

**EVOLUTION**

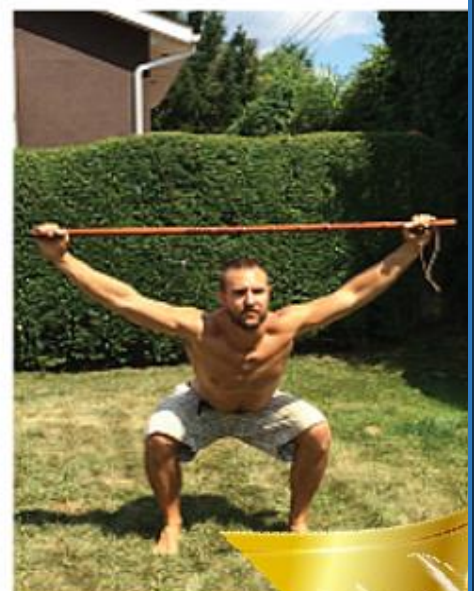
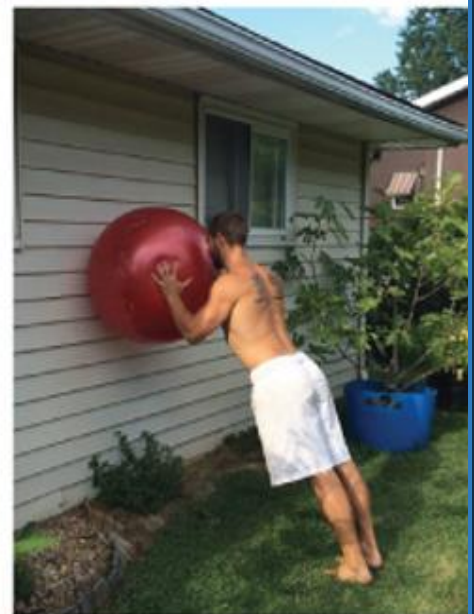
HEALTH  
& FITNESS



# Introduction to Primal Movement Patterns

*Merry Christmas*

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Lunge
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- Section 6  
Twist
- Section 7  
Gait





*"These Primal Movement Patterns should make up the bulk of our workouts in the gym or outside."  
~ Nick Horowski*

*Nick Horowski*

## An Introduction to the 7 Primal Movement Patterns

**These are seven movements, as coined by Paul Chek**, in which we can break down our activities that we do every day. There are many variations of these by people, some with a movement or two more and some with less, but are all about the same.

**They are the requisite forms of movement** that we should be able to do through a full range of motion and complete pain free in order for our movement to be considered normal. The movements include the following:  
**Bend – Squat – Lunge – Push – Pull – Twist – Gait.**

**In this eBook I will be covering the basics of the Primal Movement Patterns** and will also go into greater depth on each one so that you are able to better implement them into your own training programs. **These can all be put into both work outs and work-ins** depending on the intensity you use and breathing patterns. I want to state that these next few steps will not substitute for learning proper program design, which is very in depth if done correctly, but to give you **some ideas about how and where to put specific movements in your regular routine.**

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## BEND

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“Lift with your knees!” There are just too many good quotes out there that I couldn’t resist. Yes, your knees will be involved with a lift, but if you don’t learn to properly use your back when lifting then it certainly will get hurt (i.e. “I bent over the pick up the pencil and my back went out.”).

It wasn’t the weight it is because your form is bad, your back is weak since you only squat and are afraid to bend and that was just the last straw.

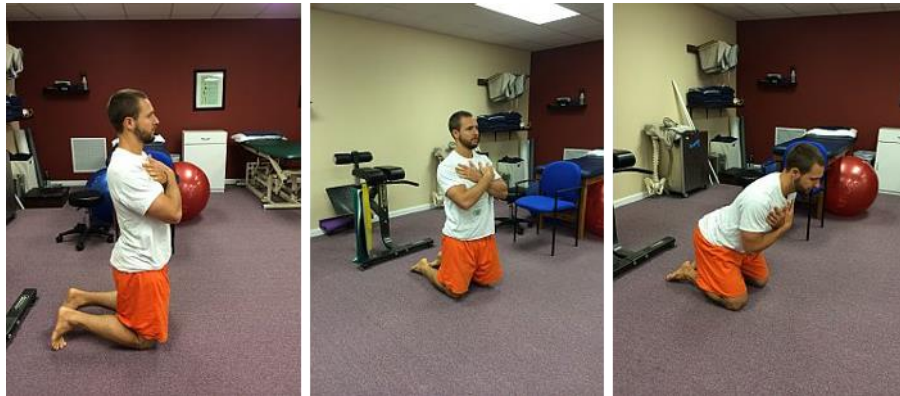
Again get those feet straight ahead, but now your head will stay in neutral with the rest of the spine as you bend over. Begin your movement by shooting your hips back and only bending the knees to about 20 degrees as this allows for maximum recruitment of the glutes which really should be working here, but are often weak.

You will bend down as far as is comfortable without letting the spine come out of neutral position and then returning to the top. You can now slowly and safely begin to start lifting your child or bag of groceries again properly.

To me there is just something amazing about bending over and picking up something heavy. It encompasses my favorite movement which happens to be the deadlift and it also certainly has quite a bit of practicality.

Think how many times each day you bend over to pick something up. Notice I said bend over and not squat down. This is a very important distinction and we must be able to do both to have full capacity of human movement.

### KNEELING BEND



This is a great movement for those who are afraid to bend, have extremely weak back muscles or are recovering from surgery and want to start introducing the bend (per your surgeon's approval). It can help to build low level endurance and introduce proper form before progressing into a standing position.

### HYPEREXTENSIONS



I am not a fan of the name (you should not necessarily go past neutral depending on your spinal angle as measured by a skilled physical therapist or C.H.E.K Practitioner), but the hyperextension bench either parallel to the ground or at a 45 degree angle are both great for building strength and amazing endurance of the posterior chain.

### DEADLIFT



Simply a classic. Put a bar on the floor, load it up with weight and pull it with perfect form to the top. To build up a strong back and core you know where to start. Low reps, medium reps or high reps depending on your goals this is just a great way to go.

### SUMO DEADLIFT



See above and like we covered last week great for keeping the low back and sacrum stable. Also very functional. Think how many times you put your feet around something and pick it up. This will keep you strong to do so.

### ELEVATED DEADLIFT



I like to do this with a normal and sumo stance. Each has its advantages. Elevating a sumo deadlift brings you to the same height as a normal deadlift and prepares you to have to get down to the floor and pick up that bag of manure for the garden out back. If you are looking for an extreme range of motion then keep a conventional stance. This is a great way to get a super strong back provided you have built up to it.

### SINGLE LEG DEADLIFT



Golfers listen up. Bend down and pick the ball up out of the cup after that birdie and how do you do it? Kick one leg back and bend the other as you pick it out and smile. I also like it because we are very unilateral beings. We walk, run and sprint with one leg pushing off at a time. Here is another great way to build that in.

There are certainly more forms of the bend, but again I wanted to focus on the basics. The bend can often be combined with the pull as both are extension based movements which we are often lacking secondary to our seated positions.

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## SQUAT

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As the saying goes "squatting is bad for your knees." This will never get old and couldn't be more wrong.

A quote that I like a lot better from Dan John is that "squatting is not bad for your knees, the way you squat is bad for your knees." That's right if you have stood up or sat down in any form today then you have squatted and need to keep reading.

There is of course a proper way to squat to keep your body in optimal alignment. Even this has much debate, but I will give you what I feel is the best way that has worked for me as well as hundreds of my patients and clients.

Find a fixed point straight ahead that you can focus on so your head stays in the same position. Make sure that your feet are pointing straight ahead or turned out up to 15 degrees, but make sure each foot is doing the same thing.

As you begin to go down shift your hips back slightly and think about spreading the floor apart with your feet. Go down as far as you feel comfortable with your back staying in a neutral position and return to the top.

This is now what to use the squat for and to give you some variety...

### BODYWEIGHT SQUAT



This is the gold standard to which all squats are compared. You must get this one right before you move on to the others because you must achieve proper form here first before adding weight.

### SWISS BALL WALL SQUAT



I've said it before and I'll say it again here. The Swiss Ball is an excellent piece of exercise equipment. When put behind the back up against the wall it can make the basic bodyweight squat a little simpler for those who are still struggling with it.



### BOX SQUAT/SIT TO STANDS



Using a box to squat down is something that has been used in the powerlifting world for years and can be a great benefit for those first learning to put the bar on their back. It can be used to teach depth, how to sit into a squat, work on explosion out of the bottom and even decrease give a high load training effect without as much muscular and central nervous system fatigue.

Compare this to a sit to stand just using a simple chair is also a great option for those just making sure they can get up and out of a chair or off the toilet without assistance.

### BACK SQUAT

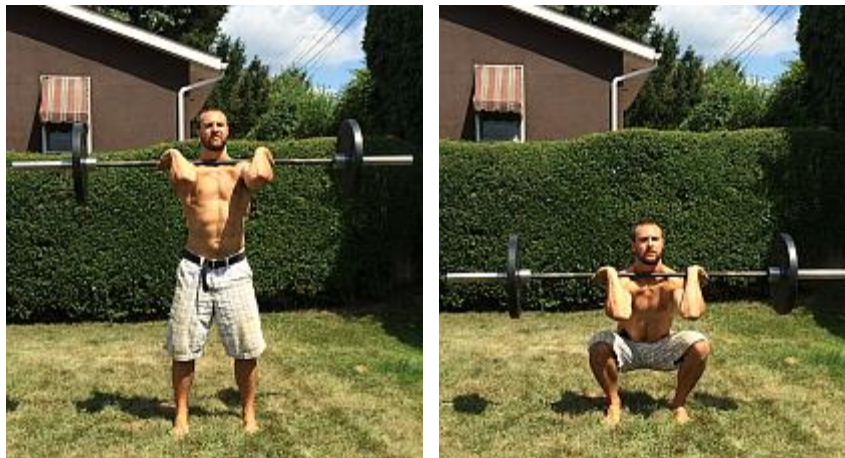


Now time for the "king of all exercises." Put a bar on your back, go down and come back up. I have found these to be great for building strength when getting into the 3-5 rep range, but for a real treat I like cranking them up to 20-30 reps.

For some insight on this I encourage you to read the book Super Squats by Randall J. Strossen. He shows you how to put on some serious muscle with a program doing heavy weight squats for high reps. I have done this before and seen amazing results.

These are not for the faint of heart and you must make sure that your recovery is spot on because when it is these can send your testosterone and growth hormone through the roof. Sleep, working in and eating right will be critically important.

### FRONT SQUAT



The front squat is an amazing exercise that does much more than meets the eye. Here we come across an exercise that has great benefits of the squat, but also is tremendous at strengthening the upper back as well.

This is so important for many of us with in increased thoracic kyphosis or rounded upper back from sitting all day and staring at computer screens.

### GOBLET SQUAT



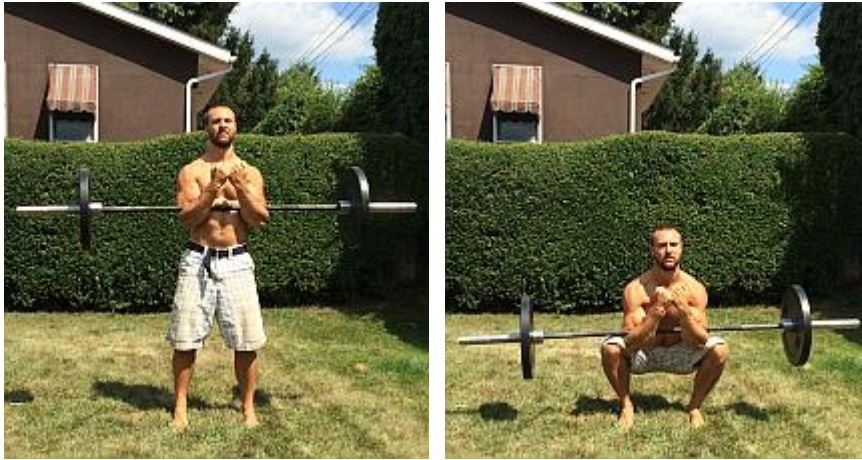
This is a front squat with a dumbbell or kettlebell and can be a great way to transition into the front squat as not as much thoracic, shoulder and wrist range of motion is required.

### OVERHEAD SQUAT



This is how to test if somebody has true range of motion in every joint in the body. That's right head up, full shoulder and thoracic range of motion, a stable lumbar spine, great hip mobility as well as getting the motion from the ankles.

### ZERCHER SQUAT



Another slick alternative to change up the loading on the squat is the Zercher squat where one holds the bar in the crux of their elbows. It can be used for those with a wrist/hand injury or even a shoulder injury when you are unable to get your hands back on the bar.

### SUMO SQUAT



Here is another variation that is great for strengthening the hip adductors or inside of the leg and can be used with any of the above variations. I am a big fan of using this for those with an unstable low back and sacrum because it allows for force closure of the hip bones on the sacrum. This stability is critical for those that have a lot of low back pain. It is also nice to add a different stimulus to the body and is also used in many powerlifting circles.

## SQUATTING DEPTH

In a lot of lifting competitions full squat depth is considered when the hip crease is below the top of the knee or the femur is parallel to the ground. When it comes to the individual it depends on one's goals.

If you are lifting then this is where you need to hit. If you are trying to just get by you need to be able to get down to an average height toilet seat which is 16 inches and the same goes for the average chair.

I feel that everybody should be able to hit a rock bottom or "ass to the grass squat." This would be full expression of human movement and is how our ancestors and many people in the so called third world sit.

It is something that I still am working on from so many years of sitting and I encourage you to do the same.

This is by no means a complete list, but just something to get you started with a little bit of variety. It is still imperative that you master the basics before jumping into a sumo front squat on a low box with chains.

Remember not to always chase the new and shiny object as it does not always fit in with what you need.

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## LUNGE

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Wait a second. Squat maybe, bend okay, but really a lunge? YES! You still lunge down and tie your shoelace, step over things with a long stride and even go up and down stairs and inclines.

Let's just make sure to learn to do it right.

Take a long step forward with the foot facing straight ahead, bend both knees while going down as far as you feel comfortable and push off the front foot to return to the starting position.

Sounds simple and it is as long as you make sure that your knee is tracking in line with your second toe.

Here is the way to go for a great butt for men and women. It will build rock hard glutes. This strength in the hips are vital for sports and also critical as we age. Do not overlook the lunge when in the gym, on the ball field or in the home. Be sure to keep it in your training program.

## SPLIT SQUAT



Take a wide stance forward and drop on down. It is a great way to introduce the lunge pattern into your repertoire of movements. I often like to have people put a chair or bench in front of their forward leg to help show them how to drop down properly. Make sure you are ready to be a little sore the next day or two if this is your first time with these. They really do work.

## FORWARD/WALKING LUNGE



Now we get into some more dynamic movement. Learning to stride forward and accept weight with great form is essential to stabilizing the hips and spine. This will have great carryover to sport and working around the house to prevent injury. Progress into the walking lunge only when you have mastered the forward lunge. It is a large jump to the nervous system, as will all of the following lunges, if the basics are not completed first.

**FRONT 45 DEGREE LUNGE, SIDE LUNGE,  
BACK 45 DEGREE LUNGE, REVERSE LUNGE**



These are all great for learning to accept weight at different angles and certainly keep you very strong. If they become easy adding them in with a medicine ball twist can certainly spice them up and really strengthen the core.

**CURTSY LUNGE**



I put this one separate from the others as I feel it has a unique benefit. The way that it is able to stretch the glute and hip external rotators when under load is tremendous. This has great importance as many people have difficulty recruiting these muscles maximally. They are the big supinators for the lower extremity so those with collapsing knees and arches take note. Your feet are flat for a reason. Poor inner unit functioning and weak lower extremity supinators cause a collapse all the way down to the feet.

Okay, now it is your turn. Make sure that you are not missing out on an incredibly important movement in the lunge. Jump into it where you are ready. Remember as with all exercises that you do not get points for adding weight too quickly or going to a jumping lunge before you can perform the basic split squat.



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## PUSH

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This is another biggie whether closing a door, using your arm to roll over in bed or pushing yourself up off the floor. I still like the good old fashioned push up to practice your push.

Start in neutral spine position with elbows extended, hands directly under shoulders with fingers straight ahead.

Think of screwing your hands into the floor and driving your elbow pits forward.

Unlock your elbows and push them toward your hips (not flaring out) going down as far as you feel comfortable and return to top position.

Up to this point in our series on the Primal Pattern Movements we have covered movements that use primarily the lower body. Of course all movements include muscles from the entire body, but now we are going to switch over to those with an emphasis on the upper body. Before continuing I want to bring up the difference between an open chain and a closed chain movement.

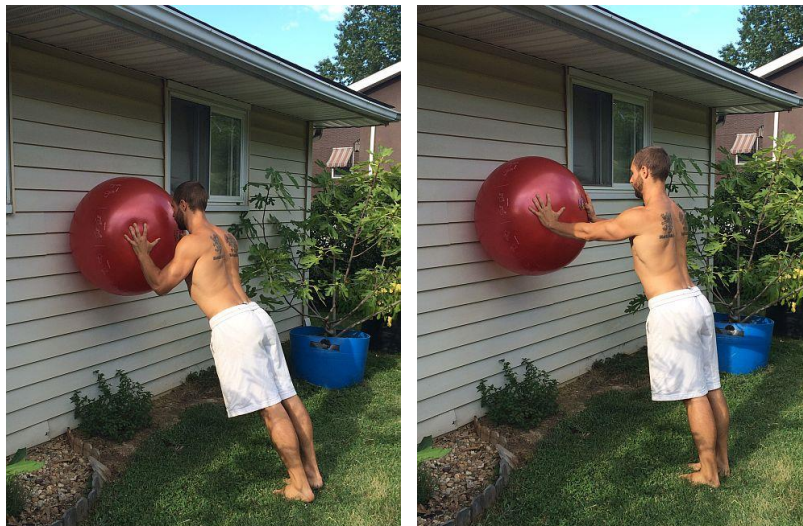
### OPEN KINETIC CHAIN

When an extremity is moving against a force it is free to move. Think throwing a ball, pulling weeds or closing a door. I do not like to do much open chain movements for the lower extremity as it does not have much carryover to the world with the exception of striding during gait and the legs during swimming.

## CLOSED KINETIC CHAIN

The closed chain always wins. Think about the squat, bend or lunge we covered over the last few weeks. We were never able to overcome the immovable force we were giving force to. This can apply to both the upper and lower extremities much more than open chain. Each time we push off during gait, stand up or bend over we are using this for the lower extremities. Using the push up and pull up are great ways for swimmers to help get through the water better (yes during swimming the upper body is functioning in a closed kinetic chain so think about that for your training program). Also, think pushing up from a chair or pulling on something to help you get off the ground.

### Push Up/Wall Push Up



These are great starting points for the push pattern, but as we have covered before don't try to move too fast. Make sure your form is spot on with a wall push up before dropping to the ground. I am also a huge fan of closed kinetic chain movements for shoulder health. They help to allow for proper recruitment of the rotator cuff and stabilization of the scapula. Even something as simple as a mammalian crawl can be a great way to begin recovering from shoulder injury.

### BILATERAL CABLE PUSH



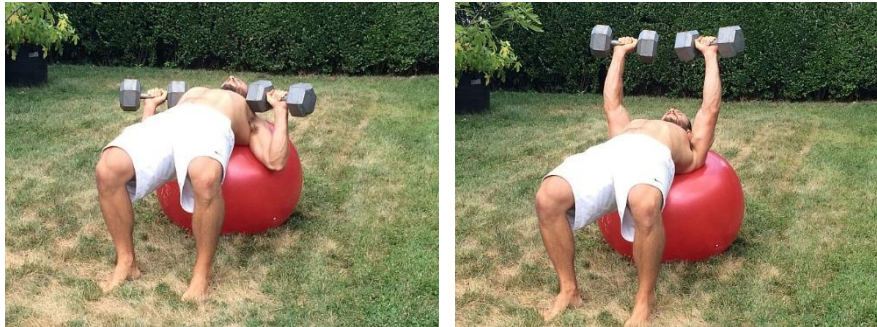
Take those cables over each shoulder and push ahead. I like to start here and then go to the single arm pushing as it leaves out the transverse (rotational) plane and makes it an easier learning process.

### SINGLE ARM CABLE PUSH



As soon as ready get into the single arm work. We don't often push with two arms in the closed chain so being able to integrate the single arm work will be critical to proper movement. We can often handle more weight per arm when getting into the single arm work and therefore want to progress here to reach that maximal strength. Also a must for any throwing athletes (or parents).

## SWISS BALL DUMBBELL PRESS



One of my favorites and for those of you without a great cable set this is certainly something to throw in. It can be done with one or both arms and certainly offers great stability for the core and backside of the body. The other **critical** benefit is that it allows the scapula to move freely on the ball.

This is something that cannot happen on a normal bench and why I prefer the Swiss Ball to keep from impinging the glenohumeral joint. Heck you can even do a barbell press on the Swiss Ball, but be sure that whenever doing Swiss Ball exercises that you have a high quality one that is puncture proof.

There you have it. A nice introduction to another movement so get on pushing! Stay tuned in for next week when we work the antagonist movement, the pull.

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## PULL

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This can be pulling a door open, reaching out and grabbing something off the counter or even moving a couch across the floor as I just did recently. I like to use bands when teaching the pull hooked onto something stable.

A simple row by grabbing two handles is a great place to start. Grab both handles with arms extended. Pull both elbows into your side while squeezing your shoulder blades straight back. Make sure that your shoulders do not tip forward and return to the starting position.

In my opinion this, like the bend, is another highly neglected movement. It is not often practiced or trained in the gym and if it is the form is often poor. I feel that this is the reason of so many of the neck and shoulder problems because we have an imbalance between the pushing and pulling muscles.

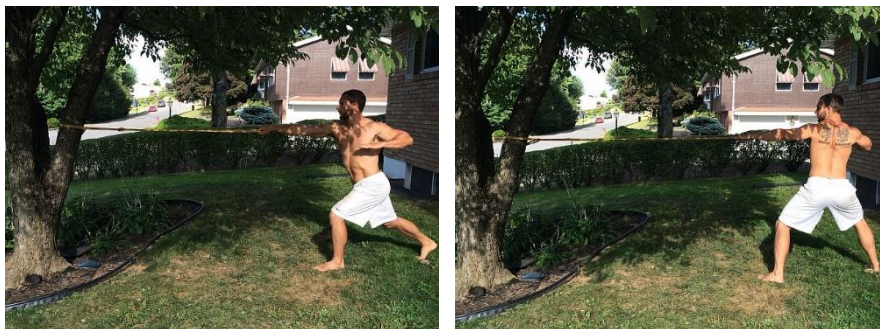
Those that are pushing muscles are on the front of the body and we see them more and because of this tend to be trained and focused upon more. Unfortunately this leads to more rounded shoulder and forward head posture. Let's explore a few pulling movements to help bring you back into balance.

### DOUBLE ARM CABLE ROW



Here is a great introduction to rowing. Reach out and grab a handle with each hand. Bring your elbows into your side, keeping your forearms parallel to the ground and squeezing your shoulder blades together.

### SINGLE ARM CABLE ROW



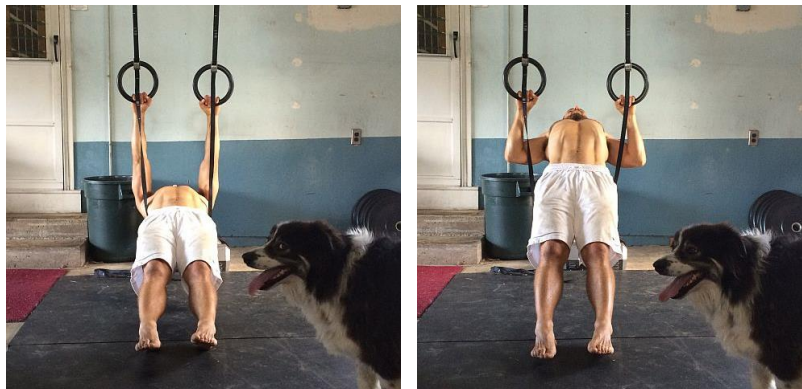
This can be done a huge variety of ways. For simplicity we will do one today and address many others in the future. Start by reaching out for a cable or band and place the opposite foot forward in a split stance. Start by twisting from the trunk and pulling your hand toward your armpit as if pulling a bow and arrow. Make sure that your forearm stays parallel with the cable and you pull your shoulder blade across the back.

### BENT OVER ROW



This can be done with any type of weight such as barbell, dumbbell, kettlebell or even sandbag. The premise is the same. Grab the weight and bend over keeping good form (see blog on the bend movement) and pull the weight into your midsection. Make sure to really squeeze your shoulder blades together and do not allow your shoulders to tip forward. Also make sure to keep your chin tucked in.

### INVERTED ROW



Still my favorite place to start is with the inverted row. It is a closed kinetic chain movement like we talked about last week and is great to build a stable shoulder girdle. Fix a barbell in a rack or grab a hold of a set of rings and pull your chest to them. Just as in the bent over row squeeze the shoulder blades again and keep that chin tucked. If it is too hard set the bar/rings up higher and if it is easy set them down, put your feet up or strap on a weight vest.

## PULL UP



Now we get to “the upper body squat.” It is called this because of the tremendous muscle recruitment and strength needed to complete a strict pull up with good form. It really is a very simple and effective movement. Jump up and grab a bar or rings overhead. “Pull” your chest “up” to the bar. That is it provided you don’t flare your elbows, stick out your chin and be sure to keep the shoulder blades down and back at the top of the movement.

Now it is your turn and really get out there and start pulling. This movement can do wonders for your posture when matched with proper stretching.



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## TWIST

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### "Hey Baby, Let's Do the Twist!"

The twist pattern is often combined with other patterns as a lot of them are. Here we see it when throwing a ball especially. We are combining a twist, push and lunge all into one for a great movement.

Here woodchops and different rotational exercises on the Swiss ball are excellent to train the pattern!

This twist is a great exercise that I feel is much underutilized. Probably because it is not a sexy exercise to do, but it has so much carryover since there are many exercises that combine the twist with other of the Primal Pattern Movements we have been talking about. Take just throwing a ball. This can be broken down into a push, twist and lunge. That is a whole lot going on at once that your body really better be able to handle so check out what we have here to get you twisting.

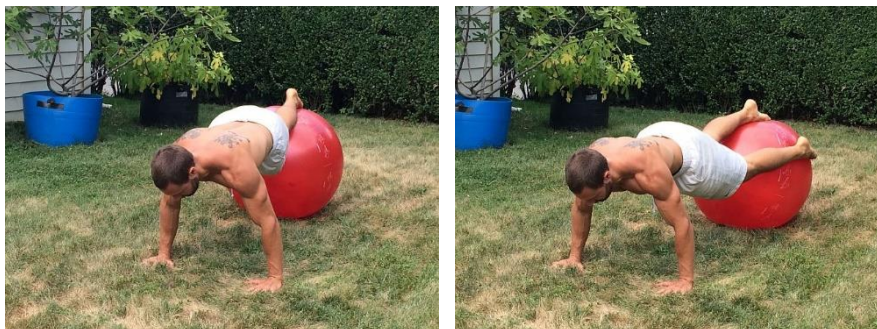
### PRONE BALL ROLL



Here is a great way to introduce the twist. Just lie down with your chest on the ball, hug it and turn side to side.

Very simple and effective when building up your twist.

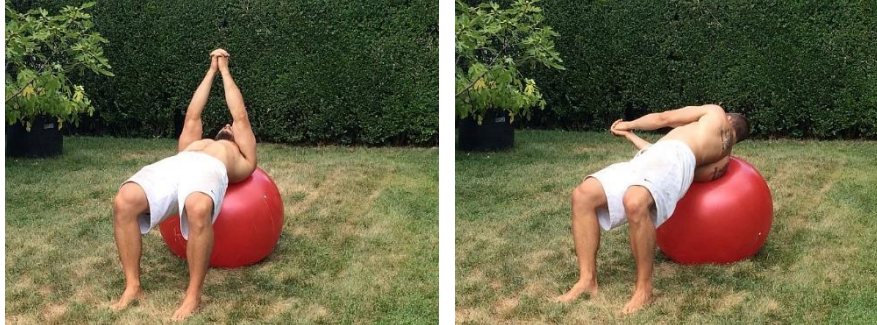
### PRONE TWISTER



Here is a great way for swimmers to twist since the lower body is in an open chain and must stabilize the ball. Get in pushup position on the ball and turn your feet side to side.

Be sure that your inner and outer units are strong enough to handle this or just slide the ball in closer to your trunk.

### SWISS BALL RUSSIAN TWIST



I am a big fan of this to work on hip stabilization with a twist introduction. It is also great for getting the spine to rotate very well. Lie on your back on the ball and keep the hips up.

Start with your arms straight in front of you and twist up onto one shoulder. Pause here and transition to the other shoulder making sure to keep the movement smooth.

### SUPINE LATERAL BALL ROLL



Here is an exercise you can get a lot done with. Not only will it help with your bend and squat, but also brings into play the pull and twist as well. Start again on your back on the ball with your arms straight out to the side.

Keeping your shoulders square to the floor shift your shoulders and feet to one side, hold and then return to the other side.

## BODYWEIGHT WOODCHOP AND CABLE WOODCHOP



This is one of my favorite exercises overall. I recently introduced it to one of my occasional training partners and he was amazed when we did it heavy what it did for him throughout his entire body.

The movements are the same, except with the cable woodchop start perpendicular to a cable machine and grasp the handle with your outside hand first. You will take a little wider stance and start with your arms up toward the weights.

Your weight will be about 70% to that foot and you will shift it as you drive your arms down and through so that your hands are now on the outside of your other foot.

Return and repeat, but be ready for how much control of the inner unit and outer units this takes as well as being proficient in the lunge and push patterns.

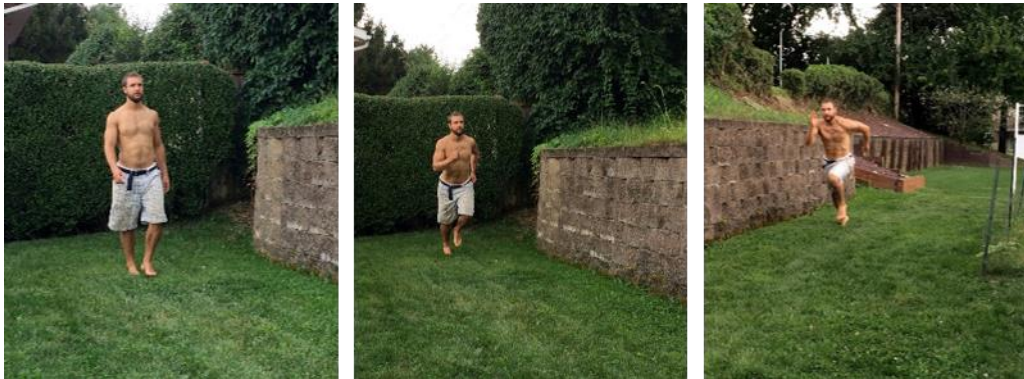
Time for you to get out and do your best Chubby Checker impression.

Yes, I love oldies so get used to the references.

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## Gait

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This can be many different forms from walking to running to sprinting. Each of us should be able to still run and sprint into late life, but most people stop doing so after their teenage years and lose this ability.

Get out go for a run, play tag, shoot some hoops.  
Just get out and move!

With all of these movements it can always be beneficial to find a local CHEK Practitioner or highly skilled physical therapist to check your form and write an exercise program for your specific body encompassing all of the Primal Pattern Movements.

### So You Want to Learn to Walk?

Make sure that you have first perfected the infant development patterns that I talked about a few months ago. You must remember that these are a prerequisite to being able to walk, run and sprint properly.

There are often imbalanced side to side in the body and this is why people notice when they walk that one leg turns out, one arm swings more than another, one leg steps more or even that a shoe has a different wear pattern than another.

All of these must be addressed and you should seek out a C.H.E.K Practitioner or highly skilled physical therapist to have these addressed to truly address any problems with your gait patterns.

## WALKING



During walking one foot must always remain on the ground. Anything more and you move on to running. I listed some of the problems associated with any form of gait in the previous paragraph, but let's make that a little more complete so you can understand all of what can be going on when moving from one place to another.

- Stride Length
- Pronation (assessing lower extremity, not just foot)
- Hip Rotation/Out Toeing
- Trendelenburg
- Arm Swing
- Shoe Wear

## RUNNING



During running there are brief periods where both feet are off of the ground. This is done at a higher speed than walking and because of this causes more force. Running can be done in straight lines forward, around turns, cutting sharply and backward. All of the problems identified in walking are amplified here because of the increased intensity.

## SPRINTING



When it comes to being able to perform normally as a human sprinting is something that I feel we should still be able to do at any age. It is a form of running near or at top speed for shorter distances.

I feel that it has tremendous importance because it would have still allowed us to escape dangerous situations in the past no matter what our age. We did not have time to warm up to not pull a muscle so our bodies had to be performing optimally. Even if you are not ready to do this right now, I encourage you to start building sprints into your life.

*"There you have it. A brief introduction to all of the Primal Pattern Movements as I have learned by Paul Chek.  
I look forward in the future to going into greater specifics on each to give you a greater understanding of how to use them for yourself." ~ Nick Horowski*