



### A Simple Air Travel Fitness Test for Patients With Chronic Cardiorespiratory Disease

**To the Editor:** Air travel is becoming an increasingly common means of transport. Nearly 1000 million people—around 100 million people in Spain—travel by air every year. Passengers travel in a pressurized cabin that provides an air cabin pressure equivalent to an altitude of 1800 m to 2500 m. Of all in-flight incidents requiring medical assistance, approximately 25% are caused by respiratory or heart problems.<sup>1</sup> Hypoxia, which is associated with cabin air pressure and the flow of fresh air into the cabin, is the immediate trigger of these emergencies.<sup>2</sup> As has been known for some time, approximately 5% of these passengers are ambulatory patients suffering from some type of illness. This situation has led the British Thoracic Society to publish recommendations for managing passengers with respiratory disease who are planning to travel by air<sup>4</sup> and British Airways has even added a specific section for these types of passengers to the confidential disclosure statements that passengers with disabilities must complete.<sup>3</sup> The British recommendations are primarily directed at people with heart or respiratory diseases whose oxyhemoglobin saturation is less than 92% to 95% at sea level.

One of the recommended tests is a simple hypoxic challenge test, in which the patient breathes air with a 15% oxygen fraction for 20 minutes; the oxygen partial pressure is thus 142 hPa, which is equivalent to breathing air at a real or simulated altitude of 2600 m. The test is considered positive when oxygen saturation at 20 minutes is less than 85%. The presence of other abnormalities, such as dyspnea or palpitations, is not necessary to confirm a positive result. If the hypoxic challenge test is positive, the patient can only fly with supplementary oxygen, which is supplied by the airline.

A similar protocol has not yet been established in Spain, despite the large number of flights here each year, and although many potentially adverse incidents could be avoided with such procedures in place. A large portion of the emergency medical interventions performed each year would be unnecessary and others would be resolved more effectively and quickly if the specific risks of air travel were taken into consideration by the specialist or family physician responsible for monitoring the patient's condition.

Administering a test such as the one described in this letter would not involve serious logistical difficulties or high costs. Moreover, the short and mid-term benefits—for both the individual and the community—of preventing in-flight incidents would far surpass the expense. Effective methods of prevention say much more about the preparedness of a country's health care system than the amount spent at times excessive—on cutting-edge technologies that are not easily accessible to the public.

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