



Push your limit



High Altitude Training Applications



Sports

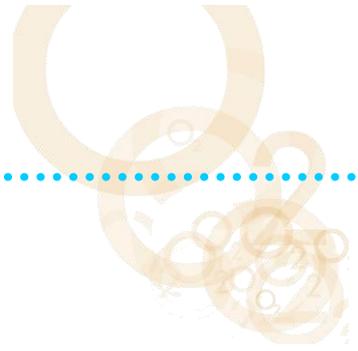


Health

Rehabilitation



Acclimitization



1. INTRODUCTION

High altitude training is often applied in sports and it is particularly popular among athletes due to the increase of stamina and the positive effects on performance.

However, athletes aren't the only ones that benefit from high altitude training. People with health issues such as obesity, diabetes and asthma can achieve significant improvements in their health. Training at altitude also accelerates one's recovery and rehabilitation.

b-Cat High Altitude is specialized in building systems that simulate conditions suitable for high altitude training. Worldwide b-Cat has realized many high altitude projects for different purposes such as improving the stamina of athletes and the health of diabetes patients.

The simulated altitude, can be realized in any closed enclosure: from tents, mobile rooms, trucks, mobile houses, or fixed rooms (e.g. bedroom, living areas or training rooms). Depending on where, when and how you wish to apply altitude training, b-Cat can deliver the most suitable solution.

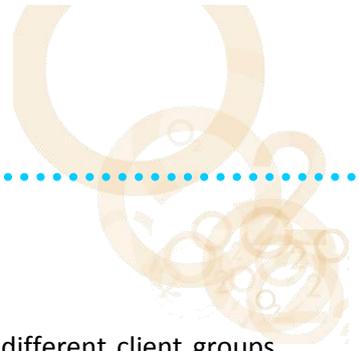
2. HOW DOES IT WORK?

Training at simulated altitude is comparable to training in the mountains. Mountain air contains less oxygen than air at sea level. At sea level, air contains 20.9% oxygen, and at 2500 meters the oxygen molecules are further apart, with an equivalent of 15.5% oxygen at sea level.

How it works is fairly simple. You inhale air that contains less oxygen which triggers the body. Inside the kidneys are sensitive cells that react to the lack of oxygen. They stimulate the production of erythropoietin. This hormone stimulates the production of red blood cells in the bone marrow.

These red blood cells transport oxygen through the body, this gives the muscles and organs more oxygen. More oxygen means a better circulation and improvement of metabolism.





3. HIGH ALTITUDE WHEREVER YOU WANT/NEED

Since High Altitude training has multiple physiological effects, it can be used for different client groups. Depending on the purpose to be achieved, individuals either benefit from (light) exercise at altitude, sleeping at altitude or from intermittent altitude exposure. For all these applications, b-cat has developed a range of suitable solutions, from altitude tents, bed rooms, (mobile) training room, to special products (like trucks, mobile homes or extreme rooms).

When exposed to altitude, everyone will have its own pace of acclimatization and physiological response. To be able to expose each individual to the optimum altitude level (depending on the purpose, the individual response and acclimatization level), the b-Cat system meticulously creates an atmosphere similar to any altitude level. In this way, you can train or sleep at altitude without going to the mountains.

4. APPLICATIONS OF HIGH ALTITUDE TRAINING

Altitude training is most applied for (top)sport , health applications, rehabilitation and acclimatization.

Sports: Athletes & Amateurs

Many national and international athletes have discovered the benefits of high altitude training which enhances stamina and performance.

For years, high altitude training has been a part of the training schedule of many athletes and Olympic performers who want to take their sports to a higher level.

High altitude training is effective for both athletes who have to compete at altitudes and for those who compete at sea level.

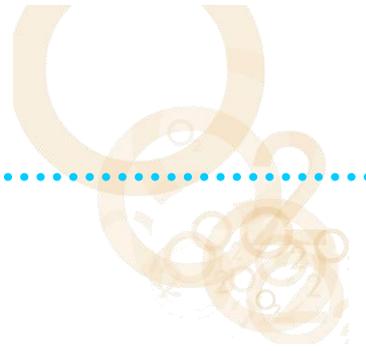
By using an high altitude training tent, altitude mask or training inside an altitude training room, many athletes noticed an increase of health and strength.

The effects of High Altitude Training for athletes:

- Enhanced performance
- Faster recovery
- Increased metabolism
- Stimulates lipolysis process (fat-burning)
- Less muscle fatigue
- Increased stamina
- Better endurance



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Health: Fit with High Altitude Training

The effectiveness of training at altitude has been scientifically proven. Supporting this effectiveness are the many success stories and personal experiences. Altitude training is most applied for diabetes, obesity, asthma, COPD, overall fitness and weight loss.

- **Diabetes & Obesity: sports as medicine**

The benefits of exercising at high altitudes have been discovered by people suffering from diabetes or obesity. Training is of course a very healthy thing to do, but High Altitude Training maximizes the benefits of the exercise:

- More oxygen transport
- Improved oxygen uptake in muscles and organs
- More stable blood glucose level
- Increased fat burning (weight loss)
- Lower cholesterol levels
- Enhanced endurance
- Less medication needed



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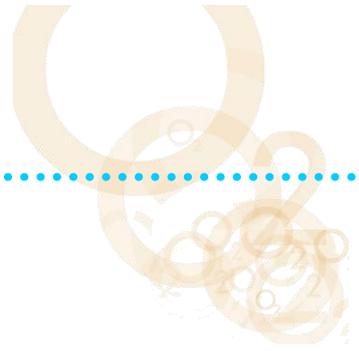
- **Asthma & COPD: Healthy with High Altitude Training**

Higher altitudes have turned out to be a very effective medicine for people suffering from asthma and COPD. Both are diseases that influence one's life drastically. The impediments that Asthma and COPD cause, can however be relieved through High Altitude Training.

Many patients have achieved great results by exercising in the High Altitude chambers. Some have stopped using their puffer while others are no longer bothered by mucus. For all of the users, it has relieved their respiratory system.



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● **Fit & Slim: with altitude training**

High altitude training leads to excellent results if you are trying to get more fit and lose weight. To stay and to train at altitude has many positive effects on the body. It leads to an improvement in your overall stamina and performance.

The most important benefits are:

- Increased burning of fat (thus weight loss)
- More oxygen transport
- Increased oxygen intake in muscles and organs
- Improved fitness
- Decreased cholesterol level
- Lower blood pressure

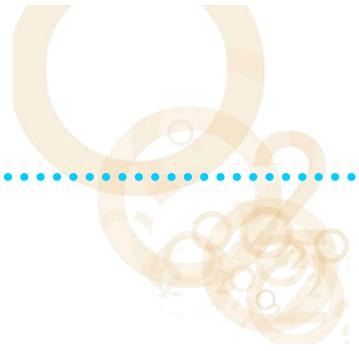


Rehabilitation: faster recovery

Injuries are inherent to sports. In case of an injury, it is important to make sure that the injured amateur of athlete doesn't lose his or her stamina.

Training at altitude is ideal in that case, because when training at altitude at a lower intensity than normal, the training response is much bigger than at sea level. In a period of rehabilitation, high altitude training is the optimal solution. Training can be done at home by sleeping at altitude in an altitude tent or at the gym inside a high altitude training room.





Acclimatization: preparation & altitude sickness

Every year thousands of people leave their home for a holiday in the mountains. Hiking, trekking, mountaineering, expeditions or winter sports, everything in the mountains could potentially lead to mountain or altitude sickness. Altitude sickness appears at a certain height or with fast ascents. The symptoms of altitude sickness include:

- Headache
- Insomnia
- Lack of appetite
- Nausea
- Severe fatigue
- Vomiting

By staying or sleeping at altitude inside an high altitude tent or training in a high altitude room, altitude sickness can be prevented and the body can get used to staying in the mountains.

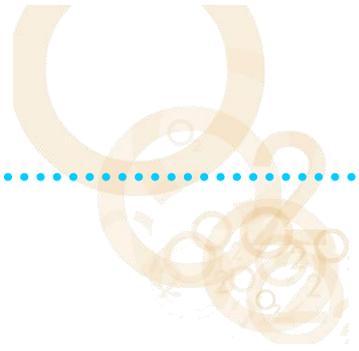


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Acclimatization effects in an altitude room/tent:

- Prevention of altitude sickness (headache, insomnia)
- Increased endurance
- Faster recovery
- Enhanced performance

Some hotels are equipped with high altitude hotel rooms of b-Cat. A stay in one of these hotel rooms at altitude can be perfectly combined with your altitude training program.



5. TRAINING METHODS: LIVE HIGH, TRAIN LOW & IHT

High Altitude Training effects multiple physiological features. In view of sports medical and regular medical expertise, more and more people are interested in High Altitude Training. There are different training methods of High Altitude Training, depending on the goal that you want to reach. By means of High Altitude rooms, tents or masks, the trainings can easily be realized without having to move to the mountains:

Live High - Train Low (LHTL)

Sleeping at altitude and training at sea level.

[Live High, Train Low](#)

Live High - Train High (LHTH)

Sleeping and training at altitude

[Live High, Train High](#)

Intermittent Hypoxic Training (IHT)

Sleeping and training at altitude, alternated with sleeping and training at sea level.

[Intermittent Hypoxic Training](#)



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Of course, different training methods can be combined. This depends on your personal situation and your goals.