

DDRC Level I and Level IIa Course Overviews

The Level I course is aimed at the initial training of medical examiners of divers. The content of the course is based on the requirements for Level I, Medical assessment of divers (Medical Examiner of Divers) as established by the European Diving Technology Committee, the European Committee for Hyperbaric Medicine and the Diving Medical Advisory Committee of the International Maritime Contractors' Association.

In order to gain full certification students must

- be qualified medical practitioners within the country in which they intend to practise
- be appropriately registered (or sufficiently qualified to permit registration) to allow them to practise medicine without supervision or they must provide written proof that their work as a medical examiner of divers will be supervised by a registered medical practitioner who has independent practitioner status and has the authority, competency and/or experience to supervise junior doctors engaged in the examination of divers.
- attend all sessions
- complete a multiple choice exam of one hour duration to a predetermined standard. Any exam mark and personal details stored in a database will be handled in a manner compliant with the UK Data Protection Act.

The requirement for medical registration depends very much on trust and your declaration will be taken as sufficient proof. Even if a full certificate is issued, it will be considered meaningless by the approving body if the student is not, in fact, entitled to practise as a medical examiner of divers.

Others may attend the course with observer status but will not receive certification as medical examiners of divers. The maximum number of students is 10 per course.

The course is primarily lecture-based but questions will be welcomed throughout and there will be some discussion sessions. There is a practical element based on skills used to assess fitness to dive. For those who are medically fit, we endeavour to offer exposure to pressure in a recompression chamber and, if at all possible, a dive wearing diving equipment in a closely supervised environment.

Session Topics in Level I course:-

- Introduction, Administration, Badges, Brief Autobiographies
- Gases and Pressure
- Physics and Physiology of Immersion
- Worked Examples of Physics and Physiology
- Decompression Theory
- Breathhold Diving and Bell Diving
- Helmet and Surface Supplied Diving and Open Circuit SCUBA
- Closed Circuit Systems
- Diving Equipment other than Breathing Apparatus
- Barotrauma and ENT Complications of Diving
- Thermal Aspects of Diving
- Use of Diving Tables
- Use of Oxygen Rich Mixtures and the Concept of Equivalent Air Depth
- Pathogenesis of Decompression Illness
- Patent Foramen Ovale and other Circulatory Shunts
- Other Consequences of Diving
- Presentations of Decompression Illness
- Diagnosis and Treatment of Decompression Illness
- Hyperbaric Oxygen Therapy
- Diagnosis and Treatment of other Diving Illnesses
- Scope of Diving Practice
- Organisations Regulating, Advising and Monitoring Diving, Sources of Information and Assistance
- Underwater Hazards, Incidence and Characteristics of Diving Accidents
- Submarine Escape and Rescue Procedures
- Discussion of Diving Accident Cases
- Post-incident Investigation
- Assessing Acceptable Medical Risk in a Diver: Medical Standards
- General Medical Considerations
- Aspects of Fitness to Dive
 - Mental Fitness and Substance Abuse
 - Respiratory Fitness and Lung Function Testing
 - Cardiovascular
 - Obesity
 - Exercise Testing
 - Neurological
 - Visual
 - Ear Nose Throat
 - Gastrointestinal
 - Dental
 - Endocrine
 - Musculoskeletal
 - Radiographic examination
 - Dermatological
 - Genitourinary
 - Haematological
- Through Career Surveillance and Assessment of Fitness after Illness
- Medical Administrative Procedures and Practical Aspects of Medical Exam
- Practice in assessment of fitness skills
- Medical Support to Diving Operations
- Discussion of Fitness to Dive Cases
- Chamber Run / Time in pool / watching professional divers and their equipment

The Level IIa course is aimed at medical practitioners who have already completed a Level I Course, Medical Assessment of Divers (Medical Examiner of Divers). It provides the initial training in prevention, diagnosis, treatment and post-incident follow up of diving accidents and illnesses. The course will give greater insight into the causes and consequences of diving accidents and this will enhance your awareness of, and assessment of the risks regarding, issues relevant to fitness to dive.

The content of the course is based on the requirements for Level IIa, Medical Management of Diving Accidents and Illnesses (Competence in Diving Medicine), as established by the European Diving Technology Committee, the European Committee for Hyperbaric Medicine and the Diving Medical Advisory Committee of the International Maritime Contractors' Association.

In order to gain full certification students must

- be qualified medical practitioners within the country in which they intend to practise
- be appropriately registered (or sufficiently qualified to permit registration) to allow them to practise medicine without supervision or they must provide written proof that their work as a medical examiner of divers will be supervised by a registered medical practitioner who has independent practitioner status and has the authority, competency and/or experience to supervise junior doctors engaged in the examination of divers.
- attend all sessions
- complete an exam to a predetermined standard. Any exam mark and personal details stored in a database will be handled in a manner compliant with the UK Data Protection Act.

The requirement for medical registration depends very much on trust and your declaration will be taken as sufficient proof. Even if a full certificate is issued, it will be considered meaningless by the approving body if the student is not, in fact, entitled to practise as a diving physician and medical examiner of divers.

Others may attend the course with observer status but will not receive certification as diving physicians. The maximum number of students is 10 per course.

The course is primarily lecture-based with questions welcomed throughout and there will be some discussion sessions. A third of the course comprises practical sessions focussed on clinical skills and treatment scenarios. Level IIa certification requires participants to be fit to attend a patient at depth. The course will include a dry chamber dive to a pressure equivalent to between 30 and 50 metres of seawater. Those who are temporarily unfit may postpone this dive and attend as observers. The chamber dive must be completed at a later date to achieve full certification. For those who are medically fit, we endeavour to offer a dive wearing diving equipment in a closely supervised environment. For these activities we will need you to confirm your fitness for dry and or wet diving.

Session Topics in Level IIa course:-

- Hyperbaric physics
- Non-dysbaric diving pathology
- Diving related physiology
- Inert gas-effects -narcosis
- Chamber dive
- Hyperbaric pathophysiology 1
- Hyperbaric pathophysiology 2
- Acute dysbaric disorders
- Hyperbaric oxygen basics – effects of hyperbaric oxygen
- Hyperbaric oxygen basics – mandatory indications
- Oxygen toxicity
- Drugs under pressure
- Basic diving procedures
- Diving tables
- Diving tables
- Decompression accident management
- General basic treatment (nursing)
- Diagnostic, monitoring and therapeutic devices in chambers
- Recompression
- Demonstration of recompression
- Simulated cases
- Chamber technique
- Management of other diving accidents
- CPR Practical demonstration and exercise
- Practice in field first aid (diving accidents)
- Regulations and accepted standards
- Causation, pathogenesis and categories of diving accidents
- Professional diver categories
- Special procedures
- Risk assessment, incidents monitoring and safety plan in HBO chambers
- Safety requirements
- Data collection / statistics / evaluation
- Dive accident investigation
- Simulated cases
- In-water practical experience
- Demonstration of professional diving and equipment
- Practical training in Fitness To Dive exam (skills)
- Inert gas-effects - HPNS
- Development of deep working dives
- The safety assessment process
- Special procedures in deep and saturation diving
- Deep diving accident management
- Chronic disorders of diving
- Simulated cases
- Rehabilitation of disabled divers
- Diverse topics
- Practice in paramedic teaching