

## **BODY-PART BLAST**

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## FUCK STUBBORN BODY PARTS

Look we all have them. Some of us are blessed with chicken legs, others are blessed with bird chests. It's just life.

That being said, just because you are born with bad genes in a certain area of muscle, doesn't mean you have no hope. It just means you are going to have to work a little harder, a little smarter and be a little more patient with those parts.

But one you achieve it, the feeling of accomplishment is so much better.

Speaking from personal experience, me weakest body part was my chest. After 3 years of training chest 3 days a week, I still had very little to show for it. Then I learned about a technique olympic athletes use to give themselves a massive advantage over the competition. The technique?

### Oxygen deprivation training.

Hypoxia and training under low oxygen density conditions have been the subject of a great deal of research.

# This mostly has to do with the adaptations the body makes to low oxygen conditions in relation to exercise performance and endurance.

Since low oxygen conditions can induce favorable changes in athlete's physiology, many competitive endurance athletes and coaches have used atmospheric chambers or training at altitude to create the low oxygen conditions needed for these physiological changes to take place.

Out of this research came an interest in hypoxia and its effects on skeletal muscle by diverse groups of competitive and recreational athletes looking to increase strength power and size.

One study that was conducted to measure the effectiveness of hypoxia and strength training had athletes experience low oxygen conditions for periods before and after strength training.

What the researchers found was that the strength and size increases were similar between the two groups, but metabolic adaptations were very different.

What changed was the capillary to fiber ratio in the muscles as well as levels of growth hormone in the blood stream measured after training.

Researchers found that the **athletes that underwent oxygen deprivation had higher levels of metabolic adaptations in the muscles though they had performed the same exercise.** Researchers noted that this could be beneficial in preventing arterial or metabolic related issues such as arterial stiffness.

Basically short term hypoxia is a good way to place acute stress on the circulatory system being worked by your chosen resistance exercise. What's more is that exercise in hypoxic conditions is **a proven way to increase growth hormone.** 

Beyond the ability of hypoxic training to increase growth hormone it has the potential to allow for increased work through the decreased lactic acid levels created under hypoxic conditions.

Hemoglobin is the body's main transporter of both oxygen and carbon dioxide. When either of the two is increased in the blood stream the other one decreases in concentration.

In hypoxic conditions carbon dioxide is therefore increased. By simply denying the body oxygen you automatically increase levels of carbon dioxide in the blood stream.

In addition to carbon dioxide's inverse relationship to oxygen, it shares an inverse relationship with lactic acid. As carbon dioxide levels in the blood increase, lactic acid levels fall off. This was first noticed when scientists looked at the blood work and physiological reaction of endurance athletes training at altitude.

Researchers discovered that the lower concentrations of oxygen found at higher altitudes resulted in higher blood levels of carbon dioxide and lower levels of lactic acid.

Unlike endurance exercise which depends heavily on the body's ability to process and transport oxygen, anaerobic exercise depends heavily on the nervous system as well as the body's lactic acid buffering abilities.

Therefore anything that assists the body in clearing lactic acid from the blood stream has the ability to increase the performance of anaerobic muscle tissue.

Further complicating this matter is the idea that endurance athletes are often limited by their body's lactic threshold or anaerobic threshold.

This is the level of muscular action, speed of running, cycling or muscular contraction, etc... at which the levels of lactic acid in the blood accumulates fast enough to build up and ultimately limit performance.

### If endurance athletes could somehow benefit from higher concentrations of carbon dioxide and its lactic acid lowering effects, they could potentially remove one of the main roadblocks to higher levels of performance.

This issue is that high levels of oxygen are required to sustain the intensive aerobic processes taking place during this type of activity.

The situation an endurance athlete performing at their lactate threshold finds himself in is very different from that of an athlete performing resistance training exercise. Think about it, a marathon runner moving at 13 mph will not be able to hold their breath in order to increase the concentration of carbon dioxide and decrease the concentration of lactic acid in the blood.

While this could remove one roadblock to higher performance it will create a much larger one in limiting the supply of oxygen to the lungs.

# What if we look at this same scenario under conditions which do not rely so heavily on oxygen. Take an extended set of side lateral raises, for example.

During a relatively isolated exercise such as side lateral raises, the contraction of the muscles, even over a relatively long set, will not be limited by the oxygen levels in your blood.

Even a pretty high rep set of an isolation exercise such as a side lateral raise does not cause a large elevation in full body aerobic activity. This allows for a scenario in which hypoxic conditions can be utilized to allow for increased muscular action.

Under normal conditions lactic acid is one of the limiters of muscular actions. One of the ways this works is that lactic acid interferes with the signals the nervous system send to the muscles.

This is one of the reasons why high rep "pump and burn" training is not good for long term muscle growth. The lactic acid produced by this type of training inhibits the nervous system and does little to enhance the changes that can cause long term muscle growth.

For the most part this type of high rep training is good for causing acute metabolic changes to the muscle and some sarcoplasmic hypertrophy.

However, if we use this type of training under hypoxic conditions it can be used as a novel stimulus to increase growth hormone levels or potentially allow for increased work – which is extremely important for hormonal adaptive release and blasting through stubborn body parts.

The ability of hypoxic training to increase the amount of work a muscle can perform is the result I am truly interested in and the reason that I have been experimenting with this type of training in my own workouts.

# The best way to apply this type of hypoxic training is to the end of your workout as a bonus or burnout set for specific isolated muscles.

The reason I like to do this is twofold. First training heavy all the time is taxing. Outside of a few benchmark exercises which you should use to gauge progress, you need to the movements you are doing.

What's more is that on exercises such as side lateral raises that depend on discrete increases in weight of up to 5 lbs per dumbbell, progression via weight used is the least desirable model.

Exercises such as these that do not lend themselves to huge jumps in weight are just the type that can benefit from hypoxic training.

### The easiest way to benefit from this type of training is to simply do a "breathhold" set.

The idea is to breath in through your nose perform one extended set, usually 8-12 reps, and then slowly exhale through the mouth slowly.

You can wait until the end of the set to exhale or slowly exhale as you get toward completion depending on your fitness levels and levels of familiarity with the technique.

Alternatively you can hold your breath as long as possible before the beginning of a set and begin as soon as you start. You will need to experiment with both techniques to see what you are able to do most effectively.

## **Breath Hold Sets Examples**

Pick your stubborn body part and add a breath set to the end of your workout. This will pump more GH through your system and allow for the necessary hormonal adaptations to take place that will ensure your stubborn body part is forced to grow.

Hold your breath for the entire 8-12 reps. Take a 1-2 min break and then perform 2 more sets.

Bodypart	Exercise	Reps	Sets
Chest	Pec flye	8-12	3
Shoulders	Lateral raises	8-12	3
Back	Bent over back flyes	8-12	3
Biceps	Standing DB curl	8-12	3
Triceps	Rope push downs	8-12	3
Legs	Dumbbell squat	8-12	3
Calves	Seated calf raise	8-12	3
Traps	DB Shrugs	8-12	3