

Certifying medical fitness of working divers

If you have patients working as commercial divers, it's important to note that medical surveillance is key to reducing their chances of short- or long-term disability. As an overall precaution, WorkSafeBC and a variety of other agencies monitor the long-term health effects of commercial diving on workers in the industry. Direct trauma, failure to recover from acute decompression illness, dysbaric osteonecrosis, and noise-induced hearing loss have well-documented, long-term effects. Keep in mind that underwater diving work in British Columbia includes bridge construction, tunneling, seafood harvesting, dam construction, and outflow surveillance.

The risks to divers

Commercial diving involves exposure to significant ambient pressure changes that are associated with pressure-related phenomena and specific injuries or diseases, including high-pressure neurological syndrome, compression arthralgia, decompression illness, barotrauma, and dysbaric osteonecrosis. The health risks associated with these disorders can be attributed partly to pressure exposure and partly to individual susceptibility.

Other factors involved in diving such as ambient cold temperature, the equipment used, and the type of work activity can be perilous. Divers also experience occupational risks similar to those experienced by workers in industries such as construction, including the risk of direct trauma and biologic and toxic exposures; however, treating divers is complicated by the often remote or offshore location of their worksites.

This article is the opinion of WorkSafeBC and has not been peer reviewed by the BCMJ Editorial Board.

Medical certification mitigates risks

The adoption of safe work practices and the development of medical criteria for fitness to dive have reduced the number of hyperbaric-related injuries and deaths in commercial diving. WorkSafeBC has been instrumental in setting standards for Medical Fit-

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ness to Dive in Canada, and is responsible for the administration of Medical Certification of Fitness to Dive through the maintenance of a list of physicians with training and expertise in dive/hyperbaric medicine. These physicians are competent in performing medical examinations of candidates for commercial, recreational, and scientific diving, and in determining their physical fitness for work and their medical safety to return to work after illness or injury.

Commercial divers must undergo a physical examination and a series of tests every 2 years until age 40, and then annually after that. Closely monitored medical conditions include cardiovascular disease, respiratory

conditions, endocrine disorders (specifically diabetes), psychiatric illnesses that include substance abuse, orthopaedic and rheumatological disorders, hearing and visual status, and neurological conditions.

Recreational divers, by comparison, have limited medical examination or surveillance. They often require only one examination when starting their diving certification, and physicians qualified in hyperbaric/dive medicine are rarely the ones to complete these examinations. In addition, conditions such as diabetes or asthma, which are considered medically contraindicated in commercial diving, are deemed acceptable in recreational or sport diving. This issue was highlighted in a BC Coroners Service report from December 2010 related to the death of a dive instructor.

More information

If you are concerned about a medical condition that may affect a patient working as a diver, or the worker-patient's ability to dive safely, you can consult WorkSafeBC's list of physicians with training and expertise in dive/hyperbaric medicine. Go to worksafebc.com and search for "dive physicians," or click on OHS Regulation under Quick Links, choose the Guidelines tab, and click on Diving, Fishing, and Other Marine Operations.

You can also contact a medical advisor in your nearest WorkSafeBC office or Dr Steve Martin at Steve.Martin@worksafebc.com or 250 704-4226.

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