Asthma

Bronchial Asthma is a chronic respiratory disease for which the cause is largely unknown. Scientists believe that the tendency for development of asthma is hereditary and that asthmatic episodes are strongly linked to the immune system’s response to certain allergens. As there is not a consensus on the cause of Asthma, there is no cure. There are, however, treatments and ways to control symptoms of this chronic disease. Scientists understand that chronic bronchial inflammation in asthma patients is a result of hyperventilation and lower than normal blood CO$_2$ levels. Therefore, the key to a successful treatment is reduction of hyperventilation and improved oxygen utilization.

The idea of using hypoxic therapy for treatment of Bronchial Asthma has been studied in Russia for years, and has recently made its way to the western hemisphere. Studies have shown that a proper IHT program can successfully minimize the symptoms of asthma and the occurrence of severe asthmatic episodes. Through its enhancement of mitochondrial (and thus cellular) tolerance to oxidative stress via increased anti-oxidative enzymes, hypoxic therapy can alleviate asthmatic stress, which is largely a result of compromised anti-oxidative defense. In addition, through improvement of cardiovascular/respiratory fitness, hypoxic therapy serves to reduce hyperventilation and hypocapnia (low CO$_2$ levels in blood). In turn, the desired balance of CO$_2$ and O$_2$ in the blood is maintained, and the severity of asthmatic episodes and chronic bronchial inflammation is reduced.

This complementary treatment for asthma provides significant benefits over conventional symptomatic treatments. Patients can avoid negative side effects of Corticosteroids [inhalers] such as increased blood pressure, osteoporosis and weight-gain. Also, by preventing asthmatic episodes before they occur, patients can minimize chronic lung damage. Through a proper IHT program, bronchial asthma patients can expect the following benefits:

- reduction of asthmatic episodes and chronic bronchial inflammation
- positively influenced immunological status
- bolstered enzymatic anti-oxidative defense
- increased Forced Vital Capacity (FVC)
- increased Forced Expiratory Velocity (FEV)

This Russian study shows that treatment with intermittent normobaric hypoxia (IHT) results in normalization of previously high free radical activity and positively influenced immunological status in bronchial asthma patients. [A method for intermittent hypoxic exposures in the combined treatment of bronchial asthma patients - Serebrovskaia et al. 1998]

This New Zealand study found an increase in FVC in both normal and asthmatic athletes after the administration of an IHT program. In addition, the asthmatic athletes noted a reduction of symptoms and medication use after the hypoxic therapy. [Does Interval Hypoxic Training affect the lung function of asthmatic athletes - Harrison, Fleming and Giles. 2002]