

to occupational risk and hence to produce information to aid the diver in reaching decisions about his health and work.

- 3 A belief that there should be a balance between the risks of radiation and the benefits to be gained by the diver and hence that radiography should be the subject of counselling and informed consent.
- 4 Our understanding that the incidence of disabling osteonecrotic lesions is very low. Lesions are particularly rare in the air diving range
- 5 Whilst the detection of a lesion has no influence on the likelihood of other future lesions the continuance of diving of the same kind may lead to other lesions. The disabling effect of a lesion (if juxta-articular) will naturally be increased by the development of disease in other joints.
- 6 That the removal from diving work of a diver with established osteo-necrotic disease does not arrest the progress of that disease and further that the condition is not amenable to currently available treatment.
- 7 In diving, lesions of the shoulder and hip greatly exceed those in the knees.
- 8 Finally, that the finding of a bony lesion at the pre-employment stage would not necessarily, of itself, preclude diving.

We therefore recommend that the practice of **routine** pre-employment long bone radiography should cease. Similarly **routine** radiography prior to Part 1, Part III or Part IV training should also cease. However, radiography of the hips and shoulders and knees should be carried out before the commencement of Part II training and of the hips and shoulders at intervals thereafter whilst the diver is still engaged in mixed gas or saturation diving.

Factors in the decision would be those currently advised in MA1 Para 40 subject to the clinical judgement of the examining doctor in the light of the diver's history and the results of clinical examination. Radiography may be advised on clinical grounds in situations other than those described.

If radiography is not judged necessary on other grounds, it should be repeated at intervals of 5 years during a diver's career.

The decision to radiograph the long bones should be the subject of agreement between the diver and the examining doctor - that is to say the diver should give his or her informed consent.

Examining doctors would retain the right not to issue a certificate of fitness if they felt that radiography was of crucial importance to their decision on fitness in any particular case and the diver would not agree.

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## HIGH TECH DIVING

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28 April 1992

The Editor,

I read with interest the editorial "High Tech Diving" by Dr Des Gorman in the January-March 1992 (Vol 22 No 1) issue of the SPUMS Journal. I would like to point out that two statements made by Dr Gorman are inaccurate and likely to lead to misinterpretation of the High Tech Divers' intentions, thereby damaging their credibility.

Dr Gorman's statement that this group "plans to use scuba apparatus and oxygen-helium, perhaps trimix, gas mixtures to dive beyond 50 msw, and according to some press releases, as deep as 200 msw" is incorrect. The above-mentioned High Tech Divers have never expressed intentions to dive to 200 msw, nor have they planned to do so on open circuit scuba equipment.

Dr Hamilton's association with High Tech Divers in Australia as so far been limited to discussions about producing decompression tables for a 82.75/17.5 heliox FGG111 semi-closed circuit dive to a maximum depth of 325 fsw (95 msw) for a maximum of 40 minutes. Dr Hamilton has agreed, in principle, to do so.

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April 20th 1992

The Editor,

Des Gorman's entertaining editorial assumes that all high tech diving is oxy-helium or trimix diving, and uses cases of disastrous experiences with these gases to justify SPUMS campaigning against recreational high tech diving. However "Technical Diving", as it is more commonly called, is more likely to manifest itself by recreational divers using enriched air, not oxy-helium or trimix, and also includes the wonderful and dramatic dives, using air, that were recently made in caves in Western Australia. Is SPUMS going to campaign against these as well?

Dr Gorman is completely correct that risk acceptance must be preceded by education, and the recreational diving industry has already devised courses for this purpose, highly responsible of them, surely. However some of his other comments had me in stitches. "Recreation should be fun" indeed, does SPUMS think perhaps that ADVENTURE