated by thorough cooking.
   a. True
   b. False

20. Dive practices that can help you prevent injuries from marine life are:
   a. practicing good buoyancy control and streamlining your equipment
   b. having situational awareness as you dive and looking up and around as you ascend
   c. shuffling your feet when entering the water from shore and wearing appropriate exposure protection for environmental risks
   d. all of the above
Final assessment may be administered in written or oral form. The instructor must review every missed question with each student so that 100 percent comprehension of materials is assured. Questions have only one correct answer.

Name _________________________ Date ________________ Test Score ______

I have reviewed this assessment with the course instructor. I understand the correct response as indicated by my initials. Any questions regarding this assessment and the contents of this course have been answered to my satisfaction.

_________________________________________     __________________________
Student signature                          Date

Neurological Assessment Final Assessment

Final assessment may be administered in written or oral form. The instructor must review every missed question with each student so that 100 percent comprehension of materials is assured. Questions have only one correct answer.

I have reviewed this assessment with the course instructor. I understand the correct response as indicated by my initials. Any questions regarding this assessment and the contents of this course have been answered to my satisfaction.

_________________________________________     __________________________
Student signature                          Date
Emergency Oxygen for Scuba Diving Injury Final Assessment

Final assessment may be administered in written or oral form. The instructor must review every missed question with each student so that 100 percent comprehension of materials is assured. Questions have only one correct answer.

I have reviewed this assessment with the course instructor. I understand the correct response as indicated by my initials. Any questions regarding this assessment and the contents of this course have been answered to my satisfaction.

________________________________________  ____________________
Student signature  Date

First Aid for Hazardous Marine Life Final Assessment

Final assessment may be administered in written or oral form. The instructor must review every missed question with each student so that 100 percent comprehension of materials is assured. Questions have only one correct answer.

I have reviewed this assessment with the course instructor. I understand the correct response as indicated by my initials. Any questions regarding this assessment and the contents of this course have been answered to my satisfaction.

________________________________________  ____________________
Student signature  Date
DEMP Student Final Assessments Answer Key
Basic Life Support: CPR & First Aid Final Assessment

Final assessment may be administered in written or oral form. The instructor must review every missed question with each student so that 100 percent comprehension of materials is assured. Minimum 16 correct.

Name _______________________ Date ___________ Test Score _______

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Emergency Oxygen for Scuba Diving Injury Final Assessment

Final assessment may be administered in written or oral form. The instructor must review every missed question with each student so that 100 percent comprehension of materials is assured. Questions have only one correct answer. Minimum 26 correct.

A  B  C  D  A  B  C  D  A  B  C  D
1  ■  □  □  □  9  ■  □  □  □  17  □  □  □  □
2  ■  □  □  □  10  T  ■  F  □  18  □  □  □  □
3  □  □  □  □  11  T  ■  F  □  19  ■  □  □  □
4  □  □  □  □  12  T  ■  F  □  20  ■  □  □  □
5  □  □  □  □  13  □  □  □  □  21  ■  □  □  □
6  □  □  □  □  14  □  □  □  □  22  ■  □  □  □
7  □  □  □  □  15  ■  □  □  □  23  □  □  □  □
8  □  □  □  □  16  T  ■  F  □

First Aid for Hazardous Marine Life Final Assessment

Final assessment may be administered in written or oral form. The instructor must review every missed question with each student so that 100 percent comprehension of materials is assured. Questions have only one correct answer. Minimum 16 correct.

A  B  C  D  A  B  C  D  A  B  C  D  A  B  C  D  A  B  C  D
1  □  □  □  □  5  □  □  □  □  9  □  □  □  □  13  □  □  □  □  17  □  □  □  □
2  □  □  □  □  6  □  □  □  □  10  T  □  F  □  14  □  □  □  □  18  □  □  □  □
3  T  ■  F  □  7  □  □  □  □  11  T  ■  F  □  15  T  ■  F  □  19  T  ■  F  □
4  □  □  □  □  8  □  □  □  □  12  □  □  □  □  16  T  □  F  □  20  □  □  □  □
## Diving Emergency Management Program Skills:

### DEMP Practical Evaluation Record

#### Basic Life Support: CPR & First Aid

**Student Name** ________________

<table>
<thead>
<tr>
<th>Provider Skills Development</th>
<th>Instructor Initials</th>
<th>Student Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scene Safety Assessment</td>
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<td></td>
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<tr>
<td>Donning and Doffing Gloves</td>
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<tr>
<td>Initial Assessment</td>
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<tr>
<td>Recovery Position</td>
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<tr>
<td>Chest Compressions</td>
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<tr>
<td>Ventilations</td>
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<tr>
<td>Full Cardiopulmonary Resuscitation (CPR)</td>
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<td></td>
</tr>
<tr>
<td>Automated External Defibrillator (AED)</td>
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<td></td>
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<tr>
<td>Foreign-Body Airway Obstruction</td>
<td></td>
<td></td>
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<tr>
<td>Secondary Assessment</td>
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</tbody>
</table>

I am comfortable with my skills performance as a BLS: CPR & FA Provider.

**Student signature** ________________________ **Date** _____________

#### Neurological Assessment

<table>
<thead>
<tr>
<th>Provider Skills Development</th>
<th>Instructor Initials</th>
<th>Student Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-A-S-T Assessment</td>
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<tr>
<td>Taking a History</td>
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<tr>
<td>Taking Vital Signs</td>
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<tr>
<td>Mental Function</td>
<td></td>
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<tr>
<td>Cranial Nerves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Function (Strength)</td>
<td></td>
<td></td>
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<tr>
<td>Coordination and Balance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I am comfortable with my skills performance as a Neurological Assessment Provider.

**Student signature** ________________________ **Date** _____________
### Emergency Oxygen for Scuba Diving Injuries

<table>
<thead>
<tr>
<th>Provider Skills Development</th>
<th>Instructor Initials</th>
<th>Student Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Oxygen Equipment Identification, Disassembly and Assembly</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>• Demand Inhalator Valve</td>
<td>________</td>
<td>________</td>
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<tr>
<td>• Non-rebreather Mask</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>• Resuscitation with a Bag Valve Mask</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>• Using an MTV</td>
<td>________</td>
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</tbody>
</table>

I am comfortable with my skills performance as an Emergency Oxygen for Scuba Diving Injuries Provider.

Student signature __________________________ Date _____________

### First Aid for Hazardous Marine Life Injuries

<table>
<thead>
<tr>
<th>Provider Skills Development</th>
<th>Instructor Initials</th>
<th>Student Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Shock Management</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>• Injury Management</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>• Pressure Immobilization Technique</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>• Traumatic Injuries (Control of external Bleeding)</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>• Applying a Tourniquet</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>• Severe Allergic Reactions</td>
<td>________</td>
<td>________</td>
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</tbody>
</table>

I am comfortable with my skills performance as a HMLI Provider.

Student signature __________________________ Date _____________

### Dive Accident Management Preparation

<table>
<thead>
<tr>
<th>Provider Skills Development</th>
<th>Instructor Initials</th>
<th>Student Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Emergency Assistance Plan</td>
<td>________</td>
<td>________</td>
</tr>
</tbody>
</table>

I am comfortable with my skills performance in dive accident management preparation.

Student signature __________________________ Date _____________
Quick Reference Chart

1. Registration and Introductions
   a. Course registration forms
   b. Statement of Understanding
   c. Completion of course roster – gather student information

2. Knowledge Development Session [Choose one of these methods.]
   a. Diving Emergency Management Provider slides and videos
   b. Diving Emergency Management Provider online knowledge development

3. Skills Development Session
   a. BLS:CPR & First Aid
      i. Scene Safety Assessment
      ii. Donning and Doffing Gloves
      iii. Initial Assessment
      iv. Recovery Position
      v. Chest Compressions
      vi. Ventilations
      vii. Full CPR
      viii. Automated External Defibrillator
      ix. Foreign-Body Airway Obstruction
      x. Secondary Assessment
   b. Neurological Assessment
      i. F-A-S-T Assessment
      ii. Taking a History
      iii. Taking Vital Signs
      iv. Mental Function
      v. Cranial Nerves
      vi. Motor Function (Strength)
      vii. Coordination and Balance
   c. Emergency Oxygen for Scuba Diving Injuries
      i. Oxygen Equipment Identification, Disassembly and Assembly
      ii. Demand Inhalator Valve
      iii. Nonrebreather Mask
      iv. Resuscitation with a Bag Valve Mask
      v. Using an MTV
d. First Aid for Hazardous Marine Life Injuries
   i. Shock Management
   ii. Injury Management
   iii. Pressure Immobilization Technique
   iv. Traumatic Injuries (Control of External Bleeding)
   v. Applying a Tourniquet
   vi. Severe Allergic Reaction

e. Dive Accident Management Preparation
   i. Emergency Assistance Plan

4. Final Assessments and Review

5. Remind students to download e-card when they receive their email notification.

6. Provide time for knowledge and skill remediation for individuals requiring additional practice.