THE RSTC MEDICAL STATEMENT
AND CANDIDATE SCREENING MODEL

Drew Richardson

Key Words
Fitness to dive, safety

Introduction

Recreational scuba diving is an enjoyable leisure activity which has attracted millions of participants. 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. 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.

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.

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.

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, 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

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<th>BOX 1</th>
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<tr>
<td>OPENING STATEMENT OF THE RSTC MEDICAL FORM</td>
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<tr>
<td>&quot;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.</td>
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<tr>
<td>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 ___________________________.</td>
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<tr>
<td>Read and discuss this statement prior to signing.</td>
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<tr>
<td>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.</td>
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<tr>
<td>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.</td>
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<td>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.</td>
</tr>
<tr>
<td>If you have any additional questions regarding this Medical Statement or the Medical History, section, review with your instructor before signing.&quot;</td>
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A 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.

**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

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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
legal liability concerns if for no other reason, typically want medical questionnaires filled in along with the disclaimer which is essential if one wishes to dive at a resort. The more one goes to resorts or travelling the more likely one will face this medical screen.

David Elliott
As I went through the PADI Instructor Manual the other day for quasi-medico-legal reasons, I saw, and had not appreciated, that PADI does require each instructor to have a medical certificate from a doctor. I think you do not really emphasise that enough.

Drew Richardson
Yes, I did not say anything about that. Before one can become a Dive Master there is a medical assessment by a physician. At least within our standards, although it is in other groups as well, if there is a change in health status then that diver has to step out of the water until all is well again. This is routinely done, believe it or not. A lot of diving instructors are concerned if they have become ill and want to know whether or not it is going to affect their career, so voluntarily go to see the diving doctor. Not always but usually. Which is a change from the old commercial field when it sometimes suited the divers to hide being unwell because they would miss out on depth pay or whatever.

Jürg Wendling (Switzerland)
I would like to repeat what David said, that these forms are good for the Bongo Bongo lands. But now, especially in Europe, there are now hundreds of trained doctors in many countries. This was not the case 10 years ago. This will go on and go on. I think it is good to have a form which is universally applicable, but it should be mentioned somewhere on the form that it is recommended for novice divers to have a medical with a doctor trained in diving medicine. It is an easy phrase to put in, and would not make any harm for the Bongo Bongo lands where there are no trained doctors.

There are a few well evolved local systems. The UK has a referee system. No system is perfect. The pragmatic reality is that diving occurs around the world and it is impossible for every learner diver to have a medical examination before they start diving.

There is a trend towards travel agencies telling people to have their medical in their home countries, and not in the remote area where they will be diving. Look at the forms we signed here, the only informed consent is no signature, no diving.

Drew Richardson
The diving industry is working in liaison with travel agents, because we do not want a customer being upset by being denied access to diving or feeling that they were hoodwinked into seeing a doctor. So it is in everyone’s best interest to try to use the internet and other media to encourage medicals before they travel. I completely agree with you.

David Taylor (Melbourne)
I am very interested in the behaviour of divers. It is something I have been interested in for quite some time; whether divers in fact select themselves to become adventurous people or whether the diving itself actually causes them to become adventurous and thrill seeking. I do not know. However I have recently just completed a pilot study on a group of divers in the US, looking at their interests and preferences. We found that divers tended to be very much outgoing, very adventurous, thrill seeking, but not disinhibited. We want to extend our survey across North America and also through Australasia looking at this and various other things.

Paul Langton (Perth)
One of the resources that is increasingly utilised by tourists before they go travelling is internet-based searching. There are now quite a lot of US and some Far North Queensland based sites that not only advertise their dive training, but have on their web side the recreational scuba training council medical certificate, with a recommendation that the candidates fill it in and seek medical assessment by a trained doctor before they go on their holiday. This is to try to overcome some of the problems of someone arriving wanting to do the dive course, starting that afternoon, and where they are probably more likely to fib about their past history.

Mike Davis (Christchurch)
I am totally confused. SPUMS is an organisation that has developed an approach to diving medicals in Australia which is increasingly permissive and is not based on a prescriptive approach at all. PADI on the other hand is asking for a prescriptive approach to medical certification of recreational divers. I am at a complete loss about what does happen in Australia. Every quarter I get a list of diving doctors from SPUMS, my understanding is that sport diving doctors from SPUMS, my understanding is that sport divers in your community are required to go to these doctors to get a medical clearance for recreational diving and that the medical is meant to be according to AS4005.1. However the diver training organisations are asking for something completely different. In Christchurch I do not do a lot of sport diving medicals but I do see those that people have not been happy with before and, in fact, this is the first time I have ever seen this form. So one wonders just what is going on in our own communities. It does not seem to fit with your reality Drew at all.

Terry Cummins (Sydney)
In Australia what happens is the PADI dive shops give trainees one of our questionnaires but they will advise them that they should have a dive medical with a diving doctor. They do not have to, but they are advised to. The
dive shops are really quite keen on that. So people in Australia are advised to see a diving doctor. Even with the PADI questionnaire.

Mike Davis, Christchurch

What sort of permissive discretionary approach do you take Vanessa? In particular, which form and what approach to permission and clearance for recreational diving do you take? Do you take the discretionary one that is our Society’s policy or do you take PADI’s.

Vanessa Haller (Victoria)

I use the medical form in the Australian Standard, AS4005.1 Training and Certification of Recreational Divers Part1. But it is very similar to the one in AS2299 Occupational Diving. There is not a lot of difference between them. The AS4005.1 form has probably got more in it.

John Knight, Melbourne.

For those who do not live in Australia, it is composed of a number of States which do not have exactly the same laws, it is a Federation. Australian Standards exist for States to put into their legislation if they want to. The only State that has put AS4005.1 into its legislation is Queensland and the law in Queensland requires somebody who wants to learn to scuba dive for recreational reasons to go to a doctor with special training. Training as laid down by the Censors of the South Pacific Underwater Medicine Society. In the rest of Australia, there is no compulsion but most of the training organisations are keen on getting their trainees medically examined, as this will shift the liability for taking somebody who does something unhealthy, like having a fit underwater, off their shoulders and onto the doctor.

Chris Coxon (Cairns)

It appears that PADI and the other training organisations are developing a proliferation of shorter courses than entry level certification courses. I understand these have lowered the previous age limits and some of them can be used later to shorten the basic certification course. Could Drew Richardson explain what these courses are and how the RSTC medical screening process fits in? I raise the matter, because I could not see any age reference in the whole document.

Drew Richardson

For Discover Scubas, and other non-certificate courses, the battery of questions is adapted for the screening element. If someone answers in the affirmative, they are referred to the full document. But there is no lower age at the moment (May 2000). However we are under revision right now.

Henrik Staunstrup, Denmark.

I agree that at least 10 years ago this medical statement was great for a lot of areas in the world. But in those 10 years an awful lot of diving doctors have been educated. I think that this RSTC statement should reflect that we have a different world now. That there are many areas filled with approved diving doctors who can do good dive medicals. I think you should really emphasise that the RSTC statement can be used, but in areas where there are plenty of diving doctors it is advised that one should have a medical examination. What is the policy of RSTC, to have this all over the world or to try and develop dive medicals and diving medicine?

Drew Richardson

I disagree with the suggestion that we now have a proliferation of physicians with expertise in diving medicine that we did not have ten years ago. I believe that the number is probably flat or declining. Look at the UHMS. Its focus now is much less on diving medicine. It is going into other hyperbarics. So I think there are actually fewer and fewer diving doctors. The number of divers has increased significantly. So, although the number of doctors probably is keeping up with society’s needs, the number of diving doctors is falling behind its user group. I believe there is even more of a demand for diving doctors than there used to be. However we do, generally in Australia and New Zealand, make the recommendation to see a diving doctor.

FIT FOR WHAT? WHAT DIVING CAN BE DONE BY SOMEONE WHO IS NOT PERFECT?

David Elliott

Key Words

Diving medicals, fitness to dive, medical conditions and problems, recreational diving, standards.

Introduction

If we are to endorse good medical standards, set pass/fail criteria or provide doctors with well-considered guidance, are these to be identical for all divers? For example, does the vacationer in a tropical resort who wants to try his or her first “diving experience”, need the same medical screening as an experienced North Sea oxy-helium saturation diver? For some things, yes (neither should have a pneumothorax), in other things, no (screening a novice for dysbaric osteonecrosis is certainly not necessary) but in other ways, the novice should have a greater level of screening (consider the potential for a panic attack in a first-ever dive). So, not all fitness assessments are the same. Now, primarily for lack of time, we should put aside all the different varieties of working divers and, in doing so,