

# Exercise training in normobaric hypoxia in endurance runners

## I) Improvement in aerobic performance capacity

## II) Improvement of mitochondrial properties in skeletal muscle

## III) Muscular adjustments of selected gene transcripts

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### Protocol:

- 6-weeks, two sessions per week, 24-40 minutes each
- Effective altitude = about 10,000 feet

### Results:

Change in O<sub>2</sub> max

- Altitude group...Increased by 5%
- Sea-Level control group...No significant change

Change in maximum sustainable oxygen uptake (VT<sub>2</sub>)

- Altitude group...Increased by 8%
- Sea-Level control group...No significant change

Fatigue: Time to exhaustion at O<sub>2</sub> max

- Altitude group...Increased by 35% (Study I & III) and by 42% (Study II)
- Sea-Level control group...No significant change

Maximum sustainable Running Speed at Sea-Level:

- Altitude group...Increased by 5%
- Sea-Level control group...Increased by 3%

Maximum sustainable Running Speed at Altitude:

- Altitude group...Increased by 8%
- Sea-Level control group...Increased by 3%