HYPERTROPHY AND CALISTHENICS

THE PRIO SYSTEM

A workout program backed by science that will show you how to gain muscle and build strength with bodyweight strength training

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Kristoffer Lidengren

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DISCLAIMER

Always consult a physician before engaging in a new exercise program. These recommendations are not medical guidelines. You must consult your physician prior to starting this program or if you have any medical condition or injury that contraindicates physical activity. All forms of exercise pose some inherent risks. The author advises all readers to take full responsibility for their safety and know their limits. The exercises in this book are not intended as a substitute for any exercise routine or treatment that may have been prescribed by your physician.

WITHOUT FURTHER ADO…

Straight to the point, let's start with the end. The focus of this book is to build muscle and strength with calisthenics. This book will provide you with the Prio System, a straightforward do-it-now calisthenics workout program for you to start following from today and benefit from for years to come. In this book you will find enough background, explanations and principles for you to adapt the training program according to your goals and preconditions. The workout program has reached its goal if it helps you a) gain lean mass while b) learning new skills. If you can't wait to get going, jump straight ahead to chapter 3 to find the best bodyweight exercises for muscle and strength, chapter 4 for how to perform the exercises and chapter 5 for the Prio System workout program.

If you're reading this you might already know a lot about calisthenics and bodyweight training. You may want to improve strength and/or master new skills. You also want to build muscle in the process and you're struggling with the programming. What program layout will have you reach both goals: muscle size and calisthenics skills? There are bodybuilders very weak for their size and there are calisthenics zealots mysteriously small for their strength. So what is really the role of muscle tissue in strength and how do we make it grow?

Some other books will try to tell you that you don't need to progress or work towards tougher skills to build muscle with bodyweight training. Some will even say that it's not only pointless but dangerous! They claim that you just have to use shorter rest intervals and other tricks instead of actually getting stronger. This is akin to someone telling you that you don't need to use bigger weights in the gym as you get stronger, you just need to swing the same light dumbbells in a slightly different manner. Cute, but not very convincing. You wouldn't believe that there's no need for more reps or bigger weights in the gym, so why would that be true for calisthenics? There's no shortcut to building muscle mass and strength. You need to

systematically work towards tougher skills in order to progress, and this book will show you how.

I originally created this program for myself and when I found that it worked very well for me and my training colleagues I decided to write a book about it. To my sincere excitement, writing this book improved the program even more. I've been training from home for about 3 years with two kids around my ankles and I'm making progress faster than ever, in both strength and muscle. Not having to go to the gym saves me money but most importantly, it saves me a lot of time.

I've been doing different forms of strength training for over fifteen years now (kettlebells, calisthenics, martial arts and powerlifting on a national level) and I've always been very much in charge of my own training. I've dared to try new things and patiently stuck to ideas, my own or others', for long enough to have a chance to properly evaluate them. Through the years, I've kept a little and discarded a lot, so I'd like to think of this program as having been filtered through fifteen years of systematic evidence testing, call it trial and error.

As a physiotherapist I know that nothing gets done without motivation, and goal-setting is a necessary part of creating motivation. In this book I will assume that we all have the same goal: calisthenics AND hypertrophy, and the workout program is built around increasing muscle size and strength, both proportionately distributed.

I will leave enough up to you, to adapt to your preferences and conditions, so that you can use the program as a template. If you train at home you might want to rely on only the floor, your body weight and maybe a pull-up bar. If you prefer the gym you might want to incorporate weight belts and barbells. This program is designed to work well with both styles of training.

If you're ready to start learning the best program out there, one that will give you strength, muscle and skill acquisition without the need for anything but your body weight, then let's go!

CHAPTER 1. COMBINING CALISTHENICS WITH TRAINING FOR MUSCLE SIZE

Calisthenics is a fantastic tool for building strength and muscle, there should be no doubt to that claim. Bodybuilders, wrestlers and powerlifters, many of the best in their respective sport have understood the benefits of keeping dips, pull-ups and push-ups as part of their strength routine. In some cases, like with old-time strongman and olympic weightlifter Paul Andersson, even the handstand push-up was an important part of his strength routine. He repped out handstand push-ups at 163 kg!

Every form of resistance training has the potential to build strength and muscle. Your body doesn't know what's making the muscles contract: gravity from your bodyweight, a barbell, dumbbells, a kettlebell, a cable-pulley… Regardless of the tool used, you need to learn how to train to get the most out of it. The oldest form of strength training and bodybuilding is the use of your own body. Did you know that the word calisthenics describes the oldest system for structuring bodyweight-based training? The Merriam-Webster dictionary gives the following definition: Systematic rhythmic bodily exercises performed usually without apparatus. The word calisthenics actually comes from the two Greek words, kalos (beautiful) and sthenos (strength).

Predating calisthenics, before any training tools were invented, and before training as a systematic tool for manipulating the body was even thought of, the human body still built muscle to match what it was used for. That's the point of muscle and

strength: for us to create movement and to protect the integrity of our joints as we move.

Primitive societies living in mountainous areas might have found themselves having to go down the hill for water, and up again for berries. This activity of walking up and down hills surely built all the strength and size they needed in the muscles that they used. At some point humans drew the connection between certain activities and the development of muscle and strength. Exposure to certain activities forced the body to adapt to be able to carry out those activities better, faster, with greater ease and faster recovery .

We started comparing ourselves to others, competing in things like throwing spears and wrestling and saw how those stronger in basic bodyweight movements were often the better hunters or the winners in other sports. Round about now in society's development, when we could afford culture, is when we started purposefully and systematically performing certain movements for the sole purpose of developing strength.

The intuitively understood connection between muscle size and strength is probably why many of us aren't very impressed by bodybuilders who, despite enormous muscle, don't seem capable of actually doing anything with all their muscles outside of the gym, and why we're not inspired by athletes capable of e.g. extremely high vertical jumps or 100 push-ups but who don't look like they would be strong outside of what they've specialized in. Whatever they're training, that's not what you're after!

So when did things change? Why do we now think of bodybuilding as something best done with machines, dumbbells and cables instead of our own body? For several reasons, I think. One, all that stuff really does work if used correctly, especially when bodybuilding is not focused on adding size everywhere, but specifically on making certain body parts stick out more than others. In other words, aiming to be a little bit disproportionate for an eye-catching effect, which fits the demand of the sport of bodybuilding. Two, the learning curve makes barbells and dumbbells a more accessible form of strength training for beginners, since, for

example, a barbell curl is performed the same way regardless of the weight on the bar. This is not as easily done with calisthenics. Going from a less demanding pike press-up to a heavier handstand push-up also means learning how to balance on your hands. Not quite as easy as adding another weight. The third reason is, because we associate certain goals with certain methods, because the style of training has been different with the different tools. Typically those training with barbells, dumbbells and machines are people more focused on the size and look of muscles and therefore more likely to train for that goal, making sure they take their supplements, sleep enough, eat enough, train for the pump etc., while those choosing to train with their own body weight are more into skills such as handstands, and more prone to do loads more sets, for the sake of practicing coordination and technique, but never pushing the sets to muscular failure, and caring more about if they can do a rep in a certain skill rather than how they do each rep.

If your goal is to become Mr. Olympia or to develop your handstands to the point where you can join the Cirque du Soleil, then you will of course have to train specifically for that goal. But for the rest of us, regardless of if we use calisthenics as a goal in itself or as a tool to build strength for other sports, we have every possibility to build strength, skills and head-turning muscles by using only bodyweight training. Certain things still apply, such as consistency and hard work. It will take time and you will have to learn new things, but this is true for all strength disciplines.

Honestly, vain as it may sound (and be), I love the surprised look on people's faces when they ask me what gym I go to and I tell them I train in my living room. Typically what follows is something like "…but you're bigger than most guys I train with at the gym!?" as if some great contradiction had just happened. These comments happen because most people have no idea how effective body-weight training can be for muscular development. As mentioned, hard work remains important, and owning a gym membership is unfortunately not going to do the work for you. The cake is a lie… Simply going to the gym doesn't automatically trump calisthenics. I like to

think of conversations like this as eye-openers and that I've helped rid someone of an excuse holding them back. Although gyms and all related equipment can be amazing and have its advantages, it isn't needed for strength and bodybuilding.

Gym membership too expensive? With some luck you might be able to find a piece of floor where you live, and you can learn how to use that instead. No good gyms in your vicinity? And you don't have time after work to go to the nearest decent gym? Again, about that floor space. You could be training while you're reading this. Do one set, set the timer on your phone on 3 minutes, go back to reading, and do the next set when the alarm goes off. I'm not joking, that's what a typical online Spanish lesson looks like for me. Most people are used to not being able to train like that, but that's part of the beauty of this program!

THE VALUE OF BEING COACHABLE / HOW NOT BEING A CLOWN CAN HELP

Put mechanical stress on a muscle and it shall grow, given sufficient intensity, volume, food and sleep and all that. That statement is correct, and it can be that easy, but sometimes we get in the way of ourselves. What follows here is one of my favourite real-life examples of how not to treat calisthenics (or life in general), regardless of whether the goal is strength or muscle.

A couple of years ago I trained with some big, muscly dudes who were new to calisthenics but had plenty of good experience from the gym. They'd spent years figuring out how to train for strength and muscle mass with gym equipment. One of them, let's call him Bob, seemed to have the same goal every workout, 2-3 times a week for a few months. Bob repeatedly showed up and tried to do a tiger-bend handstand pushup, which is no small feat! He was trying to "get the tiger-bend", but never seemed to put any work into actually building up to it. He didn't think in terms of building the strength required for this skill. He didn't understand that what he needed to work on was getting stronger in the progressions a notch under the skill (in this case, more and better handstand push-ups and diamond grip push-ups would have been helpful). Instead, he seemed to think of calisthenics as a set of "hold my beer and watch this" kind of tricks, and approached the learning of these tricks as simply repeatedly trying to do them, testing his strength instead of building it and, ultimately, failing to build any strength or muscle.

I'm telling you this story because he never achieved his tiger bend handstand push-up. I'm also telling you this because the reason that he failed is one that I'm hoping to help you avoid. That is don't try to just perform the skill but focus on building up to it by getting stronger in easier versions of the same skill. During that summer, Bob only achieved achy elbows and a small loss of muscle mass from not training productively, while I went from three tiger bend handstand pushups to

performing them for five sets of five reps. I believe that seeing someone else's progress can serve to inspire and motivate if you're not too proud. Unfortunately for Bob, my progress only served to remind him of his lack of progress, which frustrated him, and back to the gym he went.

When it comes to any challenge, a sense of entitlement is a horribly effective obstruction to future success. When you think you're too good to learn, that's when progress stops. This story, I think, says a lot about the value of being coachable as a person, and the great news is that if you're reading this, you're already on the right path!

This man knew how to train and had years behind him, so why didn't he apply what he knew? For several reasons. The sense of entitlement: he thought he was too good to start with the basics. He misunderstood the link between muscle strength and certain movements (believing it's all technique), and a simple misunderstanding of what it means to work hard, which I'll talk more about shortly. Some people with this attitude might carry enough strength with them from other training, previous sports or genetics to get away with this attitude. However long-term they're still likely to fail because they're not cultivating any actual understanding of how to train, and as the saying goes:

Hard work beats talent when talent isn't working hard.

Another way to look at why Bob failed at getting stronger and building muscle with calisthenics is this: he only thought of it as skills or tricks and he neglected the muscles that perform the movement. This led to him neglecting important and basic aspects of programming and how he performed his repetitions.

Only focusing on skills might be detrimental to developing precisely that, skills. If you underestimate the value of measuring strength by number and quality of reps you can do in the exercises that you already master, you're missing out on what ultimately builds and conditions your body and sets you up for tougher, more strength-demanding exercises in the future.

As with many other things, hard work is not just the effort you put in right now. Hard work is sticking to something, consistently doing the same thing for a long time, analyzing your results and adapting as you go along, building with patience. Think about the people who “got away with it” and could do something after several attempts, simply by tweaking the technique rather than getting stronger, what’s their next step in training? They had no plan to begin with and they’ve never really trained for anything, just tried it. It bears repeating: *hard work beats talent when talent isn’t working hard.*

CATEGORIZING INTO MUSCLE GROUPS

Is it chest day or one arm push-up day? Back day or one arm chin-up day?

Yes, it is possible to divide calisthenics skills into muscle groups. At least to a certain extent, and for most exercises. It's also necessary to do so if you want to control the volume and stress of training per muscle (and we do, as we will see in the next chapter). Think about the alternative, if you are to treat every movement separately and not take into consideration what primary movers (or main muscle, such as chest for push-ups for example) that movement relies on. How are you then to avoid things like doing too much for one muscle and not nearly enough for another? Both too much and too little will lead to you not getting the results you want.

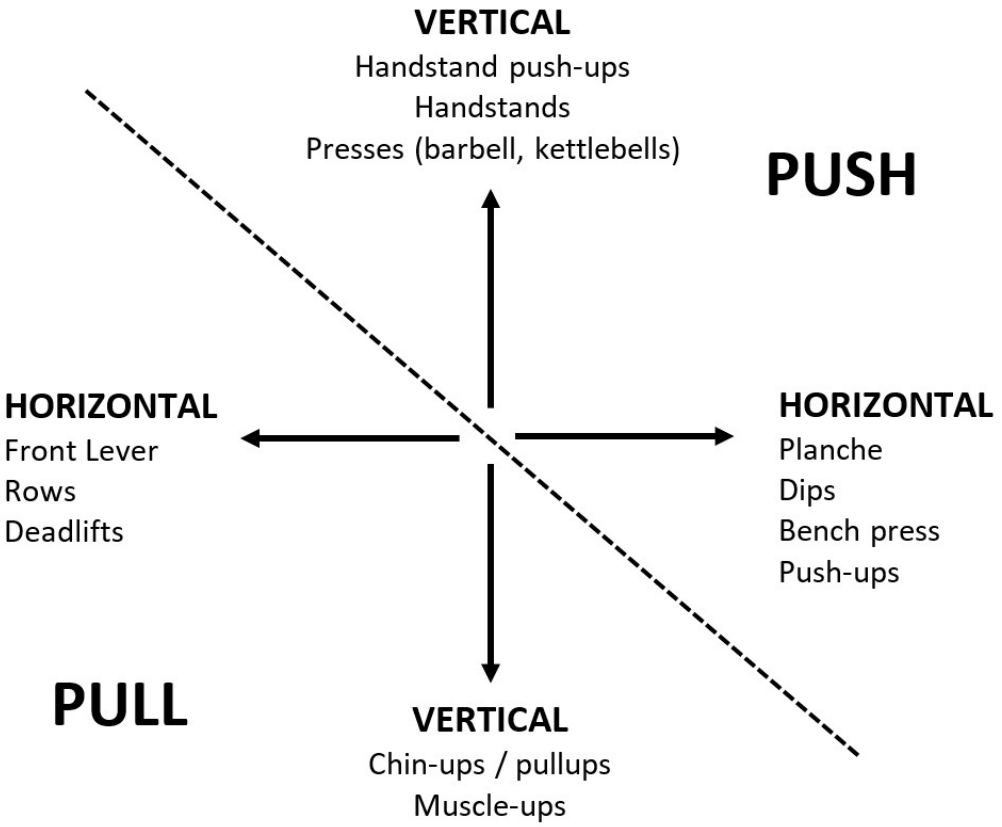
Dividing into muscle groups lets you control not only what exercises to choose, but also how much training goes into each muscle. If you do this you'll avoid overtraining one part of your body while neglecting another. If the goal is to develop a proportionately strong or muscular body, then it's not conducive to train only by exercise or skill and not think about what part of the body has to work to perform the exercise.

Thinking about a workout as a *pull* with an emphasis on biceps is much more useful. Dividing your workouts into small muscle groups such as biceps and rear delts (back of shoulders) is too isolated for multi-joint training like calisthenics. However you do have to consider even the smaller muscles, such as the one just mentioned, when planning your workouts. Fortunately, being that detailed (individual muscles) serves little purpose, unless maybe if you're a competitive bodybuilder or need to be specific for rehab purposes when coming back from an injury. Even if you are a competitive bodybuilder, the done thing is to have a foundation of big, basic multi-joint movements (bench press, squats or leg presses, pulldowns and rows etc) and to add isolation exercises only to bring up lagging parts or to get

some full range of motion (ROM), i.e, to use a muscle from completely stretched out to completely contracted.

A MATTER OF PERSPECTIVE - PUSHES AND PULLS

For our purposes, it helps to divide calisthenics skills into push and pull, and furthermore into vertical push / pull and horizontal push / pull. What that means is grouping them according to which direction the hands go, pushing away from you (dips, push-ups, handstands) or pulling towards you (rows, pull-ups). Here's a figure of examples of exercises, mostly calisthenics but also some others for clarity:



There are those who will tell you that calisthenics cannot be divided by muscle groups. I would agree that you can't isolate individual muscles in calisthenics, at least not in any calisthenics skill worth practising. However, I don't understand how anyone could argue that it's controversial to claim that dips hit your chest and triceps more than, for example, pull-ups? And that the latter relies more on lats and biceps while leaving chest and triceps relatively untouched?

It should be obvious to anyone who's ever tried those exercises that they train different muscles, and the same goes for handstand push-ups, one-arm push-ups and front lever rows, to name a few. Of course this doesn't apply to combinations of movements like what you would see in a street workout competition, but those aren't really exercises for training. Those are tricks for show, that rely on the athlete being proficient in the individual exercises that go into the combination.

It can, however, get tricky even with single exercises such as the muscle-up, which is the combination of a pull-up (pull) and a dip (push). Another example is the planche, which relies heavily on the front of your shoulders (push) and on the biceps (pull). Exercises like these have to be sorted according to their primary mover, or what muscle has to work the hardest. The muscle-up ends up in pull because getting from a hang to over the bar (lats, biceps) is heavier than doing the dip once you're over the bar (chest and triceps). The planche really does train your biceps hard but still belongs in push because the front of the shoulders are the limiting factor and primary mover. This is especially true if what you train for is the planche push-up.

So yes, I agree that for some exercises it becomes a bit of a stretch to categorize by muscle group, but in general you can categorize according to the relative stress on each muscle group, which will then allow you to program to avoid overdoing it somewhere while under-doing to it somewhere else.

PRACTISING A SKILL OR WORKING-OUT A MUSCLE?

In the first figure we looked at the movement created (push or pull) and the direction of force of the movement to categorize exercises. When we categorize according to muscle groups, we can instead look at the muscles involved in each exercise. Here's a table for illustrating which muscles are involved in each exercise:

	PUSH			PULL		
	Push-up	**Planche**	**Handstand**	**Muscle-Up**	**Front Lever**	**Pull-Up**
Triceps	x	x	x	x		
Chest	x	x	x	x		
Delts	x	x	x	x		x
Lats				x	x	x
Traps			x		x	x
Biceps		x		x	x	x

The "x" marks a muscle active in executing the exercise. However this table doesn't make a difference between if the marked muscle is important for the exercise because it's an agonist / primary mover or a synergist / secondary mover. For example, the muscle-up done on bars does use triceps, chest and delts but much less than lats or back in general, and therefore belongs in the pull category.

WHAT IS STRENGTH AND HOW TO GET STRONGER

What is strength and how is it that different people can treat it differently? Strength can be understood as a person's ability to perform a certain movement, such as lift heavy, jump high, or do anything that's challenging repeatedly.

Getting stronger can, simplified, happen in two ways.

One, your muscles get bigger physiologically and better neurologically as they learn how to contract harder and with better timing and coordination.

Two, your technique improves so that you use momentum, distribution of body weight, leverage etc. in smarter ways that let you do the movement with less "physiological" strength required.

Both mean that you are stronger if you then in practice perform better, run faster, jump higher or lift heavier. In any strength sport we must pursue both to have a chance at beating our competition. However outside of sports, the type of strength most often referred to is the former.

When physiological strength is the goal, the focus has to be on keeping the target muscles working and not on looking for ways to move differently, making the muscles work less. This is what will build muscle and has the best potential to carry-over to other skills.

CHAPTER 2. HOW TO BUILD MUSCLE AND STRENGTH

Let's start with a short vocabulary or list of important terms for the coming chapters:

- Repetitions, or reps - A repetition is doing an exercise once, i.e one push-up is one rep, two push-ups is two reps and so forth.
- Sets - One set is a number of reps with no pause, i.e. you did six push-ups, paused for 2-3 minutes and then did six more, you've now done two sets of six reps.
- Volume - Total number of hard sets over a given time unit, typically per work-out or week.
- Hypertrophy - In this context, growth of muscle tissue or simply the size increase of the size of a muscle.
- Intensity - With weights, a percentage of what you can lift once, your 1RM (one repetition maximum). In calisthenics, it's better to think of how many reps we can do in a given exercise. A few examples, 15 reps is about 67 % of 1RM, 10 reps is 75 and 5 reps is 89.
- ROM - Short for range of motion, which means movements around a joint. For example the knee joint, that can go from fully bent at around 140° to straightened, 0°. A full ROM means using all of the available degrees for that joint or movement, and a half ROM means e.g. going from chest to floor in a push-up to pushing up only half the way to extended elbows.

HYPERTROPHY AS A RESPONSE TO STRENGTH TRAINING

Your body will adapt to the physical challenges it encounters, in so far as the stress does not exceed your capacity to recover. Do what you can today, and your body will compensate so that tomorrow you will be able to do more, or the same but with less struggle. What this means to us in this context is train hard, eat, sleep, recover, repeat and then progress will happen, results will come. So far, fairly straightforward! But when we try to apply this, we quickly find that we need more detail to what that challenge (and the subsequent recovery) should really look like, in order to be optimized for our goals. How often, how tough, what exercises, how much rest between sets, how many reps per set and how many sets, how much volume per training session and per week? And, important to the scope of this book, how do we combine training for muscle mass with training for strength and specific skills in calisthenics? Does it have to be either or, or can you combine both goals without sacrificing one or the other? Is it even possible to be either or, or is it true that muscle come from being stronger, or maybe the opposite, that strength comes from getting bigger?

When it comes to the science of strength and what makes muscles grow, a lot has been studied (there is still a lot to be done), but I will not wear you out by going too deep into the physiology and science behind muscle growth, I will instead focus on how we can apply what we know now. I would, however, like to provide you with some background information to help you understand why the Prio System is designed the way it is.

WHAT MAKES MUSCLE GROW AS AN EFFECT OF PHYSICAL EXERCISE?

How is it that training can cause muscle growth? When we train, we put a stress on the body to which it must adapt. The stressors can be explained as muscle damage, metabolic stress and mechanical tension. These are the three mechanisms believed to be responsible for the muscle growth that can follow strength training. Muscle damage refers to the tissue damage or breakdown of muscle following exercise, where more or tougher training does more damage and takes longer to recover from. Metabolic stress is the accumulation of metabolites (think lactic acid and “the pump” you feel when your muscles fill with blood during training). Mechanical tension refers to how hard a muscle needs to contract (tense up) in order to create the desired movement, or how hard you need to work per repetition. Let’s have a closer look at the different mechanisms, how they influence our results and how we should train.

Muscle damage

Many of us with an interest in physical exercise, including those with formal education in the field, will have heard some variation of the following:

“Training damages the muscle, sending signals to the body to recover and in the process it over-compensates by making the muscles bigger and stronger”.

It might surprise you then to hear that the current take on this topic, by the experts of research in the field, is that muscle damage is most likely not necessary for muscle growth (1)! Currently the experts are debating whether muscle damage might help the muscle grow if muscle growth has already been triggered by other factors. They’re not sure if this is true yet .

Post hoc ergo propter hoc , or in other words, if one event follows another event then it must have happened because of the first event. Or in this case when something happens at the

same time as something else we assume that one of the two things happened because of the other. It seems reasonable, but is not always the case. For example, blood tests might show that a person's level of caffeine is increased. When asked about their lifestyle, the person tells us that they are a smoker. Looking at the population as a whole, it seems that high levels of caffeine are often found in people who smoke. Would it be reasonable then to assume that smoking causes caffeine levels to increase? We might reasonably make that assumption, if we didn't already know that smoking and drinking coffee often go together. It isn't the smoking but the coffee drinking that causes caffeine levels to increase of course. This logical fallacy is in fact so common that the Romans came up with an expression to describe it!

Recent years have challenged the belief that muscle breakdown, or tissue damage, plays a big role in stimulating hypertrophy. It seems it was yet another post hoc ergo propter hoc. Because of studies concluding that tissue breakdown can happen without muscle growth (running downhill for instance, or marathons), and studies showing that people can display different levels of exercise-induced muscle damage but still increase just as much in muscle mass, the theory of muscle breakdown has lost credibility.

It is of course true that hard training and a high volume of training lead to muscle damage but more isn't better here. You want to keep muscle damage to a minimum while stimulating growth. Muscle damage can happen without muscle growth being triggered, and reversely muscle growth can happen without much tissue breakdown, which brings us to the next part of this chapter.

Metabolic stress

You might want to sit down for this first paragraph. Metabolic stress can be explained as the buildup of breakdown products that happens during physical exercise. When you train and push your sets hard, your muscles struggle to keep producing enough energy to keep going. This causes chemical changes in your body such as pH, lactate, phosphocreatine etc. If you can do something once, such as one handstand push-up, why can't

you do it again and again endlessly? It's obviously not because our muscles get broken down that quickly, since we can perform the same movement again after a few minutes rest (unless it was a new personal best or you hurt yourself). The reason we can't endlessly repeat intensive movements is partly because our brains get tired (where the signal to move comes from), but also because we run out of energy in the working muscle. There is energy stored in the body, glycogen in muscles, and what stops us is when an activity requires more energy than the body has stored or can create fast enough.

You might have seen or tried one of those blood flow restriction (BFR), or occlusion training bands, where people put a cuff or wrap around their biceps, just under their shoulder? They exist because training with restricted blood flow can help spur muscle growth, especially at lower intensities or loads. Basically, limiting blood flow pushes the muscles ability to breath, or transport stuff in and out of the muscle, and this challenge forces adaptations. Your body will do its best to adapt to this new situation so that next time it happens, it can deal with it more effectively. So far, the evidence points towards BFR stimulating both strength and growth when training at lower intensities (20-30 % of what you could lift once) compared to the same training without BFR. However once the intensity goes up (training with heavier weights) much of the effect of BFR goes away.

Is this the indisputable evidence of the influence of metabolic stress? Not so fast. BFR with low loads also shows more activity in the muscle compared to the same load without BFR. It could be that BFR makes it more difficult for the muscle fibres that rely more on oxygen (mostly aerobic) to do their part. These muscles become exhausted more rapidly, meaning that more work is instead put on the bigger, stronger, anaerobic muscle fibres. These fibres also create more power and have a greater capacity to grow.

Muscles are made up of different fibres suited to different needs. The aerobic fibres that maintain posture for several hours are weaker and rely on oxygen as fuel. The anaerobic fibres that lift heavy, throw far and jump high are strong but lacking in endurance, as their fuel is not as readily available as

simply you taking your next breath. The latter instead rely on blood glucose and ATP and glycogen stored in your muscles. A researcher very important to neurobiology and physiology called Henneman came up with a rule that we call "Henneman's Size Principle". It states that motor units (where the neuron meets the muscle and makes muscle fibres fire) will work from smallest to largest. Muscle fibre contraction starts with the weakest fibres and saves the strongest to when they're really needed. The large powerful muscle fibres are activated at the beginning of a set with a really heavy weight or at the end of a set when the reps get hard and the weaker muscle fibres have been exhausted. By reducing their access to oxygen, BFR helps with exhausting the weaker fibres. This puts the tension instead on the bigger fibres without the need for big weights or resistance. This seems to mimic the effect of pushing to failure, meaning to not stop until you can't do any more reps. The tension being put on the bigger fibres seems to be what makes all the difference in stimulating muscle growth.

Metabolic stress only has a minor effect on muscle growth if mechanical stimuli aren't also present. On to a section about that!

Mechanical Tension

Mechanical tension can be explained as the force a muscle generates when creating a movement (positive or concentric phase, lifting), or the stretch as the muscle tenses up to fight or slow down a movement (negative or eccentric phase, lowering under control). If you fall and break your arm and have to have it in a cast for six weeks, your arm muscles get smaller from lack of use. That is, from not exposing it to mechanical tension. At the same time, your arm hasn't been exposed to muscle damage or metabolic stress from training or demanding daily activities (you know, like opening a jar that's shut really tight). So you can see that the absence of any one or all of these factors could have led to the loss of muscle mass. However, now that we know that metabolic stress and muscle damage aren't capable of producing much muscle growth on their own, this loss of mass could be considered proof of the importance of putting mechanical tension on

muscles. Since we already know that tissue breakdown and metabolic stress can happen even with very light loads and not trigger much of a hypertrophic response then mechanical tension must be the key difference between a program too light to grow muscle, and a program heavy enough to grow muscle. This is not to say that mechanical tension simply means training very close to your max strength. There are plenty of athletes out there in all disciplines (powerlifting, gymnastics, wrestling…) who've developed flabbergasting strength without putting on much muscle. One individual that comes to mind is Jennifer Thompson, bench pressing 142.5 kg / 314 lbs in the weight class of under 63 kg / 138 lbs, without the aid of powerlifting equipment (bench shirt). Another one is Eddie Berglund squatting 232.5 kg weighing under 66 kilos, also without powerlifting gear. Both examples of course have muscle, but the point is there are others in their sport much bigger yet much weaker. We can deduct two things from this observation:

- Big muscles aren't necessarily needed for performance and strength even on the highest international level.

- Training for strength and performance, and reaching high levels of strength, is not guaranteed to put on muscle.

Bear in mind that both these examples compete in a sport in which the goal is to lift something heavy once. Maybe lifting something heavy several times without pause is what really requires more muscle tissue?

So how do we use mechanical tension to build muscle, or why doesn't simply using a really heavy weight work? This is where it gets to a depth of physiology that I promised to stay out of in the beginning of this chapter, but it goes something like this: when using max effort such as an explosive push-up or a vertical jump you use almost all muscle fibres at the same time but the tension put on the individual fibres isn't at its highest. Also, when you move very quickly, individual fibres are exposed to the mechanical tension in only a split second, which means the volume of actual stimuli put on the muscle is very low. The part of the movement where certain fibres have

to work the hardest is only a fraction of the already short time it takes to perform a movement quickly.

SUMMARY

Muscle damage or tissue breakdown seems to play a minimal role in stimulating muscle growth (though it can hamper it). Even though muscle damage might help muscles grow when other factors are already present, it is probably not needed for growth. Metabolic stress might have a bigger influence on growth than exercise-induced muscle damage, but many of the mechanisms remain unclear and the effect is small in the absence of mechanical tension. Mechanical tension seems to be the key, and that translates to hard work.

An effective workout program must then provide us with enough mechanical stimuli, or it won't build muscle or strength optimally. So we want that, but how much? Is more always better? If we do too much hard work we're likely to break down more muscle than we can recover from. Where is the threshold, the sweet spot? How much is enough and how much is too much? Keep reading!

HOW TO TRAIN FOR MUSCLE, STRENGTH AND SKILLS

Frequency - how often

For gains in muscle mass there is a small benefit to training with higher frequency i.e. more days in a week. The benefit seems to stem from us being able to do more work if we spread it out over several workouts. Specifically, 2 days are better than 1 and there isn't enough research done on training more than 2 times per week for anyone to be sure yet. According to the experts in the field (2), for hypertrophy it doesn't seem to make a difference if you train a muscle once or thrice a week as long as the total volume of training remains the same. If you do 15 sets on one day a week or if you divide it by 3 and do 5 sets on Monday, Wednesday and Friday for example. However, if you don't instruct people to keep the volume down like that, and instead let them do what they can within a workout, higher frequency is slightly better. Probably because they then end up doing slightly higher volume over the week. Hypothetically, could you then find what the best volume for a week would be, and reverse-engineer it to do that on a single day, thus keeping the volume equal in a week and still get the gains from higher frequency? Maybe, but probably not. Recovery would be compromised, as would the quality of reps and sets as you get more fatigued during that workout, so you'd lose out on both hypertrophy and skill training.

Interestingly, for strength gains, which for this book means skills in calisthenics, higher frequency seems better even when volume is equated over the week. Maybe because you can train with higher intensity without wearing yourself out or losing focus. There isn't much formally studied on more than 4 times a week so we don't know about more than that for sure, but for pure skill training there are a lot of people who practise things like handstand balancing daily. However maybe less people do heavy weighted dips daily, at least with any great success. So, maybe, pure skill training can be done daily but the very muscle intensive stuff shouldn't be done as often.

For both strength and mass we should train muscles and skills several times a week. For strength up to or maybe more than 4 times a week and for muscle mass 2 to 3 times a week is ideal. Many people have reported success with other frequencies, everywhere from once a week to twice a day for both strength and hypertrophy, but so far we have to think of those examples as outliers. What I recommend is what most people are likely to react well to. This will always be the default starting point. Feel free to experiment, but start with the default, don't assume yourself to be an outlier. The sweet spot for most people and for the goals of this book would be to hit each muscle group and skill 2-4 times a week, depending on how your body reacts and what is compatible with your life and work.

Volume - how muc h

Volume is best defined as the number of hard sets, meaning the number of sets taken to failure, or close to.

To reach "failure" in a set means to keep doing reps until you're so exhausted that you can't do any more, or at least not with the intended technique. When talking about hard sets we mean sets close to failure which is 3 or less repetitions in reserve, meaning that when you do your last rep in a set you believe that you could have done at the most 3 more repetitions. Other definitions and calculations of volume exist, the most common one being reps x sets x weight = volume load. Recent studies have shown that similar levels of hypertrophy can be reached for very different rep ranges (6-30 reps), despite the total volume ending up being very different. That renders a lot of the calculations and recommendations for volume out there obsolete. What best predicts muscle growth according to the latest science is the number of hard sets per the above definition (3).

Sets in a workout or week

How many sets or reps should you do in a week or in a workout? As mentioned earlier, higher frequency is usually better because it allows us to do more work. But how much is enough and how much is too much? The science shows that as

far as we know, adding more hard sets is the best way to predict better results. But up to what point? There is likely a point at which it gets too much or at least doesn't do you any good to do more.

In a study from Schoenfeld et al 2018 they found that, in terms of muscle size, people kept making good progress with 30 sets per muscle per week (4). But since it varies between individuals, and this much training is likely to be too much if done long-term (overtraining, lack of motivation, increased susceptibility to injuries…), the same researchers later wrote guidelines on the matter (5). The guidelines recommend staying between 10 to 20 sets per muscle group per week, further adding that this will still be too much for some people while others could benefit from doing more.

Repetitions per set

For hypertrophy, sets of 6 to 30 repetitions have been found to stimulate similar gains but the effect goes down when the reps go up over 30 (6). For strength it's slightly different. The same research group concluded that if your primary goal is maximum strength gains over the long-term, you have to train at higher intensities. Basically, you get good at what you do, and if you train heavier stuff (fewer reps or tougher skills) you get better at training that way. Someone who has been training with big weights, even if the purpose is to grow muscle, will also in the process have got better at specifically that, handling heavier weights, i.e. got stronger.

What this means to us building muscle with calisthenics is that practising with lower reps (1-6 reps) can be good for skill acquisition, but isn't necessary. We also want to push sets close to failure sometimes for both strength and hypertrophy (within 6-30 reps). When pushing to failure, we might benefit from not using the most technically demanding skill that we can do. Easier exercises for more reps will allow you to increase muscle size, strength and, maybe most importantly in the long run, improve conditioning or getting your body and joints used to tougher movements to come.

Intensity

I will refer to intensity as a % of your 1 repetition maximum weight.

Hard work, or hard sets, is what stimulates muscle growth, which is what we want. But how do we do that without wearing the muscle out? The answer is by striving to do as little as possible, by only doing that which counts. We achieve this by keeping intensity high (train hard, doing sets close to failure) and volume (of hard sets) as low as we can but as high as we need while making progress.

There are two common definitions of intensity. Most often intensity is used to mean the weight or resistance used in an exercise, given as a percentage of what you could do if you only did one repetition. For simplicity let's use lbs in our example instead of calisthenics skills: Dave can bench-press 200 lbs for one repetition making it his one repetition maximum (1RM). One rep with this weight is 100 % intensity. Dave does a set of ten reps with 100lbs, which is 50 % of 200 and therefore, regardless of the number of reps, he just did 1x10 with 50 % intensity. In this version, the intensity doesn't reflect how difficult this set was because it doesn't take number of reps into consideration. You might have heard another version though, where people use intensity to describe how hard they worked, or how many reps they did with a given weight. Let's use the same example, Dave has a bench-press 1RM of 200 lbs and now goes all out and gives it everything he can with 50 %, 100 lbs, and manages to squeeze out 30 reps. According to this latter definition Dave just trained with 100 %, despite the weight being 50 % of his max. That's because he reached his maximum capacity at that weight. Both definitions make sense depending on context but the first one is the one used the most. It's also more convenient when programming. For instance, if you say that you're going to do 4 sets x 6 reps at 85 % (of your 1RM), you'll always understand exactly what you have to do and what weight to use. You can use the same system of programming regardless of where your 1RM is at, by simply re-calculating.

Proximity to failure

Do your sets close to failure, but not all the way to failure, leaving 1-3 reps in the tank. This goes back to the volume section and defining our volume as number of hard sets.

If you do 4 sets of pull-ups done all the way to failure, your reps might look something like 8, 6, 4, 4 and your form will have deteriorated somewhat at the end of every set. If you instead stop 1-3 reps before failure your sets might look like 6, 6, 6, 6. That gives you a total of 24 reps compared to 22 in the first example. The slightly higher volume is good but more importantly, you'll have better form for every rep and set. By form we refer to executing the exercise in the way you meant to, which is important for both muscular development (keeping the tension on the targeted muscle) and for strength (training the skill properly). You might think that this contradicts pushing the sets hard, but it's not that simple. The last two sets would probably be close to failure but with better technique (remember mechanical tension) and more work put on the targeted muscle.

Speed of movement

Think *unhurried confidence* on the way down. Slow down the eccentric phase of the movement, which is the part where you don't lift but descend under control. Aim for 1 second concentric (pushing yourself up) and 2 seconds eccentric (lowering under control).

Every dynamic movement contains a lifting or concentric/positive phase and a lowering or eccentric/negative phase. Using the push-up as an example, the concentric phase is when you push yourself away from the floor, and the eccentric phase is when you lower yourself down The concentric is when your muscle shortens or tenses in order to create movement, and the eccentric is when your muscle fibres stretch out and tense up at the same time in order to slow down or control a movement. In this case, in the eccentric phase, your muscles have to tense up to fight gravity.

Performing the concentric or lifting phase with a lower tempo can help with technique and coordination, but for most of the time: In the concentric or lifting phase move your body as fast as you can without doing any jerking movements or sacrificing

technique. Moving faster means creating more force (good) and moving slower means accumulating fatigue and will get fewer reps done with lower intensity per rep (bad).

In the eccentric or lowering phase, however, there can be a benefit to both strength and muscle size in moving slower. One (admittedly cherry-picked) example is a study from 2016 by Pereira et al showing that a 4 second eccentric phase provided more strength and muscle than a 1 second eccentric phase (7). Both groups did a 1 second concentric phase and 0 second pauses in the transitions from eccentric to concentric and vice versa. The difference was that one group did a 1 second eccentric while the other one did a 4 second eccentric. They measured strength (1RM) in the scott curl and centimetres around the biceps of the participants before and after the study. After 12 weeks of scott curling 3 sets of 8 reps 2 times a week, participants in the 1 second group increased their 1RM with 19 % and their biceps grew 6.5 %, or 1.9 cm (on average). Impressive enough! Grab a measuring tape, wrap it around your arm and leave 1.9 cm extra. Look at that gap and imagine if your arm could grow that much in just 3 months. The crazy thing here that the group who used 4 seconds to lower the weight in every repetition, they increased their 1RM with an outrageous 32 % and their biceps grew 16 %, or a whopping 4.8 cm!

Now, before you get too excited and run out looking to buy bigger shirts for your soon to be oversized biceps, remember that these results are from but one study and that they trained under very specific conditions. Imagine putting all your energy, recovery, and effort into only one muscle and one exercise for only three sets two times a week for twelve weeks. Specific conditions indeed, and probably not a kind of training that many would be willing to try, since it also means neglecting everything else during that time. I'm all for super-abbreviated training programs but a quarter of a year of nothing but biceps?! While we might not be able to completely reproduce the remarkable results of that one study, it would simply be wrong not to try to make use of these findings. That's why we incorporate slower movement in the eccentric phase of our reps. You'll probably find 4 seconds to be too

challenging when you're doing exercises that require more coordination and balance than what they used in that study. A simple scott curl, which only means bending your elbow while sitting down isn't really comparable to planche push-ups. I recommend about 2 seconds in the eccentric phase, visualizing unhurried confidence. Think that you should be able to stop to a stand-still in any part of the repetition without messing the movement up, and then keep going for more reps.

Rest between sets

Rest for 2-3 minutes or more between sets.

SUMMARY

- Train each skill / muscle group 2-4 times a week, preferably with one day rest in between.
- Do 10-20 hard sets per week for each muscle group (not skill!).
- Push close to failure and do 6 or more reps but less than 30.
- A “hard set” is when you have at most 3 reps left in reserve.
- For specific skill practise, the reps can go down to 1-5 reps per set but don’t have to (remember the 8 reps biceps study and the progress they made).
- Tempo of movement is ideally a fast but smooth concentric phase (1 sec) and a controlled, slower eccentric phase (about 2 seconds).
- Rest 2-3 minutes or more between sets. If you can’t sit still for that long, then do something light like work on mobility in your lower body or sets of calf raises. Or the washing up.

Now let’s tie it all into something doable!

If you really want to get going today, skip ahead to chapter 4 for exercises and chapter 5 for the program. Otherwise, keep reading for recommendations on diet, sleep, protein intake and some other things to really set you up for gains .

A word on science

Science usually focuses on averages and not on individuals, meaning that your reaction to a training program might be slightly different to others. You might respond better to training 2 or 4 times a week rather than 3, or to using more or less sets for some exercises. This happens for various reasons which aren’t explained solely through the study of human physiology.

Here is a non-exhaustive list of factors that can explain a difference from the average: previous training experience, how fast you personally acquire new motor skills, your diet, sleep, stress, psychology or mindset, supplements, your age, how hard you attack each set (as more intensity might mean that you can't do as many sets and still recover properly)…. basically everything that influences your recovery or your workouts.

Most strength and hypertrophy studies are very short (<12 weeks) compared to real life in which we train for years and years. What works best short term according to one study might not be the best version for you in real life. So remember: *Absence of evidence is not evidence of absence* . For the topics discussed in this book that means something along the lines of: don't discard methods and ideas as bro-science if there aren't (yet) any studies proving the method faulty, or at least proving another one superior.

Training without performance enhancing drugs

An important clarification:
This book and the Prio System have been created with the drug-free athlete in mind, for two simple reasons.

1/ Most of the research available is on drug-free trainees

2/ I originally created this program for myself and I have never tried PEDs.

I have nonetheless been accused of steroids at numerous occasions, and people have even asked if they could buy from me. The most memorable occasion was when I got verbally thrown out of a gym simply because of the weights I could use and how I looked thanks to it. This convinced the gym owner that there was no doubt to my steroid usage. Part of me takes these things as a compliment, part of me finds it offensive because it means I get called a cheater, when really it was work ethics and know-how and not steroids that got me here. Anyway, the research leading up to this book has ultimately gone into developing, trying and for a longer time period following programs and methods that maximize the potential in the un-enhanced physiology, the natural hormonal milieu, or

more colloquially put: the natty athlete. I see no reason why these programs wouldn't work well in combination with PEDs, but as a healthcare professional I cannot endorse this. My point for this clarification is to encourage the natural athlete, to tell you that this program is designed to work great if you're drug-free as opposed to many of the programs you'll encounter in other places and, I dare say, the vast majority of programs that you'll read about in interviews with athletes who are suspiciously enormous and shredded all year round while still claiming to be drug-free.

Performance enhancing drugs (PEDs) really do change things, despite what some might have you believe. For example, routinely doing 4 sets per exercise for 5 different exercises, totaling 20 hard sets that all hit the same muscle group in one single workout might not be the best approach without a little artificial help with your recovery. Definitely not if you're practicing skills at the same time. Yet this is something you often see recommended, not only from top bodybuilders but also from fairly average looking people who train only for aesthetics, supposedly without PEDs.

Without PEDs, your greatest enemy is volume, or doing too many sets and reps. We need volume to stimulate muscle and strength, but too much work leads to more tissue breakdown than you can recover from (naturally), especially if you want to keep the frequency higher than once a week. This is always true when talking about building muscle but especially so regarding calisthenics where we want to practise several skills in one workout, and they all use and exhaust the same primary movers.

If 4-8 hard sets per muscle group is optimal and you plan to train this muscle group every other day, then you have to divide these 4-8 sets over all the exercises you want to practise that day. Alternatively you can lose a bit of your muscle mass in exchange for slightly better performance, at the cost of an increased risk of acquiring a repetitive stress injury and not being able to train that at all.

DIET, PROTEIN, SUPPLEMENTS AND SLEEP

In this section I will provide you with some details, explanation and a summary of guidelines to follow for diet, how many grams of protein per day, supplements, calorie-tracking and sleep.

Diet

Diet is, simply put, tremendously important.

I've heard someone say that training is 80/20, meaning 80 % diet and 20 % training. Seems reasonable. The confusing thing is that I've also, just as convincingly, heard someone claim the opposite. They were of course both wrong. The real percentual relation is more like 100/100, that is 100 % training and 100% diet. What I mean by that is that you cannot take away one of the two and still expect the remaining one to provide you with the results you want. That doesn't mean that you need perfect timing for intake of so and so many micrograms of potassium and branched-chain amino acid, or the perfect distribution of fatty acids within a meal etc etc….

The tiny details are not going to create the big changes.

Diet is tremendously important, but doesn't need to be tremendously difficult, despite what people trying to make money out of our lack of knowledge might have us believe. Counting calories and "macros", however, can make the difference between gaining or losing fat or muscle.

Calories and *energy* mean the same thing here, the energy in foods used by the body. When we say calories, we mean kilocalories (kcal) as you'll notice looking on the back of food packages. If you get 900 calories from fat, protein and carbs respectively, you got 2700 kcal in total.

Macros refers to the macronutrients fat, protein and carbohydrates as opposed to micronutrients, including vitamins and minerals. Regarding micronutrients, eat a varied diet and don't only eat processed, ready-made fast food and you should be fine. Don't neglect fruits, vegetables, and don't

go fanatic with any diet categorically excluding specific sources of nutrition unless of course you have a medical condition or you are obliged to for moral or religious reasons.

Protein in this context, refers to something found in foods that the body uses as building blocks for muscle. You'll find the amount of protein is presented on all food labels. 0.8 g of protein per kilogram of body weight (g/kg) per day is enough for a sedentary person, someone who doesn't train and has a physically inactive job (sits down most of the day). When we train, especially if we're looking to develop muscle mass, we want to eat no less than 1.6 g/kg a day but there seems to be no added benefit to eating in excess of 2.2 g/kg (9). If you've read or heard someone claim success with higher numbers than that, bear in mind that this book was written for the drug-free athlete, and studies referenced were done on people who weren't on steroids. Like a colleague of mine put it: "more protein than that is recommended to everyone who wants more expensive urine". A bit distasteful, but she is right because that's what your body does with excess protein, pees it out again. All the money you put into protein supplements goes down the drain with it. Eat real food, save your money and worry about other things instead.

How many grams of protein per day?

Eat more than 0.73 g per pound of body weight, or 1.6 g per kilogram, a day. Use protein powders only if you struggle to meet this goal with real food.

Example: a human weighing 70 kilos should eat 70 kg x 1.6 g = 112 g of protein in a day. An example day (numbers in brackets is grams of protein):

- Breakfast: 80 g cereals (8) with 2dl of milk (7) = 15.
- Snack: A sandwich (8) with avocado (4) = 12.
- Lunch: 100 g of dry pasta (13 g) with 125 g of fried cod (22.5) and 40 g of pesto (2) = 38.5.
- Snack: 50 g of peanuts (12.5), an apple and a sandwich (8) with 40 g cheese (9.5) = 30.

- Dinner: 100 g of dry rice, boiled, (9) with two fried eggs (16) = 24.
- Total: 119.5 g when the goal was 112.

We overshot! And that's without resorting to supplements or force-feeding ourselves with big steaks or chicken 6-7 times a day. For a vegan version of the above the eggs and cod can easily be replaced by chickpeas, kidney beans, lentils or similar foods. The milk by almond or soy drinks. The cheese with anything vegetarian and spreadable that still contain protein such as hummus or avocado. This was an example of specifically protein and how a normal day can easily provide you with enough, but for reference, here's what it adds up to in calories: 3 050 kcal.

Supplements

After having been quite intensely studied for years now, creatine still comes out as being very potent for putting on muscle and getting more reps out of your sets. Everything else is of little use in the bigger picture. Please note that if those supplements advertised as "natural testosterone boosters" actually worked, they wouldn't be legal but instead classed as doping, so, you know… that tells us something about what to really expect from them.

How to manage calories and macros

The trick is to make it really easy and accessible for you. My suggestion is that you log your food using an app on your phone. First off, only make sure you get enough protein in and then you can move on to adjusting your total calorie intake - the protein intake has to remain the same, only change how much carbs and fat you eat. Make this adjustment when you have an average after a couple of weeks so that you know how many calories you habitually consume and whether you're going up or down in weight. If you're training hard and not gaining, eat more. If you have more body fat than you prefer, eat less calories. Don't pay too much attention to the averages, such as "a woman needs to eat 2000 calories a day and a man 2500", instead, just eat like you personally normally would but

monitor it for a couple of weeks. Adjust the calories up or down according to your goals when you know your average intake.

Sleep / recovery

Roger Federer, Michelle Wie and LeBron James have all said that they sleep 10-12 hours a night. A study showed that for athletes aged 12-18, susceptibility to injuries markedly increased with less than 9 hours of sleep a day. How many hours we need varies from person to person but I think it's safe to say that the now common wisdom of 8 hours a day is a good starting point and anything under 7 hours is just not going to be optimal for most people. From a practical perspective; staying in bed for longer in the mornings might prove difficult if you're expected at work at a certain time. So figure out how to go to bed earlier instead. Don't drink coffee late in the day (no later than 5-6) if you're susceptible, and don't take your phone with you to bed, behaving like it's more important to aimlessly scroll through social media and watch cute cat videos than sleep. Some people find training late in the day keeps them awake for longer. Try to leave a couple of hours between training and bedtime. By now you probably know what keeps your mind alert and what helps you relax so really the point is, take sleep seriously because it really matters.

SUMMARY

- Track your macros and calories. That means get an app to log food, make it easy and accessible for yourself, get into the habit and figure out how much you might need to gain, keep or lose weight.
- Eat more than 1.6 gr of protein per kg of body-weight and day. Probably nothing to gain from eating in excess of 2.2 gr.
- Try creatine. Ignore the rest.
- Get your 8 hours of sleep.

CHAPTER 3.
THE BEST BODYWEIGHT EXERCISES FOR MUSCLE AND STRENGTH

Before you start with these exercises, you have to meet these criteria…

If anyone says that, run the other way.

Avoid thinking in terms of criteria or things you need to pass before you can start training. Replace that style of thinking with thinking about progressions. Train the real thing, what you want to get better at, but adjust it to your level. It isn't always this easy, for example with serious differences in strength and mobility from one side to the other, you might have to get professional help to make sure you're not making matters worse, adding strength to the imbalance. Try to adjust the actual exercise to your needs instead of looking for magic bullets that will fix things without any direct practise.

An example: you don't have the hip or ankle flexibility to squat deep without rounding your lower back excessively? Try squatting down to a box set at a height just above the point at which rounding occurs, and spend time and workouts on getting better and more comfortable with this depth. Later, when flexibility allows for it, lower the box (or put something under your feet) to have you squat 2-3 cm lower. Do not spend time doing loads of preparatory work that isn't squatting. Do both, but really focus on finding functioning versions of the real deal. Proper warm-ups and working on flexibility is good, but do allow yourself to train the actual exercise at the same time as you work on potential weaknesses.

COMPOUND EXERCISES - WHY THE BASICS ARE THE BEST

Both muscle and strength are best built with the basics.

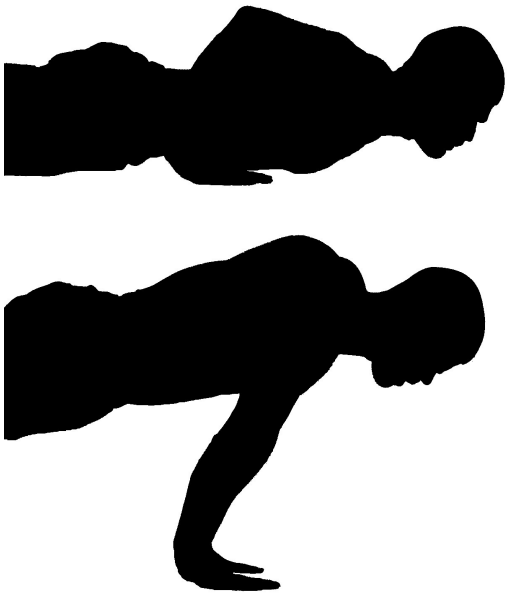
The basics are called the basics for the simple reason that even beginners, people with little to no previous experience in strength training, can do them. The reason that even beginners can do them is that they're relatively easy, because compound exercises:

- Put you in a good leverage
- Are less technically demanding
- Make use of a lot of muscle at the same time.

Let's use the basic normal push-up as an example. The push-up is a basic compound exercise that can help you build the strength you need to be able to do the much harder planche push-up (PLPU), which is basically a push-up but with your entire body, feet and everything, up in the air. The hands in the push-up are closer to the centre of rotation (elbow and shoulder joints) because they are placed directly under it. The push-up therefore has better leverage than the PLPU, in which your shoulders end up in front of your shoulder for balance. The push-up also requires less technique and still engages the same muscle groups as the PLPU. The push-up is therefore a more basic version of the planche PLPU. Increasingly more demanding versions of the push-up will allow you to build up the strength you need to be able to do a PLPU. Once the push-up has provided you with all the strength it can (you've built up to 30 reps), you need to progress to the more demanding *leaning push-up* .

The leaning push-up is performed by assuming the basic push-up position and then leaning forwards as far as shoulder strength and wrist flexibility allows for. Notice on the photo how the elbows stay on the shoulder-side of the hands in both the top and the bottom position.

This change in angle means you can't get as much out of your lower pecs and triceps and must rely more on anterior deltoids



(the front of your shoulders), upper pecs and biceps. This makes the leaning push-up less of a compound movement than the push-up, but also a more targeted exercise for those muscles as you have less muscles taking the full load and it's heavier because the leverage is worse. This makes it a great exercise to develop these muscles when you've mastered the basic push-up.

But what about those less targeted pushing muscles? The normal push-up will evolve in directions to cover them too: for triceps, the handstand push-up and for chest, the one-arm push-up. The Prio System includes compound exercises to progress to that will keep them covered. What makes this program so powerful is that all these compound exercises target the same muscle groups but have a different emphasis. That extra shoulder strength you get out of planche push-ups will carry over to other compound exercises in the program and vice versa. The exercises are carefully chosen to complement each-other perfectly.

What would happen if you could load up the push-up to the point where it's just as heavy as the planche for your anterior deltoid, without sacrificing triceps and chest? Well, that's what the bench press does, it takes a basic movement (the push-up) and builds upon it without making it trickier. But in calisthenics "tricky" is often a good thing, as we might not

want to use extra weight or gym equipment, but instead progress to a more demanding and impressive skill. We don't have to choose one or the other and focus on calisthenics or muscle building, we can simply work on technique and reps and keep the compounds movements in our repertoire as we strive for more difficult movements. We keep them in the program without adding unnecessary volume by using them as mechanical drop-sets, something we will go through in detail in chapter 4.

WEIGHTED CALISTHENICS - WHEN AND HOW

Because of what I just explained with the basics, it is true that adding weight to exercises, such as dips or pull-ups with a kettlebell or a dumbbell in a belt around your waist, can help build muscle by making it easier to progressively overload without having to learn new skills. Feel free to ignore weighted exercises if you're more concerned with skills. You'll still grow muscle with this program without weighted work and you might want to use that energy and volume for working on progressing in your skill. You don't have to do loads of volume with these exercises. Adding them for a hard set or two at the end of a workout per week will have an impact. Say it's your one arm push-up (OAP) or chest day. You plan to do 8 sets in total. You do your progression of the OAP for 2 sets, followed by your planche for 2 sets and finally hand-stand push-up (HSPU) for 2 sets. That's 6 sets in total and leaves 2 sets for weighted dips. Trust me, this is plenty when you make every rep and set count, and after all that you won't feel like doing more that day, and you shouldn't.

Adding weight can help build muscle by making it easier to progressively overload without having to learn new skills. Feel free to ignore weighted exercises if you're more interested in skills. You'll still grow muscle with this program without weighted work.

STATICS - WHY THEY ARE A WASTE OF TIME

First off - I love planches, front levers and human flags. I think for many people; the most impressive calisthenics feats are the ones where a strength- and balance-demanding position is held statically for several seconds. It seems gravity defying, and there's something stoic about it. But now we have to consider these static holds for the goals of this book and in light of what we talked about in previous chapters. As much as I love doing these static holds, I think most of us can agree that training in a static manner can be soul-quenching. The good news is: you don't have to practise static holds to get stronger at them! It might not even be the best way to get stronger in static holds. Your entire torso, back, abs, core and rotator cuff still have to work statically when you do your dynamic work. And, you might not like hearing it if you're someone who's already spent time training for statics, but a static planche is for many much less inspiring if the person doing it cannot at the same time display impressive strength in related dynamic movements, i.e. also do handstand push-ups (HSPU). What's impressive about the planche is the strength it takes. If someone is really good at planches but can't do HSPUs or other strength demanding pushing exercises, people subconsciously start to question whether the planche is too specialized to be good for the goal of building strength outside of only the planche. My first instinct is that if an exercise doesn't have good carry-over, not even to exercises involving the same muscles, there is little point to putting all that time and specificity into training for it and to prioritize that over other things. Therefore, it gets excluded from my training. It's something that I could do for fun, and believe me when I say that I often do, but nothing that I can justify having in my routine for the purpose of building strength and muscle. I have limited time (and patience) and therefore I have to be pragmatic with these things and constantly look for the biggest return on time and exertion invested. Even with unlimited time, wouldn't you rather spend more time doing things that give more back? But that's talking specifically about the static

version of the planche. The dynamic version of the planche however, the planche push-up (PLPU), will definitely carry-over to other pushing movements such as HSPUs, weighted dips, bench presses and OAPs, and most importantly, to the static planche. Planche push-ups might seem daunting, but don’t worry, you do not need to already have superhuman strength in order to benefit from training for it. The way to the PLPU starts with normal push-ups.

Training the planche push-up will inevitably teach you how to do a full static planche, but the reverse is not true, so where is your time and energy best spent?

Exclusively training, and becoming very strong in, static holds with straight arms is in no way guaranteed to make you stronger in dynamic bent-arm positions. The reverse, however, is true.

SPECIFICITY - IN DEFENSE OF STRENGTH

Regularly training very few basic, but carefully picked, exercises is better for both muscle mass and strength. Exercises that use a lot of muscle will naturally stimulate a lot of muscle. I think we can agree on that. Your muscles will also have to work together in synergy, which develops your coordination. This probably explains most of the carry-over between compound exercises.

Almost everyone will do more volume and more exercises than what they benefit from. Why? Our culture maybe, telling us that results will follow hard work, and that hard work has to mean suffering. If you're not exhausted, you could (and therefore should) be doing more. It might be better to measure your efforts in success and results rather than exertion. I think that some people aren't sure what to focus on, so they think that if they do everything, then something will work. Another thing could be the fitness industry. It's all about creating a subscribing customer. There's more money in selling new workouts, gym classes and programs, filled with workouts and exercises to keep you entertained, confused and coming back for more. But the more different exercises you do, the more confused you get, and the less you have a chance to focus on and improving that which will actually deliver results. Strength is a skill and if you're not concentrating and trying again and again, you're not learning. And if you're not developing strength and getting better at your exercises, how are they going to develop muscle?

If you're a devout calisthenics zealot, you might be very provoked by this statement, but here it goes: the front lever and the human flag don't rely on skill but strength! Stop wasting your time with odd, specific-looking but not very helpful progressions and instead get busy working hard on getting stronger in the basics. It will get you there faster. This is also very true for the planche, as soon as you've got the wrist flexibility and the coordination of protruding your shoulders correctly.

You can spend ages working on specific progressions and not make much progress, even though initially you saw some progress at the level you started at, but you might end up staying at that level for a very long time. That can be disheartening to the point where some just give up after a while.

Specificity is super important. Specificity means doing drills that make you better at what you're trying to get good at, and in the case of the human flag, basic press and pull strength in your shoulder girdle will get you there quicker than training the side of your core, even though the latter looks more like a human flag. You get good at what you train, but specificity doesn't mean doing drills that visually mimic or look similar to what you're trying to get good at. It means understanding the weakest link, the limiting factor that you need to improve upon and working specifically on that. This goes against what many others say, but how could my conclusion be anything but the above with the experiences I've had?

- The human flag I could do first time I tried it, having never even tried any of the specific progressions.
- The front lever took me 6 days to learn, from having never tried it or any of the progressions, to holding a full front lever with good technique for 4 seconds.
- The human flag I then brought up to 20 seconds in only four workouts.
- The front lever I held for 12 seconds after only 6 weeks of training it 2-3 sets every other day since I first tried it.

Does that mean that those exercises came easy for me? Well, yes, and absolutely not! Yes, in the sense that I acquired them quickly thanks to being well prepared from previous training, but absolutely not if you consider how much hard work went into that previous training. Those exercises came for free from the strength I'd built in other exercises, and that is what I mean by carry-over. I put so much emphasis on it because it's the key to building strength through calisthenics.

That I could learn those skills so quickly is the entire point of why I'm writing this. I'm not just showing off but using my experience to convince you that there is weight to my reasoning here. Before I tried the human flag I had been doing exclusively (nothing else!) but the same one push and one pull exercise three times a week for 8 months, until I had hit my goal. What were the magic exercises? One arm military presses with a kettlebell and weighted chin-ups. That's it. I'm convinced that training like that not only helped me do the human flag faster than going through static progressions, but also helped me put on more muscle and had more a carryover to all sorts of things like the human flag, that I hadn't been practising. Stop treating static strength only as a trick or skill and start treating it as strength and your training will become more rewarding and your static strength will come faster.

REMOVING THE CLUTTER - SELECTION OF SKILLS AND EXERCISES FOR THIS PROGRAM

There are just a million exercises out there, and they're not all equally good for our purposes. As strength and skill are specific we need an abbreviated program. As mentioned in the previous chapter, we want to avoid spending time on exercises that give little in return. The exercises that made it to this book have been chosen based on the following:

Inclusion criteria

- Large Range of Motion (ROM).
- Can meaningfully be done dynamically, as opposed to statically, whilst bringing gains to performance in the static version.
- Are multi-joint, or compound, exercises, as opposed to attempts at isolating muscles.
- Have good carry-over to other exercises (progress in one exercise leads to progress in others).
- Together train all muscles relevant to strength in the different directions of force (fig 1, chapter 1.).
- Are relevant calisthenics skills, meaning one that many will recognize and want to learn.

Exclusion criteria

- Train something covered by another, already included, exercise.
- Require equipment other than the floor or something to hang from.

Below are the winners, presented as muscle, master level and basic movement. Please understand that you don't have to ever reach the master level or, in other words, unlock all or any of these skills to get stronger or bigger. Stronger and bigger is what you get in the process of trying to reach these goals, it is not an on/off switch. In terms of muscle, these movements

give you the variety, intensity and specificity to fully develop your upper body. If you have good performance in these exercises, you are strong. If you get stronger in these exercises, you've left no stone unturned in terms of upper body strength and you will not be weak in any direction of force, and your muscular development will follow.

PUSH		
Muscle	**Master level**	**Basic movement**
Chest	One arm push-up	**Push-up**
Triceps	Handstand push-up	
Shoulders	Planche push-up	
PULL		
Muscle	**Master level**	**Basic movement**
Lats	Front Lever row	**Pull-up**
Biceps, back of shoulders	One-arm chin-up	
Upper back in general	Muscle-up	

You might wonder why the muscle-up is on the pull side of the table even though it ticked all the muscle boxes for a push movement in chapter 1. The muscle-up on a straight bar does include a dip and could therefore qualify as a push-movement. Yes, doing it very slowly requires plenty of triceps and chest

strength to take you through the transition from pull-up to dip. Nevertheless I will still argue that it makes more sense to have the muscle-up categorized as a pulling exercise. First, if someone is very good at dips but really struggles with pull-ups (unusual, granted, but I have seen this e.g. in powerlifters specialising in the bench press) learning the muscle-up can be tough, despite all the dip strength. On the other hand, people who can do many, at least 20 pull-ups or who can do really heavy weighted ones with good form and full ROM, typically do not need that many workouts to find the coordination and timing to do a muscle-up, because the strength is already there. The above is true because muscle-ups rely on, in other words primarily train, lats and biceps and, to a lesser degree, pecs, shoulders and triceps. They do use the latter, but not to the point where it messes with recovery if you do muscle-ups in between pushing days.

As for the handstand push-up: one could argue that the handstand push-up (HSPU) more closely resembles a military press, and that it relies more on shoulders. I agree, that would be mostly correct. In comparison with the other two big pushing movements it's still the exercise that pushes the triceps hardest.

Evidence 1: if you train and pre-exhaust your triceps you can still do your planche work, but the HSPU loses a lot of reps or isn't even be doable.

Evidence 2: as you push a set of HSPUs and you get tired in your shoulders you can still get more reps by switching the focus to extending your elbows (which is what the triceps do) instead of pushing the hands through the floor and flexing your shoulder joint.

Evidence 3: anyone who can do a full planche but still don't have the (bent) arm strength to do a handstand push-up.

Evidence 4: the HSPU (on the floor) remains a triceps movement throughout the entire rep due to the decreased ROM compared to a military press. With a military press you get no help from your triceps when pushing from the chest. Only your chest and front of your shoulders are involved in the first half of the rep, while the triceps kick in when the bar

reaches around forehead level. In a HSPU you start at about forehead level so the full ROM is equivalent to the second half of the military press, where the triceps kicks in.

What about leg day? Did you forget legs / lower body?

Yes, and no. It isn't the focus of this book.
However it's a good idea to routinely work on strength and mobility in the lower body. Especially if you want to build an all-round balanced body. But, the truth is that for hypertrophy of the lower body, external resistance is in some ways better and this book is about calisthenics. I've known very advanced calisthenics athletes, capable of one arm handstands, full planche pushups and >20 seconds human flag, who scoffed at the idea of leg day, because to their mind effective leg training would require using external resistance (i.e. a barbell, the gym) and that would oppose their identity as calisthenics zealots. Their attitude was that using weights was somehow only for the weak, while tough individuals rely only on bodyweight. Needless to say, from the perspective of all-round strength, general health and aesthetics, this is not the best approach. This elitism only helped them in becoming real-life versions of the "don't skip leg-day" joke. Don't be these guys.

CHAPTER 4.
THE EXERCISES - EXECUTION AND PROGRESSIONS

The strength and calisthenics goal for all these exercises is the same: to be able to perform one rep with full range of motion (ROM). That's it. Simple, but not in any way easy. Expect it to take a very long time. Imagine yourself in a year, and how you would want to look back at what routines you decided to adopt, or not, a year ago. Is it likely that you will become one year older? Is it likely that in a year you will still want to progress in calisthenics skills and muscular development, while learning how to save money and time by doing all or some of your workouts without a gym? What I'm trying to say is be patient and understand that one year's time is not that long, especially not if you know that you're making progress in things you care about. Hurrying is not going to make things happen quicker here. Stay with one progression until you're ready for the next one.

PROGRESSION - WHEN SHOULD YOU MOVE ON TO THE NEXT EXERCISE?

From a hypertrophy perspective:
when necessary to stimulate further muscular adaptation. If you've stopped making progress in strength and size and the reps are closing in on the 30 rep threshold, then you have to choose a tougher exercise. To be clear - you don't have to reach 30 reps before you move on.

From the calisthenics point of view:
try the exercise one level up when you think you're ready for it. If you don't get six reps with your new movement, with good technique, then you're just not ready and you won't benefit from moving on to this exercise just yet. Don't get frustrated. All it means is that you can still build strength with the progression you're currently on.

THE BEST WAY TO BRIDGE BETWEEN TWO EXERCISES

The short answer is: don't. Bridging exercises often do little more than confuse our efforts and coordination. They are overused, even by trainers, because we're looking for progress only in terms of movement instead of muscular strength. Always use as few progressions as you can, slowly building up to more reps and better technique. That's the secret best way to progress: don't try to bridge, stay with the same progression and set a new rep goal.

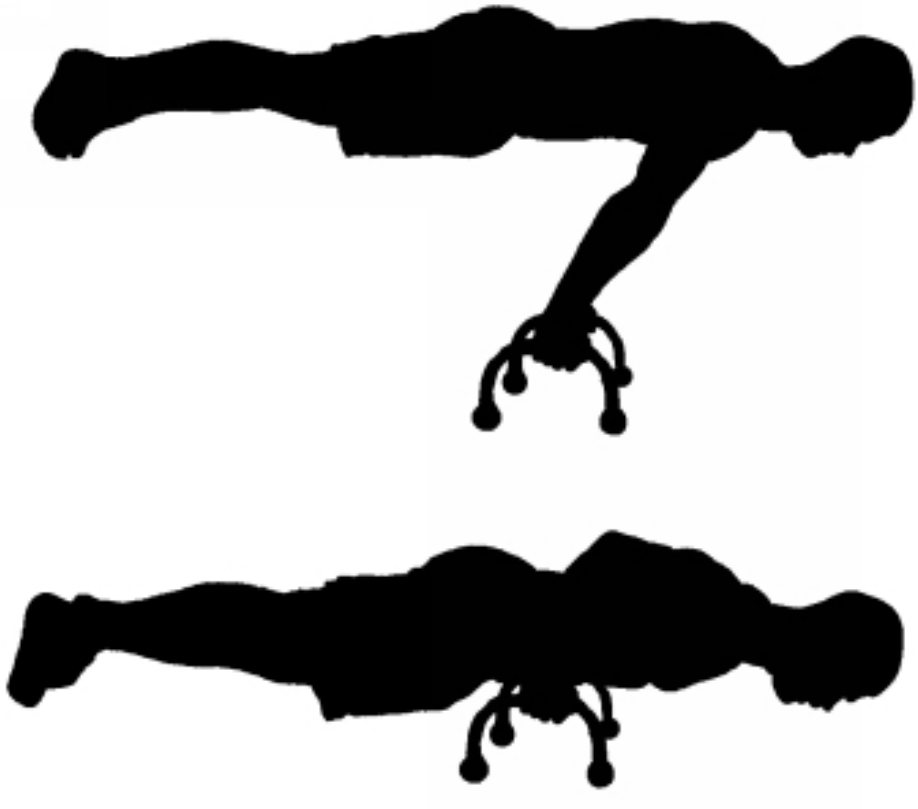
What level you're currently on is irrelevant. Only progress matters, and if you go too heavy too soon you will slow down your progress. Expect to spend a long time with many of these variations, and do not go looking for a magical exercise that will help you "bridge the gap" between two very similar progressions. Often, you don't need a bridge, you just need to get stronger, meaning to do more reps with better technique and accept that the body has a limit as to how fast it can adapt. Spend more time working on more reps, with better form, within your current progression. On the other hand, if the next progression requires more or different balance or mobility to what you currently have, then a bridge might be helpful. However the Prio System is designed with this in mind already so you shouldn't need any extras. If the only (real) difference between two progressions is the level of strength needed, then don't bridge. It will only confuse things. Build on the basics and accept that it takes time to great really good at something.

Let's say you can do 10 tucked planche push-ups and you're dying to advance so you try the advanced tuck (flat back). You try but can't perform >6 reps of advanced tuck. That means you need to simply set a new goal for your current progression, in this case the tucked planche push-up. A good goal in this case would be 2 sets of 15 reps with a 2 second negative on all reps. Enjoy the pain on your journey to your goal! If you do this and progress, your advanced planche push-up will inevitably be stronger next time you try it. This all boils down to understanding that the very best way to get

better at that specific exercise was to **not** do that more difficult progression right now.

PLANCHE PUSH-UP

The planche takes enormous pushing strength, especially from the front of your shoulders and upper chest. With the body held parallel to the floor and lifted up with straight arms, the planche is the calisthenics' king of strength and control of shoulders and scapulae. The dynamic version turns things up several notches, making it more difficult but also more stimulating for growth and strength. Working on this might have you shopping for new t-shirts to fit your shoulders, and make handstands push-ups a mere question of balance and not strength, as shoulder strength from planche push-ups will carry-over. The dynamic version relies more on chest, and that is probably why your bench press and weighted dips will get better without you training them.



Direction of force and main muscles trained

- Horizontal push
- Front and sides of shoulders and upper chest, and to a lesser degree triceps.

How to do it:

Get into a normal push-up position, lean forwards and lift your lower body off the floor so that your weight is supported only by your wrists. Tuck your legs as much as you need to, with the goal being to doing this exercise with the legs completely straight legs. Lower yourself down to the floor and push back up again.

Experiment with different hand placements to figure out what works best for you , at least right now. This might change when you've spent more time gaining mobility. Try fingers facing forwards, out to the side (thumbs forwards) or doing these on push-up bars (parallettes). This is a skill, and we want to keep training your wrists, but we also want to do what we can now for strength and muscular development.

Round your back and protrude your shoulders (visualize pushing yourself away from the floor). Avoid excessive winging of the scapulae, which is when your shoulder blades travel up towards your ears because they're no longer pressed against your thoracic spine. Keep the shoulder blades down and forwards, not up and forwards.

Use as much ROM as you can. Do this progressively, going from hands on the floor, to push-up bars, to full range with hands resting on something elevated, such as a dips station, parallel bars or even just two chairs facing each other.

Progressions

1. Normal push-ups, first on your knees, then on your feet.
2. Leaning push-ups on your knees - lean forwards so your shoulders are past your hands and do a push-up. Keep your knees on the floor. The further you lean, the more emphasis you put on the muscles that perform the planche. Experiment with different hand placements here. Lockout your elbows properly at the end of every rep. Try to push with your shoulders rather than your triceps / elbows.

3. Leaning push-ups from full push-up position (on your feet).
4. Leaning push-ups with one foot in the air.
5. Tucked planche-pushups. This is the first progression with your feet off the floor. Put your hands in a push-up position. Round your back and bend your knees and hips for easier leverage. Now lift your body up so that it is only supported by your hands.
6. Advanced tuck. Same as above, but extend hips enough to allow a flat back.
7. Straddle. Both legs straight but out to sides like a split.
8. Single leg tuck. One leg tucked and the other straight.
9. Negative full planche push-up. This one assumes that you can now hold a full planche, even if only momentarily. Go up into a full planche and fight it on the way down. Land on your belly, and start over. Do as many reps as you can without just dropping to the ground.
10. Full planche push-up.

Beyond and even harder

- Work on more reps or add weight.

Specific skill work and other tricks

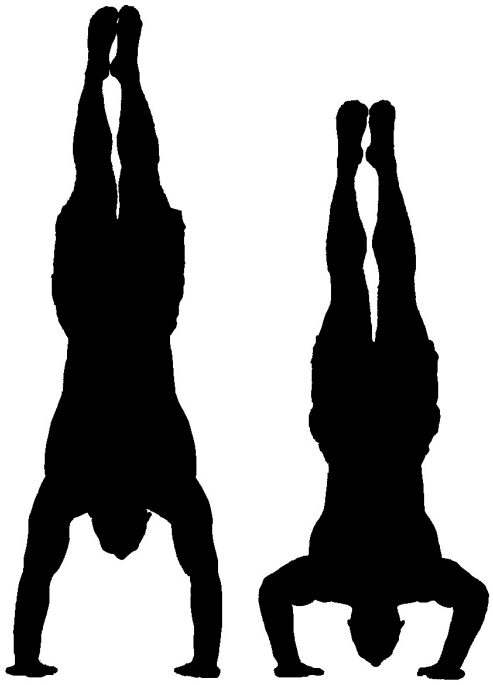
Take care of your wrists by using push-up bars or by putting something under the palm of your hand. If your wrists are bothering you from being bent back whilst under the pressure of supporting your body weight, try using push-up bars. Another great idea is to put something (e.g. socks or a book) under the palm of your hands with fingers still on the floor to ease the stress from your wrist being extended, or dorsally flexed, more than normal and under a heavy load. Also make sure to do the wrist warm-up from chapter 5.

Extend your sets with statics. When you've done your last rep, stand up and shake some tension off your hands for 5-15 seconds, then get down into a position that you can hold statically for about 10 seconds with elbows fully extended. This helps to speed up the process of learning a full planche by putting some extra focus on coordination and getting hands, wrists and shoulders conditioned to the unusual stress.

Understand the leaning push-up. Notice on the following photo how the elbows stay in front of the wrists in both the top and bottom position, as opposed to a normal push-up where the elbows stay above the wrists or even closer to the hips to make more use of the triceps. An easy way to get more out of this fantastic exercise once the reps go over twelve is to place a small weight on your back between your shoulder blades or in a backpack. You might find that adding 5 kilos does make it heavier but you lose surprisingly few reps, typically one to three. Adding weight can be used to bridge between exercises.

HANDSTAND PUSH-UP

The handstand push-up (HSPU) is a truly impressive sight, especially when balancing freely. Thankfully for training purposes and muscular development it can be done with wall support. The HSPU covers the gap in range of motion of the shoulders that isn't covered by the PLPU (planche push-up). The HSPU also requires and therefore builds much more triceps. Take a barbell weighing as much as you do, lift it and lock it out with straight arms over your head. Now lower it to your forehead (not just the top of your head) and press back up again. That's the strength it takes to do a handstand push-up on the floor. Of course on top of that you need the balance and coordination it takes to do it upside down if you want to do it without the support of a wall.



Direction of force and main muscles trained

- Vertical push.
- Triceps, delts, upper pecs and, to a lesser degree, traps.

How to do it:

Put your hands on the ground, slightly wider than shoulder width apart. Kick your feet up (in the air or against a wall), do a push-up from this position. Simple, not easy.

Push yourself away from the floor, make yourself tall. This is different from pressing a barbell where you instead want to keep your shoulders down and "packed".

Belly against the wall is better than back against the wall when using the wall for support, since you can't cheat by arching your lower back from this position. If you need excessive cheating, you should take a step back and build more strength and reps in an easier version, such as the pike press-up.

Work on flexibility in your wrists (bending back), your shoulders (ability to lift over your head and behind your head) and hips. For hips, you need the ability to extend, or to straighten your hips out. Otherwise when you try to straighten your legs out in a handstand position you'll just arch your lower back instead. This bent form is known as banana, not kidding. For mobility drills, go to the end of chapter 5.

Progressions

For all progressions from a handstand position, use a wall for assistance when necessary so that you can work on strength and balance at the same time.

1. Normal push-ups, first on your knees, then on your feet.
2. Pike press-up with feet on the floor. These are performed like a normal push-up but with your feet and hands closer together and hips bent around 90°. Your feet, hands and hips create a triangle when seen from the side so that the angle you press yourself from is somewhere between a normal push-up and a handstand push-up. It's easier than the latter since much of your bodyweight is still supported by your feet.

3. Pike press-up with full ROM of shoulders. Place your hands on push-up bars, a bench, a box or whatever you can find so that you can lower your head further than where the floor would normally stop you.
4. Pike press-up with feet elevated.
5. Half ROM handstand push-up. Put something at half-way for your forehead to touch so that you know where half ROM is.
6. Full ROM handstand push-up.

Beyond and even harder

- Work on reps or add weight.
- On parallel bars for increased ROM.
- Hands closer to each other.
- Uneven HSPUs. Put more weight on one arm by doing uneven HSPUs. One arm is the focus and the other one up on an elevation for support. If you want a balance challenge, maybe you're working towards the one arm handstand, then something wobbly like a basketball is better. For sheer strength and muscle development, removing the balance challenge by using e.g. a stack of books makes it more focused.

Specific skill work and other tricks

Learn how to do a handstand. Handstands are hard to do, but can be simple to learn. To be able to do a handstand, you need a couple of things: a wall to lean against, something soft to crash down upon, shoulder flexibility, and patience. Ideally, you would also have a coach or a training partner. Whilst working on your progressions and building shoulder strength, do the following two exercises to condition your body and learn how to balance:

1. Learn how to balance your lower body by doing the tripod headstand. Place your hands and head like a triangle and get your feet in the air. Try

shifting more and more weight to your hands and less on your head as you get stronger.

2. Condition your shoulders, wrists and elbows and build strength and coordination by doing straight arm handstands against the wall. Kick up into a handstand and hold it for as long as you can, pushing yourself away from the floor, shoulders shrugging up towards your ears.

Do these for a few minutes every day for a couple weeks and you will soon be able to start moving one of your feet away from the wall, and later both feet, momentarily balancing without the wall.

Straight line vs. banana. Traditionally, the completely straight handstand is the coveted version as it requires more balance and honestly just looks better. Outside of gymnastics, and specifically for the push-up version of the handstand, the banana form with arched back and not fully flexed shoulders, is actually preferred by many as it allows the trainee to work the pushing muscles harder. The banana form makes the exercise less balance demanding, allowing for more reps, and it also changes the angle so that more (upper) pecs can be used. The banana form happens because we compensate for lack of flexibility and/or lack of balance, but if this doesn't bother you I'm not going to tell you what to think. For the scope of this book: you can still build muscle with the banana form, it might even be better. But for mobility and balance I suggest you still work towards being able to do a completely straight handstand, even if you choose to train your reps with a less straight form.

If you want out of team banana, here's how to do it:

- Work on mobility in your shoulders, wrists and hips (go to the end of chapter 5 for mobility drills)
- Practise pushing your hands into the floor, away from you. Visualize making yourself tall and lift your shoulders up towards your ears, i.e, the opposite of where you should keep your shoulders when training

with barbell. It is like a shrug, but with your arms over your head.

- Train endurance. Do this drill: kick up into a handstand at least once a week, preferably on Prio 3 days. Keep it up for about 3-4 minutes, kicking back up again as soon as you fall down. This will give you more volume in that position, but also teach you a more effective handstand. As you get tired you will subconsciously figure out ways to improve balance to take some work of the muscles.

Take care of your wrists. When doing handstands and planches etc the excessive dorsiflexion (bending your wrists back) can cause discomfort or pain. An easy way to provide your wrists with some respite without avoiding training is to do your exercises on parallel bars or push-up bars, or to put something between your palm and the floor (but not your fingers) so you don't have to bend the wrist as far. Also, don't neglect the short but very effective wrist warm-up in chapter 5.

The military press with a kettlebell or a barbell is a great addition, and one that really helped me initially. The military press has great carry-over to the HSPU. This is not for Prio 1 days (Chapter 5 for details on the Prio System) where you want to work on skills, but for Prio 2 or 3 days if you want to train a full ROM with a lighter weight and without the same focus on balance. Personally, when I learned the handstand push-up, strength was never an issue thanks to heavy and controlled barbell and kettlebell pressing, so I only had to work on finding the balance. I say this because I want to remind you that these "muscle" exercises help skills too, by making you stronger. For reference, I could military press more than my body weight on the barbell for 5 sets of 5 reps nice and controlled before learning how to do HSPUs. With good base strength, HSPUs just felt like half the ROM to what I was used to, with the same weight, but from an angle with slightly better leverage, i.e., they were easy, except for the balance challenge. To get good carryover from military presses to HSPUs, you have to slow things down a little bit and perform all reps truly strictly and grind the bar up above your head. Absolutely no kicking from the knees and hips, and no

bending your back and arching to make it more like a bench press (using more chest, making it easier). If you allow such compensatory techniques you are teaching yourself motor skills that will not carry-over to HSPU but the opposite, it will make it more difficult as you can't move like that when standing on your hands without falling over.

ONE-ARM PUSH-UP

This exercise takes incredible strength and development in your chest, triceps and oblique abdominals. The one-arm push-up doesn't get half the attention it deserves, probably because it doesn't look that different from a normal push-up, but do not let that fool you. To be clear, the mastery level is the one-arm push-up with the body kept straight (not rotated), and legs not splayed out to the side but kept together (in the silhouettes below there is about 60 cm between the feet and the torso is slightly rotated, i.e. there is room for improvement). Legs splayed out to the sides and body very rotated is not necessarily cheating. Think of it instead

as a progression.

What's so great about unilateral exercises?

This exercise is very important in this program to make it complete, as it's the only unilateral (one sided) exercise for the pushing muscles of the upper body. Why is this important? Mainly because you'll build the strength to handle your bodyweight with only one arm, which will make the HSPU and PLPU work seem lighter.

In a normal push-up, you have to press around 75 % of your bodyweight off the floor. If you weigh 180 lbs that's 135 lbs

pressed off the floor. Maybe not the most impressive bench-press in town, but the one arm push-up means doing that with ONE arm. For a gym analogy think of it as doing dumbbell presses with each dumbbell weighing 75 % of your bodyweight. That's the strength you'll build with this exercise.

For strength and carry-over, this exercise has something very important that is not covered by the other two pressing movements: rotation and flexion of the torso. To be more exact: counter-rotation and counter-extension, meaning using your abs to fight the rotation and extension of your spine caused by gravity. Planks will seem pointless once you've progressed significantly in the-one arm push-up. This exercise will give you abs that look impressive and have the strength and endurance to win any improvised plank competition, despite you being the only one who doesn't train planks. If you're into martial arts, you'll understand the implication of developing this kind of core strength.

Direction of force and main muscles trained

- Horizontal push.
- Chest, triceps and front of shoulders in that order.

How to do it:

Start with your hand a bit closer to your belly than you would with a push-up. It's going to feel a bit awkward but sets you up for a stronger position in the bottom which is where it's at its heaviest.

Round your back and tense your abs and glutes , this will put you in the strongest and safest position for pushing from the bottom.

Protrude your shoulders on the way up . Move your shoulders forwards like you're reaching for something - visualize pushing the floor away from you rather than just straightening your elbows.

Progressions

Stick to progressions where you can do a full ROM unless the progressions calls for something else. To make an exercise

easier, as a form of bridging between two exercises, move your legs wider apart and allow your body to rotate.

1. Normal push-ups, first on your knees, then on your feet.
2. Diamond push-ups.
3. Uneven push-ups - hand placement and everything just like a normal push-up but with one arm elevated on a stack of books or a basketball, focusing on the arm on the floor. This exercise gives the hand on the floor less support in the bottom position, challenging your chest and triceps more.
4. Archer push-ups - done with one arm stretched out to the side so that it gives less support in both the top and bottom position. Both hands on the floor
5. Lever push-ups - one arm stretched out to the side but on a basketball so that the arm can roll on the ball, which both increases the ROM slightly compared to archer push-ups and helps to make the movement feel more natural for the working arm.
6. Lever push-ups with rubber band. Like the exercise above, get into a one arm push-up position with one arm and hold a rubber band attached above you (i.e around a door handle) with the other hand. The band will give you the most support in the toughest position at the bottom, and less help in the lockout which builds the muscles and strength needed for you to hold all your weight with one arm for reps.
7. Half ROM one-arm push-up. To quantify the ROM; put something under your chest (a ball, a stack of books…) at a level where you can stay within the 6-30 rep range with good form. Lower this as your strength goes up.

8. Eccentric. Go down on one arm, under control, and use the other arm to push back up. Use full ROM when you can but you can start with a limited ROM (e.g. basketball under your chest). Also, remember to use rotation of the torso and splaying of the legs as a way to make it easier if you need a bridge into this exercise.
9. One-arm push-up.

Beyond and even harder

- Work on reps or add weight.
- Make your technique even stricter and more strength-demanding by moving your feet closer to each other and avoiding rotation of your torso.
- Emphasize the negative phase - add a second on the way down to the floor.
- Elevate your feet to make it heavier, or do the exercise with one foot in the air.
- Don't bother with increasing the ROM beyond full OAP.

Specific skill work and other tricks

Do the push-up hold and shoulder-touch. Get conditioned to supporting your body weight with only one arm by doing this exercise. Do it in a slow and controlled manner. About 10 reps is good, and don't waste energy trying to progress in his exercise by doing more reps. Think conditioning, not progressing. Just focus on stability and control your core. Feet together and torso not rotated. Consider adding a small weight. Placing a kettlebell between your shoulder blades is a convenient solution but use what you have; throw a couple of the heaviest books you can find in a backpack and just wear that. If it works, use it.

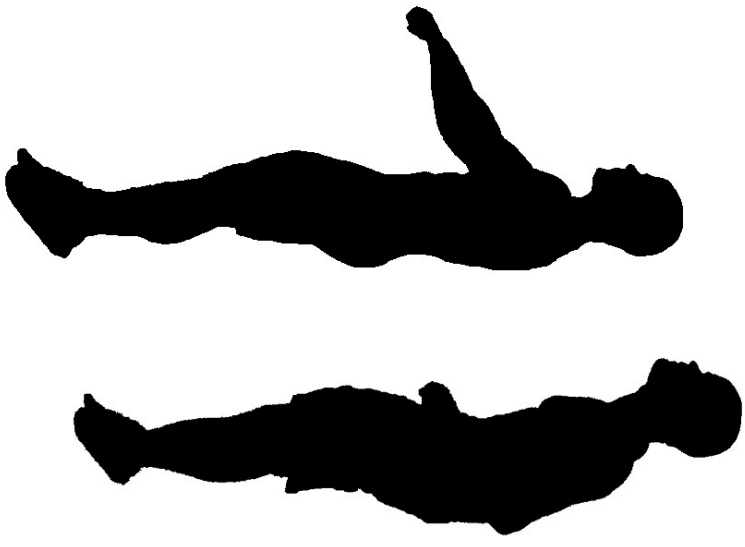
Experiment with hand placement . Many find that they're stronger when their fingers don't face forwards as in the normal push-up, but more out to the sides and the thumb faces forwards. Basically from a push-up position rotate the hand

clockwise about 45°. If you have experience with dumbbells, compare this with how the arms naturally move and rotate in a dumbbell press if you use a full ROM.

Build strength in the bottom position with typewriter push-ups. Typewriters are great in their own right, they can be a brilliant bridge for some people and can be used as a mechanical dropset to push the chest muscles, but they aren't a necessary progression towards the OAP. If you struggle specifically with strength in the bottom position, this can be a great exercise to do when you're at progressions 5 (lever push-ups) to 8 (eccentric OAP). You perform typewriter push-ups by assuming the archer push-up position, going down to one hand but then staying down, not pushing yourself back up but shifting your weight over to the other hand and then back again. That's one rep. Again, with extra weight between your scapulae if necessary but of course start without.

FRONT LEVER ROW

The front lever shows back and hand strength that can't be mistaken for anything else. There is no trick or balance challenge to this, just amazing strength and coordination in your core, back and fingers. For a gym analogy; stand up straight, grab a straight bar with a cable attached to it like you're about to do push-downs, but straighten your elbows with the bar at about chest height. Keep the arms straight and pull down slowly until the bar is level with your belly-button and just hold it there. To make it fair, do this with more weight on the cable pulley than what you yourself weigh, as the leverage from hand to shoulder in the front lever obviously makes it heavier than just hanging straight under a bar. So that's the strength it takes to do a static front lever, to pull more than your bodyweight, without the aid of your biceps. The dynamic version, the front lever row, puts extra emphasis on the biceps and brachioradialis while working your lats and shoulder stabilisers (traps, rotator cuff and rhomboids) through a larger ROM.



Direction of force and main muscles trained

- Horizontal pull.

- Lats, biceps, traps, abs.

How to do it:

Hang from a bar. Swing or lift up to a position where your torso is horizontal, all the time keeping your arms straight.

Tuck your legs as much as you need to , the goal being to do this exercise with completely straight legs.

Row so high that the bar touches your hips. Pull yourself towards the bar, rowing as high up as you can, the long-term goal being to touch the bar with your hips.

Keep your back as straight as your strength allows . The goal is to have a straight upper back and shoulders pulled back to neutral, as that requires and develops more strength. Rounded upper back and protruded shoulders are ok if this is thought of as a progression, meaning that it's something that you're always trying to improve upon throughout the different progressions. It doesn't have to be a beauty competition, but looking like a teenage mutant ninja turtle from the side might earn you a raised eyebrow from the same people who say that doing the banana in the handstand isn't legit.

Progressions

For all progressions, unless stated otherwise, row as high up as you can, trying to touch the bar with your hips or lower abdomen.

1. Hanging leg raises, legs to chest, knees bent.
2. Hanging leg raises, straight knees and hips bent to around 90°.
3. Tucked front lever for time. Bend your knees and hips, use your abs to pull your legs to your chest and round your back.
4. Tucked front lever row (FLR) - like the above but adding the dynamic row.
5. Advanced tucked FLR. Straighten your hips to 90° bend but keep the knees bent. You also want to

straighten your back out, make it flat, to make it tougher.

6. One-leg FLR - one leg fully tucked and the other straight. Tuck less and less as you get stronger.
7. Straddle FLR, both legs straight but out to the sides like a split. You might want to do this first with slightly bent hips and knees, or bend them more during the set to extend it and turn it into a mechanical drop-set.
8. Full front lever row.

Beyond and even harder

- Work on reps and getting full ROM in the row.
- Add weight. Ankle weights are better than a weight vest for front levers, as they will also make it tougher on your abs and hip flexors.

Specific skill work and other tricks

Use an elastic rubber band for full ROM. Hang it over the bar and under your hips to make you effectively weigh less. This can allow for a full ROM even on the easier progressions. This is a great addition, but not necessary.

Standing straight-arm row. This can be done with an elastic band or gymnastic rings to hang from. Stand up, attach the rubber band around a door handle, grab it, take a few steps back and pull in a rowing motion until your thumbs touch the front of your hips. Visualise doing a full front lever row with full ROM. If you want to do it with rings: hold the rings and lean back as far as you can, keeping your body straight, and row back all the way to rings against hips. What you want to get out of this exercise is a full ROM and tension still present in the top position. Experiment with foot placement and height of the rings to get achieve this and to adjust the level of difficulty.

Dragon press on the floor. This is another great way to build abs and that specific strength needed for full ROM front lever rows, but unnecessary if you’re already doing standing

straight-arm row. I suggest two sets at the end of every back workout until you can do your front lever row with full ROM in one of the progressions. After that, drop the dragon presses and stay with a version of the front lever row that you can now do for full ROM and build your repetitions.

ONE-ARM CHIN-UP

For raw arm strength there is no better body weight exercise than the one-arm chin-up (OAC). This is not debatable. If strength and size of your biceps, forearms, lats, back of shoulders and abs is something you care about, then working towards this skill is a must in your routine. For grip strength, the OAC is obviously a great exercise. The OAC might also very well be the best assistance exercise for the muscle-up, as it provides some of the unilateral benefits discussed for the OAP (one-arm push-up).

What's so great about unilateral exercises?

This exercise is very important in this program to make it complete, as it's the only unilateral (one sided) exercise for the pulling muscles of the upper body. Why is this important? Mainly because you'll build the strength to handle your bodyweight with only one arm, which will make the FLR and

MU work seem lighter. By just working towards an OAC you're getting used to using more than half your bodyweight with only one arm, which pushes the biceps on that side harder than the other two pull exercises and it builds a general pull strength that will carry-over.

Direction of force and main muscles trained

- Vertical pull.
- Lats, biceps, lower and middle traps.

How to do it:

Start from a dead hang from a bar with one arm.

Pull your shoulder down without bending the elbow.

Rotate the arm internally so that your palm or thumb is facing you.

Grab the bar really hard, really squeeze it until you get white knuckles.

Pull yourself up and visualize pulling your elbow down towards the side of your belly on the same side. Pull your hand down to your chest.

Progression s

1. Hang for time with both hands, shoot for 30 seconds.

2. Assisted pull-ups with a rubber-band if you have access to them. If not, partial pull-ups for reps is the next step.

3. Pull-ups, hands facing away from you.

4. Chin-ups, hands facing you.

5. Mixed grip, one hand straight above your head and facing you (this is the one we're focusing on) and the other facing the other way and about 50 cm away from the arm above you. Pull the hand facing you down to the centre of your chest.

6. Pull with one arm and hold a towel with the other. The towel should be hung over the same bar. Grab the towel about 20 cm under the bar, this makes it so that the arm grabbing the towel can help a lot in the start of the pull where the other

arms is at its weakest, but not so much in the top position where the other arm is relatively stronger.

7. Mixed grip negative - pull-up with a mixed grip, let go of one hand and use only the other one for a controlled negative all the way down to a hang. Put the other hand back on the bar and pull-up with a mixed grip again. Don't change hands during the set, do one set with one arm, wait 2-3 minutes and then do the other one.

8. Negative towel pull-ups - like progression number six on the way up, but with only one hand on the way down like progression number 7.

9. Full OAC.

Beyond and even harder

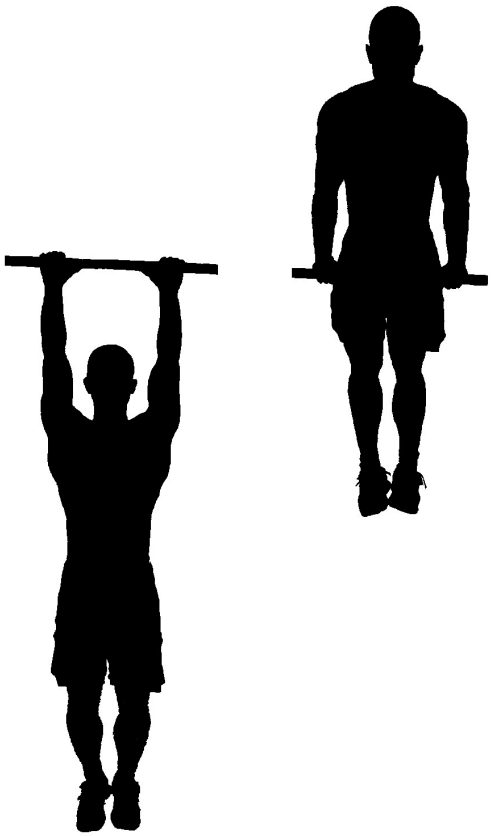
- Work on more reps or add weight, i.e. holding a kettlebell with the other hand or wearing a backpack with weights in it.

Specific skill work and other tricks

Extend sets by hanging. When you've done your last rep, let go of the bar for 5-15 seconds, then hang for as long as you can with only one arm if you can or obviously with two hands if that's your current level. If you just did a set of an exercise that puts more emphasis on one side, then you hang with only the side you just focused on.

MUSCLE-UP

The muscle-up on the bar is basically an extremely tough version of a pull-up, followed by a slightly tougher than normal dip. What makes it tougher than a normal pull-up is that you need a lot of power from the dead hang, to create enough speed to get you up and over the bar. Force = mass x acceleration, and in the muscle-up you need acceleration for the transition from pull-up to dip. However, if you do it on the rings, or purposefully slow it down, you can no longer rely on speed to help you with the transition. Instead, your chest will have to work harder. Both variations are great, and which one you prefer depends on your goal and your focus. This exercise needs to be in the program to make it complete. It doesn't train your biceps as effectively as the one-arm chin-up, it doesn't isolate your lats, traps and shoulder retractors to the same extent as the front lever row. What it does is work your lats through the greatest possible ROM.



Direction of force and main muscles trained

- Vertical pull.
- Lats, biceps, traps and to a lesser extent pecs and triceps.

How to do it:

Start from a dead hang just like in the bottom position of a pullup.

Pull yourself up and over the bar. Pull with such force that you arrive with your chest above the bar in one clean movement.

Push yourself up to straight elbows so you end up in the top position of a dip.

Progressions

1. Pull-ups and dips, lots of them. A good base level of strength for the muscle-up is to be able to do ten or more reps with both pull-ups and dips. The ten reps need to be done with unhurried confidence, controlling the descent and using a full ROM for this statement to be true. Practise doing dips from a straight bar like what you'll use for your muscle-ups. Get into position by finding a low bar and jumping up to the top position of a muscle-up and do dips from there.
2. High pull-ups. Simply try to reach higher, or touch the bar lower down on your chest, and later belly. When you can do 2-3 high pull-ups all the way up to where the bar touches your nipples, you should have the strength required to do a muscle-up. The rest is technique. Keep building reps and strength.
3. Negatives. Jump up into the dip position, and go down with control from the top position to dead hang. Fight these on the way down, try to do them slowly. Be careful not to fight them as hard as you can as the eccentric stress can be enormous and it's easy to overdo it here. What does it mean to

"overdo it"? Golfer's elbow, or medial epicondylalgia (sometimes referred to as tendonitis) is what it can mean. Or hurting elbows that make all push exercises impossible. You don't want this. If pain starts creeping up, back off from doing things that hurt, but don't stop training. If pain doesn't improve, ask a professional for an assessment.

4. Full muscle-up. Feel free to use kipping, swinging or even coming up with one arm first and then the other as bridges, making the exercise easier as you're building strength. Of course the aim is to do a strict muscle up in the end, and these little cheats will help build the strength you need.

Beyond and even harder

- Add reps or weight.
- Hands closer together.
- Stricter (without kipping) and slower.

Specific skill work and other tricks

Stand on rubber bands. If you have access to them, you can just use rubber bands at different tensions all the way from pull-ups to full MU. This might sound too simple and therefore boring to some, but it will work for sure. Hang the band over the bar and put your feet on it. Work through a full ROM. Challenge yourself with strictness of execution (not swinging), work on doing more reps and be patient.

MECHANICAL DROP-SETS - A MUST TO GET THE MOST OUT OF YOUR SETS

A drop-set is when you do a set in an exercise, and when you're done, you immediately do more reps in the same exercise but with a lighter weight. Immediately or within 15 seconds upon ending one set, do another 5-15 reps in a progression a step or two under what your main sets were. A drop-set works because you've pre-exhausted the muscles during your main set. In calisthenics we don't use weights but we can still use the same idea, calling it a mechanical drop-set because we have to rely on changing the mechanics of the movement instead of using lighter weights. We change the execution of the exercise to a lighter one, instead of changing the weight used. We achieve this by:

Decreasing the ROM
Start with full range and allow it to get shorter and shorter as you get more fatigued, maintaining proper technique and tension on the muscles.

Going to an easier version of the same exercise
From starting out with very strict technique to accepting a more cheaty version. This is not to be interpreted as using sloppy technique, but for example going from using a 3 seconds controlled eccentric phase in push-ups to dropping to the floor quicker, or by first leaning with your shoulder very far in front of your hands in the planche push-up, to making it look more and more like a normal push-up.

Rest - pause
This is a great way to get in more of those reps that stimulate growth, without having to add much volume or choosing easier exercise. Stop 1-3 reps from failure, rest 10-20 seconds and do more reps, around 5. That counts as one set.

Hangs, leans and statics
This is a fantastically easy and effective way to get more out of each set without overreaching. This is how you do it: after you've done your last rep of pull-ups and you lowered

yourself to just hanging, stay there for another 5-20 seconds. This will build flexibility in your shoulder (that will carry-over to handstands) and it will help condition grip strength and your shoulder girdle for this drill. The same principle applies to planche push-ups for example; when you've done your last rep of your current progression, stay in the locked out or static position for 5-20 seconds. You can do this in a lighter version of planche, such as a frog stand, tucked planche or a forward lean from a push-up position. This helps with mobility and conditioning of your wrist joints and elbows.

OTHER EXERCISES AND TECHNIQUES

Core and abs

I have good news for you. Save your time and energy by believing me when I tell you that adding exercises for abs isn't going to do you much good as that is already covered by the push and pull exercises. You will be training your abs HARD with this program, in fact so hard that they might be the muscle that reaches failure first in some progressions. Spend a few months making good progress with the exercises in this chapter and you'll no longer feel the need to add direct ab-work. If you can keep your body-fat low your abs will visibly grow from this program. If you have a layer of fat that obstructs vision, growing your abs even more isn't going to help. Make sure to follow the easy but powerful diet guidelines in the beginning of the book. These exercises work your abs really hard and will undoubtedly give you stronger and better developed abs.

If you still feel the need to add more specific ab-work for even more specific hypertrophy, you probably want to have a look at more isolated stuff as the rest is covered already. I would recommend you do your specific ab exercise for 2-3 sets at the end of a workout, to keep your abs and midsection as strong and fresh as possible for when you need it for the actual training. Remember the biceps and scott curl study? No need to make it more complex than that. Choose an ab exercise that is challenging at 2 sets of 8-12 reps, 2 times a week. Go with a dynamic exercises such as hanging leg raises, and avoid things like planks or even dragon flags, as you're already getting that stimuli for free from working on your one-arm push-up and front lever row. An exercise like the dragon flag, awesome as it looks, doesn't add anything to this program. A normal sit-up or crunch would do more good as it adds a different stimulus instead of more of the same.

Isolation exercises

Why isolation exercises? It helps with muscular development and it keeps you healthy. An exception to this program is the lats, they get away with no isolation as the front lever row and one-arm chin-up have already done the trick. Optimally, for our purposes, the isolation exercise chosen should train the range of motion that has been stimulated the least. For example; HSPUs work your triceps hardest in their more extended (straightened elbow) position, and a good isolation exercise would therefore put stress on the muscle in a position with elbows bent, such as french press or push-downs.

Do one isolation exercise per workout and muscle group, in other words once a week. Choose a full ROM exercise for 2-3 sets of 10-20 reps at the end of your workout. Choose an exercise that works the targeted muscle of the workout, such as pushdowns for triceps on handstand push-up day. These should be easy and you shouldn't need more than 60 seconds rest .

Example isolation exercises:

Chest
Flyes - can be done with cables, dumbbells, rubber bands or even on the rings, just bend your elbows more to make it easier, and less to make it harder.

Delts
Lateral raises - with dumbbells, cables or rubber-band.

Biceps
All forms of curls basically.

Triceps
French press, tiger bend push-ups, rubber-band pushdowns.

Abs
Hanging leg raises, ab-wheel, sit-ups.

Traps
Shrugs - can be done standing up with dumbbells. You can also do it standing on your hands and shrugging with hands above your head. This can also improve your handstand endurance and flexibility. Another way is holding onto the bar with your hands, hanging upside down with your legs up and

pulling upwards. A little unorthodox maybe, but your traps won't know the difference.

Go easy on isolation exercises in a program like this. You don't have to push to failure. The point is to be able to focus fully on that muscle, and to make sure that the muscle has been trained through its entire ROM. Our compound movements tend to be partial reps if you consider total joint mobility, and we naturally shift the tension between muscles when leverage gets tougher for one muscle or another muscle is better for that part of the movement. This shift means that each muscle works only a section of its full ROM. This shifting doesn't happen with isolation exercises, as the other muscles can't help. For example, the triceps can't be significantly assisted by other muscles when doing a french press, it's all triceps. So we need to complete our training by adding exercises that trained the section of ROM that wasn't trained by the compound exercise.

My experience is that isolation exercises are best treated as no-brainers, both in terms of execution and exercise choice. Something like pushdowns with a rubber band for 3x10 with 60 second pause, leaving 2-3 reps left at the end of each set. You don't have to think about progressions here either. Remember that you've already worked hard in the tougher and more important exercises.

Despite being a clinically active physiotherapist and all the years of training and experimenting on myself and others that I have in the bag, I have to admit that I've always had a tendency to neglect direct arm work in favour of higher volume of bigger movements. This is especially true when I've focused on skills in calisthenics or powerlifting. However in the long run, you make progress faster by staying healthy. Whenever I've tried to skip arm work, I've had these old annoying injuries flare up: my left elbow joint and my right biceps insertion at the front of my right elbow. I get pain and it makes progress impossible for a couple of weeks or, in the worst case, up to several months. The solution is to take a step back, definitely continue to train but never train with pain. Pushing too hard will make matters worse. Anything that

hinders recovery will also make it worse. The longer it takes to get rid of the pain, the slower your overall progress will be.

Other Skills

What about the human flag? Manna? One arm back lever? Hefesto? Spinning on your head while cutting your toenails with one arm and juggling vases from the Ming dynasty with the other?

Impressive as some feats may be, they simply don't lend themselves to the goals of this book. All jokes aside, get strong in the movements from the program in this book and the trickier, more isolated or static skills will come much more easily. This all goes back to the reasoning behind why the basics are the best and assuming that we can agree that carry-over is a good thing. No amount of human flagging will teach you how to do a handstand push-up, but the reverse isn't true as time spent practicing the HSPU will teach you the HSPU and you'll get the human flag for free.

Will this book have you train the human flag? No.
Will this book make you better at the human flag? Yes.

With that said; I love doing statics and I love being strong in them. As I mentioned in *Statics - why they are a waste of time* , I could hold a human flag for over 20 seconds with good form the fourth time I tried it, simply thanks to having made good strength gains in the basic push and pull exercises. A couple of weeks after having trained the human flag for no more than 1-3 reps per workout, holding it for as long as I could, I was able to do just over 30 seconds.

I recommend you test other skills every now and again (I typically do it every 8 weeks) to see if you've made gains in skills you haven't even been training. Such as the bench press, weighted dips, weighted pull-ups, human flag, back lever or the static versions of what you've been training i.e. front lever or planche for time.

Some people focus only on building muscle, others on skills., Many of us focus on somewhere in between thinking that the two go hand in hand. Every goal is a good goal as long as you know what your goal is. If you want to focus more on skills, if

that is what keeps you motivated, then go ahead! I personally think it's more effective to focus on skills than on muscle when the goal is both, but I don't believe that it has to be either or. For instance, I worked hard reaching my goal of 5 sets of 5 reps of slow and controlled tiger bend HSPUs and to me, that was about the challenge of building a specific skill rather than muscle, but all the training that led up to that level of performance obviously put a lot of mass on my triceps and upper pecs.

A young man once came up to me and my friends asking us for tips on how to build biceps, as he was new to calisthenics and had seen us doing the more advanced drills. We looked at each other, shrugged and answered, simply, pull-ups (and all versions of the pull-up, including one arm chin-ups and muscle-ups). This wasn't the answer he was looking for and he wasn't convinced. Despite his personal best at the time being 3 shaky pull-ups, he was still skeptical to our suggestion that he would benefit from improving his pull-up. He kept trying to find more biceps-isolating versions to get a bigger pump in his virtually non-existent biceps. Needless to say, as the weeks and months went by he hadn't managed to build neither his pulling strength nor his biceps from stubbornly following that method. That's how you learn though, through trial and error. I suppose it's true that form must follow function. My recommendation for principles to always follow is to focus on skills, strength and quality per repetition first. Don't forget to push the reps and do more when you can without sacrificing form. Don't overtrain, especially if you feel any aches and pains, and remember to take diet and sleep into consideration when planning your days.

CHAPTER 5.
THE PROGRAM - THE PRIO SYSTEM

THE PROGRAM LAYOUT

“Now hold up, I hear what you’re saying but my nagging prior knowledge is telling me that bodybuilders train each muscle once a week, so that must be best for hypertrophy. Gymnasts and weight lifters often practise their skills daily. The former is bigger but the latter is stronger, doesn’t this mean that they’re mutually exclusive?”.

Most bodybuilders will tell you that they train each muscle once a week. Now I’m not saying that they’re lying, but I’d say it’s closer to the truth to say that what most bodybuilders really do is they focus on each muscle once a week, not that each muscle only gets trained once a week. Here’s an example of a bodybuilder routine. I’ve chosen to keep only the pressing muscles for simplification:

Day	Muscle	Main exercise
Monday	Chest	Bench press
Wednesday	Triceps	Narrow grip bench press
Friday	Delts	Overhead press

Plus more exercises of course, either for assistance or for isolating the target muscle. But the interesting pattern here, and the main thing to notice, is that a big pressing (basic, multi-joint) exercise is the basis for all three biggest muscles in the push group: pecs, front of shoulder (delts) and triceps. So these three workouts all train the same muscles to varying degrees. It's the same movement in different directions.

It doesn't matter if you use a barbell, dumbbells or your bodyweight, the same principles apply. This happens to coincide with what we learned in chapter 2, in other words, the bros and their bro-science seem to have been right all along but maybe not for the reasons they thought. If we use the above bodybuilding template for pressing muscles and translate it to calisthenics, we can end up with something like this:

Day	Muscle	Main exercise
Monday	Chest	One-arm push-up
Wednesday	Triceps	Handstand push-up
Friday	Delts	Planche push-up

In our case, instead of adding isolating exercises, we will add the main exercises from the other days again, so that we effectively train all skills three times a week but with different intensities. How to do it? Enter: The Prio System.

THE PRIO SYSTEM: WHAT IS IT?

This is what will enable you to get what you want out of this book. The Prio System works according to a heavy, light, medium protocol. You'll do the exercises according to priority, where Prio 1 is both the skill and the muscle that you'll focus on for that day. There will be a Prio 2 and a Prio 3 exercise for each day as well. What is todays exercise for Prio 1 (heavy) becomes Prio 3 (light) in the next one workout, and Prio 2 (medium) in the next one, and then back to Prio 1 again. This pattern doesn't change regardless of how many days a week you train .

THE PROGRAM

Below is a table showing how the priorities move during the workouts. On the left you will always be presented with the master level. Then you choose which progression you train as Prio 1, 2 and 3. See the RULES section to help you choose the right progression. In this example we use a 6 days a week program. The one-arm push-up goes from Prio 1 on Monday / chest day to Prio 3 the next time it's trained which is on Wednesday / shoulder day, and then to Prio 2 when it's trained the third time on Friday / triceps day.

PUSH	**MON / CHEST**	**WED / DELTS**	**FRI / TRICEPS**
One arm push-up (OAP)	Prio 1 (heavy)	Prio 3 (light)	Prio 2 (medium)
Planche push-up (PLPU)	2	1	3
Handstand push-up (HSPU)	3	2	1
PULL	**TUE / BACK**	**THUR / BICEPS**	**SAT / BACK**
Front lever row (FLR)	1	3	2
One-arm chin-up (OAC)	2	1	3
Muscle-up (MU)	3	2	1

RULES

- Prio 1 (heavy) for the current workout becomes Prio 3 (light) in the next one, and Prio 2 (medium) in the next one, and then back to Prio 1 again. This doesn't change regardless of how many days a week you train.
- Prio 1 gets trained first, using the toughest progression you can do with good form while staying within 6-30 reps.
- Prio 1 gets more sets, and is followed by mechanical drop-sets (on all or only the last set) and can have an isolation exercise at the end of the workout, i.e. after Prio 2 and 3.
- Prio 2 and Prio 3 are considered assistance exercises to Prio 1 and should be easier than on the day when they are Prio 1. They are there for practise, frequency and volume with some variety.
- On Prio 2 day for an exercise, you can use the same exercise as you did on Prio 1 day, but with fewer reps. Aim at doing about half as many as on your Prio 1 day. For example if you did 10 HSPUs on Monday when it was Prio 1 you do only 5 on Friday when it's Prio 2. This example doesn't break the rule of staying within 6-30 reps as you're not pushing to failure, and you could've done more if it had been the Prio 1 day for that exercise.
- If you find your current Prio 1 progression too hard to be used on Prio 2 days, then back down a step on the progression chart for your Prio 2 day. Instead of doing the same exercise with fewer reps, do an easier version that still works the same muscles and keeps you in the 6-30 rep range. If you can only do 6 reps of the Prio 1 exercise then you have to choose an easier version.
- Prio 3 is always an easier progression than when it was on Prio 1 day. For instance tucked PLPU on Prio 1 becomes leaning push-ups on Prio 3 day and mixed grip pull-ups become normal pull-ups.

Looking at the Prio System from one skill at a time

It might be easier to think about it from the perspective of one skill at a time. Let's take the one-arm push-up as our example. You've decided you want to train this skill three times a week, on Mondays, Wednesdays and Fridays. You start on Monday with it as your Prio 1, and you go through the progressions until you find one that suits your level. You do 3-8 sets (since you're doing nothing else), adding a mechanical drop-set to the last set. That's it. On Wednesday you have a light workout, Prio 3, in which you do 3-8 sets of an easier progression. On Friday it's time for Prio 2 and you feel recovered enough to again train your toughest progression but with fewer reps on your 3-8 sets, staying further away from failure than on your Prio 1 day. On the following Monday, you're back at Prio 1. Ok, now you have the pattern figured out and you want to add the other two pushing exercises, PLPU and HSPU. Monday was Prio 1 for one-arm push-up, so on Wednesday you add PLPU to the mix making the PLPU the Prio 1 on Wednesdays. On Friday, you add HSPU making HSPUs the PRIO 1 on Fridays . Then all exercises follow the same pattern, only that they start on different days of the week .

Know your goals and preconditions

A few questions to get you going and to make the planning of your workouts easier:

Will you train at home, in the park or in the gym?

When will you be training? How many days a week, on what days and at what time?

Is there a skill or a muscle group you would like to focus more on?

What equipment do you have access to and is there anything that you would like to buy? Is there something that you for some reason don't want to use? Some people are allergic to incorporating certain things, such as machines, barbells, dumbbells rubber bands, kettlebells.

In my personal training with both myself and clients, I do it all, but I do very little of everything that isn't bodyweight on the floor or from a bar. I occasionally use, or have used, dumbbells, parallettes, barbells, gymnastic rings, gym machines, cable pulleys, kettlebells and a weight belt, and it's

all great! Just have a clear reason *why* when you change things around, and stick to the program rules when you change exercises and equipment.

A short mention on specificity, boredom and discipline

Do you seek to make progress or to be entertained? Within a workout it might seem exciting to try new programs and new exercises. Doing the same things over and over might get boring, I get it. What's more fun and exciting in the long run though, playing around and neglecting your goals, or accepting a bit of monotony to really build up to something and reach your goal? Which is more disheartening, not allowing yourself to fool around today, or knowing that you won't reach your goals because you refuse to discipline yourself?

Discipline might be a scary word to some people, but all it really means is to strive to keep our behaviour consistent with our goals.

I believe most would agree that this is a very good thing, albeit a difficult one. If you feel like you need a period or a workout to play around with tricks so as not to lose motivation, then do that, as long as you actively decide what to do instead of letting your whims decide for you.

PROGRAM FOR 6 DAYS A WEEK - ALTERNATING PUSH AND PULL

This is as tough as it gets, but don't let that intimidate you. It is tough, in the sense that you wouldn't benefit from doing more, but since we'll be splitting our workouts in push / pull you only have three exercises (plus isolation, optionally) to worry about per workout. And, it probably takes less time than you think. Let's say a set takes about 30 seconds of actual work, followed by 3 minutes of rest, and that you have 8 of these sets in a workout. That's 3,5 min x 8 = 28 minutes, out of which only 4 minutes are spent putting tension on muscles and the remaining 24 spent resting and recovering. Remember what I said in the beginning of the book, about my Spanish lessons being done in between sets? I wasn't joking. If, like me, you have small children to look after outside of working hours, then I recommend you plan your training around that. A set of HSPUs, change a nappy, another set of HSPUs, do some dishes and wipe a snotty nose, and so on and so forth. Admittedly, not the most glamorous form of exercise one can imagine, but I promise you that strength and results don't care. It is what it is, use what you have, do what you have to do to get it done.

Following is a table showing you the days of the week and the Prios for each day .

Sets / volume
Prio 1: 2-3 sets
Prio 2 and 3: 2 sets
Total per workout: 6-7 sets
Sets per week: 18-21 sets

Day	Prio 1	Prio 2	Prio 3
MONDAY **Chest/Push**	One-arm Push-up OAP	Planche Push-up PLPU	Handstand Push-up HSPU
TUESDAY **Upper back/Pull**	Front Lever Row FLR	One-arm Chin-up OAC	Muscle-up MU
WEDNESDAY **Shoulders/ Push**	Planche Push-up PLPU	Handstand Push-up HSPU	One-arm Push-up OAP
THURSDAY **Biceps/Pull**	One-arm Chin-up OAC	Muscle-up MU	Front Lever Row FLR
FRIDAY **Triceps/ Push**	Handstand Push-up HSPU	One-arm Push-up OAP	Planche Push-up PLPU
SATURDAY **Upper back/Pull**	Muscle-up MU	Front Lever Row FLR	One-arm Chin-up OAC

PROGRAM FOR 4 DAYS A WEEK - or 2 days on, 1 day off

If you train 2 days on and 1 day off, that means that you'll train push on Monday, Thursday, Sunday, Wednesday, Saturday, Tuesday, Friday and then back to Monday again after 3 weeks. This is not a problem, physiologically speaking, but might be very hard on your head for logistical reasons, such as your family, friends, work and other nuisances in life that may rob you of the attention you should be putting into training. That was a joke. I recommend you instead do it according to the table below, resting two days on the weekend or however you want to plan it so you may keep a weekly routine.

Sets / volume
Prio 1: 2-4 sets
Prio 2 and 3: 2-3 sets
Total per workout: 6-10 sets
Sets per week: 12-20 sets

Day	Prio 1	Prio 2	Prio 3
MONDAY **Chest/Push**	OAP	PLPU	HSPU
TUESDAY **Upper back/ Pull**	FLR	OAC	MU
WEDNESDAY	Rest		
THURSDAY **Shoulders/ Push**	PLPU	HSPU	OAP
FRIDAY **Biceps/Pull**	OAC	MU	FLR
SATURDAY	Rest		
SUNDAY	Rest		

PROGRAM FOR 3 DAYS A WEEK - COMBINING PUSH AND PULL EVERY OTHER DAY

Don’t fall into the trap of thinking that this is half as hard as 6 days a week because you only train half as often. True, this routine has the benefit of you not having to train every day, but the workouts are longer and more taxing. This can be a huge benefit if you don’t mind long workouts and you prefer to train at the gym or the park with the company of others. This one I’ve done a lot throughout the years and I honestly can’t say which one has worked best for me, three days a week combining push and pull or six days a week separating them. This may very well be the sweet-spot for you. Try it.

When you combine push and pull, you have to do the Prio 1 from both groups first, that is, start with your Prio 1 push and after that do your Prio 1 pull instead of going to Prio 2 push. With this routine you only do 2 sets for all exercises, including the Prio 1, but you can keep the mechanical drop set for the last set of your Prio 1. You may, to save time, alternate sets of pushes and pulls in the Prio 2 and 3 exercises, if you can do this without losing technique or reps. Do a set of push, wait 2 minutes, do a set of pull, rest 2 minutes and back to another set of the first exercise. You can still do isolation exercises, and they will still be done at the end of the workout for 2 sets of 10-20 reps. The isolation exercises can be alternated too, i.e. one set of curls, rest 1-2 minutes, one set of french press, rest 1-2 minutes and back to curls .

Sets / volume - times two since you’ll be doing push and pull on the same workout
Prio 1: 2-3 sets
Prio 2 and 3: 2 sets
Total per workout: 6-7 sets
Sets per week: 18-21 sets

Day	Prio 1	Prio 2	Prio 3
MONDAY **Chest & Lats**	OAP FLR	PLPU OAC	HSPU MU
TUESDAY	Rest		
WEDNESDAY **Biceps & Shoulders**	PLPU OAC	HSPU MU	OAP FLR
THURSDAY	Rest		
FRIDAY **Triceps & Upper Back**	HSPU MU	OAP FLR	PLPU OAC
SATURDAY	Rest		
SUNDAY	Rest		

PROGRAM FOR 2 DAYS A WEEK - COMBINING PUSH AND PULL

This program is the best in two scenarios: either when you're pressed for time and can't train more often than twice a week, or when you have another sport or event you're training for and you want to use calisthenics as your main tool for strength. That does not mean that this is an easy or lazy version compared to the other ones. This program can be really hard because of the volume or number of sets you'll want to get in. As proof of its efficacy, this is the program that took me from 1 set of 3 tiger bend HSPUs to 5 sets of 5 reps. You'll follow the same rules for combining push and pull as for the 3 days a week program. You can choose to train with two days rest in between or you can decide on what two days a week you will be training, such as Mondays and Thursdays.

Sets / volume - times two since you'll be doing push and pull on the same workout
Prio 1: 3-4 sets
Prio 2 and 3: 2-3 sets
Total per workout: 7-10 sets
Sets per week: 14-20 sets

Day	Prio 1	Prio 2	Prio 3
MONDAY **Chest & Lats**	OAP FLR	PLPU OAC	HSPU MU
TUESDAY	Rest		
WEDNESDAY	Rest		
THURSDAY **Biceps & Shoulders**	PLPU OAC	HSPU MU	OAP FLR
FRIDAY	Rest		
SATURDAY	Rest		
SUNDAY	Rest		

LEG TRAINING

As promised in chapter three, here are the two examples of how to train your lower body. One is with external resistance, in other words means going to the gym, and the other one does not use anything but the weight of your body. Don't underestimate the one with only bodyweight.

Leg training using the gym

You'll notice that I recommend fewer reps in heavier exercises, even though in the beginning of this book it was stated that there is no specific rep range for hypertrophy rep as anything between 6-30 reps will work if taken to failure or close to. The reason for the low rep recommendation is that these exercises work your lower body dynamically whilst your torso and core have to bear the grunt statically. As the reps get higher many experience that form starts to deteriorate, possibly leaving you more susceptible to injury, especially in your lower back. In my experience as a physiotherapist and as a powerlifter, more people get injured from doing high rep squats or deadlifts with light weights, than with heavier weights. When done conservatively and with fewer reps, heavy but low reps rarely bother anyone (save for those with mobility issues, but that's not dependent on rep range).

Day 1:

1. Squats 3x6
2. Romanian deadlifts 3x6
3. Lunges 3x6-30
4. Knee extensions supersetted with hamstring curls 3x10-30.
5. Standing calf raises on an elevated surface 4 sets.

Day 2:

1. Deadlifts 3x6
2. Front squats 3x6

3. One-legged leg press 3x6-30 (per leg)
4. Knee extensions supersetted with hamstring curls 3x10-30.
5. Standing calf raises on an elevated surface 4 sets.

Try the routine above for a couple of months and share your progress, tag #priosystem!

If you only can or want to train your lower body at the same time as you do your upper body, then here's an example of a program for that:

Leg training using only body weight.

Since you're not using external resistance you will have to adjust the difficulty of the exercises by for example doing them on one leg, following the same principles regarding progressions as outlined in chapter 4 .

Day 1:

1. Squats or lunges 3 sets (per leg if you do lunges or one-legged squats)
2. Sissy squats 3 sets
3. Hip bridges or thrusts 3 sets (per leg if done on one leg)
4. Standing calf raises on an elevated surface 4 sets.

Day 2:

1. Squats or lunges 3 sets (per leg if you do lunges or one-legged squats)
2. Nordic leg curl / hamstrings 3 sets
3. Sprinting 5-10 x 100 meter (start easy on this, not your fastest and not 10 sets first time you try it).
4. 4-8 circles of jump rope 1 minute followed by 10 standing calf raises and then back to jump rope, without any rest between exercises.

WARM-UPS, PREHAB AND MANAGING ACHES AND PAINS

Too much, too soon or too sloppy. Sometimes it happens like that. You've been having so much fun with new skills that you've simply done too much of everything, neglecting recovery and ignoring volume and pain. You might have progressed in strength faster than what your body's conditioning has kept up with, or you've accepted crappier form than you should've because you shortsightedly chased some arbitrary rep number as a new personal best. Anyway, when the damage is done, you have two options:

1. If something snapped, clicked, started bleeding, seems unstable or anything else of the sort, go see a medical professional. I might be biased, but I'd like to think that on average, physiotherapists should be best at diagnosing and treating these things. Try to find someone who specializes in sports medicine.
2. Otherwise, keep training but take a step back. Continue to move but don't train with pain, to avoid making matters worse or hinder recovery. If you stop moving you'll get stiff and weak, which is not great for recovery. Don't stop moving, but don't train things that cause pain if that pain then gets worse during or after a workout. If that's the case, you need to step back even more for a while.

MOBILITY

Do only what you need, unless you do it for the sake of enjoyment. Only stretch to increase mobility where and when it's needed. You don't have to stretch everything before and after workouts. And I say stretch specifically, referring to the typical passive and static forcing of body parts into different exotic directions. Mobility is something else, that means being able to dynamically move through a ROM. Mobility is best achieved and kept through dynamic strength training exercises. That's if your strength training takes you through ROMs big enough for you to get all your mobility from there. Which it should.

For all drills below, stretch as far as you can without causing pain, increasing your pain-free ROM over time. Don't stress with these exercises, don't get competitive with yourself here. It is probably best, and easiest on your head, to get into the habit of doing these directly before a workout, but anytime of the day is fine really. Mobility drills are best done actively, so don't strive after a passive stretch, stay active in the muscle and joints that you're stretching.

Wrists, elbows, hands and fingers

Many of the skills in this book put your wrist in a backward-bent position (very far in the planche) whilst supporting your entire body weight or close to it. To stay healthy and get stronger you need to condition your wrists and keep them flexible.

This takes about five minutes and is time very well spent. Do this at 2-6 times a week, as often as you feel you need. Unless something else is stated do all drills from the position of a push-up on your knees.

Get down on your knees and hands, actively push through your fingers, hands and shoulders. Elbows are kept straight throughout the exercise. Push hands through the floor and protrude your shoulders (visualize pushing yourself away from the floor). Do all drills for 5-15 reps, doing some reps slower

and some faster, just to get your wrists accustomed to different movements.

- Elbow rotation - supination / pronation from a push-up position. Fingers pointing forwards like a push-up, rotate your elbow as far as you can in one direction and then the other.
- Fingers pointing forwards, lean / rock backwards and forwards.
- Back of the hand pulses - hands pointing towards each other, fingers almost touching, go from putting your weight on the back of your hand up to resting on your knuckles with a clenched fist.
- Fingers pointing out to the sides. Inside of wrists facing each other, hands shoulder width apart. Lean backwards and forwards.
- Side to side - same position as above, but lean left and right instead of backwards and forwards.
- Fingers pointing back - lean backwards and forwards. If you're unable to keep your arms straight, move hands closer to the knees or even all the way back to the outside of your knees.
- Back of your hands on the floor - back of the wrist pointed forwards and back of the hand on the floor, fingers pointing towards knees. Lean backwards and forwards.
- Fingers pointed forwards. Shoulders above your hands like in a push up. Push your hands up as far as you can, lifting the base of your hand away from the floor, extending fingers as they remain on the floor, only extending the knuckle joint.

Shoulder warm-up

- Start pull workouts by hanging from the bar and doing small shrugging movements with your elbows kept straight.

- Start push workouts by doing the warm-up for wrists, hands and fingers. Before you do your first hard set of the day, do one or two really easy sets of a much easier progressions. If your first hard sets is expected to be 10 handstand push-ups, then do a set of normal push-ups on the floor for 10 easy reps 2 minutes before your first hard set.

There are loads of other exercises one can do, but this warm-up will have you covered unless you have specific needs such as an injury. In that case, general recommendations might not be enough for you and you should seek help from a physiotherapist for assessment and when you know what the problem is, then consider a personal trainer who can help you work around and rehab your injury. Shoulders are less prone to suffer injuries from a lack of flexibility, but we want flexibility for other reasons. Specifically we want to be able to lift our arms over our heads and even behind the ears, to find a good position in the handstand.

Overhead shoulder flexibility drills

Drill 1: Pullover stretch.
Lie on your back with legs bent to avoid arching in your lower back. Hold something with both hands (I use a light kettlebell) and straight arms and lower it over your head. Keep your abs tense and press your lower back into the floor when you lower the weight over your head. Do 5 reps 2-3 times a week. Good flexibility for handstands is when the back of your hands can touch the floor without the lower back arching.

Drill 2: passive stretch leaning on a chair.
Get down on your knees with a chair in front of you. Rest your forearms on the seat of the chair and lower your torso to the floor. Your knee and hip joints should be bent at around 90°. The goal, for our purpose of handstand flexibility, is to get your torso down to the floor to the point where there's an imaginary straight line between your spine and your arms, both parallel to the floor.

Drill 3: tucked handstands.
When you bend your hips and knees and tuck your lower body in a handstand it locks your lower back in a position that

makes it impossible to adjust your balance by flexing and extending your back, instead you are provided with a crash course on how to use your wrists, fingers, shoulders and elbows. The tucked handstand also puts more weight on the belly side, meaning you will naturally flex your shoulders even higher over your head to stop yourself falling over. Use a wall for this exercise and have your back against it, but of course try to balance freely as much as possible and use the wall only as a safety measure.

Drill 4: passive hang from a pull-up bar.
Self-explanatory. Hang for a while and let your body weight take care of the stretching for you. If this bothers your shoulders initially, then try pulling your shoulders down into your rib cage making it an active hang, If this isn't enough or your hands get tired too quickly, place your feet on something to take a big chunk of your bodyweight off from your hands, without changing the angle of the stretch. Either find a bar low enough or put a chair under the bar.

HIP FLEXIBILITY

What we want is an increase in hip extension, to make the planche pretty and to enable a good position for handstands. What's holding our hip extension back is lack of mobility in our hip flexors (iliopsoas and rectus femoris), or having hip extensors (mainly glutes) weak compared to the hip flexors, at least in the most extended position with legs straightened. Hip flexors are what we use to lift our legs in hanging leg raises, and what becomes stiff from sitting (with flexed/bent hip joints) all day.

First off, you might have enough flexibility but you're not using it! This means you have to start using your glutes to straighten your legs. Not using your glutes can come from either not having focused on it before or having developed the habit of using the banana form to make balance easier. Try a handstand against a wall to see if you can straighten your hips out without increasing the arch in your lower back now that the balance challenge is absent. Have a friend help out with balancing and checking your form, or use a camera and film yourself from the side. If you try but you can't straighten your hips out, try the following:

Drill 1: The good old kneeling lunge hip flexor stretch.
Go down on one knee (this is the side that gets stretched) with the other foot in front of you and your front knee bent. The more you arch your lower back, the less of a stretch you get. Keep your abs and your glutes (on the kneeling side) tense to both fight the arching of the lower back and teach you how to actively extend the hips.

Drill 2: Standing hip extension.
Stand up, take a short step back, about 30 cm, with the side you'll start with. Lean your torso slightly forwards, round your lower back slightly by using your abs. Now tense your glutes on the same side and maintain this position as you go from torso leaning forwards back up intoa straight position. The abs tensed, lower back rounded and glutes tensed are absolutely key, otherwise you'll just compensate for your lack of flexibility by arching your lower back. This is a great exercise

because it more closely mimics what you need to do in the handstand, because in this exercise you're straightening your legs and hips at the same time. It might take a couple of sessions to figure out but care less about the stretch and more about the specific muscle activation pattern you're building. Think about how much this will benefit your planche and handstand push-up and you might be more ok with this being a long-term commitment.

CHAPTER 6. SUMMARY OF THE PRIO SYSTEM

The upper body is divided into push and pull.

You can choose to train between 2 and 6 days a week.

Do 10-20 hard sets per week and muscle group, NOT per exercise. A hard set is a series of repetitions where you stop when you can only do 1-3 reps more.

Rest 2-3 minutes between sets.

On push days, do progressions of these exercises:

- Planche push-up - shoulders
- Handstand push-up - triceps
- One-arm push-up - chest

On pull days, do progressions of:

- Front lever row - lats
- Muscle-up - upper back in general
- One-arm chin-up - lats, biceps

Vary the order and intensity of the different exercises by applying the Prio System:

- Prio 1 (heavy) for the current workout becomes Prio 3 (light) in the next one, and Prio 2 (medium) in the next one, and then back to Prio 1 again. This doesn't change regardless of how many days a week you train.
- Prio 1 gets trained first, using the toughest progression you can do with good form while staying within 6-30 reps.
- Prio 1 gets more sets, and is followed by mechanical drop-sets (on all or only the last set) and can have an

isolation exercise at the end of the workout, i.e. after Prio 2 and 3.

- Prio 2 and Prio 3 are considered assistance exercises to Prio 1 and should be easier than on the day when they are Prio 1. They are there for practise, frequency and volume with some variety.
- On Prio 2 day for an exercise, you can use the same exercise as you did on Prio 1 day, but with fewer reps. Aim at doing about half as many as on your Prio 1 day. For example if you did 10 HSPUs on Monday when it was Prio 1 you do only 5 on Friday when it's Prio 2. This example doesn't break the rule of staying within 6-30 reps as you're not pushing to failure, and you could've done more if it had been the Prio 1 day for that exercise.
- If you find your current Prio 1 progression too hard to be used on Prio 2 days, then back down a step on the progression chart for your Prio 2 day. Instead of doing the same exercise with fewer reps, do an easier version that still works the same muscles and keeps you in the 6-30 rep range. If you can only do 6 reps of the Prio 1 exercise then you have to choose an easier version.
- Prio 3 is always an easier progression than when it was on Prio 1 day. For instance tucked PLPU on Prio 1 becomes leaning push-ups on Prio 3 day and mixed grip pull-ups become normal pull-ups.

Extend your Prio 1 sets by using mechanical drop-sets. Immediately or within 15 seconds upon ending one set, use one of the techniques described in chapter 4, e.g. do another 5-15 reps in a progression a step or two under what your current Prio 1 is.

Optional: add an isolation exercise relevant to the muscle that is the Prio 1 focus of the workout. For example tiger bend push-ups or french presses for triceps. Do this for 2 sets x 10-20 reps at the end of your workout and do not go as heavy and hard as you can with these, focus instead on using a full ROM and working the target muscle specifically.

EXAMPLE WORKOUTS AND HOW TO LOG

I'm going to give you two examples of how to log your workouts. The only difference behind these examples and how I do it is that I often only log the Prio 1, to kind of force myself to focus only on that skill and those 2-3 sets for that day. This is a reminder that I shouldn't try to progress or push my Prio 2 and 3 for that day, so whatever they do it should be nothing exciting. Just going through the motions and improving coordination, but not pushing as hard as I would if they were Prio 1. I use and excel sheet. You can of course use whatever, but I do recommend you use something, because logging your workouts is a great way to create future success.

Friday. Prio 1: Handstand push-up. Muscle: Triceps.

1. Wrist warm-up (chapter 5)
2. Prio 1: HSPU 3 sets x 8-12 reps + Pike press 3 x 8 mechanical drop-set
3. Prio 2: OAP. Lever push-ups 2 x 10
4. Prio 3: PLPU. Leaning push-ups 2 x 10
5. Isolation: Tiger bend push-up 2x20

Explanation: The plus before the pike press means that that exercise was the one used after Prio 1 as a drop-set. Everything else, I hope, is self-explanatory in terms of sets, reps, exercises and order. The isolation exercise can be replaced with anything you have available that works the muscle well for you. Refrain from trying to squeeze in another assistance exercise, such as anything that has the direct goal of building strength or a skill. That is already taken care of and adding more might lead to progressing less. Focus instead on the muscle and the joint, moving smoothly through a full ROM. This will build muscle and help with longevity, which is important because nothing halts progress more abruptly than an injury.

Tuesday. Prio 1: Front lever row. Muscle: Lats, Biceps, Traps.

1. Warm-up - Hang from a bar and pull with straight arms to get your grip and shoulder blades ready.
2. Prio 1: FLR Tucked, 4 sets x 8-12 reps + FL tucked hang 1 x 10 seconds
3. Prio 2: OAC. Mixed grip 2 x 10 per arm
4. Prio 3: MU. High pull-ups 2 x 10

Explanation: The FL tucked hang done after the row serves as the mechanical drop-set, maintaining tension on the lats after the relatively weaker biceps have given up, while adding volume to time spent in the static front lever position. This will speed up acquisition of that skill. This was only done for one set after the last set of rows. There was no assistance exercise, but instead an extra set of FL row plus the added volume to all the pushing muscles that comes naturally from the OAC mixed grip, since it's a semi-unilateral (one side at a time) exercise that still puts some tension on the other arm.

Either of these two examples can be done in 30 minutes once you've figured out your progressions. Again, let's say on average your sets take 30 seconds and you rest for 3 minutes between sets. Take that multiplied by 8 sets and you have 28 minutes. That is 4 minutes of actual training! Let's say you do the wrist warm-up from chapter 5 before the workout and one of the mobility drills for overhead mobility afterwards, this will only add 4-8 minutes to the original 28 which means that we still land at 32-36 minutes for a workout like that, with only 4 minutes spent training. This is a lot less than what many people spend at the gym, and that's not even including the time it takes to get there and back!

CONCLUSION

What you've just read might be the best program ever written on the topic of building strength and muscle with bodyweight training. I've tried many and this is the only one I use myself. I feel very confident in recommending this program to both my friends and clients, even when calisthenics is not the goal! This program delivers the physical development and all-round strength most people seek, even without an interest in calisthenics.

You no longer need to choose between training for muscle or for skills and strength, you can have both, without compromise. The workouts take less time than most other programs and methods, and time spent going to and from the gym can be non-existent if you train from home. It's a very focused program that will have you working on and improving in the movements that really matter. It's super abbreviated and flexible.

Now it's up to you. You have the program, you know the exercises, you know the reps and set schemes and how to perform the movements. Doing it costs nothing, takes less time than other programs but you will have to add consistency, hard work and patience to stick to it and make it happen.

Best of luck!

FREQUENTLY ASKED QUESTIONS

I can do leaning push-ups for six reps and have been doing so for quite a while now, at least once in my life, but I still can't progress to tucked PLPUs yet. What am I doing wrong?! How do I bridge these two exercises?

I don't know how many times I've heard or read a variation of this question. The solution is tremendously simple, you guessed it: do more and better reps with a progression you master, in this example the leaning push-up. Apply *unhurried confidence* , go back to concentrating on execution and technique, building muscle and adding (quality) reps whenever you can and give it more time. Set a new goal, for example 10 reps and then try again. If no, then do the same thing again but change the goal to 15 reps. Consider adding a 5 kg weight on your back when the reps go over 12. It does take time, just keep going. Don't go crazy and start changing things in the program because you get bored. Boredom is not bad, it is actually part of success, because succeeding in anything will require doing the same thing over and over again.

But this guy I follow on instagram says he makes good progress on only once a week!

Yes, and there's nothing superhuman about that! I explained why higher frequency seems better for most of us, but I never said that lower frequency wouldn't work at all. Some people however do claim that you can't make progress with once a week, and that is not true. However, there's a big difference between saying that you can make progress with training once a week at all, and claiming that it would be optimal for everyone, which just isn't true either. Yes, it is doable if your have to, but it's less likely to be your perfect frequency. It might be for some people, in some stages of their training, but to say that it's always the best for everyone is just too far away from what the science shows when we study what actually happens if we have many people doing the same thing. Look at it this way: many people train several times a week for years and still don't make any progress, so training more often isn't going to fix things on its own. HOW you train is therefore more important than how often.

The Prio System can give you gains with training once a week. Do it like this: combine push, pull and legs. Remove the muscle-up and the one-arm push-up (the remaining will carry-over). Keep PLPU, HSPU, OAC, FLR and squats or lunges. Do 2-3 sets per exercise. Skip mechanical dropsets to save energy, and instead add a finisher at the end of the workout. Only one finisher per muscle group: push, pull and legs respectively. Choose an easier progression for each muscle group e.g one set of normal push-ups or diamond grip push-ups for both PLPU and HSPU. One set of pull-ups or tucked hang for both OAC and FLR One set of lunges or bodyweight squats for legs. This will work if the quality of reps is good and you don't go too heavy or too light.

I've read elsewhere that trying to progress beyond a certain point can be dangerous for your joints, and this appeals to me since I'm afraid of hard work. Is it true?

Speaking here from the perspective of a physiotherapist, that is complete and utter bulls**t. It is not even logical. It assumes that we all have the same base level of strength, which is an obviously flawed assumption. The reasoning goes something like this: the planche push-up is too much but the normal push-up is perfect. My problem with that is that I have many patients and clients who would hurt themselves trying to do even a half push-up on their knees. Whoever says something like that must assume that his strength level, which is inevitably going to be vastly different from some of his readers', is some kind of a golden standard, not understanding that what's easy for him is still going to be too heavy for someone else. The human body is fantastically adaptive, but to progress safely we must respect our current state and conditioning and go from there. If it can hurt you, you weren't prepared for it, i.e. you haven't spent enough time training an easier version based on your level and your preconditions.

Can I replace … with …?

Sure. I mean, probably. It depends. The focus of this book is the Prio System, but the specific exercises that go into the program were also chosen for a number of reasons, the main one being that they carry-over to each other. If you remove and replace one, I can't tell you how the others will react.

Having said that, the program and its foundation has been laid out for it to be flexible enough for people with slightly different goals. Try to use the figure of directions of force in chapter 1 to work out if replacing something with something else can be done without causing a clash with some other part of the program. If you feel like dropping one arm push-ups for a while to replace with training to reach a goal or personal best in for example weighted dips, then go ahead! Or replacing the HSPU with a barbell military press every other workout. From a hypertrophy point of view this change would be fine since they train basically the same muscles. Don't replace a skill with another skill that doesn't train the same muscles, because then you're not just removing one stimulus, you're also most likely doubling another one meaning you're actively disrupting the recovery and therefore progress of another skill and muscle.

If you do choose to change the exercises so much that your routine no longer follows the principles in this book, then please at least refrain from blaming the program.

Does the full ROM dogma also apply to the isolation exercises?

No. The reason behind me nagging about full ROM, and for having large ROM as one of the inclusion criteria for the exercises in this book was that it has more carry-over to strength and coordination in other exercises. For joint health and mobility, it is best to choose a full ROM also for the assistance exercises. However, for hypertrophy purposes, assuming that you're not lacking in mobility and your joints aren't giving you trouble at the moment, it can actually be better with isolation exercises that use a partial ROM! Some studies have shown that, at least for the triceps, staying in the strongest ROM and avoiding the weaker end positions of joint mobility leads to greater gains because we can use more weight or do more reps with the same weight. Ultimately, what one study showed was that it can build bigger and stronger triceps. For example tiger bend push-ups they might be better if you don't go all the way down to the floor but keep on repping in your strongest position.

I want to focus specifically on … until I hit my goal of … how do I do that without losing progress in the other skills?

I recommend doing it like this: Do that very most important thing first of all workouts where it would normally be included (push or pull) but still only push it to failure once a week. Only use mechanical drop sets once a week. Stay with the same total volume per week but redistribute it so that this skill or muscle gets more. Redistribute by stealing a set from each of the other two prios of that day. Replace the isolation exercise with an easier version of that thing you're working on. Also, sneak in some of the exercises from the *specific skill work* section. Do these drills first and keep it light, think of it not as pushing but getting your body accustomed.

After three sets of Prio 1, I feel like I could do more. Does this mean I'm a superhuman who would benefit from adding more sets?

If only! But for most of us, no, this feeling is part of the plan. More isn't always better. Don't confuse optimal with maximal. You're supposed to feel challenged but relatively fresh after your Prio 1, because you need energy for Prio 2 and Prio 3. They don't just train the same muscle group, they are also skills on their own and for that you need some steam. The goal is to stimulate, not annihilate.

I'm still not convinced that anything over 12 reps is heavy enough to actually build muscle. Other than what you eggheads and keyboard warriors claim, did anyone ever really get big training like that?

At least you've been far from alone in this sad state of broscience and willful ignorance. This has been believed for a long time and stems from a prehistoric time before it had been properly studied. I think it's for that reason that some theories die harder than others, namely that when they were conceived we accepted them without evidence so why would evidence be needed now? Interestingly, even before recent years' evidence of muscle getting built in everything from 6 to 30 reps, there have always been people achieving good results with other training than 8-12 reps. For instance, Sergio Oliva preferred 15-25 reps on all upper body exercises and the body he built in

the 60s still rivals most of today's bodybuilders despite the latter having access to much more advanced drugs and, at least supposedly, more intelligent training methods. Take a look at this photo, and ask yourself why no one bothered explaining to poor Sergio that his method wasn't working. Imagine the physique he could have built, had he only known!

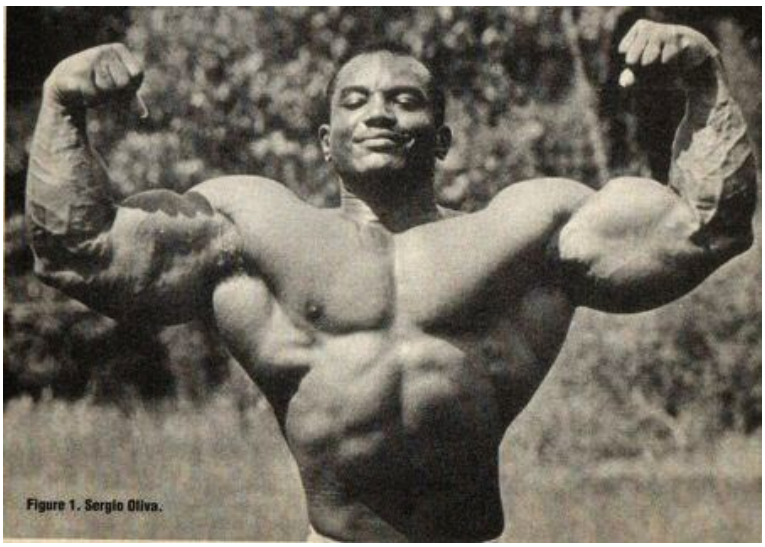


Figure 1. Sergio Oliva.

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KRISTOFFER LIDENGREN is a husband, father, physiotherapist and a personal trainer. He is a former competitive powerlifter at a national level, researcher in exercise physiology, lecturer in anatomy and orthopedic assessment for medical students at Lund University and instructor of kettlebells for martial arts clubs.

What really gives credibility as the author of this book is:

- 20 free-standing handstand push-ups
- Over 20 seconds front lever and human flag
- A deadlift of 3 x his bodyweight
- 5 reps tiger bend handstand push-ups
- Squat of just over 2.5 x bodyweight
- Slow and controlled dips and chin-ups with more than his own bodyweight added to the belt
- A strict kettlebell military press with 60 % of his bodyweight for 4 reps
- A strict barbell military press of 115 % of his bodyweight for 3 reps.s
- Strict one arm chin-ups
- Full planche

ONE LAST THING…

I originally wrote this program for myself and I'm really pleased with the results I'm seeing! I hope you too find that it works to build strength, muscle and coordination for you to perform and look like you want to.

If you have any feedback for me that could make this book even better, I'd be very grateful if you'd post a short review on Amazon. I read all reviews personally and your support really does make a difference.

For videos of the content of this book and more, of exercises and how to do them, or if you have any questions for me, go to instagram and find me on @power_by_kris

Thanks again for your support !