Guidelines for Divers with Diabetes

What was considered an absolute contraindication to diving is now openly supported for those who are medically evaluated and who carefully monitor their condition. Divers who use medication (oral hypoglycemic agents or insulin) to treat diabetes but who are otherwise qualified to dive may undertake recreational scuba diving, provided certain criteria are met. Those using dietary control will easily meet the guidelines. This was the result of the Undersea and Hyperbaric Medicine Society (UHMS) and the Divers Alert Network (DAN) published consensus guidelines resulting from their 2005 co-sponsored workshop, Diabetes and Recreational Diving: Guidelines for the Future. After scientific data review and related discussions, the conservative view held by the diving medical community on people diving who have insulin-dependent diabetes was relaxed. Guidelines produced from this workshop give the diver a means to factor in this medical condition and dive in a responsible manner.

Please feel free to distribute these guidelines to student divers asking about diving with diabetes. Note that these are simply "guidelines," and not rules. Just as the Diver Medical form and accompanying guidelines for physicians are meant to assist the diver and doctor in making educated decisions with regard to fitness for diving, the guidelines for diving with diabetes should be used as an informational tool when the individual is medically evaluated for diving.

Guidelines for Recreational Diving with Diabetes – Summary Form 1

Selection and Surveillance

- Age ≥18 years (≥16 years if in special training program)
- Delay diving after start/change in medication
  - 3 months with oral hypoglycemic agents (OHA)
  - 1 year after initiation of insulin therapy
- No episodes of hypoglycemia or hyperglycemia requiring intervention from a third party for at least one year
- No history of hypoglycemia unawareness
- HbA1c ≤9% no more than one month prior to initial assessment and at each annual review
  - Values >9% indicate the need for further evaluation and possible modification of therapy
- No significant secondary complications from diabetes
- Physician/Diabetologist should carry out annual review and determine that diver has good understanding of disease and effect of exercise
  - In consultation with an expert in diving medicine, as required
- Evaluation for silent ischemia for candidates >40 years of age - after initial evaluation, periodic surveillance for silent ischemia can be in accordance with accepted local/national guidelines for the evaluation of diabetics
- Candidate documents intent to follow protocol for divers with diabetes and to cease diving and seek medical review for any adverse events during diving possibly related to diabetes

Scope of Diving

- Diving should be planned to avoid
  - Depths >100 fsw (30 msw)
  - Durations >60 minutes
  - Compulsory decompression stops
  - Overhead environments (e.g., cave, wreck penetration)
  - Situations that may exacerbate hypoglycemia (e.g., prolonged cold and arduous dives)
- Dive buddy/leader informed of diver's condition and steps to follow in case of problem
- Dive buddy should not have diabetes

Glucose Management on the Day of Diving

- General self-assessment of fitness to dive
- Blood glucose (BG) ≥150 mg·dL-1 (8.3 mmol·L-1), stable or rising, before entering the water
  - Complete a minimum of three pre-dive BG tests to evaluate trends – 60 minutes, 30 minutes and immediately prior to diving
  - Alterations in dosage of OHA or insulin on evening prior or day of diving may help
- Delay dive if BG
  - <150 mg·dL-1 (8.3 mmol·L-1)
  - >300 mg·dL-1 (16.7 mmol·L-1)
- Rescue medications
  - Carry readily accessible oral glucose during all dives
  - Have parenteral glucagon available at the surface
- If hypoglycemia noticed underwater, the diver should surface (with buddy), establish positive buoyancy, ingest glucose and leave the water
- Check blood sugar frequently for 12-15 hours after diving
- Ensure adequate hydration on days of diving
- Log all dives (include BG test results and all information pertinent to diabetes management)

For full text see: Pollock NW, Uguccioni DM, Dear GdeL, eds. Diabetes and recreational diving: guidelines for the future. Proceedings of the UHMS/DAN 2005 June 19 Workshop. Durham, NC: Divers Alert Network; 2005.