



Scuba Diving and Asthma by Allen D. Adinoff, M.D. September 2006

The topic of asthma and diving has long been a controversial subject in the recreational diving community. Traditionally, people with asthma have been excluded from diving. Serious potential risks may make scuba diving, which is often performed in isolated locations and far from competent medical care, an unwise elective sport for an individual with asthma. There are four primary issues of concern that occur during scuba diving:

- 1. Concern about the decreased amount of air that can be moved in and out of the lungs.
- 2. Reduced airway caliber can cause trapping of gas in the lung during ascent.
- 3. Increased propensity of airways in asthmatics to narrow when exposed to the conditions commonly found during diving, mainly breathing dry, relatively cool air.
- 4. Asthmatics that dive are at risk from exercise limitation. While exercising on land, it is easy enough to stop, rest, and catch one's breath. This may not be possible underwater.

The question of which persons with asthma are fit to dive was recently addressed by an expert panel at a workshop of the Undersea and Hyperbaric Medical Society. COPD or emphysema is a contraindication for diving.

However, the UHMS workshop panel felt that the risk of diving is probably acceptable if a potential diver with asthma or some asthmatic "history" can demonstrate the following requirements before being considered for diving. Requirements for the potential diver with asthma:

• Asthma should be clinically stable (mild-intermittent or persistent controlled with medication).

• The patient must have normal lung function at rest.

• The patient must maintain normal lung function after a strenuous exercise challenge.

• If necessary, maintenance asthma medication can be used to achieve normal airflow before and after exercise.

If a patient with asthma meets these standards and is cleared to dive, he/she must be aware that the clearance is contingent on continuing the same maintenance medications that were used at the time of the exercise test.

• Asthmatics with exercise or cold air-induced asthma should not dive unless completely controlled by medication.

• The patient **cannot dive with active asthma symptoms** and should not dive until lung function tests return to normal.

• The patient must not have experienced increased asthma for at least 3-4 weeks prior to diving.

Diving is not recommended unless the diver is free of asthma symptoms before each dive and, lung functions have returned to normal. Patients must agree to schedule an appointment to have their asthma checked before diving. Children under 18 years of age with asthma generally should not dive.

If you have asthma and are interested in scuba diving, ask your CAAC physician if he or she feels it would be appropriate and safe for you.