<u>10 Tips to Improve Your Vertical Jump</u> By: Luke Buchholz and Michael Zweifel

The vertical leap is a prized possession for all athletes. Not much can compare to watching someone with high vertical jump. Just watch the ooh's and the aah's when someone throws down a massive dunk, or a wide receiver out leaps a defensive back for a touchdown, or an outside hitter smashes home a killer spike in volleyball. The examples are endless

Talk to a swimming coach and they will tell you that between 25-30% of a short sprint race is determined by the start and the transitions off the wall. That's all jumping!

A high vertical is key in basketball, certain events in track and field, and volleyball, but also the not so obvious sports like soccer, swimming, baseball, rugby, handball, etc.



People are obsessed with jumping high, just look at how many videos you can find on YouTube about jumping. There is so much information there is out there for improving your vertical. It's really a world of it's own when it comes to training, and many people have made a living calling themselves vertical jump specialists. While you may want a high vertical so you can dunk and show off for the ladies, the reasons why jumping high is so revered is clear.

A high vertical leap represents athleticism, explosiveness, power, strength, speed, all things athletes strive for. A high vertical can strike fear and intimidation into opponents, and give you a huge mental and physical edge.

Jumping is also a very natural progression and movement for all humans. Watch any child as they develop. They start with crawling, then assisted walking, then to walking, then running, then landing, and finally jumping, bounding, skipping.

We move along a natural progression to landing and jumping.

Watching a young child as they play. What do they do? They explore their limits of landing and jumping from objects of varying heights. They are testing just how high they can safely land from, and conversely how high they can jump to.

Why are the dunk contests and parkour (free running, tricking – whatever you want to call it) becoming so popular? They are built around jumping and pushing the limits of how high and far one can jump.

It is obvious that we all want a high(er) vertical leaps and there is an array of information out there on how achieve that higher vertical, and it can be tough to decipher the good from the bad.

At Building Better Athletes, we know how to achieve a higher vertical, we have trained people to higher verticals, and we too have been engulfed in learning how to jump higher. We have spent thousand of hours reading and implementing many of these various techniques. We have sifted through all the bullcrap, and giving you the best.

Luke was a 3-time All-American High Jumper at the Division 3 level, reaching a PR of 6'11.25, he knows what he's talking about! We have also contacted various coaches from across the country on their top tips for increasing your vertical jump. We have taken all this information and experience and pieced together the Top 10 Tips on how improve your vertical jump. This truly is the best 10 ways you can improve your vertical leap the in the fastest, most efficient, and safest manner.

Now what we're giving you isn't anything world-changing, or some top-secret exercise that will make you jump 5 inches higher in 30 minutes. Nope, none of that, just real science and experience based and backed information.

So let's get to the meat and potatoes. Here's the top 10

#1 – Improve Body Composition	3
#2 – Learn How to Land	4
#3 – Learn How to Jump	5
#4 – Core Strength	7
#5 – Ankle Stiffness	8
#6 – Improve Ankle Mobility	9
#7 – Get Your Glutes and Hamstring Working	10
#8 – Stretch Your Hip Flexors	12
#9 – Jump More	12
#10 – Use Plyo's Wisely	13

<u>1. Improve Body Composition</u>

Fat don't Fly! It's pretty obvious the more fat you're carrying on your frame, the lower you will jump. Fat does not contribute to muscular force or power, so it is of no help to generating a high vertical. It's the anchor that holds you back on the ground. To jump higher - lower your body fat percentage.

It's really interesting, horse trainers have the weight of their horses down to a science, and know how much a horse needs to weight to run their best.

They found only <u>2-5 pounds heavier</u> than their ideal weight can slow down their horse by as much as <u>8-20 feet</u>. That's between 2-2.5 horse lengths, and if you've ever watch a horse race, that can be the difference between 1^{st} and 5^{th} . Read more <u>Here</u>

Add on just <u>2% body fat</u> (which can be as little as 3-6lbs depending on your weight), and you're looking at lowering your vertical jump anywhere between **2-4 inches**! (Read the <u>Study</u>)

Your goal should be to be around 9-11% BF if your a male and 14-16% for a female. If you're above that, you're leaving time on the table. We believe there reaches a certain point where the detriments start to drop off. Meaning being at 3% BF will not benefit you much more than being at 8-10% BF. The toll that it takes on your body being that low, counteract the benefits. So shoot for that 9-11% and 14-16% range and you'll be good,.

Also be sure if you're gaining weight to keep your weight gain functional. Meaning you don't want to add 10lbs of muscle from high-rep, bodybuilding type stuff that increases your sacroplasmic hypertrophy. If you are gaining weight, that's fine, just try and make sure that weight gain is coming from the building blocks of strength exercises – squat, deadlift, push-ups, pull-ups, hip thrusts, rows, glute/hams. Not from bicep curls, triceps work, excess shoulder work, traps, or any work that isn't going to functionally help your strength and power. Remember <u>increased levels of unnecessary</u> weight equate to a lower vertical.

This ebook isn't meant to be a nutrition guideline, but here are some suggestions

- Decrease Carbohydrate Intake Reduce breads, pastas, grains and stick to vegetables and fruits with the occasional intake of potato varieties, squash, and rice
- Increase Protein Intake Get a <u>whey protein supplement</u>, eat more lean meats, fish, and dairy
- Perform Heavy, Multi-Joint Lifts Get rid of isolation exercises and stick to big, compound lifts (squat, deadlift, hip thrust, pull-up, push-up)
- Increase Vegetable Intake Veges give you tons of vitamins, minerals, antioxidants, fiber, as well as provide great assistance to inflammation, tissue repair, and overall health. Consider a <u>greens</u> <u>drink</u> if you stuggle to get 7-8 servings each day
- Get Rid of Excess Cardio Cardio is one of the biggest mistakes you can do for your vertical and overall health. Stick to high intense, shorter duration exercises. Condition by playing basketball, performing repeated sprints, <u>kettlebell</u> circuits, <u>slideboard</u> conditioning, jumping rope, <u>heavy</u> <u>rope</u> work, etc.

Doing long duration – low intensity exercises like jogging, elliptical, biking <u>do not</u> provide the benefits to body composition, metabolism, hormonal profiles, protein synthesis, strength, or power as an athletic based program. If you are set on doing that type of work, keep it to 10 minutes or less.

Check out all the research showing High Intensity Training and Strength Training positively effects endurance and conditioning as much if not more than Low Intensity – Long Duration Training <u>here</u>, <u>here</u>, <u>here</u>, and <u>here</u>.

Piggy backing this idea is that you want to increase your relative body strength - how strong are you at your given body weight. If you weigh 200lbs and can squat 300lbs, and add 15lbs to your squat while maintaining the same body, you WILL jump higher.

Getting stronger at your current body weight, adding weight while also adding proportional strength, or losing weight while maintaining strength will all increase your relative body strength. This may seem old school, but shoot for a 2xBW squat or deadlift. This gives you the "engine" to build a high vertical on.

So make sure your strength training is hitting all aspects of the force-velocity curve and you are training all the qualities needed to enhance your power development, RFD, strength, speed, and ultimately your vertical jump.

2. Learn how to land

We like to say you can't produce force unless you can absorb it. This means, there is no way in hell you will jump 40 inches high if you can't safely land from 40 inches. Your body doesn't give a crap about how high you can jump, it's concerned with keeping itself safe. It will not allow you to jump higher than you can safely land from, otherwise that would put itself in danger.

You need to teach your body to land and eccentrically absorb force before it will give you the OK to reproduce more force. The amount of input your body can handle will equal the amount of output. Altitude drops, depth landings, depth drops, or whatever you wanna call it, has been around forever, but rarely ever utilized. You NEED to learn how to land properly before you can excel your vertical.

This also ties into learning how to accelerate into your jump. The more force you put into the eccentric portion of your jump, the more force that will be expressed back out of your jump. Learning to accelerate the eccentric or lowering portion of the jump, will allow you to jump higher, as long as your body can handle this force.

Watch any great jumper, whether it be high jumpers, long jumpers, or dunkers, and the common theme is these athletes accelerate into their jumps quicker and faster than others. Being able to eccentrically absorb more force will allot you to put out more force concentrically.

Talk to any coach that prepares football players for the NFL draft, and they will tell you to improve your vertical jump, you need to accelerate how fast you lower into your jump. This increases the SSC and better utilizes your connective tissues. Learning how to land and absorb forces quicker and from higher heights will enhance your vertical and keep you injury free! Read these two great articles for more information and application

<u>BBA Article on Learning to Land</u> <u>Awesome Article on Importance of Eccentric Strength for Jumping</u>

3. Learn how to jump

You need technique to jump high, and you can make significant improvements immediately by improving your technique. High Jumpers spend a lot of time learning the correct body position and techniques for maximizing their height off the ground, so it only makes sense you should do the same.

There are differences in technique between jumping off 1-foot and 2-feet, so let's take a look at each.

<u>1-Foot</u>

Head in line with cervical spine and the rest of the spine. Having parts out of line with alter mechanics down the line.

Keep a big chest and shoulders back. This keeps spine neutral and allows you to stay TALL!

Plant foot should land in a heel-to-toe relationship. We don't want a huge braking force going into the plant foot, so closer to a slight heel-to-toe plant or flat foot is best.

Having your foot dorsiflexed will enhance the SSC, stability, decrease deceleration, and decrease injury. This will naturally occur to some degree, but if you notice you're reaching with your toes pointed towards the ground (plantarflexion), then you will need to actively think about dorsiflexion

DON'T REACH! Reaching puts braking forces on the body and causes energy leaks. Keeping the plant foot slightly closer to the center of mass will allow a better transition to vertical forces and a cleaner foot roll to take take-off.

<u>Penultimate Step</u>: Second to last step in jumping approach. This should be <u>slightly</u> longer in order to <u>slightly</u> lower center of mass, and will result in the take-off foot being applied quickly to the ground and in line with the center of mass to maximize SSC potential. Ultimately, the final step should be quicker than the previous penultimate step. A good way to analyze an athlete's take-off efficiency is to listen to the sounds of their steps:

-Last two foot contacts will be <u>slightly louder</u> and in a <u>quicker rhythm</u> than the rhythm during the approach

-If last two foot contacts are <u>too</u> loud and you lose speed, this indicates a braking action. If this is the case you are either reaching too much and leading with your heel, lowering your center of gravity too much, or just can't handle the speed.

You should strive to keep the plant leg as close to straight as you can. This is going to utilize the SSC and all the elastic properties. A big bend, during a 1-footed jump, will put more stress on the muscular system which is not as effective at utilizing the elastic qualities of the muscles, tendons, and connective tissues as keeping a straight leg is.

Drive opposite knee and both arms into air. This helps continue your momentum and increases upward forces. Your arms are approximately 15% of total body mass, add in your opposite leg, and you have a significant amount weight to use to your advantage.

Arms need to start behind the frontal plane and at 90 degree angles. This puts a big pre-stretch on the pecs, anterior delts, and biceps brachii/brachioradialis, and in return you get a great SSC that will contribute to higher jumping.

Keeping the arms at 90 degrees also ensures a shorter lever the will move more quickly through the range of motion. The whole amortization time is very quick, so we want our arms to be quick through their movement to help connect the jumping motion.



2-Feet

The 2-Footed jump consists of greater range of motions, longer ground contact times, and more braking forces. The 2-foot jump transfers the horizontal velocity into straight vertical movement more than a 1-footed jump, which carries more horizontal movement with it. So there are going to be differences between techniques.

The 2-footed jump has a lot more variance in techniques and styles than the 1-footed jump. To be honest there is no one perfect technique, things will be different for everyone. But there are some techniques you need to make sure you take care of to enhance the 2-footed jump.

Speed needs to be brought into the jump. <u>Paul Fabritz of PJF Performance</u> gives a few knowledge bombs, "you need to accelerate into the last few steps, NO SLOWING DOWN. Unlike the 1-footed jump, the last step in a 2-footed jump needs to be long. Watch any good 2-footed jumper and they cover a ton of ground with that last step. This brings a ton of eccentric force into the jump, and will enhance the SSC".

Hmm, eccentric force sounds pretty familiar, oh yeah refer to Tip #2 and any of these 4 studies. <u>One</u>, <u>Two</u>, <u>Three</u>, <u>Four</u>

The legs, during a 2-footed jump, will flex a lot more than in a 1-footed jump. For most this is around a 45 degree bend in the knees. The more bend you get, the more likely you are losing energy. "A muscle develops optimal force from <u>100%-130% resting length</u>, and for the quads that's around 45

degree knee flexion. Anything more than 45 degrees knee flexion and you will not fully use the stretch reflex to your advantage", awesome insight from **Paul Fabritz**!

Upper body position will vary. Just like with knee bend, you need to find what works best for you. Some people jump best with their torso bent over, others do best with keeping their torso tall. You need to play around with both and see what works best. But no matter the position, you need to keep good alignment in your spine.

Arm technique is the same as in the 1-footed jump. BOTH arms needs to be loaded back, creating a big stretch on the upper body. Keep arms at 90 degrees and bring them through to assist driving you off the ground.

Overall one of the best ways to improve technique is to film yourself jumping. This way you can slow down your jumps and see where and how you need to improve. Every sport involves some sort of film study; jumping is a highly athletic, technical movement and you will benefit from filming yourself jump. Here's a <u>Study</u> on different jumping styles and protocols and their effect.

4. Core Strength

Everybody has heard of core strength, it's the buzz word nowadays. But what is our core and what does it do? Here's how I describe the core or torso

<u>RATS</u>

- **R- Resist Movement/Motion** The core is an anti-mover. It resists external forces put on the body to keep it in a stable position
- A- Assists in Force Production Because the core is a big stabilizer, it works to put the body in a safe and correct position for other muscles to perform movement. Your torso needs to be stable and in a correct position for you hips, legs, glutes to initiate any kind of force/strength
- **T Transfer Force** Once a force is produced by a prime mover, that force is transferred through our core to other parts of the body. Throwing a ball starts from the hips, down through the ground, back up to the hips, through our core, and on to our shoulder/arms. If the core is weak, there will be energy leaks and force will be lost
- **S Stability** The overlying theme of the responsibility of the core/torso is that it is a STABILIZER!

You need a stable core and torso to transfer force throughout your whole body. If your core strength is not up to par, then you will have energy leaks and lose potential force.

<u>Gray Cook</u> has been know to say, "A weak core is like shooting a cannon out of a canoe". A canoe cannot stay stable or stiff enough for that cannon to fire at it's full power. The canoe represents a weak core in terms of all the energy that is lost if you cannot create that stiffness and stability during powerful movements.

You need to attack your core in a ways that stress it in the above ways. Things like... Kneeling and ½ kneeling chops/lifts Pallof presses Carrying Variations - Farmer walks, suitcase carries, waiter walks, goblet walks Turkish Get-Ups Deadbugs Deadlifts Plank Variations – Prone, supine, side, single arm/leg, bird-dogs, moving Med Ball Throws Rollouts, etc. Not crunches, sit-ups, rotational sit-ups, or any of that

Sprinkle in these throughout your workouts, in your warm-up, and as a finisher. DO NOT base the foundation of your program strictly around these exercises. Studies have shown that the core in not a prime mover, and core training, by itself, does not enhance power, strength, etc (<u>Study</u>, <u>Study</u>). It is a supplement to your big, compound lifts and assists these bigger movements.

5. Ankle Stiffness

The lower leg complex (feet, ankles, plantarflexor, dorsiflexors) is the point of contact where the force generated from up the chain, is put into the ground. We talked about how have a weak/unstable core will causes energy leaks, well having weak/unstable ankles or feet will also cause energy leaks.

In fact, a stiff ankle joint and achilles tendon can contribute up to <u>16% of a jump</u>. That's 16% of height you could be losing if you have poor ankle stiffness, or the difference between jumping 28 inches or 32.5 inches!

You don't want to create great force from your hips, glutes, hammies, and quads only to be lost at your ankles and feet. Increasing your lower leg strength and stability increases the potential to transfer those high forces from the hips into the ground. Having a strong lower leg complex with also improve ground contact times, thus increasing the SSC and allowing for quicker/faster jumping.

Ankle stiffness is also key for muscles up the chain to work optimally. For example, have instability in your ankle decreases the activity of the gluteus maximus (<u>Study</u>). So working on ankle stiffness will help your vertical in a number of different ways.



Now doing balance drills or band resisted ankle strengthening drills will NOT increase your ankle stiffness. You need to drills that stress that lower leg complex in a manner that will carry over to actual jumping.

Ways we like to do this at BBA include

a. Perform lower intensity, high duration plyometric or bouncing exercises

Things like jump rope, line jumps, 1-3 inch continuous box jumps, high rep calve work, and isometric holds fall into this category. Perform these movements for time or reps. For instance, aim for 500+ contacts in the jump rope, shooting for sets of 50-100 jumps. Or when doing line jumps, perform them for 1-2 minutes straight. This builds ankle stiffness and strengthens the elastic qualities of the lower leg.

b. High intensity, lower duration plyometric movements

Things like depth jumps, sprinting, hurdle jumps, landings, bounding put great stresses on the lower leg complex, and improve it's stiffness in a manner very similar to which it will experience during a jump.

c. Spending direct work on the tibialis anterior and tibialis posterior

Your tibialis anterior is the main muscle that dorsiflex your ankle, and is often not up to snuff. Increasing the strength of the tibialis anterior will assist in dorsiflexion ROM, help in force absorption, help eccentrically control and stabilize the ankle, and decrease risk of injuries such as shin splits and jumpers knee.

The tibialis posterior is a small muscle runs up the medial side of the foot and works in conjunction with the tibialis anterior and peroneals to stabilize the foot and ankle. Specifically it works to control eversion and effects the height of the arch. A weak tibialis posterior can help contribute to a flat foot, or collapse of the arch (more info on this in tip #6). This action not only puts additional stresses on the foot and can lead to injury, but also is a sign of a major energy leak. You will lost elastic qualities of the foot and jump lower.

Improve tibialis posterior function by working on tri-pod foot position, watch this <u>Video</u> by <u>Mike</u> <u>Robertson</u> to learn more about foot tri-pod and it's importance. Strengthen and get your posterior tibialis activated and involved by performing <u>this exercise</u>. Also consider going barefoot more. Things like barefoot deadlifts, squats, loaded carries, warm-ups, cool-downs, or just walking help strengthen that foot and ankle.

6. Improve Ankle Mobility

Most people who want to jump higher, tend to have very tight/immobile ankles. They are in Jordan's all day, never take those honkers, and have no dorsiflexion.

Try this test.

Kneel on one leg and place the big toe of the other leg 4 inches from a wall. Extend your your toes

(dorsiflex your toes) while keeping the pads of your toes on the ground. This creates what is called

foot tri-pod. Your calcaneous (heel), base of your 1st metatarsal (big toe), and base of 5th metatarsal (pinky toe) are the only 3 points of contact on the ground. Because your toes are extended, your arch will be stiffened and high due to what is called the Windlass Mechanism.

From here, put your toes back on the ground, while maintaining the tri-pod and good arch. Now you will press your knee towards the wall, while keeping this foot position. Do not let your heel come off the ground, and maintain the foot tri-pod. A common mistake is the will arch collapse, don't let this happen, keep that tri-pod! If you cannot touch your knee to the wall, you have restricted ankle mobility.

Can't picture it, watch this Video

So what? What's the big deal?

If you do not possess enough ankle dorsiflexion, you will compensate in other areas. Lack of dorsiflexion will not allow a proper ankle rocker (foot roll), and a couple of other things will happen to make up for this lack of range of motion. Let's take a look

<u>One</u>, is your foot will pronate (arch will break). Your plantar fascia play a key role in force production and elasticity. This breaking is essentially a massive energy leak, not what we want.

Two, you will bypass lack of ankle dorsiflexion by turning on plantar flexion early. If you cannot roll over through the needed range of motion, you will turn on your plantar flexors (gastrocs, soleus, achilles) early in the gait cycle to bypass that lack of mobility. This leads to over worked and shortened plantar flexors, neither a good environment.

Third, you will get what is called valgus knee collapse. To make up for the lack of mobility, the knee caves inward to shorten the ROM needed for the tibia/fibula to reach toe off. This knee valgus is very stressful on the knee joint and it's surrounding ligaments. Again, not what we want.

Fourth, instead of getting knee valgus, you compensate by rolling laterally towards your pinky toe for toe-off. We need toe off to occur at our BIG toe. It is the strongest toe, with the most elastic connections. If you roll laterally and toe-off at the lateral aspect of your foot, you lose power, energy, and elastic properties.

Scared? Good, get that ankle mobility fixed. Start using regular ankle mobility drills like the kneeling wall touches. Like we touched on in Tip #5, start taking off your shoes off more. Let those puppies open and see the light of day every one in a while.

There are 26 bones in each foot so 52 bones in your feet alone. That accounts for 25% of the total bones in your body are in your feet and ankle. Not to mention the many more muscles, tendons, ligaments, attachment points, all bound up in those tight sneakers. We think that those shriveled up things you call your feet are pretty damn important!

7. Get Your Glutes and Hamstrings Working

Your glutes and hamstrings are the power houses of athletic movements. These bad boys are your primary hip extensors, and hip extension is key to jumping high.

Check out any sprinter or jumper, they will have well developed glutes and hammies. Yet the glutes and hammies are typically underdeveloped and weak from performing shitty ¹/₄ squats and sitting on your ass all day.

An imbalance between over-developed quads and under-developed glutes and hamstrings has been shown to increase risk of ACL injuries. Don't be like most meatheads and only focus on the muscles you can see in the mirror, be an athlete and hit that posterior chain.

First let me give 2 routines for glute and posterior chain activation. Perform these before every lift, workout, jumping session, game, etc to get your glutes really fired up. Here's a <u>Study</u> that showed going through a simple glute activation series increased vertical jump and power.

Glute Activation #1

Double Leg Glute Bridges x12 Naughty Dogs (On all-4's, hip abduction) x10each Bird-Dog x12 total RKC Plank x15sec (Video) Side Plank x20sec Single Leg Rotational Hip Thrust x8each (Video) BW Squat x10 Single Leg Airplanes (SLRDL) x8each

Glute Activation #2

Straight Leg, Lateral Band Walks x15yards (Put band around feet) (Video)
Bent Leg, Lateral Band Walks x15yards (Put band around feet) (Video)
Glute March x20 (Video)
Split Squat Series (forward, lateral, reverse) x4each
Prone, Straight Leg Hip Extension x10 (slightly abduct your leg for more glute activation)
Prone, Bend Leg Hip Extension x10 (slightly abduct your leg for more glute activation)
BW Squat x10

Now that you've got your backside more revved up than the cars at the Indy 500, you'll be ready to put those bad boys to work. You should also see the difference in your movements, and actually feel your glutes being more involved.

But the fun doesn't stop there. Activation can only go so far, you need to add some strength to your backside. Here are some sure fire ways to target your backside in the weight room. These exercises should be the staple of your programming.

Deadlifts Hip Thrusts Squat variations Valslide Leg Curls Glute/Hams Back Extensions RDL variations KB Swings Stability Ball Leg Flutters Reverse Hypers

Get that P-Chain working to improve your vertical, if not anything the ladies will take notice!



8. Stretch Your Hip Flexors

A quick tip players preparing for the NFL combine vertical jump test, it to stretch their hip flexors. Most people's hip flexors tend to be shortened due to our addiction to sitting and lack of movement. A stiff/shortened hip flexor can inhibit the ability of the glutes and hamstrings to produce full force through a full range of motion, effect pelvic tilt, and put un-needed stresses on our low back.

As we talked about, the glutes and hamstrings are the prime hip extension muscles. But that hip extension can be inhibited if the hip flexors do not have the range of motion.

Before performing a vertical jump, perform a hip flexor mobility or stretch to lengthen and relax the hip flexor muscles. This give the glutes and hamstrings that extra range of motion key to increasing your vertical. Also a lengthened and more relaxed antagonist muscle (hip flexor) will allow the agonist (glutes/hammies) to perform it's action optimally (Check out this <u>Study</u>).

9. Jump More

Want to jump higher?

Then jump more!

This is a no brainer, but a lot of people either fall into 2 categories. One category is an athlete who jumps and plays basketball all day and is allergic to the weight room. The other category, lifts and strength trains all day but never does any actual jumping or movement skills. Neither one of these two strategies is going to allow that athlete to reach their highest potential.

So if your a guys that squats a ton, and lives in the weight room, starting adding in more jumps. You can't get better at jumping unless you spend a good amount of time actually jumping.

<u>**Pavel Tsatsouline**</u> likes to say you need to, "Grease the Groove." Meaning, make movements more natural, efficient, and smooth by engraining the pattern.

If you put grease of a rusty door hinge, what happens? The door moves much more freely, smoothly, and efficiently.

Grease you vertical jump by getting enough reps jumping. This will improve your technique, efficiency, and motor patterning.

BUT if you're the guy that hasn't seen the weight room since the Bush Administration, then you better get your ass in there. Strength gives you a bigger engine to build a vertical on; you NEED to get stronger. More strength = higher vertical, so get your squat or deadlift up to 2xRM, and you will see great results in your vertical. So get used to having callus's on your hand, and find that weight room.

<u>10. Use Plyo's Wisely</u>

When most people think about improving their vertical leap, the first thing they think about is plyometrics. Plyometrics are associated with improving jumping ability in just about everybody's mind, and for good reason. Correctly implementing a plyometric program is one of the best ways to increase your vertical, but they need to be implemented correctly, and that is rarely the case.

Athletes quickly jump (pun intended) to the most intense, technical, and stressful plyometrics without progressing properly. Depth jumps, hurdle hops, single leg bounding, and multiple jumps put incredible amounts of stress and demands on the body, yet many athletes will jump to these exercises right away.

This is setting athletes up for <u>injury</u>, <u>muscular/tissue damage</u>, <u>high amounts of fatigue</u>, <u>and/or</u> <u>decreased performance</u>.

There needs to be a proper plyometric progression (say that 3 times fast) that takes athletes through the different stages and intensities of plyometric exercises.

To be honest, extremely intense/high demand plyometrics should be saved for peaking. Performing these exercises too frequently with do more harm than good. So progress properly and save the depth jumps for when you need to peak.

Progress from Lower Intensity exercises to Moderate exercises and then to High Intense exercises. When and only when you show mastery of the techniques, patterns, and coordination of the lower level intensities, may you then proceed to the next intensity.

Low Intensity

Squat Jumps (In place, reset after each rep)
Skipping – Distance and height
Box Jumps - DO NOT use a high box – 18-24" inches is more than enough. We are not testing how high you can flex your hips! Jump maximally, land softly and reset after each rep
Standing Long Jumps
Alternate Bound and Stick - Laterally and linear
Line Jumps
Box Landings – 6-24 inches, depending on your max vertical
Lunge Jumps

Moderate Intensity

Continuous Standing Long Jumps Bounding – Alternating and lateral Repeated Squat Jumps (Land, absorb, and jump back up) Tuck Jumps Standing Triple Jump Depth Jumps – 6-15 inches Box Landings – 24-32 inches, depending on you max vertical

High Intensity

Depth Jumps – 18-30 inches Hurdles Hops Repeated Box Jumps (DO NOT use a high box! 18-24 inches is plenty!) Single Leg Bounding Box Landings – 32+ inches, depending on your vertical

Take advantage of the wonderful effect plyometrics can have on your vertical jump. They are great for developing elastic abilities, stiffness, power, speed, and a great nervous system. But they are often progressed way to quickly and can have disastrous effects.

So take time to progress and adapt to the stresses of plyometrics. They are NOT end all, be all. They are a piece of the puzzle, and need to be fitted in correctly with all your other pieces.



The Greatest of All-Time!

Bonus!!!

<u>11. Sprint</u>

Sprinting? What!? Yes that's right, sprinting will improve your vertical jump.

How?

First off, at BBA we believe sprinting is the best exercise anybody can do. If we could only perform or prescribe one exercise for the rest of time, it would be sprinting.

Sprinting trains just about every quality we want to hit. It's highly plyometric, highly elastic, targets the P-Chain, improves body composition, improves coordination and motor patterning, teaches body control at high speeds, increases ankle stiffness, requires great deals of range of motion, great for neuromuscular development, the list goes on and on.

Jumping and sprinting have many qualities that carryover to each other. Why else would it be shown that vertical and standing long jump performances are correlated with sprinting performances. Just look at that list above, it's obvious sprinting will enhance qualities needed to jump high. Need more, then read **This**

Now Get Out There

There you have, 11 Tips to take your vertical jump to the next level. To separate you from your competition and give you that extra edge you need! We hope you enjoyed and learned something! Feel free to share this info with friends and family and send them to BBA to pick up their own copy!

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Feel free to contact us with any questions, comments, or concerns at <u>buildingbetterathletes.bba@gmail.com</u>

So from us here at BBA, Go Get 'Em!