

Qualification of diving doctors

**BERGEN INTERNATIONAL DIVING SEMINAR
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Qualification of diving doctors

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1) Why is this a topic?

- HSE had a **list of approved diving doctors** (used worldwide)
→ **discontinued**
- IMCA noted some **concerns with** quality of **medicals** and diving **doctors competence**

IMCA guidance D061 (2018)

Health, fitness and medical issues in diving operations

A number of IMCA members have become increasingly concerned that workplace incidents connected to diver health (medical fitness) and physical fitness issues appear to be increasing. This unsettling trend suggests that there is a need for diving contractors, and divers themselves, to manage the question of diver health and physical fitness more effectively.

IMCA guidance D061 (2018)

Key Factors Identified by Members

IMCA members consider that the following key factors underlie many of the workplace incidents connected to diver health and physical fitness issues that they have been seeing:

- ◆ Excessive weight and poor levels of **physical fitness** amongst divers;
- ◆ The **concealment of known medical conditions** by divers;
- ◆ The **use of prescribed/non-prescribed drugs** or leisure/lifestyle substances (such as steroids, vitamins, protein and electrolyte drinks) by divers without the knowledge of those in control of the diving operations;
- ◆ The **dubious quality of the annual medical examinations carried out by some medical examiners** of divers;
- ◆ **Lack of competence or excessive leniency amongst some medical examiners of divers;**
- ◆ Failure to employ clear pass/fail criteria when carrying out medical examinations of divers;
- ◆ Medical in confidence concerns preventing appropriate access for employers to the medical histories of divers;
- ◆ Inadequate training of worksite medics, leading to poor communication between medics and those in control of the diving operations;
- ◆ Organisational **failures by diving contractors to manage diver health, fitness and medical issues** effectively;
- ◆ A poor culture amongst divers and dive teams that permits problems with diver health and physical fitness to develop and worsen.

IMCA guidance D061 (2018)

Health, fitness and medical issues in diving operations

Diving Medical Physician

A diving medical physician is a doctor who is competent to act as a medical examiner of divers and to manage the treatment of diving accidents and illnesses, including, where appropriate, mixed gas and saturation diving accidents. In addition, diving medical physicians have a reliable knowledge of the offshore diving industry and commercial diving operations. They are also competent to advise on fitness to dive issues. Such doctors will have undergone specialised training and have demonstrated experience in this field.

The most widely recognised training course for diving medical physicians is the Level 2D - Medical

"6.2 Suitable Doctors

The physiology of diving and the problems encountered by an ill or injured diver are not subjects which most doctors understand in detail. For this reason it is necessary that any doctor who is involved in any way with examining divers or giving medical advice in relation to divers has sufficient knowledge and experience to do so (Ref. DMAC 17).

Diving contractors need to identify suitable doctors to carry out medical examinations of divers, and

IMCA guidance D061 (2018)

Health, fitness and medical issues in diving operations

Other than the annual diving medical, the only formal medical checks that have been routinely carried out on commercial divers over the years are the pre and post sat medicals. These

This guidance recommends that in addition to the annual medical, diving contractors may wish to take a more proactive role in managing diver physical fitness issues than has been the case in the past. Effective management

- 2) Make it a contractual condition of service that persons employed as divers must agree to undergo periodic physical fitness testing as specified by the diving contractor and allow the diving contractor access to the results of any such tests.
- 3) Specify appropriate limits with clear pass/fail criteria for BMI and waist size.
- 4) Specify appropriate limits with clear pass/fail criteria for aerobic capacity e.g. maximal
- 10) Make it clear to the divers that, subject to specialist medical advice, the company reserves the right not to employ people as divers if they fail to meet the standards of physical fitness set by the company.

This makes it difficult to specify a required VO_2 max level. Functional goals should be independent of age and gender and would need to allow for the fact that the experience of older divers may make them more effective than younger divers.

IMCA guidance D061 (2018)

Health, fitness and medical issues in diving operations

contractors may wish to put in place management arrangements designed to ensure that all divers:

- ◆ Have the choice, if necessary, to give consent for the company diving physician(s) to access relevant medical records held by their GP/family doctors and medical examiners of divers;
- ◆ At an agreed periodicity return a completed form very similar to the “Diver Fact Sheet and Medical Questionnaire” made available by the HSE (see Appendix 3) that has been validated by their GP/family doctors;
- ◆ Agree to provide all pages of their current annual diving medical examination forms to the diving contractor's diving medical specialists (not just the page stating they are considered fit to dive);

Medical examiners of divers normally do not have access to the medical histories of the divers they assess. In Great Britain, for a diver's first medical assessment, the HSE does

2) the actual situation

Who are the diving doctors?

- **Legal obligation** for fitness to dive medicals
(but MED definition different in each country)
- **Legal obligation** for safety planning
(but need for qualified doctors often not specified)

2) Actual situation (cont.)

What competence is needed for safe practice

- Employer:
HIRA - safe operational proc - emergency plan
- Divers:
Medical fit - physical fit - skills - experience
- Diving doctors:
Knowledge - skills - attitude - experience

3) Contributions of EDTC

In a period of unacceptable risks of offshore-diving:

- EDTC 1973: A non governmental organisation
The goal is to enhance safety of diving.
- Historically starting from extremely high accident rate – contributed to big improvement of safety management
- Close cooperation with AODC-IMCA

Disappearance of decompression incidents in offshore industry

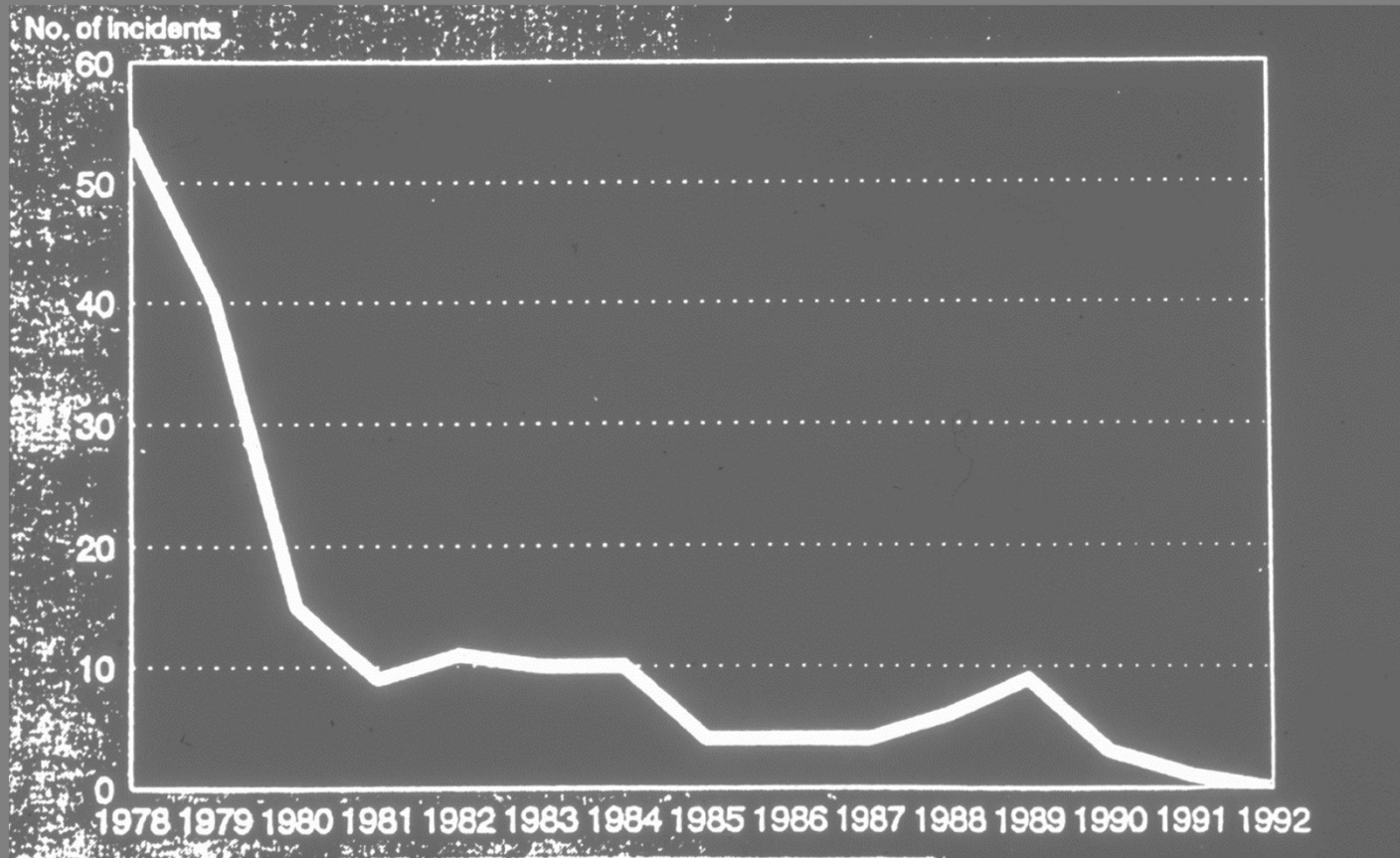


Figure 7. Evolution of DCI incidence in the Norwegian shelf offshore divers 1978-92 (from Brathens [7])

EDTC's approach

- Coordinate the efforts of industry and H&S authorities to establish regulations and standards
- To facilitate mutual recognition and free movement of divers and certificates
- Expand this spirit to those European countries without appropriate regulations, especially for inshore and inland diving

1. European Diving Technology Committee (EDTC) Profile



Non profit organization - formed 1973.

Purpose

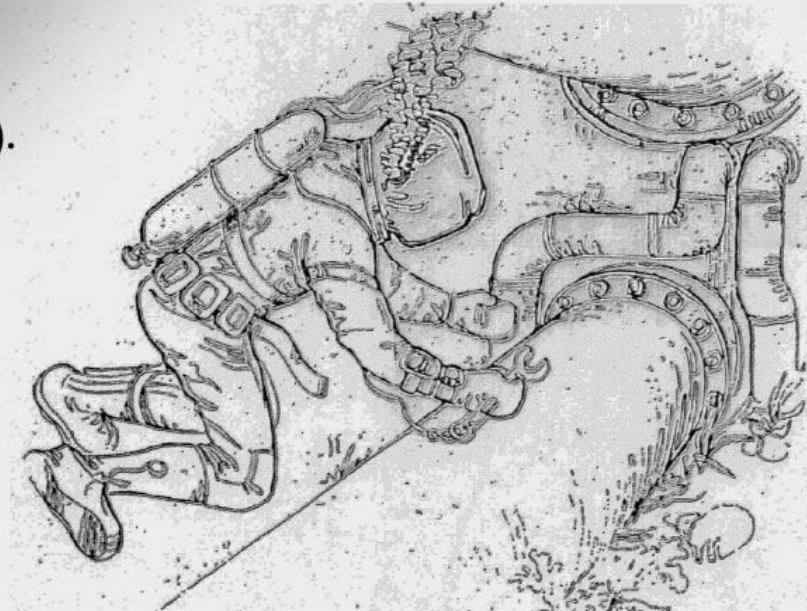
- Safer Commercial Diving,
- Through Unity, Strength (Securitas per unitatem).

Representation

- 23 European countries,
- Medical,
- Industry,
- Government,
- Labour Unions.

EDTC reach its aims by

- Independent European forum,
- Discussions,
- Standards,
- Guidance.



4. European Commercial Diving –

Comparison of Fatal Accident Rates



Statistics provided by governmental - HSE UK – a country with mature rules and regulations

All Workers in UK	0.5 per 100,000
Service Sector	0.3
Construction	2
Extractive Industries	4
Agriculture	8
Offshore Diving	20 - 30
Inshore Diving	30 – 60

**the goals are
not achieved
yet!**

Fatal accidents per 100,000 workers per year

Updated in 2018



(The statistics are based on fatal commercial diving accidents in the UK between 1996 and 2018)

EDTC standard 2003 (under review) for medical assessment of working divers

- **Guidance and reference section (manual)**
- Be aware of **dual loyalties** of the examiner:
towards the diver and the employer
- **Precautionary principle** as part of the duty of
care
- Respect a **non-discrimination** act

move from old school techniques to an job focused exam:

- Prescriptive → Discretional
- Any doctor → Competent MEDs
(Diving med and occmed)
- List of CI → Guidance incl many
med conditions

To be ordered from:
www.imca-int.com

medical assesement of working divers

EDTC Standards

1st edition September 2001

medical assesement of working divers



Jürg Wendling, David Elliott, Tor Nome

Authors:

Standards by the medical subcommittee of EDTC

Hermann van Bogaert, Jordi Desola, David Elliott, Robert van Hulst, Pasquale Longobardi, Clemens Mader, Joop Madsen, Jean-Louis Méliet, Tor Nome, Hans Omhagen, Seppo Sipinen, Steve Watt, Jürgen Wenzel, Jürg Wendling

Reference Section:

Jürg Wendling, Oskar Ehm, Rolf Ehram, Peter Knessl, Peter Nussberger, Antoine Uské and coworkers of Swiss Underwater and Hyperbaric Medicine Society

Published by:

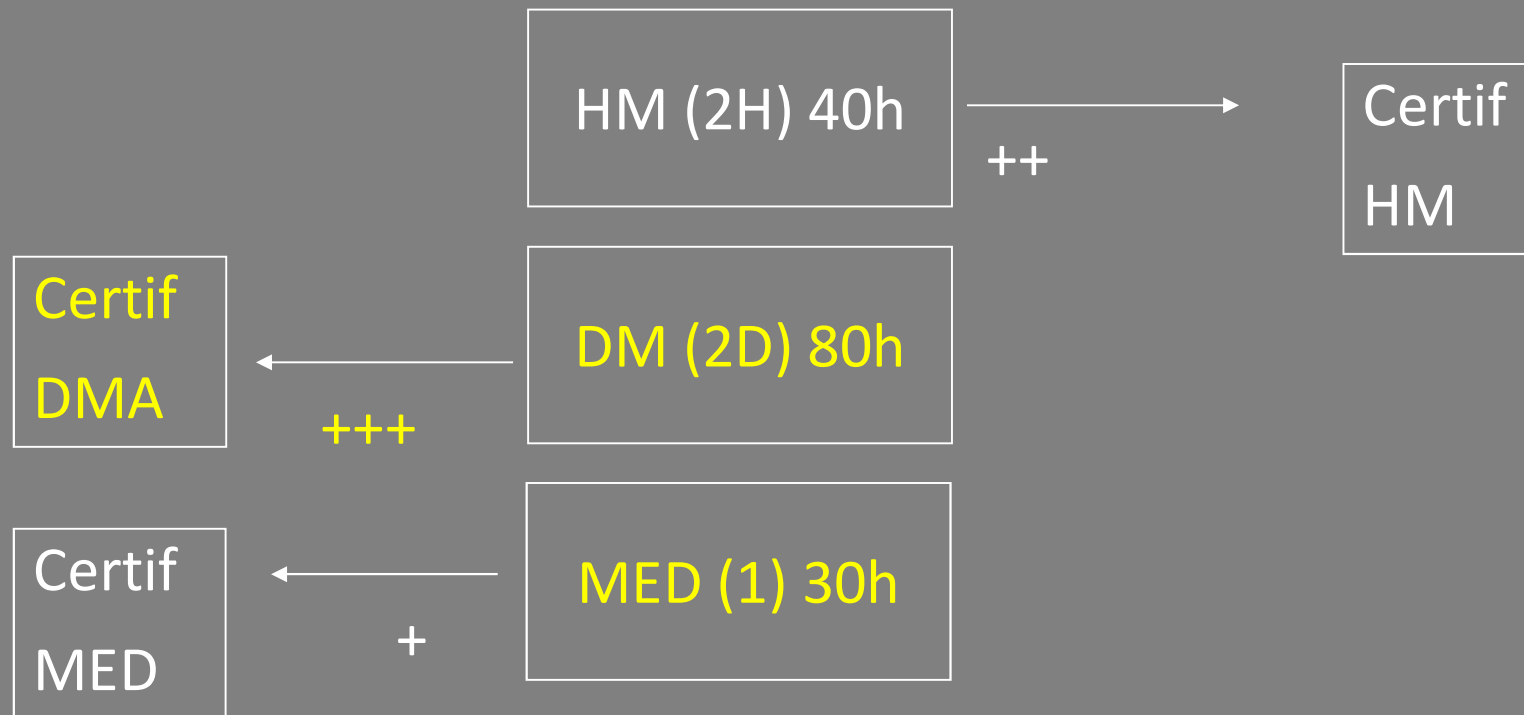
European Diving Technology Committee

Modules of training in hyperbaric med

EDTC
PISA IDMEB

Courses

ECHM
ECB





European Diving Technology Committee

EDTC

**COMPETENCE STANDARDS for
PHYSICIANS of OCCUPATIONAL
DIVING and TUNNELLING
COMPANIES**

January 2019

2019

download from
www.edtc.org

As EDTC sets standards serving as a guide for certifying instances we further proposed a

“EDTC competence standard for physicians of occupational diving and tunnelling companies”

- Med training standards 2011 EDTC-ECHM remain unchanged
- Diving medicine advisor (**DMA**) new name for doctors certified on the basis of the competence standards
- EDTCmed wishes to **include** medical support for high pressure **tunnelling**
- Content: All “+++”elements from training standards (skills and experience) are specified

**EDTCmed = medical subcommittee of EDTC
(all medical delegates + corresponding members)**

- In cooperation with DMAC
(mutual representation, common
approval process of training courses)
- Actually:
 - 1/ Updating FTD standard → 2020
 - 2/ Implementing approval process for
competence of MEDs and DMAs

Updating fitness to dive standards

Certificate should contain

- fit **for duty** (diving AND task)
- (as required) sensible restrictions , as defined **in accordance with the industry**
- **optionally: info about physical fitness**

Certificate

MEDICAL CERTIFICATE:	FITNESS FOR OCCUPATIONAL DIVING / COMPRESSED AIR WORK
ÄRZTLICHES ZEUGNIS:	TAUGLICHKEIT FÜR ARBEITEN IM ÜBERDRUCK / TAUCHARBEITEN
CERTIFICAT MÉDICAL:	APTITUDE À LA PLONGÉE PROFESSIONNELLE OU AUTONAVAL EN MILIEU HYPERBARE
CERTIFICATO MEDICO:	IDONEITÀ MEDICA ALL'ATTIVITÀ SUBACQUEA PROFESSIONALE

NAME: _____

ADDRESS: _____

E-MAIL: _____

PASSPORT NUMBER / ID: _____

The above mentioned person was examined on the indicated date. This medical examination complies with the National Diving Regulations, the EDTC* standards for medical assessment of working divers 2003 and the international standards specified by the Diving Medical Advisory Committee, as contained in IMCA D02001. Attested fitness means that no relevant contraindications to perform the indicated underwater or compressed airwork job were found.

While the fitness to dive certificate attests appropriate medical fitness, certain jobs, in particular offshore and saturation diving need a high physical performance to be "fit for the job". Therefore the examining doctor should add biometric data (body mass index, fat %) and a value of cardio-pulmonary and muscle-function (as metabolic equivalent of task MET).

BMI _____ **Fat %** _____ **Vo2 max** _____ **MET** _____

THIS DOES NOT REPLACE THE NECESSARY INFORMATION AND OPTIONS, AND BE OBTAINED

ASSESSED FOR HYPERBARIC EXPOSURE FOR THE FOLLOWING PURPOSE & LEVEL:

PURPOSE:

LEVEL:

RESTRICTIONS:

COMMENTS / SUGGESTIONS: _____

DATE OF NEXT ASSESSMENT: _____

PHYSICIAN (SIGNATURE & STAMP):
(Medical practitioners of divers registered by the DMES are listed online at www.edtc.eu)

E-MAIL: _____

PLACE & DATE OF EXAMINATION: _____

* EDTC: European Diving Technical Committee www.edtc.org. The standards for medical assessment of working divers 2003 are part of the guidelines of EDTC, endorsed as well by the DMAC (Diving Medical Advisory Committee www.dmac-diving.org), compatible with MAF of UK and BS31 of Germany.

Disclaimer: The information on this certificate was typed by the result of a physician performing the examination, who has full responsibility for the contents thereof. The diver may request a copy of the full medical report including examination data when needed for further medical checks elsewhere. This certification does not include the occupational health evaluations required for exposure monitoring or screening for occupational diseases. Additional certification on this regard must be provided separately.

Certificate

MEDICAL CERTIFICATE: FITNESS FOR OCCUPATIONAL DIVING / COMPRESSED AIR WORK
ÄRZTLICHES ZEUGNIS: TAUGLICHKEIT FÜR ARBEITEN IM ÜBERDRUCK / TAUCHARBEITEN
CERTIFICAT MÉDICAL: APTITUDE A LA PLONGÉE PROFESSIONNELLE OU AU TRAVAIL EN MILIEU HYPERBARE
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PASSPORT NUMBER / ID:

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While the fitness to dive certificate attests appropriate medical fitness, certain jobs, in particular offshore and saturation diving need a high physical performance to be "fit for the job". Therefore the examining doctor should add biometric data (body mass index, fat %) and a value of cardio-pulmonary- and muscle-function (as metabolic equivalent of task MET).

BMI Fat % Vo2 max MET

(For jobs not requiring these data these informations are optional, can be omitted)

2010 NEW PART OF THE GUIDELINES OF EDTC, as agreed by the Diving Medical Advisory Committee, is included in this certificate. The diver must be informed of this change.
Disclaimer: The information on this certificate was logged by the medical practitioner performing the examination who has full responsibility for the contents thereof. The diver may request a copy of the full medical report including examination data when needed for further medical checks/benchmarks. This certificate does not include the occupational health evaluations required for exposure monitoring or screening for occupational diseases. Additional certification in this regard must be provided separately.

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CERTIFICATO MEDICO: IDONEITÀ MEDICA ALL'ATTIVITÀ SUBACQUEA PROFESSIONALE

NAME:

ADDRESS:

ASSESSED FOR HYPERBARIC EXPOSURE FOR THE FOLLOWING PURPOSE & LEVEL:

PURPOSE:

Commercial surface supplied diver offshore

Purpose of hyperbaric exposure

- A Diving commercial (offshore, inshore, inland, civil engineering)
- B Diving others (SAR, scientific, multi-media, dive leaders, military)
- C Compressed air work (CAW) others (staff of HBOT-chambers, SAR, scientific, technical)
- D Compressed air work (CAW) commercial (tunnelling, caisson work)
- E Surface personnel at diving worksite

LEVEL:

I air or nitrox, air or O2 deco (normally < 50m)

Level of hyperbaric exposure

- 0 no deco stages (normally < 12m)
- I air, nitrox, O2 deco (normally < 50m)
- II mixed gas bounce (normally < 80m)
- III closed bell and sat (normally > 50m)
- Non diving personnel

RESTRICTIONS:

D) No diving with rebreathers

Restrictions groups

- A) Senses
- B) Decompression/pression/immersion
- C) Medical conditions
- D) Equipment & personnel
- E) Geographical

E-MAIL:

PLACE & DATE OF EXAMINATION:

* EDTC: European Diving Technology Committee www.edtc.org. The standards for medical assessment of working divers 2005 are part of the guidelines of EDTC, endorsed as well by the DMAC (Diving Medical Advisory Committee www.dmac-diving.org), compatible with MAF of UK and DSI of Germany.

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CERTIFICATO MEDICO: IDONEITÀ MEDICALL'ATTIVITÀ SUBACQUEA PROFESSIONALE

NAME:

ADDRESS:

E-MAIL:

COMMENTS / SUGGESTIONS:

DATE OF NEXT ASSESSMENT:

PHYSICIAN (SIGNATURE & STAMP):

[medical examiners of divers registered by the IDMEB are listed online at www.edmd.eu]

E-MAIL:

PLACE & DATE OF EXAMINATION:

DATE OF NEXT ASSESSMENT:

PHYSICIAN (SIGNATURE & STAMP):

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4) Build-up of an international registry of diving doctors

With support of EDTC

With support of DMAC

Authored and managed by the IDMEB
(International Diving Medical Expert Board)

Hosted at SSSA Pisa
(Scuola Superiore di Studi Universitari et di
Perfezionamento Sant'Anna)

IDMEB

- Registry of diving doctors edmd.eu
- Designation of MEDs and DMAs
- Approval of skills-training providers
- Exam for DMAs

DMAC/EDTCmed

- Approval of diving med courses

Registry getting international

EDMD → www.DIVEMEDREG.org

- Opening for overseas associations and national coordinators
- Synchronising with other registries of equivalent credibility and quality

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[History](#)

[The EDMD databank](#)

[How it is managed](#)

[References and links](#)

Hosted by the International Diving Medical ExpertBoard IDMEB



FOR DIVERS

[Locate a doctor for medical examination](#)



LOGIN

[Registered users only](#)

[New applicants registration](#)



FOR EMPLOYERS

[Locate a doctor for operational support](#)

[Verify fitness certification](#)

[Submit medical information on an employee](#)

Locate a doctor



5) Conclusions

- EDTC: new FTD standards with work specific certificates
- The DIVEMEDREG is open access to divers and employers

This will facilitate :

- Safety planning with competent DMAs
- Selection of medically and physically fit divers by employers
- Finding adapted diving jobs for those with a medical condition compatible with some restricted diving