

Medical Information

ASTHMA

Respiratory System

Asthma and Diving

Asthma may predispose to air-trapping leading to pulmonary barotrauma and air embolism, which may be fatal. An acute asthma attack can also cause severe dyspnoea which may be hazardous or fatal during diving.

These theoretical risks should be explained fully to the asthmatic diver. There is little if any evidence that the mild controlled asthmatic who follows the guidelines below is at more risk.

Asthmatics may dive if they have allergic asthma but not if they have cold, exercise or emotion induced asthma.

All asthmatics should be managed in accordance with British Thoracic Society Guidelines.

Only well-controlled asthmatics may dive.

Asthmatics should not dive if he/she has needed a therapeutic bronchodilator in the last 48 hours or has had any other chest symptoms.

Control

The asthmatic should not need more than occasional bronchodilators, i.e. daily usage would be a disqualifying factor, but inhaled steroids/cromoglycate/nedocromil are permissible.

During the diving season he/she should take bd peak flows. A deviation of 10% from best values should exclude diving until within 10% of best values for at least 48 hours before diving.

The medical examiner should perform an exercise test such as the 18 in (43 cm) step test for three minutes, or running outside (not a bicycle ergometer) to increase the heart rate to 80% (210-age). A decrease in PEFR of 15% at three minutes post exercise should be taken as evidence of exercise induced bronchoconstriction and hence disbars. The patient should be off all bronchodilators for 24 hours before the test.

A β_2 agonist may be taken pre-diving as a preventative but not to relieve bronchospasm at the time.

References:

- 1 Farrell, PJS, Glanvill P "Diving practices of scuba divers with asthma" Brit.Med.J. 300(1990)166
- 2 Farrell, PJS "Asthmatic amateur divers in the UK" SPUMS J. 25(1995)22

Information supplied by UK Sport Diving Medical Committee