

Simulated Altitude Training- Repeated Sprint Performance

You are invited to enrol in an investigation by The Altitude Centre, which has been approved by the London South Bank University Ethics Committee.

Study Location: Altitude Chamber Facility, NTC, 100 Priory Lane, Roehampton, London. SW15 5JQ

Study date to commence: Initial screening has commenced and remains open (start asap preferable)

Simulated Altitude training sessions begin after pre-performance testing and familiarisation

Simulated Altitude Training has a profound effect on athletic performance both for high-altitude and sea-level events. Athletes are becoming increasingly aware of the benefits that hypoxic training (or training in low oxygen) can have for their performance in terms of strength, power and endurance. Hypoxic training is fast becoming the new method of getting a physiological edge over the competition.

What will it involve?

Initial Screening/ Fitness testing:

- All potential participants must complete a session comprising of a maximal sprints, a sprint endurance test and a group YOYO test to exhaustion (a repeated sprint fitness test- specific to sports such as football, tennis, hockey and rugby).
- Plus before commencing the sprint interval training within our state of the art altitude chamber, each participant will have a familiarisation session to both the chamber and the repeated sprint protocol (10x 6sec max effort/ 30sec rest).

Also prior to your enrolment in the study, we need to gather relevant medical history to ensure there are no reasons that you cannot train at altitude (current musculoskeletal injuries, anaemia, certain severe heart & lung conditions).

Typical Training Regime:

- Training sessions will take place 3 x per week, for two weeks in total (24hrs min rest between sessions).
- Each training session will be completed at a different altitude, but the repeated sprint protocol will remain the same (10x 6sec max effort/ 30sec rest). A maximal sprinting effort is required- those who are not familiar with this type of training may not wish to take part.
- Each session will last ~90min in total- Altitude training may be incorporated with normal training
- If you enrol upon the study you will be required to complete 9 visits, 6 of which are simulated altitude training sessions within our state of the art chamber.
- During each session you will be closely monitored and measures such as HR, blood oxygen saturation, breathing rate, lactate and oxygen consumption will be made- this will mean having to wear a small face mask, a HR belt and have small ear prick samples of blood taken at intervals.
- Other measures include EMG and NIRS- which are again completely non-invasive and simply require you to have some small sensors taped to your leg whilst you are running in order to measure leg muscle activity and desaturation.

Benefits: You will find out more about your repeat sprint ability and fatigability, we will also provide you with individualised feedback on your fitness level and maximal running velocity. In addition we will strive to answer questions surrounding simulated altitude training in general.

Confidentiality: In accordance with the Data Protection act, your personal information/results will be kept completely confidential and a full record of your individual results can be provided upon request.

Further information:

Should you have any queries or require further information, please do not hesitate to contact:

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