

FORM A

TO BE COMPLETED BY THE DIABETIC DIVER ON AN ANNUAL BASIS.

Name:

Date of birth:

Address:

Age:

Tel. no.:

Branch and membership no.:

Are you a new diver?

YES/NO

Have you been admitted to hospital for a diabetic condition in the last year?

Have you had an annual checkup at the diabetic clinic involving eyes, nervous system, kidneys and glycosylated haemoglobin or fructosamine level?

What portable glucometer do you use and how often do you calibrate it?

Who undertakes the majority of your diabetic care? HOSPITAL/G.P.

If you are NOT a new diver then please answer the following questions:

Total number of dives performed during the year:

Have you had any incidents due to low blood sugar in the last year? If so, please explain the circumstances and the outcome:

In the last year, how many dives did you perform in the depth range:

0 - 10 metres: 10 - 20 metres: 20 - 30 metres: 30 + metres:
Dives with **compulsory** decompression stops:

Note: It is not anticipated that diabetics will dive to depths greater than 30 metres or do dives with compulsory stops unless by accident or exceptional circumstances. The BSAC/SAA/SSAC medical committee wish to know about such dives as at some stage, the rules may be relaxed.

Have you or your buddy experienced any problems of any nature during the course of these dives? If so, please give full details below and continue on a separate sheet if necessary.

Do you consider that your diabetes has had any adverse effect on you or your buddy's diving during this year? Please give details.

Please return this form completed to your medical referee. Your Branch Diving Officer must also sign this form. Your name will be entered on the register of diabetic divers in order that the BSAC/SAA/SSAC medical committee may follow your progress. This information will be treated in the strictest medical confidence.

Signed:

Name (PRINT):

Signature of Branch DO:

Name (PRINT):

FOR USE BY THE MEDICAL REFEREE ONLY.

This diabetic diver has been passed as fit to dive for a period of ONE YEAR ONLY. I have explained to the diver that he/she will require a repeat medical on an annual basis.

Signed:

Name (PRINT):

Please send a photocopy of this form to:

Dr. C.J. Edge, The Stone Barn, Gravel Lane, Drayton, Nr. Abingdon,
Oxon. OX14 4HY Tel.: 0235 529888 (home) 0235 553066 (work)

Thank you for your assistance in this matter. It is important that the diabetic diver is carefully reviewed by you. Any major problems with a diabetic whilst diving could potentially lead to a further ban on diabetics diving and this may prove to be irreversible.

FORM B

TO BE COMPLETED BY THE PHYSICIAN-IN-CHARGE

This person has applied to join the British Sub-Aqua Club, Sub-Aqua Association or the Scottish Sub-Aqua Club for the purpose of scuba-diving training. In view of this person's diabetic condition, the medical committee has imposed extra conditions that must be satisfied by this person in order to be passed medically fit to dive. It must be borne in mind that from 1975-1991 there was a ban on diving by diabetics. Any diving accident involving a diabetic diver could result in a further ban on diving by all diabetics. The committee must therefore respectfully request that you reply to **all** questions asked on the form. Any costs incurred in carrying out these tests are the responsibility of the diabetic diver. Thank you in advance for your cooperation.

Name of diabetic:

Date of birth:

Address of diabetic:

Name of physician-in-charge:

Address of physician-in-charge:

Name of general practitioner:

Address of general practitioner:

Regarding long-term diabetic control:

1. What is the diabetic's medication regime and when was the medication last changed?
2. Have any episodes of hypoglycaemia occurred in the last year and in what circumstances did these occur?
3. Has the diabetic been hospitalised within the last year for any condition relating to the diabetes?
4. Do you consider this person's level of diabetic control to be satisfactory?

5. What is the current %HbA_{1c} or fructosamine level?
6. Is microalbuminuria present? (N.B. The committee realises that some physicians may consider this test controversial. However, refs. 1-5 (*vide infra*) indicate that the test may be a predictor of renal failure and increased mortality. Therefore this test should be carried out).
7. What degree of retinopathy is present and when was this last checked?
8. What degree of neuropathy is present?
9. What degree of coronary, vascular or microvascular disease is present? In diabetic divers over the age of 50 an annual exercise ECG should be performed.
10. Finally, do you consider that this person is mentally and physically fit to undertake a sport that involves a degree of stress and exertion?

Please return this form to the medical referee at the address given above and direct any questions you may have to that referee. Thank you for your time.

Signed:

Name (PRINT):

Date:

Hospital/practice stamp:

Please send a photocopy of this form to: Dr. C.J. Edge, The Stone Barn, Gravel Lane, Drayton, Nr. Abingdon, Oxon. OX14 4HY

References:

1. Parving, H.-H., Oxenboli, B. Svendsen P.A.A. et al. "Early detection of patients at risk of developing diabetic nephropathy. A prospective study of urinary albumin excretion", Acta Endocrinol. (Copenh) **100**(1992)550.
2. Viberti, G.C., Jarrett, R.J. & Mahmud, U. "Microalbuminuria as a predictor of clinical nephropathy in insulin-dependent diabetes mellitus", Lancet **I**(1982)1430.
3. Mogensen, C.E. "Microalbuminuria predicts clinical proteinuria and early mortality in maturity onset diabetes", N. Engl. J. Med. **310**(1984)356.
4. Jarrett, R.J., Viberti, G.C., Argyropoulos, A. et al. "Microalbuminuria predicts mortality in non insulin-dependent diabetes", Diabetic Med. **1**(1984)17.
5. Microalbuminuria Collaborative Study Group "Risk factors for development of microalbuminuria in insulin dependent diabetic patients: a cohort study", Brit. Med. J. 306(1993)1235.

FORM C

TO BE GIVEN BY THE DIABETIC INDIVIDUAL TO THE BRANCH DIVING OFFICER ON SUCCESSFUL COMPLETION OF THE MEDICAL EXAMINATION

Name of diabetic:

Address of diabetic:

Name of diabetic's G.P. (block capitals please):

Signature of diabetic's G.P. to indicate diabetic has been passed fit to dive:

G.P.'s practice stamp:

This diabetic individual has been passed fit to dive by the medical committee of the BSAC, SAA or SSAC. Because of their diabetes there are certain requirements laid down in terms of limitation of diving, supervision and long-term monitoring. A series of suggestions are therefore put forward that will help diabetics to dive safely.

• **Pre-dive.** The diving diabetic should be as fit and mentally prepared to dive as his/her non-diabetic buddy. The diabetic partner should be especially careful with regard to being adequately hydrated as there is some evidence that the level of hydration affects the chances of experiencing decompression sickness. The **dive marshal** should be aware that the subject is a diabetic and should also be informed of the profile of the dive (**plan the dive and dive the plan**). The diabetic divers's buddy should be a person who is either i). a regular diving partner and who is familiar with the diabetic and the problems he/she is likely to experience or ii). a trained medic or paramedic who is familiar with the problems of diabetics.

The diabetic should carry with them on a dive a kit consisting of:

1. Oral glucose tablets or a tube of glucose paste.
2. Emergency intramuscular injection of glucagon.
3. Glucose oxidase sticks together with the necessary glucometer kit and CLEAR instructions for the use of such a kit.

It is essential that there is at least one person in the dive party of the diabetic who is able to use and administer the glucose tablets and intramuscular injection of glucagon.

A diabetic diver should probably dive no deeper than 30 metres until a considerable experience of diving and its associated problems has been gathered by the diving medical committee. He/she should remain well within the tables or have more than 2 minutes no-stop time left on a dive computer. **He/she should not dive with another diabetic as a buddy.** Safety equipment must be carried e.g. marker buoy, flag, flares etc. Long-term build up of nitrogen in the tissues must be avoided by ensuring that no more than 3 consecutive days' diving are undertaken, with no more than 2 dives to be done each day.

It would seem sensible for the diabetic diver to ensure that he/she has a slightly high blood sugar level before the dive by consuming glucose in whatever form takes their preference.

- **Post-dive.** On arrival back at the boat (or on shore if a shore-dive) the diabetic should check their glucose level and, if necessary, correct it in the appropriate manner. Any adverse symptoms or signs should *immediately* be reported either to their diving buddy or to the dive marshal and **should not be passed off as merely “part of diving”**.

- **IT IS IMPORTANT TO REALISE THAT THE SYMPTOMS OF LOW BLOOD SUGAR MAY MIMIC THOSE OF NEUROLOGICAL DECOMPRESSION SICKNESS OR A GAS EMBOLISM AND VICE-VERSA e.g. CONFUSION, UNCONSCIOUSNESS, FITS. IN THIS SITUATION, GIVE FIRST AID THERAPY TO THE CASUALTY AS IF HE/SHE HAD BOTH CONDITIONS. GIVE OXYGEN THERAPY AND TREAT FOR POSSIBLE LOW BLOOD SUGAR (SEE BELOW).**

- **Treatment of a possible low blood sugar attack.** In the event of there being an incident in the water or on the boat, the diabetic diver should be brought to the boat or shore as soon as possible. The blood glucose should be measured using the equipment in the diabetic emergency kit if this can be swiftly performed. Oral glucose should be administered to the subject with low blood sugar if conscious; otherwise, an intramuscular injection of glucagon (1 mg) should be given. Medical attention and recompression facilities should be sought as soon as possible.

The medical committee, as a condition that this diabetic is allowed to dive, requires the diabetic to submit to an **annual medical examination** by a BSAC, SAA or SSAC medical referee and the physician in charge of the diabetic. Furthermore, the diabetic is required to submit an annual record of dives conducted during that year which must be countersigned by yourself. Your cooperation in this matter is greatly appreciated by the medical committee.