

MEDICAL FORM FOR PROSPECTIVE RECREATIONAL SCUBA DIVERS

CANDIDATE DETAILS: THIS SECTION TO BE COMPLETED BY CANDIDATE

All information provided in this form will be kept in strict confidence between you and the examiner. It will not be relayed to a third party without your consent. Diving can usually be undertaken even if you have a chronic infection (e.g. hepatitis B and C, herpes or HIV), however you should inform the medical examiner so that you can be advised how to dive safely.
 It is advisable to inform your instructor of any advice you have been given.
 Positive responses to questions do not necessarily disqualify you from diving.

1	Surname	Other names	2	Date of birth
3	Address			Phone (home)
4	Sex	Male	Female	
5	Principal occupation			Phone (work)
6	Do you participate in any regular physical activity?	YES	NO	
7	Description of activity			
8	Do you smoke?	YES	NO	
9	Do you drink alcohol?	YES	NO	
10	If yes, how many drinks per week?			
11	Are you taking any tablets, medicine or other drugs?	YES	NO	
	List:			
12	Do you have any allergies?	YES	NO	
	List:			
13	Have you had any reactions to drugs, medicines or food?	YES	NO	
	List:			

Have you ever had or do you now have any of the following? Tick YES or NO.

	YES	NO	Notes on history
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	YES	NO	Notes on history
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Have any blood relations had:			
84 Heart disease			
85 Asthma or chest disease			
Females only:			
86 Are you possibly pregnant or planning to be?			
87 Do you have any incapacity during periods?			

88 Date of last chest X-ray _____

Previous diving experience

	YES	NO	Notes on history
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I certify that the above information is true and complete to the best of my knowledge and I hereby authorize Dr _____ to give medical opinion as to my medical fitness to dive to my diving instructor. I also authorize him or her to obtain or supply medical information regarding me from or to other doctors as may be necessary for medical purposes in my personal interest.

Candidate's name _____

Signed _____

Date _____

MEDICAL EXAMINATION: TO BE COMPLETED BY A REGISTERED MEDICAL PRACTITIONER

1	Height cm	2	Weight kg	3	Vision R6/ Corr6/ L6/ Corr6/	4	Blood pressure	5	Pulse
6	Urinalysis Albumen Glucose	7	Respiratory function test Vital capacity FEV ₁ Percentage	8	Chest X-ray (if indicated) Date Place Result				
9	Audiometry (air conduction)								
	Frequency, Hz	500	1 000	2 000	4 000	6 000	8 000		
	Loss in dB, (R)								
	Loss in dB, (L)								
If abnormal, enter in diver's logbook, on certificate, or both.									
	Clinical examination/assessment	Normal	Abnormal	Notes on abnormalities					
10	Nose, septum, airway								
11	Mouth, throat, teeth, bite								
12	External auditory canal								
13	Tympanic membrane								
14	Middle ear auto-inflation								
15	Neurological — Eye movements — Pupillary reflexes — Limb reflexes — Finger-nose — Sharpened Romberg*								
16	Abdomen								
17	Chest hyperventilation								
18	Cardiac auscultation								
19	Other abnormalities								

* Results should be descriptively detailed at right to assist future comparison

Medical fitness to dive

Candidate's name _____

..... I can find no conditions which are incompatible with compressed gas, SCUBA and surface supplied breathing apparatus (SSBA) and/or breath-hold diving.

..... Based upon my assessment, the candidate is not medically fit to dive with compressed gases (SCUBA and SSBA).

Advice:

Doctor's name (Print) _____

Signed _____ Date _____

Medical benefits refund and/or medical rebate is not permissible, by law, for this examination. Issue of any item number which allows the candidate to claim such benefit will result in the physician being guilty of medifraud.

ADVICE TO THE EXAMINING PHYSICIAN

Issuing an itemized account, which enables the patient to claim Medicare benefits for diving medical examinations, has been prohibited since 1st February 1984.

Diving is a sport carried on in a non-respirable environment which requires the use of either self-contained or surface supplied breathing apparatus. Sudden unconsciousness underwater is usually fatal when using SCUBA equipment, as the relaxation of muscle tone accompanying unconsciousness results in the breathing regulator falling from the victim's mouth. The diver's next breath will then be water. This makes any condition which can cause sudden unconsciousness an absolute contraindication to diving. Such conditions may include epilepsy and diabetics on insulin.

A further problem with the water environment is that pressure increases very rapidly with descent, i.e. by one atmosphere of extra pressure for every 10 m of depth in the sea. The use of breathing apparatus, providing gas at ambient pressure, prevents problems of pressure-volume imbalance in the lungs during descent. However, the middle ears and sinuses will develop problems on descent unless the pressure in these spaces equals the ambient pressure. There is no way of establishing the patency of sinus ostia by clinical examination. However, patency of the Eustachian tubes, and so the ability to equalize the middle ear pressures, can be established easily. Observation of the tympanic membrane while the patient holds his (or her) nose, closes the mouth and blows (Valsalva manoeuvre) will reveal inflation of the middle ear by movement of the drum. The nasopharyngeal opening of the Eustachian tube is normally closed but is opened by swallowing. Therefore, a combination of a Valsalva and swallowing during the manoeuvre will give the best chance for air to travel up the Eustachian tube. Another way of opening the Eustachian tube is to protrude the jaw and wriggle it from side to side while performing a Valsalva manoeuvre. Failure to demonstrate an ability to inflate a middle ear is an absolute bar to diving until the person can auto-inflate.

A further set of pressure related problems also occur during ascent when the ambient pressure is decreasing. If an air-filled space cannot vent when the surrounding pressure is reduced, two things may happen. A space with elastic sides can expand but if the space has rigid walls, the pressure in the space remaining at the original pressure becomes higher than ambient pressure. The chest wall is elastic, but after a certain expansion the stretching of the lungs results in tears of the lung substance. Air can then enter the pulmonary venous drainage, pass through the left portion of the heart and be carried to the brain as air embolism. Unconsciousness and death can result. Thus, any condition preventing normal emptying of the lungs is an absolute contraindication to diving.

Asthma, lung cysts, bullae, and other areas that empty slowly or not at all are an absolute contraindication to breathing air under pressure. These conditions are best detected by taking an X-ray of the chest in full inspiration and another in full expiration. To detect expiratory airway obstruction, a Vitalograph (or similar) test is required. Experience in the navies of the world with submarine escape training of many thousands, has shown that a disproportionate number of those suffering burst lungs have FEV₁/FVC ratios of below 75%. Such people do not need to hold their breath on ascent to damage their lungs; all they have to do is rise too rapidly. A FEV₁/FVC ratio below 75% may be an exclusion from diving and should be further investigated.

A normal FEV₁/FVC ratio but clinical signs of bronchospasm, especially on forced deep, rapid ventilation, is an indication of unfitness to dive. Treatment with drugs is not suitable as the effects can wear off underwater and the combined effects of pressure and broncho-dilator drugs are uncertain.

It is hoped that the foregoing makes the following list of absolute and relative contraindications to diving logical and comprehensible:

ABSOLUTE CONTRAINDICATIONS

Conditions causing unconsciousness

Epilepsy

Diabetes where the patient requires insulin

ENT conditions

Inability to auto-inflate the middle ears. Previous middle ear surgery with insertion of prosthesis to replace any of the ossicles

Lung conditions

Asthma

Lung cysts

Previous spontaneous pneumothorax

Obstructive lung disease

Lungs which empty unevenly (X-ray appearance)

Previous thoracotomy

RELATIVE CONTRAINDICATIONS

FEV₁/FVC ratio less than 75%

Poor physical condition

Previous myocardial infarction

Pregnancy

Further information about medical standards for minimum entry-level SCUBA divers can be found in AS 4005.1, available from Standards Australia, Phone: 1300 65 46 46, Website: www.standards.com.au

If in doubt about a candidate's fitness, it is safer for the candidate to be classed as unfit than fit to dive. Difficult decisions should be referred to a doctor experienced in diving medicine. These are to be found in each State. The South Pacific Underwater Medicine Society* maintains a list of its members with training in diving medicine. Enquiries should be addressed to the Secretary of SPUMS, C/- The Australian and New Zealand College of Anaesthetists, 630 St Kilda Road, Melbourne, Victoria 3004.

URGENT specialist advice can be obtained from the major hospital hyperbaric units in each State and the RAN School of Underwater Medicine, HMAS Penguin, Balmoral, N.S.W. 2091, Phone: (02) 9960 0555.

For diving emergencies, contact the Diving Emergency Service (Australia), C/- Hyperbaric Medical Unit, Royal Adelaide Hospital, Phone: 1800 08 8200.

Recommended reading: THE SPORTS DIVING MEDICAL Parker, J., 1996. Melbourne: J.L. Publications.

DIVING AND SUBAQUATIC MEDICINE Edmonds, C., Lowry, C., and Pennefather, J., 3rd Edition, 1992. Butterworth-Heinemann.

* The South Pacific Underwater Medicine Society exists—

(a) to promote and facilitate the study of all aspects of underwater and hyperbaric medicine; and
(b) to provide information on underwater and hyperbaric medicine.

STATEMENT OF HEALTH FOR RECREATIONAL DIVING

This section to be completed by a medical practitioner, preferably with appropriate training in diving medicine.

This is to certify that I have today interviewed and examined:

Name

Address

.....

Date of birth / /

Initial the statements that apply:

- I have assessed the candidate in accordance with AS 4005.1.
- I can find no conditions which are incompatible with compressed gas, SCUBA, surface supplied breathing apparatus (SSBA) and/or breath-hold diving.
- I have explained the health risks of diving disclosed by this examination to the candidate and we have discussed how these risks may be reduced. The candidate appears to have a good understanding of these risks.
- Based upon my assessment, the candidate is not medically fit to dive with compressed gases (SCUBA and SSBA).
- Based upon my assessment, the candidate is not medically fit to breath-hold dive.

.....
Signature of medical practitioner

.....
Name, address and phone number of
medical practitioner
(Stamp should be used)

... / ... / ...
Date

This section to be completed by the candidate.

Initial the statements below:

- I understand the health risks that I may encounter in diving and how these risks may be reduced.
- I also understand that the medical practitioner's recommendation herewith is based, in part, upon the disclosure of my medical history.
- I agree to accept any responsibility and liability for health risks associated with my participation in underwater diving, including those that are due to or are influenced by a change in my health and/or my failure to disclose any existing or past health condition to the medical practitioner.
- I hereby authorise the medical practitioner to supply information with regard to my medical fitness to dive to the diving instructor.

.....
Signature of candidate

.....
Name of candidate

... / ... / ...
Date

This statement is valid for 12 months.