Med Dive is Dive Rescue International’s renowned 20-hour training program for certified divers, surface support personnel, EMS professionals, and other medical professionals involved with dive teams. Students learn how to recognize and treat hyperbaric injuries. More importantly, graduates of this program will learn how to prevent injuries and safeguard their teammates. This program includes numerous hands-on practical sessions. Successful completion of this program is measured in class participation and an end of program comprehensive test.

Key training topics and the associated objectives include:

**MEDICAL EVALUATION OF DIVERS**
- Identify the levels of medical evaluation for different types of divers
- Define the medical standards for recreational and public safety divers
- Discuss contraindications to diving and distinguish the difference between absolute contraindications and relative contraindications
- Define asthma and the considerations for diving
- Describe chronic obstructive pulmonary disease (COPD) and the diving considerations
- Explain the pneumothorax, its causes, and diving considerations
- Identify the relationship between diving and the cardiovascular system
- Define the following: heart attack and angina, defects in the heart’s structure, pacemakers, high blood pressure, diabetes, neurological problems, and head injuries – describe the effects diving has on the diver with one or more of these conditions
- Describe diving considerations in relation to pregnancy and alcohol and/or substance abuse
- List the components of a diving physical

**DECOMPRESSION PHYSIOLOGY**
- Define gas absorption and release in the human body
- Describe bubble formation, the factors that relate to it, the effects of bubble formation, and risk factors associated with it
- Explain the development of decompression problems
- Decompression Sickness
- Identify the terms related to decompression sickness, the significance of the symptoms, and the areas of the body commonly affected by decompression sickness
- Discuss the signs and symptoms of decompression sickness

**PULMONARY BAROTRAUMA**
- Identify the mechanisms of injury and the common causes of pulmonary barotrauma
- Define the different types of pulmonary barotrauma
- Understand the mechanism of injury and signs/symptoms of mediastinal emphysema and cerebral arterial gas embolus (CAGE)
- Differentiate between CAGE and serious decompression sickness
- Define the difference between deserved and undeserved pulmonary barotraumas
- Discuss the treatment of pulmonary barotrauma
RAPID FIELD NEUROLOGICAL EXAM
• Define the purpose of the exam
• Identify when the rapid field neurological exam should be performed
• Discuss the documentation of the rapid field neurological exam
• Describe and be able to perform the rapid field neurological exam to test a diver’s mental state, cranial nerves, sensations, muscle tone, and balance/coordination
• Understand the objectives of the rapid field neurological exam

FIELD TREATMENT OF COMPRESSED GAS INJURIES
• Describe how to evaluate the diver for compressed gas injuries
• Identify the treatment principles for compressed gas injuries
• Explain field management of compressed gas injuries
• Define the different ways to position injured divers
• Describe the evacuation of injured divers in ground vs. air transportation
• Discuss helicopter safety including the differences between evacuating divers from the ground and from a boat

OXYGEN ADMINISTRATION
• Define oxygen and list the reasons why oxygen is administered to an injured diver
• Identify the different types of oxygen cylinders and oxygen delivery devices
• Explain the proper use of the following: fitting of pocket-style masks, demand valve use, and positive pressure valve use
• Identify the different types of airway adjuncts
• Describe the assembly of oxygen equipment and the safety precautions used in oxygen administration

POST-DIVING CONSIDERATIONS
• Describe the critical incident stress debriefing (CISD)
• Explain the information needed to evaluate a return to diving
• Define concerns over flying after diving

ADVANCED TREATMENT PRINCIPLES
• Describe recompression chamber treatments

PREREQUISITES
All students must be a member of a public safety agency, at least 18 years of age and have current First Aid and CPR training.
Med Dive Schedule

DAY 1

8:00-8:30 Registration, introductions, and course overview
8:30-9:30 Medical Evaluation of Divers
9:30-10:30 Decompression Physiology and Bubble Formation
10:30-11:00 Risk Factors Associated with Bubble Formation
11:00-12:00 Signs and Symptoms of Decompression Sickness
12:00-12:30 Pulmonary Barotrauma
12:30-1:30 Lunch
1:30-3:00 Rapid Field Neurological Exam
3:00-4:00 Field Management of Compressed Gas Injuries
4:00-7:00 Oxygen Administration

DAY 2

8:00-9:00 Post-Diving Considerations
9:00-10:00 Neuro Exam Exercises
10:00-12:00 Field Management of Compressed Gas Injuries Exercise
12:00-1:00 Lunch
1:00-4:00 Lecture
4:00-7:00 Review, Final Exam and Closing

Schedule is subject to change