

The #1 UK
Company For
Occlusion
Training



OCCCLUSION TRAINING GUIDE

**BUILD BIGGER MUSCLES, REDUCE
CHANCE OF INJURY**

zer0.1percent 

www.zp1.co.uk

ABOUT US

Zero.One% Ltd was set up in 2019 with a mission to help people achieve their true fitness potential.

Our name is based on the fundamental principle that **every improvement counts** even if it's a marginal gain of **0.1%**. If done consistently overtime these marginal gains can be life changing.

The company was created by **Fran** and **Colin**, a couple from the **UK**, who met whilst working in the fitness industry for the worlds largest sporting goods manufacturer.

They have a combined **10 years** experience helping fitness facilities create and design unique spaces that encourage people to exercise. Using this knowledge and expertise they now design **unique fitness apparel** and **fitness equipment** that help people maximise their true potential.

Zero.One% are the creators of the **Occlusion T-Shirt** (Patent Application 1915130.7), specifically designed to boost muscle growth and reduce your chance of injury.

To support you on your journey we have now created this free eBook which has been designed to give you everything you need to know to get started and benefit from this form of exercise:

The eBook includes:

- The history of **Occlusion Training**
- The key benefits of this form of exercise, the **Science Explained**
- A how to guide on **Performing if Safely** for **Maximum Benefit**
- A Beginners **6 Week Workout Program** allowing you to start today
- Some of the existing methods of Occlusion Training and the **Zero.One% Occlusion T-Shirt**

We look forward to being part of your journey!



INTRODUCTION

Occlusion training has been widely discussed by sporting professionals, sports scientists and general gym enthusiasts in recent years but its true potential has still to reach the masses.



Even though it has shown **proven benefits** in terms of muscle growth and rehabilitation, Occlusion Training still remains a niche method of exercise.

Occlusion Training goes by many names including: Blood Flow Restriction Training, often reduced further to BFR; and Kaatsu Training however the fundamentals are exactly the same.

In this eBook we will dig a little deeper into **Occlusion Training**, detailing the scientific data behind the method, the results of exercising in this way, while also dispelling many of the myths circulating around this methodology.

Finally, we have included a step by step guide on how to optimise this method of training to boost results, which includes a 6 week '**Bigger Arms**' program using this simple but effective technique, too often ignored by the masses.

WHERE DID OCCLUSION TRAINING ORIGINATE?

This type of training takes its origin from **Japan**, where during the 1980's, this new innovative method of muscle building called **Kaatsu training** or Occlusive Training, began to spread with great success.

The name, which comes from the Japanese term Kaatsu or "increased pressure" the fundamental principle behind this training method: the momentary occlusion of muscle blood vessels, resulting in increased internal pressure.



This new training methodology was the idea of a university student, **Yoshiaki Sato**, who, through the Research Centre for Physical Health and Exercise Science in Tokyo, began studies on training in oxygen deficiency and circulatory deficit to apply them mainly to exercise in microgravity conditions to support **astronauts**.

We immediately understand that this strategy is therefore, not the result of some fancy supposition, but has a **solid scientific basis** to support it.

Another important supporter of Occlusion Training is the eminent sports physiologist **Masahiko Tanaka**, convinced that this training allows greater gains in strength and hypertrophy while using light weight rather than more traditional methods of training.

Thanks to these well researched studies, across Asia, this new way of training, based on the occlusion of blood vessels, began to find a wider use than the niche for which it was born, Occlusion Training was now being widely used for both its **hypertrophic** and **rehabilitation benefits** .

This was the beginning, of scientific theory designed for a specific group being applied in the sports and performance market.

Today Occlusion Training is being used widely in the NFL, Professional Rugby, the Military and Body Building. Now Zero.One% would like to bring this indisputable **innovative training technique** to the masses.

KEY BENEFITS

To fully understand Occlusion Training it is important to first look at the **Key Benefits** of this training methodology, before we examine the **Scientific Elements** of each point in more detail:



1. This training methodology causes a strong **metabolic stress**, due to the pooling of blood in the muscle that leads to an improvement in the hypertrophic response.
2. Partial muscular hypoxia (reduced levels of oxygen) allows you to obtain an **anaerobic metabolism** regardless of the weight we used, so there will be a prevalent intervention of IIb muscle fibres (fast-twitch fibres) even at relatively **light weights** (very important for patients returning from an injury for example).
3. The high lactate production that derives from this method, has a strong impact on the **hormonal profile**, as well as creating the famous condition of an “**insane pump**” in the muscle.

4. This method will makes it possible to achieve **full recruitment** of the majority of the muscle fibres while using lightweight. This allows you to get the same, if not better, muscle growth from performing Occlusion Training at lightweight as you would lifting a heavier weight closer to your 1 repetition max.
5. If you are healing from an injury, or if past traumas don't allow you to use heavy weights safely, Occlusion Training will allow you to take full advantage of the hypertrophic advantages of high-intensity workouts, yet **doing it safely**, using relatively light weights.
6. Thanks to the **low intensity** required, it can be adopted brilliantly even during de-load periods, to give your joints a break without disregarding muscle work.

SCIENTIFIC ASPECTS OF OCCLUSION TRAINING

Now that we have a better understanding of what Occlusion Training is and its key benefits, let's now understand what **physiological mechanisms** make this possible.



The concept of Occlusion Training is very simple: preventing the venous return of the trained limbs, leads to an accumulation of blood in the targeted muscles.

But before we begin it is **VERY IMPORTANT** to understand: we are **not** going to completely occlude the blood flow as many people think, but only the venous return is blocked, letting the arterial flow free.

Simply put, the blood must be allowed in to the limbs but partially restricted in its return during our training sets.

This factor is precisely what triggers an incredible "pump" and triggers the anaerobic metabolism, recruiting many more muscle fibres, even using much lighter weights.

The same **muscle activation**, without occlusion, would be possible only using heavier loads between 80% and 100% of your 1 Rep Maximum.

So let's start by analysing just the aspect of **muscle recruitment**.



Since the loads used in Occlusion Training are not high at all, it might seem strange that the muscle activation is **so great**, but the explanation is very simple.

A prolonged lack of oxygen in muscle tissue (hypoxia) during an effort, quickly exhausts the **type I** fibres (those responsible for none intense but prolonged efforts), forcing the neuromuscular system to recruit **type 2b** and **2a fibres**, those that come into play in short but intense efforts and those that have the greatest **hypertrophic power**.

In other words, a **marathon runner** has a prevalence of type I fibres (also called "red fibres") while a **sprinter** has a prevalence of type 2 fibres (also called "white fibres").

You can easily see the differences in muscle mass between a marathon runner and a sprinter, and you can understand why it is important to work on type 2 fibres if our goal is increasing **muscle size and density**.

Hypoxia, through lack of oxygen in the muscle also creates a strong stimulus to the process of angiogenesis, i.e. the generation of new blood vessels.

This plays a crucial role in improving **vascularisation**, which is one of the signatures of a great **Bodybuilding** physique, but usually lacking in athletes who train at very high intensity with little repetitions sets.

Muscle hypoxia also has a positive effect on the secretion of **GH** or somatotropin, a hormonal mediator with an anabolic effect. This is due to the high production of lactic acid by the muscles which, in an oxygen-poor environment, rapidly increase the **anaerobic lactic acid metabolism**.

This Energy System usually intervenes at a **medium-high intensity work**, but the lack of oxygen in the muscle induced by Occlusion Training will activate the anaerobic lactic acid metabolism a lot faster and with lighter loads.

*Without overcomplicating this point in scientific detail, the lactic acid binds to certain receptors causing it to stimulate **GH secretion** and consequently to increase the anabolic response of the muscle and thus also its size.*

Additional physiological benefits

Occlusion training also triggers an **inhibitory** mechanism of **myostatin**, a protein produced and released by myocytes that acts on muscle cells to inhibit muscle growth and increase the body fat.

Decreases in myostatin levels results in increased skeletal muscle mass and strength and decreased levels of body fat.

Two other particularly interesting aspects should be mentioned.

This methodology allows proven gains in **mass and strength** without creating significant damages to muscle fibres compared to classical training with heavy loads.

Also, due to its lower intensity and consequent lower stress, it seems to induce a lower concentration of **cortisol**, a toxic hormone that is released during stressful periods and that affects muscle growth and the psychophysical condition of the person.

In Summary

Physiologically speaking, Occlusion Training can increase the recruitment of motor units, increase anabolic hormones inhibiting local negative muscle growth regulators.

It also eliminates many of the potentially negative effects of high-intensity training, such as deep muscle fibres damages and potentially related injuries, and increases in unfavorable catabolic hormones (cortisol).

MAKE OCCLUSION TRAINING PART OF YOUR WORKOUT

As you may have guessed, the greatest use of Occlusion Training is in the training of the **limbs**, both arms and legs, as it is obviously difficult to isolate muscle groups such as chest or back.



But there are also **advantages** for these larger muscle groups when using Occlusion training.

One of the problems that are usually found is that it's **hard to isolate** the large muscle groups mentioned above (chest and back).

For example in the dumbbell lever row, which is predominately a Back Exercise, you have an important intervention of the biceps.

This works the same for a **Bench Press**, which focuses on the Chest Muscle, there will be always an important involvement of the triceps.

So how can we achieve **greater isolation** of these muscle groups to have a better hypertrophic response?

The solution lies in the technique of **pre-fatiguing** a synergic group of muscles rather than the targeted one. This is where Occlusion Training can support hypertrophy in these larger muscles.

Let's take the example of the Chest Press.

Occluding the arms, we will get fast fatigue in the arms which will lead to a more **isolated intervention** of the large pectoralis muscles. This method forces the larger group of muscles to work harder to compensate for the pre-fatigued condition of the Occluded arms. This method works the same goes for all other compound lifts.

A similar method is applicable in the opposite case.

If we want to target the triceps in a **Close Grip Bench Press**, through the occlusion of the arms, the triceps will be hit much more than the pectoralis.

In short, the Occlusion Training lends itself to much more than just arms and legs.

HOW DO YOU DO IT?

Now we understand what Occlusion Training is and the benefits it can provide, we finally get to the **heart** of the matter, how can you actually apply this and get **all these benefits**?



The first and most obvious thing to do to **occlude** your muscles is to apply a wrap around the limb during training. **HOWEVER** it is important that you consider these guidelines in order to perform this safely. To give you a clearer visual reference, take a look at these images below.

WHERE TO WRAP



✓ DO

- Wrap at the top of the arm or leg only.
- You can wrap your arms for shoulder or chest workout or your legs for glutes. Just use your head and keep weights light!

⊘ DON'T

- Don't wrap at the knee for calf training or at the elbow for forearms. Wrap high on the leg or arm.
- Wrap for any lift above 50% of your 1RM. 20-40% is the sweet spot.

HOW TO WRAP



Over the years, we have seen the most various solutions...

The most popular was to use **knee straps**, or **boxing bands** used in combat sports, up to the "professionals" who use specific **BFR bands**.

The most **common mistake** that derives from these DIY methods is in fact to tighten too much and unevenly across each limb.

Tightening to the point of blocking the arterial inflow, however, is very unlikely.

In fact, to create a real Tourniquet effect, the force applied must be such as to create an immediate and painful sensation, which we absolutely do not want to achieve.

On the contrary, a too light grip would considerably **reduce** the hypertrophic benefits of this method.

To give an **intuitive guideline** to obtain the right compression on the limbs, if we consider a scale from **1 to 10**, where 10 is the complete occlusion of the circulation (venous and arterial), we should aim to a pressure range from **4 to 7**.

Needless to say, between the two options, it is much better to have a grip that is too light rather than too heavy.

Characteristics of an effective Occlusion Training session

First of all, let's look at the **workout intensity**.

The 1RM% must be low, averaging between 20% and 40%, with the best range being in the middle, at **30% 1RM**.

In fact it has been seen that this percentage is sufficient to produce all the necessary stimuli.

For those of you new to the term 1RM, it stands for “One Repetition Max”, which is the heaviest weight you can lift for just one rep with perfect technique. This is often the benchmark in which exercisers aim to increase over time as they build strength. In Occlusion Training we build this strength without pushing towards the 1RM weight which massively reduces your chance of injury.

Second, let's look at **repetitions**.

Each set should be **high**, with an optimal volume of about **75 reps**, divided over at least 4 sets, following for example a **30-15-15-15 reps** pattern.

Some techniques that work very well are also the Pyramid Sets (working up and back down a weight range) or Rest Pause (perform a set to failure, rest a few seconds, then squeeze out a few more reps).

It is basically a methodology to be used in exercises and "**as many reps as possible**" type of Sets.

As for **recovery** between the Sets, this should be limited, to around **30 seconds**.

Finally, **how often** should we use Occlusion Training

When first starting with Occlusion Training you should aim for at least **2-3 workouts** per week, following our 6 week program. With a good steady **progression** you will be able to increase this to **4-5 times** per week. This will maximise your results while reducing the stress on your joints and reducing the chance of injury.

Occlusion of the muscle will total between **5 and 10 minutes**, throughout the full workout. It is necessary to underline the importance of maintaining a limited compression time releasing the pressure after the completion of each Occlusion set, and this is why a fast release and adjustment is vital.

But don't worry, we have designed a workout plan below which is easy to follow and that promotes maximum increases in muscle growth safely.

Let's now see another practical protocol of the application of Occlusion Training, with this example of exercise intensity over 8 Sets.

SET	REPS	1RM%	REST
1	30	20%	30 seconds
2-3-4	15	20%	30 seconds
5-6-7-8	MAX REPS	50%	30 seconds

Note: Do not remove the occlusion before you have completed all sets.

MUSCLE MAINTENANCE

Until now, we have focused on the benefits of Occlusion Training in building muscle however this method is also used extensively in the **rehabilitation** of patients who have undergone an injury. In instances where individuals cannot safely perform exercises using heavy weight or high-intensity, due to **previous injuries**, Occlusion Training is fast becoming a preferred method for **muscle maintenance**.

The fact that a load of **30%** of our 1 Rep Max, associated with occlusion, allows the maximum hypertrophic response and muscle development, makes it clear that the recovery of muscle, will be much faster and more effective.

This method has also been used successfully in subjects who, for example, have been forced to the immobility of a limb, consequently creating a strong imbalance of strength and volume compared to the healthy one.

It is used by the **Army**, helping wounded soldiers to recover faster, and by **NFL athletes**, who trying to get back to match fitness, as detailed in the ESPN article below.

https://www.espn.com/nfl/story/_/id/12352707/houston-texans-first-nfl-incorporate-blood-flow-restriction-training

As you can see, intervening with **Occlusion Training** on the limb that needs to be rehabilitated, it can speed up the process of recovery of muscle tone, while training both of the limbs together.

This way we will quickly reduce the imbalance created by the previous immobility of the injured limb.

People with **lower back pain** have also benefited from Occlusion Training.

Subjects who have been strongly discouraged from performing heavy-weight Squats, for example, can still obtain the enormous benefits of this exercise, even if they train with only 30% of 1RM, avoiding **unnecessary overloads** on their spine.



Rehabilitation from a knee injury using Occlusion Training.

SPORTS SCIENTISTS PUTTING THEORY IN TO PRACTICE

There are various experiments and **case studies** carried out by numerous Research Centers which are worth reviewing. Let's list the most important and significant **results**.

In a pilot study, in which a group of individuals performed a Bench Press workout, 4-times a week for two weeks, increases in strength levels were found (**+6% 1RM**); increases in **chest size (+8%)** and **triceps (+16%)**.

Another example.

In a systematic review a total of 2658 articles and 11 studies with a total population of 238 subjects were examined.

The study was based on a comparison of activities against resistance **with and without occlusion**, where one group used loads above 70%1RM while another group used loads below 50%1RM.

Also, the effects of Occlusion Training on walking were tested by assessing the pre- and post-training mass gain and/or strength in adult subjects.

The results revealed that both in the case of training with lower loads and walking, the use of **Occlusion Training** resulted in significant improvements in strength (**+ 13.3%**) and mass (**+ 3.0%**).

Comparing high load training to low load training using the principle of occlusion caused **similar muscle hypertrophy**, but **without the potential risks** of frequent use of heavy-weights.

Similar results were also obtained on a group of untrained women. At the end of a 12 week Occlusion program, the results in term strength and hypertrophy, despite the considerable difference in load, were practically the same.

So they had the same results but a **lower percentage of injury risk!**

BIGGER MUSCLES, LESS INJURIES!



CONCLUSION

At the end of this **Occlusion Training Guide**, what conclusions can we draw?

First of all, we are not talking about something without scientific foundations, but supported by years of **studies** and dozens of **experiments** carried out.

The benefit that stands out the most is certainly the fact that **Occlusion Training** allows you to increase both **strength and muscle size**, even with relatively **light weights** (about 30%1RM) thus **avoiding overloads on the joints**, or allowing injured subjects to regain in record time the muscle tone and strength they've lost.

Whether you are an untrained exerciser who is approaching fitness for the first time, or an NFL athlete, the benefits of Occlusion Training can help you meet your fitness goals.

Like any other training method, it is important to periodise the Occlusion Training and to use it at the right moment of your training cycle.

What is important to note, however, is that for the same loads, training in hypoxia has given great results more than classical training without occlusion.

YOUR FITNESS JOURNEY STARTS HERE!

Why not introduce such an **effective** and **easy-to-apply** system into your exercise plan? Below we hope to help you start your journey with our 6 Week Workout Plan specifically designed to incorporate Occlusion Training, in which you'll maximise your results while dramatically reducing stress on your joints.

Before we start our, Zero.One% would like to introduce you to our Occlusion T-Shirt



ZERO.ONE% PRESENTS

ZP1 - Occlusion T-Shirt



FINALLY OCCLUSION TRAINING MADE EASY!

As detailed above, working out with knee straps or straps with large buckles tied to your arms is neither functional nor aesthetic.

You can't have uniform pressure on both limbs or create micro adjustments which creates the risk of imbalance in the development of strength and hypertrophy.

That's why **Zero.One%** developed an innovative product that solves all these problems, which previously kept us from using this magnificent training method.



Look at all the **problems** of a standard BFR band and straps.



With the **ZP1 Occlusion T-Shirt**, we have introduced **easy-to-use** straps woven in to the sleeves, that create an occlusion of the right pressure, identical on both sides quickly and easily.

Finally there is a product designed for the mass gym market to build bigger muscles through hypoxia in the muscles without the risk of injury of pushing weight at your 1 RM.



You can create the occlusion in a matter of **seconds** using the fastening **velcro system**, and when you don't need the straps, or buckles. The ZP1 has a **rest tab** so that the straps can be stowed close to the arm between sets.

Zero.One% have spent the last year developing and perfecting our Patent Pending (PG449178GB) Occlusion T-Shirt.

Our goal with this eBook is to raise awareness for this amazing training method and get you started on your journey to BIGGER arms today.

The development at Zero.One% never stops, we are also working on the development of **Occlusion Training shorts** with the same built-in straps system, these will be launching soon.

To get more information about our products, please contact us at

zero.one2019@outlook.com



or visit our website

www.zp1.co.uk



WORKOUT PROGRAM

To help get you started here is a **FREE** Training Program that you can follow for at least **4-6 weeks** with great results, in which we are going to insert the principles of **Occlusion Training** seen till now.

In the tab, next to certain exercises, you will find the acronym **OT** in the Reps column, just to indicate that in that exercise you will use the **Occlusion Training** method.

When the **indicated sets** are 4, you will proceed using the **30-15-15-15** reps scheme, keeping a load of 30% 1RM and a recovery of 30 seconds.

When the **indicated sets** are 8, you will use the chart shown below.

SET	REPS	1RM%	REST
1	30	20%	30 seconds
2-3-4	15	20%	30 seconds
5-6-7-8	MAX REPS	50%	30 seconds

To give a reference, 30% of 1RM is a weight you may use for warm ups, that allows you to do without so many problems, even **30 reps**.

How much weight to use on the other exercises?

Since this is a Program designed for **Beginners/Intermediates**, we have avoided the use of complex schemes with the use of a specific % of weight according to the 1RM%, as we imagine that many people are not even aware of their 1RM% on each exercise.

In fact, before we can test ourselves, we need to refine the technique and reach a sufficient level of strength.

For this reason, you will use the "**Reps in Reserve**" (RIR) principle during the Program.

For each exercise, apart from those related to Occlusion Training, you will use a **RIR 2**.

What does this mean?

It means that you will have to use such a load that at the end of the Repetitions of the Set, you feel like having enough energy to do 2 more reps.

Let's take an example.

If you have to do 6 reps of Deadlift, RIR 2, it means that you will increase the weight until you find a load so that, at the end of the 6 reps, you would be able to do 2 more reps.

This way you will get good **muscle recruitment** without sacrificing good technique, risking injuries.

Also, this will allow you to always train according to your potential of the current day.

So if one day you feel quite energetic, you will load more weight on the barbell and push more.

The same way, on those days in which you have an “empty tank”, you will use lighter loads.

This is the principle of self-regulation, much more advanced and effective than the use of 1RM%.

The success of any workout program requires you to ‘listen to your body’ whether this is for weight load used, how many reps to perform or the tightness of the Occlusion Band.

Use data to push yourself and track progress, we would encourage you to write down the load used in each exercise, as your body responds to the exercise over time, building muscle and getting stronger.

At the end of the first 3 week block, you will switch to a RIR 1, in the 4-5-6 weeks.

Same principle of RIR 2, so if you have to do 6 reps of Deadlift, RIR 1, it means that you will increase the weight until you find a load so that, at the end of the 6 reps, you would be able to do just 1 more rep.

If you're used to the 1rm% method, check the chart below to help yourself the first times you switch to RIR.

RIR	Reps	1	2	3	4	5	6	7	8	9	10	11	12
3+		90%	87%	84%	81%	78%	77%	75%	74%	72%	71%	69%	68%
		92%	89%	86%	83%	80%	78%	76%	75%	73%	72%	70%	69%
2		94%	90%	87%	84%	81%	78%	77%	75%	74%	72%	71%	69%
		95%	92%	89%	86%	83%	80%	78%	76%	75%	73%	72%	70%
1		97%	94%	90%	87%	84%	81%	78%	77%	75%	74%	72%	71%
		98%	95%	92%	89%	86%	83%	80%	78%	76%	75%	73%	72%
0		100%	97%	94%	90%	87%	84%	81%	78%	77%	75%	74%	72%

Warm Up

Warming up the muscles before you put them under stress is extremely important and often an area often ignored by many exercisers. When it comes to warm up exercises we would normally suggest some low intensity cardio and stretching. This will reduce your chance of injury, loosen up the muscles and joints and allow you to get the most out of your body

Warm ups should last at least 10 minutes to get the blood running through your muscles.

Suggestions for a good warm up would be a brisk Incline Walk on a Treadmill if training in the gym or controlled steady paced skipping if training from home. Try our Zero.One% skipping ropes which are a perfect compliment to your cardio workouts



Before starting your strength workout always begin the first 2 sets of the exercise with a very low weight, performed with the Occlusion band at rest.

Whether you are training in the gym or at home, our workout plan has you covered

We suggest to **PRINT** the following **Workouts Plan** and to write down in the KG column the load you've used in each exercise, so that you can track the progress of your workouts.

SAFETY FIRST

It is not advised to exceed recommended tightness of the bands beyond a 7 out of 10 at any point of the workout. If you do feel any painful sensations please release the band immediately.

A useful and easy test to check if you have tighten too much the straps is the **Capillary Refill Time**.

Try it now. Press on the lower left side of your palm. You will notice that your skin appears lighter for a moment, then immediately fades back into its natural color.

Capillary refill time is the amount of time it takes for your skin to return to its natural state and should **not exceed 3 seconds**. To check arm CRT, press the lower left side of the palm. To check leg CRT, press top of the foot or bottom.

WEEK 1 - 2 - 3 (RIR 2)

DAY 1	SETS	REPS	KG	REST
Pull-Up	3	6		120 seconds
Deadlifts	3	6		180 seconds
Leg Curl	4	OT		30 seconds
Lat Machine	3	8		120 seconds
Triceps Ext	4	OT		30 seconds
Curl EZ BB	8	OT		30 seconds

DAY 2	SETS	REPS	KG	REST
Squat	4	6		120 seconds
Leg Extension	8	OT		30 seconds
Bench Press	3	10		120 seconds
Dips	3	8		120 seconds
Chest Press	4	8		120 seconds
DB Shoulder Press	4	8		120 seconds
Alternating DB Curl	8	OT		30 seconds

DAY 3	SETS	REPS	KG	REST
BB Row	3	6		120 seconds
Chin Up	3	8		120 seconds
Military Press	3	10		120 seconds
Facepull	3	10		120 seconds
Pulley	3	8		120 seconds
Tricep Extension	8	OT		30 seconds
Curl BB	3	10		60 seconds

WEEK 4 - 5 - 6 (RIR 1)

DAY 1	SETS	REPS	KG	REST
Squat	4	8		180 seconds
Bulgarian Split Squat	3	8		120 seconds
Leg Curl	4	OT		30 seconds
Bench Press	4	6		120 seconds
Military Press	4	6		120 seconds
Tricep Extension	4	OT		30 seconds

DAY 2	SETS	REPS	KG	REST
Chin Ups	3	6		180 seconds
Deadlifts	3	8		180 seconds
Leg Extension	4	OT		30 seconds
DB Row	3	12		120 seconds
Facepull	3	10		60 seconds
Rope Pushdown	4	OT		30 seconds
Curl EX BB	8	OT		30 seconds

DAY 3	SETS	REPS	KG	REST
Air Squat	4	OT		30 seconds
Glute Bridge	3	12		60 seconds
Bench Press	3	10		120 seconds
Dips	3	8		120 seconds
DB Shoulder Press	3	8		120 seconds
Chest Press	8	OT		30 seconds
DB Curl	4	OT		30 seconds

BODYWEIGHT VERSION

In case you're still into a lockdown, or maybe you simply prefer to train at home or outdoor, check this out.

DAY 1	SETS	REPS	REST
Air Squat	3	15	60 seconds
Bulgarian Split Squat	3	8	60 seconds
Glute Bridge	4	OT	30 seconds
Pull Ups	3	MAX	120 seconds
Push Ups	4	15	60 seconds
Diamond Push Ups	4	OT	30 seconds

DAY 2	SETS	REPS	REST
Chin Ups	3	MAX	120 seconds
Rear Lunges	4	OT	30 seconds
Single Leg Bridge	3	10	60 seconds
Chair Dips	4	OT	30 seconds
Inclined Push Ups	3	12	30 seconds

DAY 3	SETS	REPS	REST
Squat Jumps	3	12	120 seconds
Cossack Squat	3	12	60 seconds
Wide Push Ups	3	12	60 seconds
Diamond Push Ups	3	10	60 seconds
Table Row	4	10	60 seconds

DISCLAIMER

This training method, although extremely safe, places a lot of stress on the veins and their valves.

People prone to or familiar with varicose veins should avoid it.

We recommend a gradual approach at all levels to get used to the sensation caused by mild hypoxia of muscle tissue.

Do not abuse this method and follow the guidelines provided by this guide.

An occlusion prolonged too long (over 10') can expose the athlete to painful sensations.

The training proposed in this eBook, however, carried out for the short periods indicated, presents a very low risk.

However, it is recommended to train under the supervision of professionals and as before starting any training program, consult your doctor of confidence and carry out a medical examination to rule out possible pathologies.

Finally, it should not be forgotten that occlusive training is not a substitute for all the other methods used for hypertrophic stimulation, but should be considered as a supplement to exponentially increase the results in terms of muscle growth and rehabilitation.

BIBLIOGRAPHY

- Joamira P. Araújo et al.: THE EFFECTS OF WATER-BASED EXERCISE IN COMBINATION WITH BLOOD FLOW RESTRICTION ON STRENGTH AND FUNCTIONAL CAPACITY IN POST-MENOPAUSAL WOMEN (2015). American Aging Association
- Christoph Centner et al.: EFFECTS OF BLOOD FLOW RESTRICTION TRAINING ON MUSCULAR STRENGTH AND HYPERTROPHY IN OLDER INDIVIDUALS: A SYSTEMATIC REVIEW AND META-ANALYSIS (2018). Sports Medicine
- Peter Ladlow et al.: THE EFFECTS OF LOW-INTENSITY BLOOD FLOW RESTRICTED EXERCISE COMPARED WITH CONVENTIONAL RESISTANCE TRAINING ON THE CLINICAL OUTCOMES OF ACTIVE UK MILITARY PERSONNEL FOLLOWING A 3-WEEK IN-PATIENT REHABILITATION PROGRAMME: PROTOCOL FOR A RANDOMIZED CONTROLLED FEASIBILITY STUDY (2017). Pilot Feasibility Studies
- Stian Ellefsen et al.: BLOOD FLOW-RESTRICTED STRENGTH TRAINING DISPLAYS HIGH FUNCTIONAL AND BIOLOGICAL EFFICACY IN WOMEN: A WITHIN-SUBJECT COMPARISON WITH HIGH-LOAD STRENGTH TRAINING (2015). Am J Physiol Regul Integr Comp Physiol
- Brendan R. Scott et al.: HEMODYNAMIC RESPONSES TO LOW-LOAD BLOOD FLOW RESTRICTION AND UNRESTRICTED HIGH-LOAD RESISTANCE EXERCISE IN OLDER WOMEN (2018). Frontiers in Physiology
- Sadegh Amani-Shalamzari et al.: BLOOD FLOW RESTRICTION DURING FUTSAL TRAINING INCREASES MUSCLE ACTIVATION AND STRENGTH (2019). Frontiers in Physiology
- Stephen D. Patterson et al.: BLOOD FLOW RESTRICTION EXERCISE POSITION STAND: CONSIDERATIONS OF METHODOLOGY, APPLICATION, AND SAFETY (2019). Frontiers in Physiology
- Sadegh Amani-Shalamzari et al.: EFFECTS OF BLOOD FLOW RESTRICTION AND EXERCISE INTENSITY ON AEROBIC, ANAEROBIC, AND MUSCLE STRENGTH ADAPTATIONS IN PHYSICALLY ACTIVE COLLEGIATE WOMEN (2019). Frontiers in Physiology
- Peter Ladlow et al.: LOW-LOAD RESISTANCE TRAINING WITH BLOOD FLOW RESTRICTION IMPROVES CLINICAL OUTCOMES IN MUSCULOSKELETAL REHABILITATION: A SINGLE-BLIND RANDOMIZED CONTROLLED TRIAL (2018). Frontiers in Physiology
- Michal Wilk et al.: TECHNICAL AND TRAINING RELATED ASPECTS OF RESISTANCE TRAINING USING BLOOD FLOW RESTRICTION IN COMPETITIVE SPORT – A REVIEW (2018). Journal of Human Kinetics
- William R. Vanwyne et al.: BLOOD FLOW RESTRICTION TRAINING: IMPLEMENTATION INTO CLINICAL PRACTICE (2017). International Journal of Exercise Science
- Peter C. Douris et al.: THE EFFECTS OF BLOOD FLOW RESTRICTION TRAINING ON FUNCTIONAL IMPROVEMENTS IN AN ACTIVE SINGLE SUBJECT WITH PARKINSON DISEASE (2018). The International Journal of Sports Physical Therapy
- John Faltus et al.: THEORETICAL APPLICATIONS OF BLOOD FLOW RESTRICTION TRAINING IN MANAGING CHRONIC ANKLE INSTABILITY IN THE

- Alexander Törpel et al.: STRENGTHENING THE BRAIN—IS RESISTANCE TRAINING WITH BLOOD FLOW RESTRICTION AN EFFECTIVE STRATEGY FOR COGNITIVE IMPROVEMENT? (2018). Journal of Clinical Medicine
- Jakob L. Nielsen et al.: BLOOD FLOW RESTRICTED TRAINING LEADS TO MYOCELLULAR MACROPHAGE INFILTRATION AND UPREGULATION OF HEAT SHOCK PROTEINS, BUT NO APPARENT MUSCLE DAMAGE (2017). The Journal of Physiology
- Miguel S. Conceição et al.: ANAEROBIC METABOLISM INDUCES GREATER TOTAL ENERGY EXPENDITURE DURING EXERCISE WITH BLOOD FLOW RESTRICTION (2018). PLOS ONE
- Mizuki Sudo et al.: BLOOD FLOW RESTRICTION PREVENTS MUSCLE DAMAGE BUT NOT PROTEIN SYNTHESIS SIGNALING FOLLOWING ECCENTRIC CONTRACTIONS (2015). Physiological Reports
- Miguel S. Conceição et al.: EXERCISE WITH BLOOD FLOW RESTRICTION: AN EFFECTIVE ALTERNATIVE FOR THE NON-PHARMACEUTICAL TREATMENT FOR MUSCLE WASTING (2019). Journal of Cachexia, Sarcopenia and Muscle
- Sara A. Harper et al.: BLOOD-FLOW RESTRICTION RESISTANCE EXERCISE FOR OLDER ADULTS WITH KNEE OSTEOARTHRITIS: A PILOT RANDOMIZED CLINICAL TRIAL (2019). Journal of Clinical Medicine