

THE RSTC MEDICAL STATEMENT AND CANDIDATE SCREENING MODEL

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Key Words

Fitness to dive, safety

Introduction

Recreational scuba diving is an enjoyable leisure activity which has attracted millions of participants.^{1,2} Due to the unique physical and environmental nature of breathing compressed air, scuba diving poses potential health risks. Most diver training organisations do not require every student to undergo a medical examination, by a medical practitioner, before enrolling in a scuba course. They do, however, require some type of medical and health screening as a prerequisite to scuba diving activity.³ Before 1989 industry organisations had developed their own screening process and methods with wide variation in content and approach.

In 1989, a standardised and objective assessment of medical fitness to participate in scuba diving was voluntarily sought by the diving educational organisations (NASDS, PADI, SSI, PDIC, YMCA and IDEA) who were members of the Recreational Scuba Training Council (RSTC). This was accomplished in November 1989 with the release of the RSTC Medical Statement.

In 1989, RSTC member organisations adopted the Medical Statement for use. These organisations train approximately 70% of the world's divers. The PADI Medical Statement is a reproduction of this form.⁴

Development of the Medical Statement

The RSTC used diving medical expertise and guidance to develop requirement for medical eligibility for diving students. The RSTC Medical Statement was developed by well known members of the Undersea and Hyperbaric Medical Society (Drs Paul Tombs, Keith Vandermeter, Peter Bennett, Robert Goldmann, Richard Moon, Paul Linaweaver, Roy Myers and James Vorosmarti) along with physicians from DAN in conjunction with training organisations affiliated with the RSTC. The medical statement reflects the conventional thought of the United States diving medical community as to what constitutes medical eligibility to learn to dive at the time it was developed.⁵

The medical content has evolved since its release with various revisions suggested from the international medical community, including input from the United Kingdom and

the 1995 SPUMS workshop policy on medical practitioner certification of fitness for diving.^{6,7}

Since its release ten years ago, the RSTC Medical Statement has been adopted and applied internationally in over 175 countries and territories throughout the world. Conservative estimates indicate that the RSTC Medical Statement has been utilised as a scuba diver health screening system over eight million times. Initially released in English it has been translated into several languages.

The medical statement is currently utilised by all RSTC member affiliates of the RSTC Canada, RSTC, RSTC-Europe and Barakuda, FIAS, ANIS, SSI Europe, PADI Norway, PADI Sweden, PADI Asia Pacific, PADI Japan, PADI Canada, PADI Americas, PADI Worldwide, IDD Europe, YMCA, IDEA, PDIC, SSI International, BSAC Japan and NASDS Japan.

How the Medical Statement System Works

The RSTC Medical Statement system is designed to help the diving candidate, the examining physician and the scuba instructor ensure that a student is medically fit for diving. The statement is composed of three sections, a medical questionnaire, guidelines for recreational scuba diver's physical examination and a bibliography.

The medical health screening questionnaire was designed to be comprehensive enough to identify appropriate questions yet decrease the number of unneeded physical exams. The standards of RSTC member organisations stipulate that it is necessary for prospective diving candidates to complete the medical questionnaire before breathing compressed air. If a candidate answers in the affirmative for any question, they are advised to contact a medical practitioner for an opinion, a consultation or physical examination as required.

The statement was designed to accommodate the geographical and operational problems facing diving operators throughout the world. The limited number and distribution of physicians with expertise in diving medicine in the majority of world, including the US, makes it difficult, if not impossible, for many diving students to ever see a qualified medical practitioner. In some developing countries, a physician may not be available at all.

With the increase in scuba diving, the chances that a primary care physician will deal with a diving problem is increasingly likely. Physicians living far away from diving sites are not excluded from the possibility of encountering diving medical problems. Many divers travel to exotic areas for diving and may complete a medical before leaving. As a result the statement includes a section on guidelines for any physician to follow, with a bibliography to assist the examining medical practitioner to assess the

patient's health and medical conditions in the context of diving physiology and so make an informed recommendation. Contact information for the Diver Alert Network (DAN) and the medical endorsers are provided to assist further with difficult or unusual cases. Instructions and guidelines for recreational scuba divers' physical examination are provided to correspond with each area of the health screening questionnaire and identify associated relative and absolute contraindications to further guide the examining physician.

Role of the Diving Candidate

The first two pages of the six page statement are filled in by the student at the beginning of every diving course. To encourage honesty, risks are outlined and the importance of personal health for safe participation is highlighted, the text appears in Box 1.

After reading and signing this section, the student completes the medical questionnaire with a written yes or no answer for every question. All blanks are checked by the instructor to insure no questions are left unanswered. If an affirmative answer is given to any question, the student is referred to a physician, taking with him or her the statement guidelines, for examination. The student must return with an unconditional medical approval prior to water activities or be disqualified from further participation. This relieves the instructor from the burden of deciding whether a student should be seen by a physician or not. In the past, scuba instructors were occasionally placed in the uncomfortable position of wanting to teach a willing student to dive, but not knowing if diving could compromise the student's health. With the new statement, a doctor makes a decision based on his or her knowledge and expertise along with the patient history and the use of the guidelines written expressly for this purpose.

Role of the Medical Practitioner

A long standing concern within the diving medical community is that not all physicians are aware of certain physical and emotional factors peculiar to scuba diving and so are unable to provide suitable medical examinations.

In addressing this concern, the medical statement assumes that a physician should be the medical decision maker. Physicians make daily decisions with their patients regarding risk to benefit ratios of diagnostic procedure and treatment. It is logical to extend this process to risk assessment in recreational scuba diving. The RSTC statement provides diving-specific, medically-based guidelines to the physician. The statement assumes physicians have a sufficient background in physiology to learn enough about diving medicine to make informed decisions based on risk assessment. The examining

BOX 1

OPENING STATEMENT OF THE RSTC MEDICAL FORM

“This is a statement in which you are informed of some potential risks involved in scuba diving and the conduct required of you during the scuba training program.

Your signature on this statement is required for you to participate in the scuba training program offered by

(Instructor) _____ and _____

(Facility) located in the city of _____ and state of _____.

Read and discuss this statement prior to signing it.

You must complete this Medical Statement, which includes the medical history section, to enroll in the scuba training program. If you are a minor, you must have this Statement signed by a parent.

Diving is an exciting and demanding activity. When performed correctly, applying correct techniques, it is very safe. When established safety procedures are not followed, however; there are dangers.

To scuba dive safely, you must not be extremely overweight or out of condition. Diving can be strenuous under certain conditions. Your respiratory and circulatory systems must be in good health. All body air spaces must be normal and healthy. A person with heart trouble, a current cold or congestion, epilepsy, asthma, a severe medical problem, or who is under the influence of alcohol or drugs should not dive. If taking medication, consult your doctor and the instructor before participation in this program. You will also need to learn from the instructor the important safety rules regarding breathing and equalisation while scuba diving. Improper use of scuba equipment can result in serious injury. You must be thoroughly instructed in its use under direct supervision of a qualified instructor to use it safely.

If you have any additional questions regarding this Medical Statement or the Medical History, section, review with your instructor before signing.”

physician is provided with the student medical questionnaire, guidelines and the instructions in Box 2.

BOX 2

“Recreational scuba (self contained underwater breathing apparatus) diving has an excellent safety record. To maintain this status it is important to screen student divers for physical deficiencies that could place them in peril in the underwater environment.

The Recreational Scuba Diver’s Physical Examination contains elements of medical history, review of systems and physical examination. It is designed to detect conditions that put a diver at increased risk for decompression sickness, pulmonary over-inflation syndrome with subsequent cerebral gas immobilisation and loss of consciousness that could lead to drowning.

Additionally, the diver must be able to withstand some degree of cold stress, cope with the optical effects of water and have a reserve of physical and mental abilities to deal with possible emergencies.

The history, review of systems and physical examination should include, as a minimum, the points listed below. The list of contraindicating, relative and absolute, is not all inclusive. It contains the most commonly encountered medical problems that put the diver at risk, and (lead him) to consider the individual patient’s state of health.

Diagnostic studies and specialty consultations should be obtained as indicated to satisfy the physician as to the diver’s status. A list of references is included to aid in clarifying issues that arise. Physicians at the Divers Alert Network (DAN) are available for consultation at worldwide locations.

Some conditions are absolute contraindicating to scuba diving. Conditions that are absolute contraindicating place the diver at increased risk for injury or death. Others are relative contraindicating to scuba that may be resolved with time and proper medical intervention. Ultimately the physician should decide with the individual, based on his knowledge of the patient’s medical status, whether the individual is physically qualified to participate in scuba diving.

Remember at all times that scuba is a recreational sport, and it should be fun, not a source of morbidity or mortality.”

Physicians are then guided through each screening area which identifies relative and absolute contraindications for the following areas,

- 1 cardiovascular system,
- 2 pulmonary,
- 3 neurological,
- 4 otolaryngological,
- 5 gastro intestinal,
- 6 metabolic,
- 7 endocrinological,
- 8 pregnancy,
- 9 haematological,
- 10 orthopaedic and
- 11 behavioural health.

If any negative responses are noted, the physician is asked for an opinion as to the medical fitness for scuba diving. The general principles for disqualification include

- 1 diving causes a deterioration in the medical condition and
- 2 the medical condition presents an increased risk for a diving injury to both the individual and the diving partner.^{8,9}

Role of the Diving Instructor

Because, typically, scuba instructors are not medical practitioners, they should not be expected to medically screen, make diagnoses nor render definitive opinions as to whether a course applicant is medically eligible to participate in a scuba course. This responsibility should rest with the medical community. The RSTC form provides a medically-based standardised approach to the health screening process to address this problem. This effectively reduces the problem of lay people being faced with medical and health screening decisions. If an answer to a screening question is unclear, the instructor can inform potential students that their cases are complex and invite them to discuss medical issues with a physician before completing the questionnaire.

When a physician gives approval to a student as to his medical eligibility to dive, the instructor must then decide whether or not to take the student under instruction. If an applicant is medically approved for diving and the instructor believes the student has a condition that may not be suitable for diving, it may be appropriate for the instructor to seek further guidance from the physician who examined the student. Coren discusses this point, “ultimately, the scuba instructor must make the final decision as to whom will be permitted to take a scuba course. Scuba instruction is not a right to which all persons are entitled. It is a private recreational choice on the part of both the instructor and the applicant. An instructor has absolutely no legal obligation to accept every applicant. Therefore, keeping in mind these considerations in the area of medical fitness, an instructor may exercise discretion by

refusing admission to an application if, in the instructor's judgement, there is cause for concern".¹⁰

It is important for an instructor not to assume responsibility for medical judgements or approvals. This is solely the physician's area of expertise. The instructor is required by the training agency, to leave this responsibility to the physician.

Conclusions

By using the RSTC Medical Statement system, instructors, students and physicians are linked together to determine individual health for diving. The process of student, instructor and physician interaction is designed to provide information about student medical history and risk identification to make an informed health assessment and recommendation before scuba diving. This in turn supports safe and enjoyable scuba diving for the majority of the interested population. The past ten years have shown this system to be responsive and effective in supporting this purpose.

The future of the RSTC Medical Statement

The RSTC Medical Statement is currently under active review and updating with the UHMS Diving Committee. The three goals of this process are

- 1 to evolve the semantics and content to current 2000 diving medical conventional thought,
- 2 broaden the international endorser group on the statement, and
- 3 release it completed back to the RSTC by July 2000.

Recently in the United Kingdom, a system very similar to the RSTC Statement has been proposed which uses a self-assessment based health questionnaire which only refers the student to a medical referee qualified in diving medicine if the candidate answers in the affirmative for any question.⁶

References

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QUESTIONS AND ANSWERS AFTER THESE PAPERS BY DAVID ELLIOTT AND DREW RICHARDSON

Robyn Walker

In Australia there are people who go from doctor to doctor to get dive medicals, amending their medical history until they find a doctor who will pass them. A dive medical once passed lasts for life. However if something occurs later on, there is no way which we can take certificates away from them. All we can do is ring the dive shop and warn them that the person should not be diving.

David Elliott

That introduces the question I was going to ask Drew Richardson. While there is obviously still a lot of work to be done on the wording of those forms, the principle is totally acceptable, particularly where medical services are few and far between. What I think has not yet been properly addressed, are the problems of the older diver, the person who has been sick and so forth. I am surprised that questionnaires are not used more often. Sometimes a PADI dive resort will slap the questionnaire down in front of you, before you fill in your disclaimer. I think that is entirely acceptable. It would answer an awful lot of the doubts that people have about the once-only nature of examinations or questionnaires.

Drew Richardson

That is the standard practice. Resorts, because of