Intermittent Hypoxic Training

<u>Intermittent normobaric hypoxia does not alter performance or erythropoietic markers in highly trained distance runners</u>

Colleen G. Julian,1 Christopher J. Gore,5 Randall L. Wilber,3 Jack T. Daniels,1 Michael Fredericson,4 James Stray-Gundersen,2 Allan G. Hahn,5 Robin Parisotto,5 and Benjamin D. Levine2 1Sports Medicine Institute International, Palo Alto, California 94300; 2Institute for Exercise and Environmental Medicine, Presbyterian Hospital of Dallas and University of Texas Southwestern Medical Center at Dallas, Dallas, Texas 75231; 3US Olympic Committee, Colorado Springs, Colorado 80909; 4Department of Medicine, Stanford University, Palo Alto, California 94305; and 5Australian Institute of Sport, Canberra, ACT, Australia J Appl Physiol 96: 1800-1807, 2004 - link.

Protocol: 14 National class athletes. Control Group & Altitude Group 4 weeks, 5 X per week 70-minutes per session, 5 minutes \square on \square 5-minutes \square of \square O2 content 12% - 10% via mask.
Results:
Change in VO2 max IHT Group□□ No significant change Sea-Level Group□. No significant change
Change in 3000m running time IHT Group□□ No significant change Sea-Level Group□. No significant change
Change in erythropoietin, soluble transferrin receptor, or reticulocyte parameters IHT Group □ No significant change Sea-Level Group □. No significant change

Conclusions: Four weeks of a 5:5-min normobaric hypoxia exposure at rest for 70 min, 5 days/wk, is not a sufficient stimulus to elicit improved performance or change the normal level of erythropoiesis in highly trained runners.

Note: The authors of this study consist of the World s leading researchers in altitude training, representing some major institutions that were looking for a definitive answer to the effectiveness of this novel modality of altitude training.