

# Sled Dragging Part II

# The Fundamentals



In part one I explained how useful a sled was, but now we are going to go into more detail on the benefits of sled dragging and how to incorporate it into your next workout. In this article, *The Fundamentals*, we are going to discuss the sled and its practical applications.

First, here's a picture of the handle set up that I use.



Several have asked about it....It's pretty simple. In addition, various cable attachments work well for certain movements. In fact Elite Fitness and Dave Draper have quite a few thick handled versions of popular handles that would be worthwhile. However, the set up I have here is quite versatile. It's simply cambuckle straps tied onto a quick chain link used to attach the two chains. A heavy duty carabiner would work as well. The other feature is the 2 inch PVC handles. I'm a big believer in thick grips whenever they are available. I just bought a 6 foot length of PVC pipe and hacksawed two handles out of it. Edison eat your heart out!

My athletes whine like a puppy the first few times they use them because they are not accustomed to that type of grip work. However, after a few sessions they will have improved levels of grip and forearm strength and won't even realize it! There are some movements that are better with other attachments and so forth, I will discuss them in the exercise index as they are added.

Now, how do we actually drag the sled? Well, so long as you are dragging it, you really can't screw up too bad. The biggest contraindication with the sled is running. It doesn't make you faster! In other sports in which weighted implements have been used to train the specific sporting motion, it has never been found that the actual sporting movement being performed with resistance is beneficial. Whether the sport is throwing a weighted baseball, javelin, swinging a weighted bat (at pitches, not warming up), a weighted golf club, shooting a weighted basketball, whatever.....the weighted implement never improves performance. To my knowledge no top level track coaches who consistently produce world class sprinters use resisted running methods. The only work they perform other than track work that is specific to sprinting, to my knowledge, is assisted running either with the wind at their backs, or down a 2-3 degree incline. According to Professor Tudor Bompa in his excellent text, *Periodization: Theory and Methodology of Training*, Russian sprinters used incline work extensively. Also, at one time, I know the Dallas Cowboys had such an incline at their facility. I do not know if they still do or how extensively it was used. And, not all track coaches agree with that method. However, in addition to running with a sled not improving performance, there is a safety issue as well. When attempting to run with a weighted sled, the inertial forces at ground contact are very high, hence one has an increased likelihood of pulling or tearing a hamstring. Injuries in training are sins! Athletes are going to get injured, however, one of the goals of training should be to prevent injury. This can't be done if the athlete is getting injured during training.

The two most basic drags are pretty easy to figure out. You drag the sled forward, or you drag the sled backwards. Years of Russian research was invested into developing these two methods! Dragging the sled backwards emphasizes the quadriceps and low back. It is also can give the scapular retractors, forearms, grip, and elbow flexors quite a workout. The set up is pretty basic for the **backward drag**, start in front of the sled with one foot ahead of the other in a staggered stance, low, holding onto the handles.



You then simply start walking backwards while staying low. The first thing most athletes will want to do is stand up and shorten their steps. This is not as effective! Stay low! It makes a difference. It will increase the recruitment of the quadriceps as a whole and especially the VMO.

The other basic drag, is the **forward drag**. It actively recruits the hamstrings and glutes, and to a lesser extent the low back, and again the grip and forearms. Set up by facing away from the sled and holding a handle in each hand as pictured:



The straps and the arms should more or less be in line throughout the movement. The key, again, is staying low. Taking big steps and planting with the heel, and then pulling with it. The first thing the athlete will want to do is to stay on their toes and make short choppy steps. Doing so takes recruitment away from the hamstrings and puts it on the quadriceps.

A variation of the forward drag, that somewhat simulates dragging with a harness is the ***Over the Shoulder drag***. The set up is similar to the forward drag, with the exception that you will be more upright throughout (due to the angle of pull) and therefore recruit more of the lower back.



The arms should only be slightly bent and the straps over the shoulder inside the acromion process (the notch on top of your shoulder). Then you simply walk forward emphasizing the push off. Again, you will be more upright during this movement.

With those two (or three if you count the variation) you can get a great workout for the lower body and improve your base level of conditioning. In addition, these are the first two movements I have an athlete perform with the sled.

The next movement is best used for developing explosiveness and power. It's probably my favorite movement with the sled. I'm stealing it from Charles Poliquin who in turn discovered it talking shop with Louie Simmons. It is the ***Sled Pull Through***. The basic set up is to face away from the sled with the strap between your legs, your back arched and about parallel with the ground. The arms should be straightened.



The movement is then performed explosively as one extends their hips and knees as forcefully as possible, extending up onto the balls of their feet.



As in the power versions of the Olympic lifts, it is important not to pull with the arms. Most athletes will want to do so initially, but it kills **power** of the movement. I had a group of athletes using this movement in their pre-season conditioning once, and they were all at about the same strength level. One kid however, could not conceptualize the proper technique of this movement, so would try to pull exclusively with his arms on every rep. I finally convinced him to do it one time with straight arms, and he moved the sled farther than he ever had on one pull. Prior to that the sled would literally jerk him backwards! Never had a problem after that, turned out the dumb old coach knew what he was talking about!. Take home point: **DON'T PULL WITH THEM ARMS – IT KILLS POWER!** This is a lower body movement.

In addition, a safety point on these sled movements, depending on the surface, you may need a partner. They will stand by in order to stop the sled if it slides all the way to the person pulling it. On grass this usually isn't a problem unless it's very short strap. But on concrete, gravel, carpet when you give it a good tug, it will take a second before it comes to a stop. A sled loaded with a couple hundred pounds slamming into the achilles of an athlete is not desirable!

For most intents and purposes (and I will get into specific programming variables in part III of this article series) I like dragging for time as opposed to reps or distance. Generally speaking I like to use 5-10 reps or no more than about 30-40 seconds in the pull through.

Another lower body movement that can be very beneficial is the *Peterson Sled drag*. Again, borrowed from Charles Poliquin, this is very similar to the Peterson Step up if you are familiar with it. It is essentially a moon walk for those of you born prior to 1984 and remember Michael Jackson for actually being an entertainer and not.....whatever he is today.

Start in the same position for the Peterson step up, the working foot with a heel to toe alignment with the nonworking leg. The heel of the working foot should be raised. Point the working toe out 10-15 degrees. Initiate the movement by pressing the ball of the working foot into the ground and pushing back. The toes of the non working foot should be pointing up. Your torso should remain upright throughout the movement. 40-70 seconds of work is optimal for most instances.



It's a great movement for developing the all important **VMO** (*vastus medialis oblique*) which plays an important role in knee stability as well as jumping, cutting, sprinting, and other fast, highly intense movements.

That basically gives you 5 movements in order to thoroughly work and develop the lower body. There are other movements that work, but those give you the most bang for your buck.

Now on to the upper body.....there are virtually endless variety of pulls one can perform with the upper body. The following will again be the most basic that are beneficial focusing on the needs and goals of most athletes. They will develop strength and power, as well as, prevent injuries.

The first is the *Sled Press*. It's highly specific to a variety of sporting movements and can be done in one of two ways, stationary or walking. First, to set up, face away from the sled with a handle in each hand. The strap should be on the outside of the arms and hands. Use a semi-supinated grip on the handles. Start with a staggered step foot position. This increases stability and allows you to use more weight. Start with the hands by the sides, then begin to press upward at an angle similar to the incline press.



The finish position should be about eye level, perhaps slightly higher. Now, as I said, you can perform these either stationary or walking (i.e., dragging the sled). Performing them stationary would mean you just reset after every rep. Performing them while dragging the sled is different only in that you continue forward movement while continually pressing. At the end of the movement, as you continue to walk forward, you can actually resist the hands/handles returning to the start position. This places an eccentric stress on the muscle. Hence this method is very beneficial to those seeking to improve hypertrophy.



The next upper body movement is the *Sled Row*. If your going to push, you have to pull, right? Set up facing the sled using the afore mentioned staggered stance. With a slight forward lean and neutral spine, reach out for the handles. You should feel a slight stretch in the latisimus dorsi.



With a semi-supinated grip pull the sled to you concentrating on squeezing the shoulder blades together. Because of the thick grips, the forearms, hands, biceps, biceps brachia and the brachialis all will get a good workout as well



As with the sled press these can be performed stationary or walking.

A variation of the *Sled Row* is the *Sled Row to the Neck*. It's similar to the rope row to the neck and likewise does an excellent job of developing the rear deltoids, rhomboids, trapezius III and IV, and helping correct and/or prevent various shoulder girdle dysfunctions.

Start with a similar setup to the regular row, but with a slightly more upright posture.



Pull the sled towards your neck getting the maximal *Range of Motion (ROM)*.



Try to minimize forward head tilt....as in the picture shown.....forgive that oversight, but the athlete featured was modeling the movements, trying to adhere to my anal retentive instructions. Every dog in my neighborhood came out to play, and though one shows up in a few shots, we were essentially shooting around dogs. So please forgive this oversight in technique in this picture. Keep your neck aligned with the spine!

A movement very similar at the start to the *Sled Row* to the neck is the *Cuban Sled Drag*. No it's not because elite Cuban athletes spend time performing them, it's simply a movement that partially mimics the *Cuban Press* which in weightlifting circles is better known as the muscle snatch.

Start as you did in the *Sled Row* to the neck.



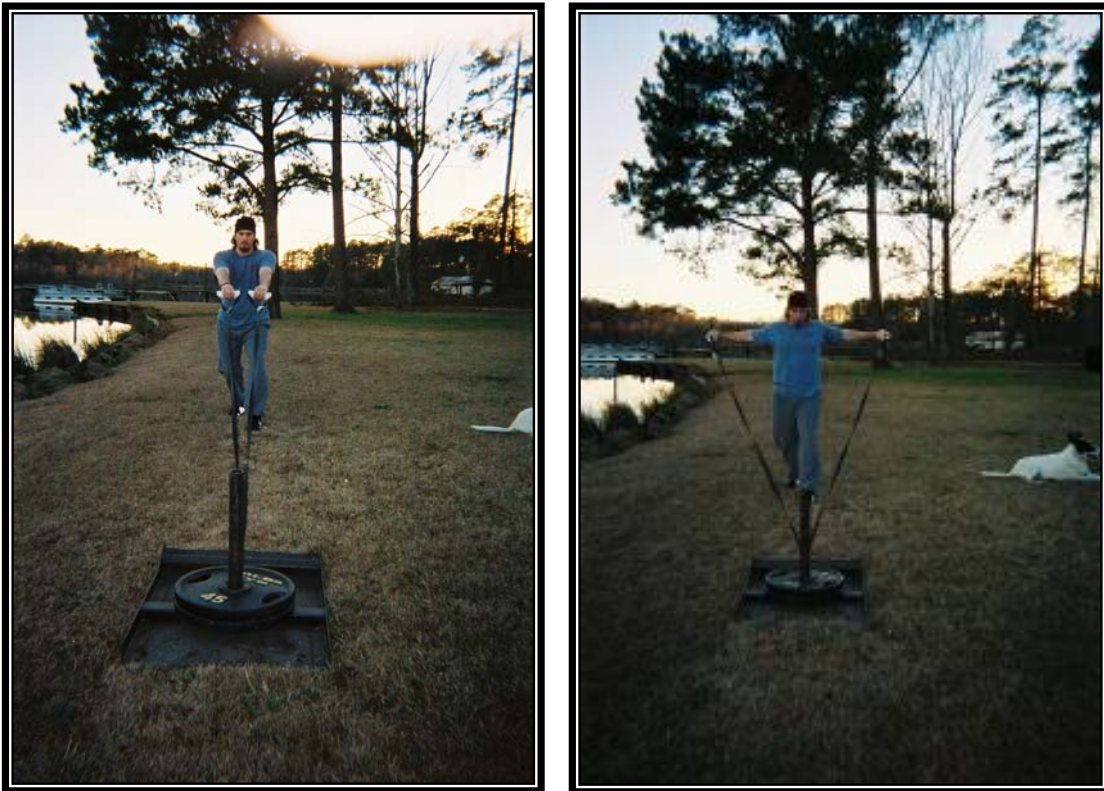
Now as you pull the sled to you, you begin external rotation of the humerus when both arms come into alignment with one another as see in this picture:



This movement does an excellent job of integrating external rotation of the humerus with the actions of the other muscles of the shoulder girdle, as they are active stabilizing it in order to provide the external rotators an effective line of pull in the partially retracted position. If one has had weak external rotators and spent time with isolation movements in order to bring them up, this is an excellent movement that can be used to integrate them back into more complex shoulder movements.

While we're on the subject of shoulder health there are two other movements somewhat unique to the sled that can be used to help prevent or correct various problems.

The first is the reverse fly. It thoroughly works the rhomboids and rear delts. Set up in a staggered stance with a pronated (palms facing down) grip. Keeping only a slight bend in your elbows pull your arms apart.



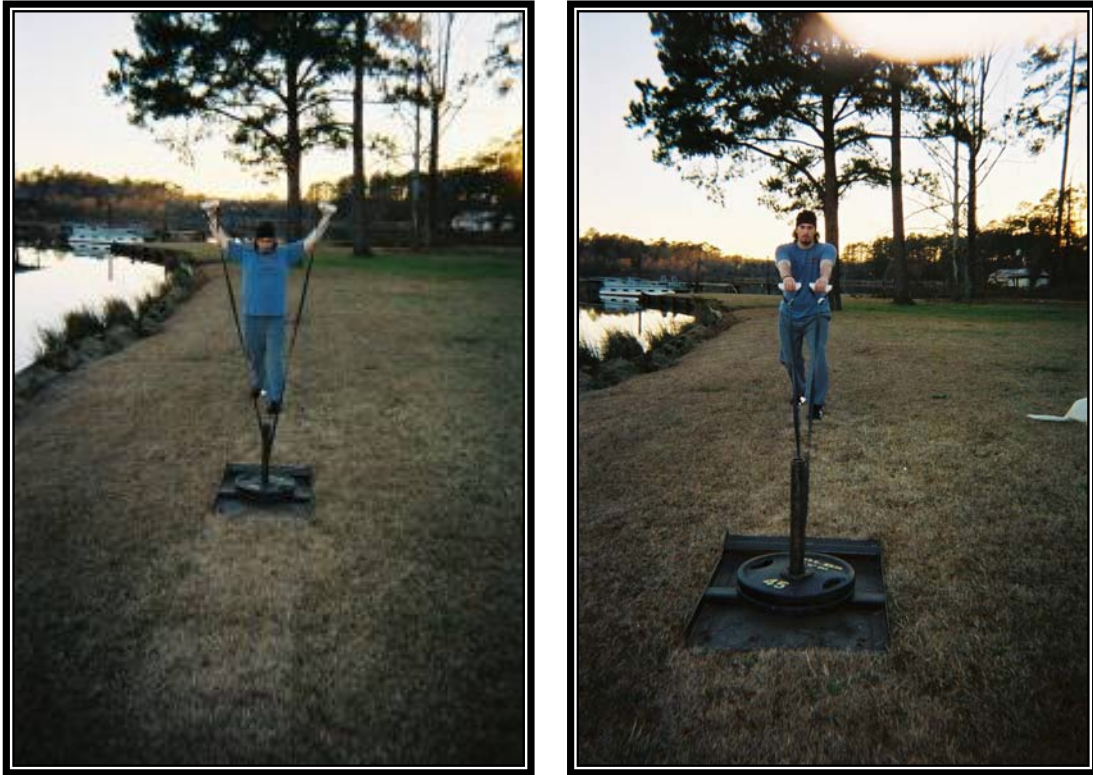
Your hands should stay about nipple height in order to maximize recruitment of the targeted musculature. It's my opinion that walking works best with this exercise. The goal is to build some degree of strength and strength endurance when giving these muscles special attention.

Now let's reverse this movement and perform *Sled Fly*. The key point here is to use a pronated grip. The reason being, is that this puts the humerus into internal rotation. The targeted musculature here are the pectorals, which just so happen to be internal rotators.



With this movement you can adjust the height of the hands. The lower you bring them, the greater the recruitment of the sternal portion of the pectorals. The higher you bring them the greater the recruitment on the clavicular portion of the pectorals. Like the *Reverse Fly* this movement works best while walking. Also, this makes an excellent movement to add mass to the chest in a second workout. In addition, many athletes suffer shoulder problems from tight pectoral muscles. One of the benefits of this movement is that you can effectively stretch this muscle at the start position, which will provide a greater contraction, but also a slight PNF action depending on where you bring the handles – which will aid in shoulder mobility.

Here's another move from the *Westside Barbell Club*, the **Sled Rear Raise**, or as I call it, the **Y drag**. It does a great job of working the deltoids, trapezius, rhomboids, etc. in the upper back. Start out facing the sled with a staggered stance.



Now simply raise your arms keeping a slight bend in the elbows as if you're singing the YMCA song. This movement, **Sled Rows to the Neck**, **Cuban Rows**, **Sled Flys** and **Reverse Flys** are great movements for conditioning the muscles of the shoulder girdle and can go a long way in preventing shoulder troubles.

In my opinion these are the most useful sled dragging movements, as well as some effective ways to use them. For more strength and power work, perform the upper body movements in the stationary position and make the pull or push explosive. For greater strength endurance, walk with them and use the eccentric portion to increase **Time Under Tension (TUT)**. However, for the movements that specifically address conditions within the shoulder girdle I recommend not getting too explosive with them. They are not explosive or overly powerful muscles.

Now, how far do you drag the sled. Well, that will largely depend on how big your training area is. Here are the guidelines I use, and have found to work well. First, I don't drag for distance per se. But, in my opinion 30-100 feet is sufficient in most cases, at certain times you may go up to 150 feet, but I dislike going any further than that. I'd rather put more weight on the sled. If you want to drag for distance, just put a little weight on and take a few trips around the block. Do not however send me your citation for failing to adhere to the noise ordinance!

Now, for most movements, not unlike regular lifting, I think a specific **TUT** applies for most desired training adaptations.

- 🚗 **Speed Strength** - drags of 20-40 seconds
- 🚗 **Strength** - 20-60 seconds
- 🚗 **Strength Endurance** - 30-70 seconds

Now, what's with all the overlap? If I go for 30 seconds what am I getting? Power, strength or strength endurance? Well it depends on a few things. 1) These are mere guidelines, don't get too anal retentive on them. 2) If you are using the **Sled Row** with the dragging variation, you pretty much are maintaining tension on the targeted muscle group. However with the **Pull Through**, you have a few seconds between each rep that you must take to reset. Same thing if you are performing **Sled Presses** with the stationary or walking variation. So you must look at the actual time the set takes to perform and the actual time in which the muscle is spent under *tension*.

In addition for speed strength you will want to take longer rests in order to facilitate greater recruitment of high threshold motor units for each set. For speed strength, rest intervals can be from 90 seconds to 3 minutes. That's a little less than what I would recommend for the weight room, however, understand that the eccentric stress is much lower for most sled dragging movements. Strength endurance rest intervals should last anywhere from 30 to 60 seconds with strength rest intervals falling between 60 and 120 seconds.

For most of the drag variations though I prefer going for time as opposed to distance. The only exception is that at certain times I like to go for reps in the **Pull Through, Sled Press and Sled Row** (using the stationary variation). Generally speaking at such times reps should stay in the 5-12 rep range. However, you will realize that even using this method - the set will last 20-40 seconds in most cases, but the **TUT** on the muscle will generally be under 20 seconds.

As for sets, I like lots of sets. Usually 5-10. On some of the movements such as the **Cuban Drag** I might use only 2-3 sets for greater **TUT**. However, I usually like only 2-4 sets and rarely more than 5 dragging movements per workout. This allows for a higher quality of work for a specific *muscle group* or *muscle action* in my opinion.

That's about all there is to dragging a sled! At least as far as the fundamentals go. With the movements provided you can work virtually everything and even correct many common problems that most athletes experience. In part three we will examine variables and factors that dictate how, when, where, and how much you use these fundamentals in a program be it with the sled alone, with your current program, etc.

However, I will no doubt receive an email as soon as this article is posted about direct arm work as spring break is only a few weeks away, therefore pump your guns up with these arm movements and you will be beach ready. Perform them at the end of an arm workout as a finisher or as a second arm workout.

***Bicep Curls Sled Drag***; start facing away from the sled similar to the ***Forward Drag***, except we will start with a supinated grip (though you can use a supinated, semi-supinated or pronated grip interchangeably). The walking variation works best here. You simply curl the weight as you walk.



The other is a tricep movement that I call the ***Skiers Drag***. It somewhat simulates downhill skiers use of their ski poles. Get into crouched position, as if you might actually be skiing, the straps should be taunt and the elbows bent. The movement will look like this:





Unlike most of the upper body movements, a staggered stance is not absolutely necessary, but you may still find it useful. Also the stationary or walking variations can obviously be used, but in my experience the walking version works better. Also, one advantage to the walking versions is that your quads, hams, glutes, and low back get additional work.

However, like I said at the beginning, it's hard to drag it in a manner that is ineffective, so just go drag it.

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