

# the **CrossFit** JOURNAL



June 2006



## **Strategic Shopping** Outfitting a CrossFit Gym on the Cheap

Eddie Lugo

Hardly a week passes that I don't hear someone say, "I hear you opened a gym. That must have cost a fortune." My usual response is, "No, not really. You would be surprised at how small the start-up costs are relative to mainstream commercial fitness facilities." Typically, their eyes glaze over at this point, their eyebrows wrinkle, and I suspect that they walk away thinking, "Yeah right, no need to play it down. There is no way you can own a gym without spending a bundle." Well, there is.

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# Fit to Eat: Summer Picnic Menu

— Benjamin Sims —

The beginning of summer is always an exciting time for food. Everything really starts to come alive, begging to be eaten straight out of the ground or off the vine. Ingredients I have dreamed about all winter are finally here - wild salmon, ripe tomatoes, sweet peaches, and tender green beans. Here is my Zone-friendly summer picnic menu for a warm evening.

## Poached Salmon Salad

4 pieces skinless salmon fillet,  
4.5 ounces each  
4 Early Girl tomatoes,  
or the best tomatoes you can find  
4 cups haricots verts  
(thin, tender green beans),  
with tips trimmed off  
4 shallots  
3 stalks celery  
2 cloves garlic  
1 bay leaf  
1 bunch fresh basil,  
leaves and stems separated  
12 olives, pitted and chopped roughly  
2 lemons  
1 tbsp. red wine vinegar  
2 eggs  
1 oz. (about 3 tbsp) extra virgin olive oil  
Salt and pepper



Start by filling two medium pots with cold water. To the first pot add two of the shallots, one stalk of the celery, and the garlic, all roughly chopped. Add the stems of the fresh basil (reserving the leaves for later), the bay leaf one of the lemons cut into quarters, and salt (it should taste like the sea); bring this pot to a slow simmer. To the second pot, just add salt and bring to a boil.

When the salted water comes to a boil, carefully drop the two whole eggs into it, reduce to a slow simmer, and set a timer for 7 minutes. Fill a large bowl or pot with ice water. After 7 minutes, add the green beans to the pot with the eggs and cook for another 2 minutes. Drain the eggs and beans and immediately immerse in the ice water.

Thinly slice the remaining two shallots, put in a bowl, and pour in red wine vinegar. Slice the two stalks of celery and cut the basil into thin strips. Stem the tomatoes, cut into quarters, and place in a separate large mixing bowl. Remove the green

beans from the ice water, pat dry, and add to the tomatoes, along with the shallots and vinegar, basil, celery, olives, and the olive oil. Season generously with salt and pepper (tomatoes need more salt than one might think to bring out their flavor). Leaving the cooked eggs in the cold water bath, peel them (the shells come off easily and neatly underwater).

Meanwhile, your other pot of water with the herbs and vegetables has been simmering and becoming flavorful for the salmon. Making sure the water is not boiling but is just about to, drop the fish into it gently and cook at a low simmer for about 3 to 4 minutes, depending on the thickness of the fillets. The salmon will turn opaque and firm up; if you bend the fillets a little bit there should still be dark pink in the center when you pull it out of the water. If the fish is the same color all the way through and flakes apart in the water, it will turn out overcooked and dry. Pull out of the water gently with a spatula. If the salmon seems slightly undercooked, that is best, as it will continue to cook from

the residual heat. (You can always drop it back in the water if you want to cook it more, but there is no recourse for overcooking.) The salmon, tomato, and green bean salad and the eggs can all go into the refrigerator until you are ready to serve them. When you are ready to eat, cut the eggs in half lengthwise, assemble everything on plates, and sprinkle salt and fresh cracked pepper over the Salmon and hard cooked eggs.

### SUMMER PICNIC MENU

Poached Salmon Salad

Fresh Peaches  
with Yogurt and Almonds

**Four 4-block servings**

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## Fit to Eat: Summer Picnic Menu

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### Fresh Peaches with Yogurt and Almonds

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(Dessert)

4 ripe peaches  
1 cup organic plain yogurt  
2 tbsp sliced toasted almonds

The hardest part about this dessert is finding good peaches. They will not be in a supermarket; the best source is typically either a farmer's market or a generous friend with a peach tree. Finding a good peach is one of the joys of summer—you will know when it

is right, and all others will seem like a waste of time. Give the peaches a rinse and cut into quarters, removing the pit. Spread on a plate and top each quarter with a spoonful of yogurt and a sprinkle of almonds.





# The Slow Lifts

## Part 4: The Bench Press

— Mark Rippetoe —



The longer I stay in this business, the less fond I become of the bench press. And it's not the fault of the exercise itself, which is a perfectly reasonable thing to do if it's incorporated correctly into the program.

It's the injured shoulders, the big pecs and little legs, the \$400 six-layer denim/moly-steel shirts, the 18-year-old football players who can "do 500," the spotters with traps more fatigued than the bencher's pecs.

But mainly, it's the noise.

Not at my gym, of course. The vast majority of my members learned a while back that the best way to keep their shoulders healthy was to press and bench press in equal doses, quietly. But there are other gyms in which the bench press is the only upper-body lift done and is the main trapezius exercise for spotters, since deadlifting is pretty scarce in these places. And the yelling just annoys me all out of proportion to how much it should. I get really tired of spotters trying to sound like Macho Man Randy Savage, with their hands on the bar "spotting" every rep. At CrossFit Wichita Falls/WFAC, spotters don't touch the bar unless it's going back down or has been stuck for long enough to get them worried. We all squat and pull, so our legs are generally in proportion. Just now there are no competitive powerlifters here, so most of the members don't even know what a bench shirt is. (Quite honestly, if a bunch of them starting spending money

on bench shirts, I'd probably feel compelled to raise my dues.) Here, benching is just another exercise, not the absolute measure of personal worth it is in some circles, and the noise level is commensurate with this more balanced, peaceful, logical worldview.

The bench press is the best exercise for absolute strength in the upper body, because it allows the lifter to move heavier weights

with the arms than any other exercise. It should be included in every barbell training program. But it is not the only lift we should do, and it frequently gets used as though it is.

Benching provides hard active work for the chest, shoulders, and arms and isometric work for the forearms, and it trains novice lifters well in the fundamental skill of pushing on a very heavy load. This last may be its most useful function. When people first start training, they have no experience with maximal effort. The vast majority of humans on this planet have never had to push really, really hard on anything, and that is a skill that should be developed, along with cooking, critical thinking, and interpersonal relations. The bench press is a very good place to learn how to bear down and push hard, and this invaluable lesson translates to all the other slow lifts quite well.

This is because the bench press is relatively simple to do and, once learned correctly, involves not much more than this: pushing very hard on something that is moving rather slowly because it is very damned heavy.

There are no other distractions since the back is braced against the bench, and the rest of the body—while it must be controlled in terms of position and tension—is not directly involved in the lift. Pushing hard is possible because the

segment doing the pushing is very short, and the thing—or one of the things—you are pushing against, the bench, does not move at all. (Yes, you push against the bench too. The bench and the bar are pushed apart.) The press involves the entire body down to the floor, and while this makes it a better exercise overall, it also means that some extraneous movement will occur in the supporting segment secondary to the prime movers used in the exercise. The bench press allows you to focus on the push itself, without having to worry about controlling much of the rest of the body at the same time. This allows you to bench press more weight than you can press.

The two exercises thus provide balance in a couple of ways: the bench press works the anterior shoulder girdle and chest, while the press works the medial and posterior shoulder and the posterior stabilizers. The bench press works on raw "push" while the press trains total body stability while pushing. Both are best done without a lot of unnecessary drama.

Since everybody pretty much knows how to bench press, at least in general terms, I'll address just a couple of points I consider salient. First, there is a little trick I use to make the bar go to the right place, through the right path, every time. It's about eye position, and it applies to every sport that involves the use of an implement, from benching to golf to tennis to throwing the shot. (Many other coaches have observed this, and I just stole from them. I am shameless this way.) When you take the bar out of the rack, you'll be looking up, since you're lying on your back. Find a place on the ceiling to stare at and nail your eyes to that place. This point will be your positional reference for the bar path and its lockout position over the chest. If you return the bar to the same position at the top of every rep, having touched the same place on your chest every time, you will find that your bar path is uniform as well. This is due to the use of the stationary reference for the movement—the fixed point on the ceiling.

## The Slow Lifts

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In golf, you look at the ball, not the club head. The head of the club goes to where the eyes are fixed. You look at the ball in a tennis volley, and, even though the ball is moving, your head moves with it and renders it stationary relative to your eyes. The implement in your hand then goes where it is directed by the eyes: the golf club goes to the ball, the shot goes downfield, and the bar in your hands will go to the same place in reference to the ceiling if you fix your eyes on that point. Most bench pressers do this without thinking about it. It has been my observation that very few good benchers look at the bar as it moves, since it is liable to move to a different place each time if the eyes follow the bar instead of directing it to the right place. Use this technique next time you teach someone how to bench and see what happens. More than 90 percent of the time, their first reps will be almost perfect if the movement is explained this way.

But how, you ask, does this observation relate to, for instance, the snatch? Damn you, you're making me have to think. Okay, the snatch is a movement that involves the bar moving from the ground to overhead, and would be impossible to watch against the ceiling due to the neck position this would require. More importantly, a movement like the snatch or the clean is best thought of as a movement of the body, not the bar. As such, we normally fix the gaze on the facing wall, so that positional reference information is available about the body itself, not the bar, which will go to the right place if the body does its job correctly. As a general rule, there must be some fixed reference point for the eyes in any kind of movement of the body, and in every barbell (or dumbbell) exercise that fixed point should be stationary.

Next, the bench press, as mentioned before, has a little bitty short kinetic chain that goes from the hands to the place where the back contacts the bench. It would be better if we could involve more of the body in the movement, and as it turns out good benchers know how to do this. They

brace against the floor with their feet, pushing the chest up and arching the back, in effect extending the kinetic chain on down to the floor. It is very common to see novice benchers raise one foot up in the air as they miss a heavy rep. I have no idea why this is so universal a reflex, but it is so normal to do this that I caution my other members to stay away from the new people's feet when they do their work sets the first few times. Obviously, if a foot



comes up, a less-than-efficient use of the legs has occurred. The best foot position is open to discussion, but I like to use a stance that is about like the squat stance, with feet about shoulder width apart and shins approximately vertical. This produces the best drive down the bench with less tendency to bridge the butt up, as might be the case if the feet were too far back up under the hips.

Now, it is bad form to raise the butt up off the bench, and what *should* happen is that the push from the legs is directed straight along the bench to the back and

shoulders instead of up so that the arch is supported without a loss of contact with the bench at the hips. This convention is designed to prevent things from getting too out of hand, turning the bench press into a decline bench press, an easier version of the exercise with a shorter range of motion. Our purpose is to get strong using the bench press, not to see how much weight we can bench press, which is an entirely different matter. That is powerlifting, and this is CrossFit. So we need to keep our butts on the bench while using our legs to support our position.

Some people prefer to bench press with their feet up on the bench, or even held up in the air. This is fine, as long as everybody is aware of what is being compromised when this is done. A lower back injury or a preference for a harder style might make this desirable, but it is less efficient, and not as much weight can be lifted this way. But, remembering that more weight is not always the point, use this if you want or need to.

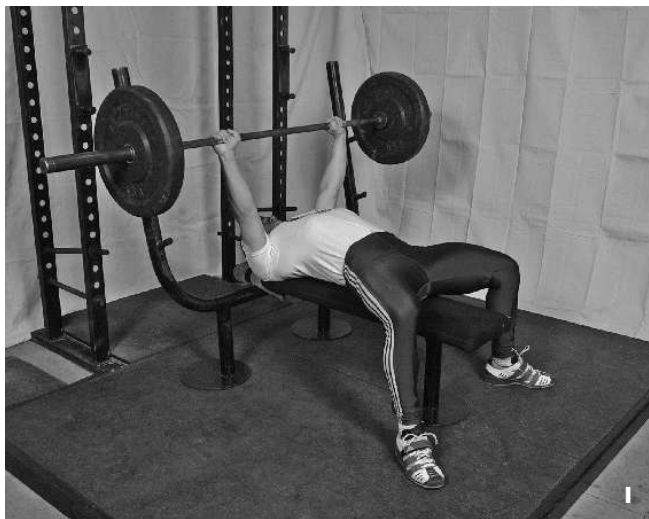
Dumbbell bench presses are a very good substitute for the barbell version. The DB bench is actually the older of the two exercises, dumbbells having been pressed in the supine position on a bench before the invention of the upright support bench that allowed the barbell version of the lift to be performed without spotters. Prior to the invention of that equipment, the lifter would have to clean the bar, lie down with it, press it, stand up with it, and then set it down on the floor (which didn't leave much gas for that 500-pound set of five that all the high school powerlifters seem to be able to do today). The DB bench involves more of the body, and quite a bit of skill when using heavy dumbbells if the shoulders are not to be dislocated. As such, it is quite useful in CrossFit workouts.

The bench press is an important exercise that has suffered at the hands of people who lack the proper perspective of its value, its correct use, and its limitations. Use it wisely.

**“Benching is just another exercise, not an absolute measure of personal worth...”**

## The Slow Lifts

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# Parkour Basics

## Part 2: Monkey, Dash, and Reverse Vaults

— Jesse Woody —

After covering the basic two-handed, speed, and lazy vaults in last month's article, I will finish up the basics of ground-level vaulting technique here by exploring the monkey, dash, and reverse vaults. These three movements ride the cusp of practical technique. All three can be useful in the right situation, but most people seem to have a tendency to apply them for their flair more than anything else. I can think of some very practical situations in which I have used monkey and reverse vaults, but I have yet to figure out the true purpose of the dash vault. Perhaps it's just me, so I will cover the technique here anyway, as you can never have too much information.

Known as the saut de chat, or jump of the cat, in French, our first movement was mistranslated as the monkey vault by some of the original English-speaking traceurs. Gross misnomer aside, the monkey vault is a powerful diving technique that is quite often the first vault learned by new practitioners once they grasp the basics of vaulting in general, as its speed and power are very impressive. Unfortunately,

this predisposes it to also becoming an overused method of clearing a variety of obstacles when other techniques might be more appropriate.

Where the monkey vault shines is in overcoming wider objects in one fell swoop. Often a speed vault is impossible to accomplish smoothly over wide walls, boxes, or the hoods of cars (with permission, of course), but the monkey vault is perfect. Learning the basics of this technique can help a new traceur develop the commitment and confidence required for many of the more strenuous movements.

Approaching an obstacle at a run, time your final step a few feet from the edge of the object. Make your last step a powerful dive toward the end of the obstacle, aiming for a point a few inches from the far edge (if it's a narrower object, such as a railing or single-brick-width wall, aim for the middle). Dive in an arch to end up with your hips slightly higher than your torso. This elevation of the hips, along with

a forward lean toward your landing allows you to push with both hands, bringing both legs over at the same time. Keep in mind that they won't pass between your hands, as you will have pushed off in preparation for the landing already. Once your hands push off, your feet will travel over the edge of the object and make their way toward the ground while your torso straightens in preparation for landing.

This is a hugely powerful technique when the needed commitment is learned, and mastering it makes it possible to overcome very wide objects. The most common problem with this move for inexperienced practitioners is clipping their feet on the obstacle mid-vault. This is caused by the torso remaining too vertical throughout the movement (i.e., not enough dive), and trying to pass the feet over the object while the hands are still in contact with it. To make this vault, you must dive and then, as your hands make contact, quickly explode up and out by pushing your hands down and back. Only after your hands are free of the obstacle do your feet continue over. Mastering this aspect of the technique is largely a matter of committing to the dive and maintaining



**Monkey Vault 1**  
Take-off, launching into a dive toward the obstacle

**Monkey Vault 2**  
Mid-vault, knees tucked and hips high

**Monkey Vault 3**  
Hands press down and back, propelling you forward, before your feet pass over the object

**Monkey Vault 4**  
Spot your landing, compress or roll, and continue on your way

## Parkour Basics

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forward motion. This movement is best practiced initially in a padded gym setting, which can free new trainees from the fear of injury and allow them to focus purely on proper technique.

A movement closely related to the monkey vault is the dash vault. In both techniques you overcome the wall or rail with arms and legs parallel. In the dash vault, though, you essentially jump over the object to land in an L-sit position, arching your legs and letting your momentum carry you to the other side. I train with friends who swear by this technique, but it has always felt to me like a huge waste of energy. If I can dash-vault something, I can probably just jump over it, and the last thing my shoulders need is any gratuitous impact. Nevertheless, many of the concepts that are important for all of parkour are required for accomplishing a dash vault, so it is worth at least a small look.

As with any other vaulting technique, you will begin in a run. Your final leap will occur slightly farther from the object than would be necessary for a monkey vault, as you need to clear your feet in front of your body without clipping the edge. Accuracy and coordination play a huge role in the success of this step, as overdoing your jump will land you directly on your butt,

while not jumping hard enough (or too late) will have you clipping your feet and falling face-first onto the ground below. You want to skim as close as possible to the top of the obstacle, which reduces both the power required for the jump and the total impact as you land.

**“If you don’t commit 100 percent to a powerful leap and to the required body position, you are doomed from the beginning.”**

As your feet pass the edge of the obstacle, they will move from below your torso to in front of it and you will begin to descend toward the middle of the object. You want to land with your legs in front and your hands next to your hips. Your butt will skim close to the top of the object as your hands press down and back, continuing

the momentum from your approach and final jump. Your legs will extend and arch toward the ground as you pass over the object, and you will allow your arms to extend all the way through to the end of the movement.

Problems with this movement generally stem from a lack of confidence. If you don’t commit 100 percent to a powerful leap and to the required body position as you make contact with the obstacle, you are doomed from the beginning. With both the monkey vault and the dash vault, the closest I have come to creating a gradual learning process boils down to spending time in a safe environment (padded gym) and working on slightly lower obstacles. The latter is limiting, though, as attempting the techniques on obstacles lower than waist-height seems to destroy the common movement pattern required for their successful completion. Better to find a safe spot to train or just suck it up and approach the move with the needed commitment rather than reinforcing improper coordination.

The last move I’ll cover in my list of “mostly practical” techniques is the reverse vault. I believe this one has the highest possibility for misuse, as it involves a 360-degree spin

*Dash Vault 1*  
Begin with a committed run

*Dash Vault 2*  
Your final leap will occur slightly farther from the object than for a monkey vault, to avoid clipping the edge with your feet

*Dash Vault 3*  
As your feet pass the edge of the obstacle, they move from below to in front of your torso

*Dash Vault 4*  
Extend and arch toward the ground as you pass over the object and allow your arms to swing all the way through to the end of the movement  
Land with your legs in front and your hands next to your hips





## Parkour Basics

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above a wall or railing as you overcome it. At first glance this may seem entirely extraneous, but practicing this movement demonstrates very effectively that you can translate rotational core strength into horizontal momentum, an especially useful technique when you are approaching an object with less-than-optimum speed.

Starting out, it is helpful to begin the reverse vault similarly to the two-handed vault (described in the last *CrossFit Journal* issue), with your starting stance beginning a few feet away from the base of the obstacle. Take a couple of quick steps into a short hop and reach forward with your left hand palm-up and directly in front of the midline of your torso. As you jump, rotate your torso toward the left, placing your right hand to the left, palm facing away from your body and fingers pointed toward the ground. This description assumes you will be rotating counter-clockwise (over your left shoulder), so if you feel more comfortable starting with a clockwise rotation, reverse the hand placement.

The jump is similar to that for the two-handed vault, except that you press down and toward your lead hip—that is, to your

left if you are rotating counterclockwise. At the same time, lead with your head by looking over your left shoulder. This causes everything else involved with the spin to fall into place, as the movement of your head will lead the rotation of your torso and your legs as well as allowing you to spot the landing before you complete the rotation above the obstacle.

Tuck your knees up toward your chest and tighten your core to efficiently elevate your legs above the obstacle. As you pass the plane of the wall or railing, release your left hand (right if you are rotating clockwise) and begin to extend your legs toward the ground, keeping your eye on the landing area throughout the move. If you committed to the rotation and an efficient and powerful jump, you will have a good bit of momentum as you return to the ground, so it is best to approach from a slight angle, leaning back toward the obstacle. This allows your momentum to carry you to vertical as you absorb the shock from the landing. Land silently and smoothly and continue on your way. The reverse vault is the one technique discussed here that can be effectively scaled down to a basic level. If you are timid about

trying it, you can establish the rotational technique by starting from a crouch on the floor, placing your hands in front of your feet and hopping forward into the spin. Moving up from this level one step at a time is a great way to slowly build confidence and coordination in an apprehensive trainee.

So there you have it: the last few basic ground-level techniques distilled into some short descriptions for what I hope is comprehensible beginning training. Establishing these movements as parts of your daily training will increase all aspects of fitness in perfect conjunction with your CrossFit lifestyle. The added balance, coordination, agility, accuracy, and, above all, confidence that you can garner from these most basic movements will improve every aspect of your everyday fitness. These movements also serve as the foundation for the basic above-ground techniques in which you break free of the horizontal boundary we move within every day and begin to think along the vertical plane as well.



**Reverse Vault 1**  
Set up the initial hand position, which begins your rotation

**Reverse Vault 2**  
Jump, then press down and toward your lead hip; at the same time, begin to look over your back shoulder

**Reverse Vault 3**  
Tuck your knees up toward your chest, and, as you pass the plane of the obstacle, release your left hand

**Reverse Vault 4**  
Lean back slightly toward the obstacle as you approach landing

# The Freestanding Handstand Push-Up

— Roger Harrell —

Performing handstand push-ups (HSPUs) without the support of a wall or spotter dramatically increases the demands of the movement. The stabilization required during the movement provides a stimulus that is simply not present when the HSPU is assisted. Regularly performing freestanding HSPUs will dramatically improve any overhead lifting or throwing activities. The following article provides a progression for developing the ability to do a freestanding HSPU, starting with no handstanding experience whatsoever. This process may take years for many people.

## Beginning handstands

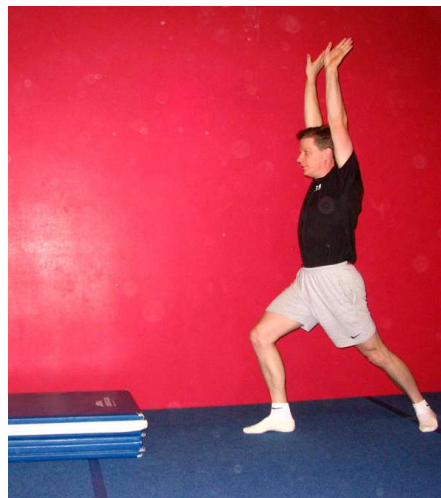
Many people will be intimidated simply by the concept of doing a handstand. Fears of falling and/or not being able to support themselves with their arms will be the primary hindrances early on. Proper positioning and a gradual progression will take trainees through this process safely and quickly.

The first step to a handstand is simply to learn how to be comfortable in a hand support. A vertical handstand is not necessary to start this process. Start with a folded panel mat, plyo box, or other stable raised surface. Stand in a shallow lunge in front of the object with arms overhead. In the lunge, the rear leg is the kicking leg, and the front leg is the support leg. Place your hands on the object, and kick your rear leg up toward the ceiling so that the support leg comes off the ground only a few inches. Start small. Getting up into a handstand at this point is not necessary and not recommended.

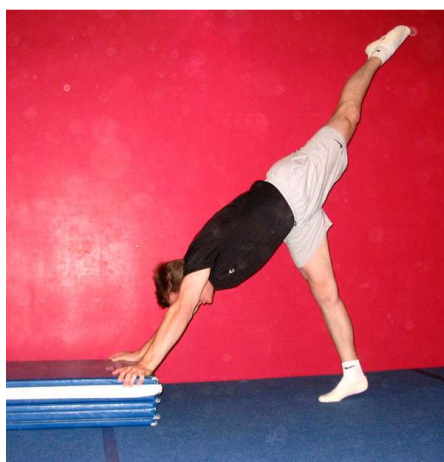
This initial stage can tell you a lot about the handstand and you can begin to improve handstand technique. The first thing to look for is proper shoulder angle. Many people will push their shoulders forward past their hands. This creates a very unstable position unless the individual performing the handstand is capable of performing a planche. The shoulders should be completely open and active with the arms by the ears. The head should be positioned so that your hands are just

visible by looking toward them with your eyes (not moving your whole head). If you can see two feet past your fingertips then your head is too far out and your shoulder angle likely is "broken." Once the proper position has been established, work on kicking higher. If the handstand is approaching 45 degrees from vertical it is time to move off of the raised surface.

Before moving to a handstand on the ground, you should be very comfortable with forward rolls. A forward roll is the easiest and safest way to exit a handstand that falls forward. Training a forward roll is discussed in detail in *CrossFit Journal* issue 38.



Correct



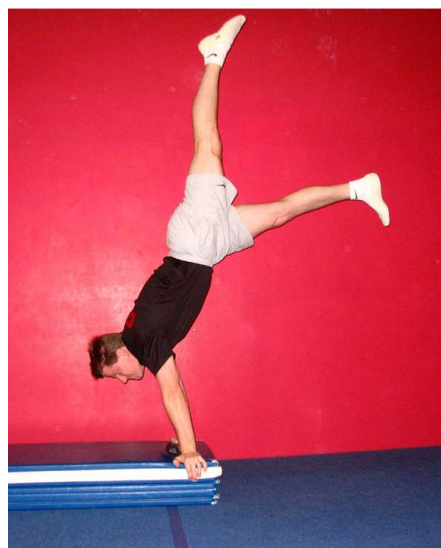
Correct



Incorrect shoulder angle



Correct



Incorrect shoulder angle



# The Freestanding Handstand Push-Up

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Practicing a handstand on the ground may be the starting point for individuals who already have a solid base level of strength and kinesthetic awareness. The starting point is the same as it was for the raised object. Start in a shallow lunge with arms overhead. Kick to a handstand by lunging forward and kicking your rear leg up toward the ceiling. The kick is what brings the hands to the floor, not reaching down with the hands. A very common mistake is to reach down with the hands, which breaks the shoulder angle and creates a less stable position. The line from wrists to the rear leg should be kept straight. When starting to kick to handstand, the kick should be kept low. As with the handstand drill on a box, only a small kick is necessary to identify deficiencies in the position. Once proper positions have been demonstrated, the kick can be taken higher. Simply kicking up and stepping back down repeatedly will begin to bring the hips higher in each kick and train an understanding of the shoulder and arm push required to hold a handstand. Once the kick leg is reaching vertical, the support leg can be brought up to meet it in the handstand.



Correct positioning



Incorrect: Head out, shoulder angle broken

## Holding a handstand and improving alignment

Once a kick to handstand is consistent, shift focus to holding the handstand. The only way to improve your ability to hold a handstand is to practice handstands. Do handstands whenever you get a chance. This is comparable to learning to walk. When children learn to walk they practice constantly. This is the same approach that should be taken with handstands. A solid static handstand is essential to performing free standing handstand push ups.

Handstands can be practiced against a wall to develop strength in the position and to allow for enough time in the handstand to play with body alignment. Handstands against a wall should be practiced both with the back to the wall and facing the wall.

Handstands facing away from the wall do not encourage a proper hollow handstand posture, but allow for practicing balance in a handstand. Start in a lunge facing the wall and kick to handstand so that your heels hit the wall. Be sure to place your fingertips only a couple of inches away from the wall. Start the lunge far enough away from the wall so that you have to stretch forward a bit as you kick to the handstand. This will force a better alignment in the shoulders and improve the mechanics of the kick. This also creates proper positions for other kicking skills such as front handsprings and round offs. Once in the handstand, the shoulders should be pushed up (toward the ears) as far as possible and fully extended. There should be no angle between the shoulders and torso. The line between wrists and toes should be as straight as possible. Once the handstand is aligned properly, push with your fingertips and try to pull your heels away from the wall slightly to hold the handstand. As you get more stable you can walk your hands farther away from the wall to practice your balance.

Practicing handstands facing the wall helps to ensure a proper hollow handstand position but does not allow for balance practice as readily as facing away from the



Correct

Incorrect: Too far from the wall, which forces excessive arch

wall does. To get into a handstand facing the wall start with your back to the wall, bend down and place your hands on the floor 1 to 2 feet away from the wall, then walk your feet up the wall as you walk your hands in to the wall. Try to get your hands as close as possible to the wall. Your toes should be pointed and the tops of your feet should be the only thing touching the wall. It is possible to do this with your wrists virtually touching the wall assuming handstand alignment is good. Proper alignment is an open hollow with shoulders fully extended and pushed up. Think about pushing your toes as high toward the ceiling as possible. Once this position is obtained, try to push away from the wall slightly and transfer your weight to your fingertips and hold the handstand.

Practice freestanding handstands as often as possible. Kick up to a handstand whenever you get a chance. When you kick to handstand, think about extending your lunge, keeping your



Correct



# The Freestanding Handstand Push-Up

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shoulders open, and maintaining a straight line between your kick heel and your hands. Part of your practice should be just trying to stay on your hands no matter what it takes. Walk, break form and bend your arms, just stay in the handstand. As you spend time in the handstand you will begin to feel the adjustments that are necessary to maintain it.

In addition to practicing handstands allowing for walking, you should also make a concerted effort to practice static handstands. Kick into a handstand with a tight, straight body and don't move. If you have to take a step, come down and try again. As with previous handstands, kick into the handstand with an extended body and shoulders. Once in the handstand squeeze your legs together, extend your shoulders so that they are completely open, and hold the body in a straight, slightly hollow position. Think about digging your fingertips into the floor while practicing static handstands. This will create a more solid base for the handstand. Think about leaning the handstand slightly forward, as it is easier to save a handstand that is falling forward (over onto your back) than it is to save a handstand falling backward. (The exception to this is on rings.) To save a handstand that is falling forward, extend through your shoulders and dig your fingers into the floor as hard as you can. To save a handstand falling backward pike your shoulders and hips

and if necessary bend your arms. As the handstand gets stronger, a slight planche will save a handstand that is falling backward.

## Assisted handstand push-ups

There are several methods of performing assisted HSPUs. Each has benefits, and the various methods should all be used in the progress toward a freestanding HSPU. Doing HSPUs against a wall allows the balance factor to be removed from the exercise so you can begin to strengthen the movement. As with static handstands, these can be done facing the wall or facing away from it. A spot can provide as much balance and lift assistance as necessary. HSPUs can be performed on the ground or on parallettes. Parallettes allow for greater range of motion and help to stabilize the handstand. They can also relieve wrist strain for those with inflexible or injured wrists.

Proper technique during the assisted HSPU will allow faster progress. Throughout the HSPU the body should be kept hollow and as rigid as possible. It is much easier to push a stick than a rope: make your body like a stick. The elbows should be kept in close to the body throughout the motion, not flared out to the sides. In the bottom of the HSPU your hands should be about six to twelve inches in front of your shoulders and your elbows should be directly above your hands. Upright, this would be like holding two dumbbells just in front of your shoulders with your elbows directly beneath your hands. Do not allow your elbows to jut out to the sides or your stability will be severely compromised. When doing HSPUs with your back to the wall, start by just kicking up and working through the movement with your hands close to the wall. As you get stronger move your hands farther away from the wall to allow you to lean your shoulders forward toward the wall as you descend on the HSPU. This forward movement of the shoulders is essential to developing the control required for freestanding HSPUs. In addition to the shoulder lean, bend one or both legs to allow your knees to move



Correct



Incorrect: Elbows out

away from the wall as well, so you can maintain a straight body from the knees to the hands.

Practicing HSPUs facing the wall allows for a hollow position and proper shoulder mechanics without compromising positions in the legs. Hands should be placed a few inches away from the wall to allow for the lean that is necessary in a freestanding HSPU. As the HSPU descends the shoulders should track forward of the hands. The



Correct



Incorrect: Head out,  
shoulder angle broken

# The Freestanding Handstand Push-Up

...continued from page 12

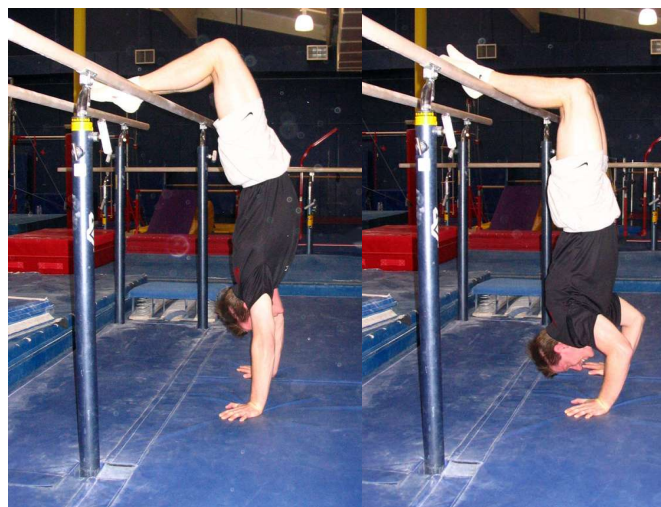
torso should be kept hollow throughout the motion. Resist the urge to arch as you push back to the handstand.

The self-spotted HSPU was introduced to me by the CrossFit community and is an excellent option for practicing HSPU. Using a bar or stacked mats that are just under shoulder height, kick up to the handstand so that your heels can hook the support. You can then use your legs to help balance and lift the

HSPU, which makes this exercise a glute and hamstring exercise in addition to training the HSPU.

A practiced spotter can give enough assistance to allow someone who can just barely hold a handstand to perform an HSPU. This same spotter can also provide minimal, balance-only assistance to

someone who is almost capable of a freestanding HSPU. The spotter should stand in front of the spottee and catch his heels as he kicks up to the handstand. From this point on, the spotter should provide the least assistance possible. To provide balance-only assistance, the spotter can keep her hands completely open, with her thumbs on the spottee's calves and fingers on the spottee's shins. This way no vertical assistance will be provided. On the other end of the spectrum, if the spottee is highly fatigued, or is just beginning to practice HSPU, the spotter can hug the spottee's legs and perform squats as the spottee performs HSPU.



Self-spot using parallel bars

## Freestanding handstand push-ups

If you are able to perform a 10- to 20-second static handstand with proper position and can do HSPUs with minimal assistance, it is time to start working the HSPU free standing. It will be easier to start on parallel bars, as they will provide more stability. Kick into the handstand and push into an extended hollow handstand. Shoulders should be actively extended, shoulder angle should be completely open and body should be hollow. As you descend into the HSPU, allow your shoulders to shift forward of your hands and let your legs counterbalance this motion. Remember to keep your elbows in. At this stage you will find yourself piking to control the balance at times. This is OK. As you progress, you will find that you can pike far enough to touch the floor with your toes at the bottom of the HSPU then press it back to a handstand. As your HSPU gets more stable, aim to eliminate this pike. The effort required to perform one freestanding HSPU is drastically greater than the effort required in one assisted HSPU, and the stabilization it requires provides a demand and stimulus otherwise not present in the movement.

A freestanding HSPU will take a significant amount of work to accomplish, but the benefits gained along the way will be significant as well. All overhead work will be dramatically improved and stabilized. Performing freestanding HSPUs during a workout will increase the time required to complete the workout versus doing HSPUs with assistance, but it will increase the demands and benefit of the workout. As your freestanding HSPU gets more solid, the time discrepancy will be reduced. Practice freestanding handstands and HSPUs frequently. And be patient, as it will take significant practice to perform them with any consistency.





## Strategic Shopping

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Part of the start-up process is not only to plan gym layout but to prioritize equipment purchases by determining which are required for the exercises that are most important and used most frequently—the staple movements that make up the core of our core. In my analysis, the core movements boiled down to the pull-up, squat, handstand push-up, and running—all things that require no significant cash outlay and are enough to establish an initial client base around. For the items that do require fairly large expenditures, there are often creative work-arounds, what I like to call the circumnavigation of retail purchases.

This article is essentially the story of how we at newly opened CrossFit San Diego effected such a circumnavigation and managed to open our doors with a minimum of cash outlay—and a minimum of construction aptitude. Few individuals achieve anything like this on their own, and I'm not one of them. It took a lot of help—and a bit of luck—to get it done. Our story demonstrates that outfitting a functional facility doesn't have to cost a small fortune, and I hope it will help spur the induction of additional affiliates into the CrossFit family.

### Pull-up bars

The pull-up is a movement so functional that it is nearly impossible to have a complete facility without pull-up bars or, at the very least, something to hang on.

An Internet search for adequate pull-up bars—ones that can safely withstand vigorous kipping, yields a number of results, some good, some bad, and many ugly. Couple that requirement with the need to accommodate several trainees at the same time, and the combined total cost, along with the dreaded shipping charges, is more than significant.

Welders and steel fabricators to the rescue! I have yet to meet a member of these professions who doesn't consistently



express a love for the manipulation of raw material. Most, if not all, say it's more pleasure than work. Lucky for me. As a city kid, it's common for me to sift through a tool box in complete bewilderment. One of these master craftsmen happened to be within earshot of my gripes and decided to lend a hand.

The next step was to find a reputable metal supplier—the cheaper the better (after all, metal is metal). Once you have that resource, all you need are a schematic of the pull-up bar and some instructions for the welder. In our case, a 36-foot-long pull-up bar that can support forty people at the same time required an expenditure

of \$1,100 for materials. Our welder compensation “package” came in at a whopping \$20, in the form of a case of domestic beer with tax! The total cost for an adult-playground-worthy, “monkey-bar” was \$1,120. Not inconsequential, but my requirement was mass and strength. (And if you figure the cost per trainee, for forty people performing pull-ups simultaneously, it comes out to a mere \$28 per capita—a bargain even compared to the flimsy, non-kippable, single-person units available on the Internet.) You can adjust your specifications to suit your facility's needs—and budget.

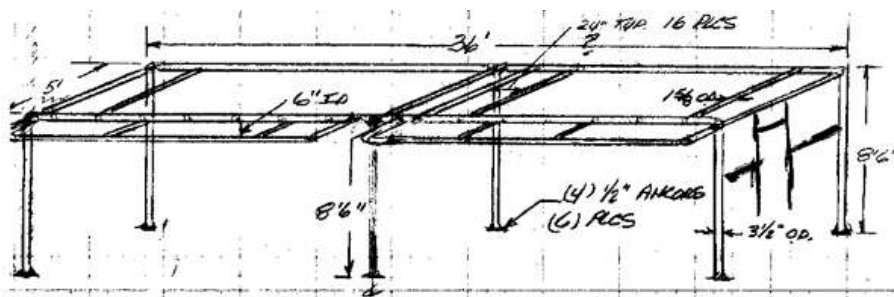
### Parallettes

My experiences with parallettes have been great, whether for working the L-sit, the press-to-handstand, or the lovely pass-through.

My original parallette build took approximately two hours for a single pair. My hacksaw skills were shoddy at best, I had no power tools, and my work area was insufficient. The result was significant perspiration, a little blood, and maybe even a rage-induced tear or two.

United States Plastic Corporation is an online retailer of consumer plastic products. As FED Ex and UPS can't ship ten-foot sections, USPC will pre-cut your PVC order to the exact specifications you dictate at no extra charge to you and deliver it to your doorstep (normal shipping charges apply). This is very convenient for us. They also sell the accessories you need to complete the set (PVC elbows, T's, and end-caps).

The additional cost at this company over what you would pay at somewhere like





## Strategic Shopping

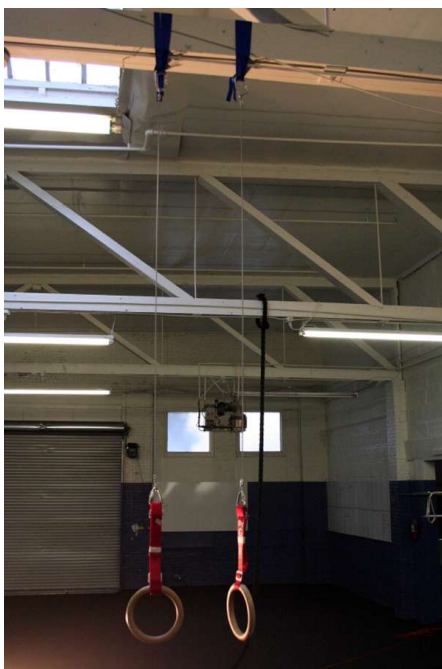
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Home Depot or a local plumbing supplier is insignificant. The 1-inch PVC is \$1.57/foot, and the more you purchase at one time, the cheaper your per unit cost will be. (At the same time you can also order six-foot lengths of PVC to use for unweighted skill and flexibility work.) If you're like me, and a lot of the people I speak with, eliminating manipulation time and applying it elsewhere is a good use of your time, and if you're an affiliate in the process of your facility setup, this equates to six to ten hours of solo time saved as well as potentially considerable amounts of rage and tears. Once the material is in hand, proceed with assembly per the instructions in issue 13 of the *CrossFit Journal* (or on the Drills and Skills website).

A couple of alternative methods for construction and aesthetics show promise. Schedule 80 PVC, as opposed to 40, is better suited for threading the ends of the pieces to allow for disassembly and additional portability, and it renders them virtually indestructible. Access to a pipe threader and pre-threaded tees, elbows, and end caps are all you need to make stronger and more travel-friendly parallettes.

You can eliminate the lateral travel that pass-throughs and other dynamic moves create by using tool dip (available at your local home improvement or hardware store) to coat the end-caps on the feet with a liquid that, when dry, mimics the grip material found on most tool handles. This eliminates slipping of the parallettes on the floor. Where this isn't feasible, warranted, or welcome, rubber inner tubing cut to the width of the end cap is also adequate.

### Rings



Gymnastics rings are an apparatus symbolic of both strength and power. When you see them, it's difficult not to stare in awe because of what these two circles demand from the body—one of the reasons we love them.

The problem is they can be expensive. Couple this with their consistent use in CrossFit WODs, and, once again, the cash outlay to accommodate a large group can be considerable. But there are ways around it.

### Competition set

You can expect to pay approximately \$100 to \$120 for a competition set, rings and straps only. If you want the entire setup—rings, straps, cables, swivels, dampeners,

and beam hardware—you will pay roughly \$450, shipping included, at Norbert's Athletic Products.

### Hybrid set

This set requires a pair of rings previously purchased through gymnastics equipment manufacturer AAI (or elsewhere), twelve feet of 1-inch webbing (available at any climbing store or online at [www.rei.com](http://www.rei.com) for 32 cents a foot), two 6-foot lengths of 3/8-inch pre-crimped cable, (see photo at left) and two 5,000-pound capacity locking carabiners, available at outdoors or hardware stores. The total cost is approximately \$150, or \$300 less than the official set.

The setup is relatively easy. Loop the webbing around your beam (in my case a 7" x 7" wood beam) and tie it with a water knot to secure it; place the carabiners through the 1-inch webbing and the cable eyelet; hook up the other end of the cable to the ring hardware; and you now have a hybrid set that will support significant static loads and inverted hangs—but not dynamic moves such as giant swings, etc.

Tyler Hass's new Elite rings are another excellent alternative, and less expensive than my hybrid version.

Even cheaper are seine purse rings (rings only). Seine purse rings, originally intended for hoisting large loads of fish in a net, were described on the CrossFit message board, and so far they have proven to be a wonderful and economical substitute. The grip circumference of these rings is slightly smaller (3 3/8") and the inner diameter of each ring is a bit larger (7 5/16") than competition wood rings, which



## Strategic Shopping

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are 3 5/8" and 7 1/16" respectively. They are made up of a high-tensile engineered plastic with a capacity to withstand heavy loads.

⇒ They are available online, and two will put you out approximately \$38 (shipping included). Total cost for a set worthy of everything except dynamic load-bearing is \$60, our cheapest handstand-

push-up-worthy set yet (see photo at left below for ways to connect these rings to steel cable).

### Other alternatives

Homemade PVC rings are significantly cheaper, to the tune of a few hundred dollars less. This is where you can get creative because the use for these rings is, and should be, limited to dips, muscle-ups, L-sits, and feet-on-the-floor push-ups (body inversion not recommended). With these as an option, a lack of cash needn't prevent you or your clients from using rings.

United States Plastic Corporation, again, will cut PVC to the lengths you require (in this case, two 28-inch pieces of schedule 40 PVC pipe). You can find instructions for do-it-yourself PVC rings on the CrossFit message board. ←

### Climbing ropes

Our ropes were purchased from West Marine boating supply company. Their reputation for selling quality rope (strong and reliable) made them the obvious choice.





## Strategic Shopping

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I lucked into a shopping scenario that I think could be replicated at a similar location near you. I was able to purchase a particular rope that typically retails at \$11.75/foot for \$3/foot, a 75 percent discount! The “trick” was a bit of luck and a little investigation.

Most stores experience some level of product returns. Establishments like West Marine are no different. In my case, a consumer who had ordered a 90-foot length of 2-inch rope accidentally received 1-inch rope instead and returned it to the store. The store could not put it on the sales floor because it was a special order. So they offered me the entire length, including an eye-splice on one end, for \$270 (\$3/foot).

I originally went in to purchase four ropes at a reasonable price, but after hearing the per-foot price of the returned 1-inch rope,

I rethought my needs and settled for one. My total cost would have been upward of \$300 for a single rope with the additional cost of the eye splice (see the photos below for a strong, cost-effective substitute for the eye splice). I now have four ropes that are each 22.5 feet long that I purchased for the price of one, a savings of \$750.

So next time you're in the market for climbing rope, or any rope for that matter, go straight to customer service and ask them about excess inventory or returned items. Retailers are concerned with product turnover (more sales), and you should be willing to assist them with this dilemma—I'm sure they will appreciate the sale.

### Plyo boxes

“Kelly” and “Fight Gone Bad” (FGB) are two CrossFit benchmark workouts that utilize plyo boxes for box jumps. A group of twenty on a two-round FGB (ten on the stations in two complete setups, and ten counting reps) would require only two boxes, whereas a group of 8 doing “Kelly” ideally requires a box for each person, an expensive WOD. An Internet price search for your standard 20-inch plyo box yields an average cost of \$99, without shipping.

Dixieline Lumber is a large, retail chain that specializes in lumber products. They also possess a lumber mill that will craft any item you can imagine, so long as it's made of wood, of course. My original intention was to buy plywood and construct plyo boxes myself, but, after discovering the minimal costs associated with the milling and craftsmanship, I gave them the go-ahead to do the entire box fabrication for me.

To do this, you will need a set of instructions for the milling department. You can either duplicate the exact measurements of an existing plyo box, or you can draft your own. I did a bit of both, providing my own design adapted from the specs of commercially available boxes. My diagrams illustrated two 24-inch, two 20-inch, and two 10-inch high boxes, all made from 3/4-inch plywood. The total

cost, milling included, was \$205 (\$175 for milling and \$30 for the plywood). That's six boxes with a large base, angled upward, with beveled edges and a large foot surface, for approximately \$600 less than retail!

Any local lumber company can accomplish this feat, so long as they possess a mill. The mill employee I conversed with cut me off midway into every sentence—he quickly understood what I wanted and what had to be done. Their experience with their craft is immense. Lean on them.

Because of this experience, we wonder what else local mills can manufacture at such a discount. In addition to producing custom exercise equipment, they could even create furniture and/or fixtures for your gym. For instance, CFSD needed a place to store our clients' valuables during their sessions. So, we contracted with Dixieline to make four separate cubicle shelves. Our total cost of \$400 rivals that of any similar product, even at somewhere like IKEA.

### A little help from your friends

Overall, outfitting CFSD has taught us many things. Perhaps the most relevant here is that a lack of excess startup capital can sometimes be a blessing in disguise. Sharing our grumbles and frustrations with others about the difficulties and expense of retail purchases caused many of the people around us, some whose talents were dormant or unknown to us before, to step forward and help. There is no substitution for this community effort. Being vocal about your needs and remaining diligent in your search for gear where utility is the aim lends itself well to the circumnavigation of retail purchases, whether luck plays its part on cue or not. Go for it!





# Large-Group CrossFit Training

Wade Rutland

In the relatively short time that it has been available to the public, CrossFit has been proven to provide the highest level of physical fitness for those whose lives or livelihoods depend on being in top physical condition—whether in the arena or on the mountain, in the streets or on the battlefield. Individuals doing CrossFit on their own and bringing their new abilities to their profession or event have achieved this success. As the program spreads, however, CrossFit is making headway in places where physical fitness training is conducted in large groups, not individually—places such as the military unit, police recruit depot, and fire academy.

The “Team Workouts” *CrossFit Journal* issue (#14) lays an excellent basis for team physical training (PT) with groups of ten. This article is intended for trainers who wish to use CrossFit as the fitness program for a larger group, and it is based on the experiences of military and law enforcement personnel who have successfully integrated CrossFit into their PT program. The aim of this document is to present ideas for physical training with a large group, with a view to setting up the group trainer for success at integrating CrossFit into a group PT program. The article will address the advantages and disadvantages of training a large group with CrossFit, principles of group training, logistics and equipment issues, group scoring, and dealing with injuries. This article will use the military as its example, but the lessons are applicable for any large group, including police and fire academies, athletic camps, and even high school physical education classes.

## Advantages of implementing group CrossFit PT

### More fit operators

Having performed CrossFit yourself, read all the journals, hung around the message board, and perhaps even attended a certification seminar, you know that CrossFit is the best program available for creating fit individuals. This article will not

reiterate material available to you in forty-five *CrossFit Journal* (CFJ) issues; suffice it to say that for the same reasons CrossFit makes the fittest individual athletes, law enforcement agents, and soldiers, it will also turn out the fittest groups of athletes, law enforcement agents, and soldiers. There should be no reason to discuss why these types of people need to be as fit as possible.

**“CrossFit has been proven over and over in the sporting arena, clinical trials, and the battlefield to be more effective than traditional PT programs.”**

### Variety inherent in CrossFit training

One of the major challenges you will face as a leader taking command of a military unit is trainees who think “I’ve seen it all—at least ten times.” There may be soldiers in your unit who have up to twenty years of experience, and they will have seen ten platoon leaders come and go—all of whom have utilized the same type of PT program. What you have to remember is that while this group and the PT program may be fresh to you, it may well be their tenth iteration of the same program and you their tenth platoon leader. CrossFit can provide your soldiers with a new and interesting stimulus during PT periods. Learning the new skills inherent in CrossFit will provide fun, challenging, and rewarding workouts for years for several reasons. First of all, the workouts change daily (across every parameter: type of movements, intensity, duration, metabolic demand, scoring method, and so on), and the same workout might not be repeated for months. Second, there are always new skills to learn and practice. Should some of your soldiers master one move—such as the handstand—they can always move

on to other, differently challenging moves—such as the freestanding handstand push-up or the front lever.

### Physical training as sport

If you take two people separately and ask them to complete, for example, their maximum number of push-ups, and then put them together, with the same instructions and the additional information that the winner will get a medal, it is virtually guaranteed that, in the second case, they will do push-ups until their arms fall off in order to win, and they will have more fun while completing the task. Why? The onerous, boring task of completing push-ups has become sport. This is what CrossFit does—it turns PT into sport. The military has known the utility of this for hundreds of years; hence Friday-afternoon intercompany sports, the goal of which is not to become great touch football players but to create group cohesion through competition. Instead of limiting this to Friday afternoons and separating it from the unit’s day-to-day work, however, why not harness the beneficial effects of competition daily through group CrossFit? Completing “Michael” with the group will develop considerably more mental toughness and group cohesion than standing out in right field while playing softball.

Unfortunately, there has been a disturbing trend in Western society recently to label competition as bad (hence the trend to stop grading children in school, for example). This is one of the most nonsensical notions that has ever been promulgated in the history of human civilization. Attila the Hun stated, “A leader without a sense of competition is weak and easily overcome by the slightest challenge,” and he was right. If there is anyone we want infused with a competitive spirit it is the person who will stand up and head toward the sound of gunfire when needed—the soldier or law enforcement officer. Combat is the ultimate competition, except instead of receiving a silver medal for coming in second you

# Large-Group CrossFit Training

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get a flag-draped coffin. So develop this sense of competition during group PT with CrossFit.

## Maintain fitness in austere environments

A major challenge to achieving maximum fitness in a military unit is one of logistics. There is just no way that you are going to get a whole brigade of soldiers into the base weight room for PT every morning. Even more of a challenge is staying in shape while deployed. When the C-17 is bringing in ammunition, defensive stores, and fuel, the Hammer Strength pectoral machine is not going to achieve a high priority on the loading manifest. CrossFit is the solution to training for the highest level of fitness in an environment of limited facilities and equipment. It is the movements and programming that garner the results, not the equipment. Think about a group "Fran" workout, for example. Do you think the body knows the difference between thrusters performed with a barbell, dumbbell, ammo can filled with sand, or rock? All that is needed to perform effective CrossFit workouts are some sticks (i.e., lengths of wooden dowel or PVC/ABS pipe), objects to provide weighted resistance, and something to do pull-ups on. With a little ingenuity, CrossFit can be performed in any environment, no matter how large the group, at very little cost. (For additional ideas, see "Training in Austere Locations" in *CrossFit Journal* issue 43).

## All benefit and suffer equally

Although it is a favorite of military programming, there are not many group activities more overrated in terms of developing group morale and fitness than the group run. The fast guys are bored and untaxed by what they consider a slow pace, the average guys are getting a pretty decent workout, and the slow guys are frustrated and dejected as they fall farther and farther behind. What is essentially happening is that the fast guys are losing fitness, the medium guys are staying about

the same, and the slow guys are getting fitter (albeit just in one specialized domain). On average, however, the fitness of the group overall is staying about the same. In terms of morale effects, the fast guys are pissed off by the lack of challenge and may resent their slower counterparts, and the slow guys are pissed off as well and feel singled out when they fall behind. Overall, the ubiquitous group run comes out a bit of a loser.

There is a better way to train a group, and as you can guess it is CrossFit. Instead of just the slow guys getting somewhat fitter, the scalability of the program means that all will improve. Once again consider a group doing "Fran." The firebreathers will blast through the workout using 95 pounds and kipping pull-ups in five minutes or less, and be left quivering on the floor. The average guys will use 75 pounds and broken sets or jumping pull-ups, finish in eight minutes, and be left quivering on the floor. The weak guys will use 55 pounds and partner-assisted pull-ups, finish in ten or fifteen minutes, and be left quivering on the floor. So what happened? Every single person in the group was challenged, worked hard, and thus improved their personal fitness. Unlike the group run, this raises the overall fitness level of the group. What else happened? Every single person suffered equally and was left quivering on the floor. It is this equal group suffering that creates team cohesion. Moreover, the smaller guys probably found the thrusters particularly challenging, and the heavier ones probably hated the pull-ups, individual weaknesses were exposed, and no one was singled out for a deficiency in a single domain.

## Disadvantages of implementing group CrossFit PT

### More dangerous than "dumb PT" if done incorrectly

CrossFit has been proven over and over in the sporting arena, clinical trials, and the battlefield to be more effective than traditional PT programs. This is not what

is holding the program back from wider military implementation: who would not want to institute a more effective, clinically proven program? One of the main rationales for not implementing CrossFit more widely is the perception that the program can be dangerous. This perception has some merit if implementation is done in an unthinking manner. There is no doubt that having soldiers attempt bodyweight snatches on their first day of CrossFit training will lead to injuries. But that's not the fault of the program itself. And there's an obvious solution: Be smart about program implementation, and treat the introduction of CrossFit as you would the introduction of a new weapon.

You would not hand a new recruits loaded weapons and tell them to stack up and perform a live-fire room clearance wearing night vision equipment. You would start with weapons classes to teach them the parts of the weapon and how to assemble and disassemble, how to load and fire, and how to clean it. They would then fire the weapon static, fire the weapon in movement, and then perform group fire and movement. Once deemed effective at all these tasks, the recruits could then move on to the advanced live-fire nighttime room clearance. The same progression holds true when introducing a skilled CrossFit movement such as the snatch. The students will receive a lecture on the squat. They will learn how to squat with no resistance and then move on to an overhead squat with a stick. Once this is perfected they will advance to snatch assistance exercises such as the hang snatch and snatch balance with a stick. Once they can perform these safely, they will move on to a full snatch with a stick. Eventually they will graduate to a bar and increasing weight, and the truly dedicated may someday perform a bodyweight snatch.

This is how risk is mitigated—by smart training progression and implementation. For another military training analogy, see the "Club vs. Rifle CrossFit Analogy" chart on the next page. For those unfamiliar with the term, "dumb PT" refers to the repetition of unskilled movements in an unvaried rotation: e.g., the insidious run

## Large-Group CrossFit Training

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	Club	Rifle	Dumb PT	CrossFit
<b>Skill level</b>	low	high	low	high
<b>Time to learn</b>	low	high	low	high
<b>Supervision necessary when learning/executing</b>	low	high	low	high
<b>Effectiveness</b>	low	high	low	high
<b>Chance of battlefield success</b>	low	high	low	high
<b>Danger to the user if incorrectly taught</b>	low	high	low	high

As you can see, the rifle and CrossFit come out on top, with the exception that they are more dangerous to the user if incorrectly taught. Yet no military unit would think of issuing clubs instead of firearms in anticipation of a battle, despite the fact they are potentially dangerous to the user. Why? The efficacy of the rifle and the advantage it confers make it clearly superior, and the risk to the user has been mitigated through proper training. The argument that CrossFit is dangerous and therefore soldiers should do “dumb” PT instead is analogous to arming our fighters of terrorism with clubs.

### Overcoming resistance

There is always resistance to something new, and this is especially true in an institution. Convincing others to accept CrossFit is not even as easy as getting them to accept something new; it is convincing them to accept a complete paradigm shift in the way PT is perceived and conducted. Your superiors in the chain of command, raised on a steady diet of run on Monday/Wednesday/Friday and do upper-body isolation exercises on Tuesday/Thursday, will be reluctant to accept the premise that everything they did was wrong and that the whole organization is in fact “unfit.” Introducing CrossFit to a unit that has been doing things the same way for years is tough. Ever try to convince a forty-year-old combat veteran that he should be doing

gymnastics? There is no easy solution for this problem, but it is your problem. If you believe in the program enough, you will find a way to break down these barriers. Many have been in your shoes before and have been able to convince our superiors to give the program a shot through logical briefings and presentation. (If you contact Coach Glassman, he can give you access to a multitude of these presentations in electronic format, and 95 percent of your work will be done for you. Also see relevant articles in back issues of the *CFJ*, including “Police Training” [issue 7], “Combat Gymnastics” [issue 39], and “Validity of CrossFit Tested” [issue 41].)

### Supplementing with long-distance work

One of the main advantages of CrossFit is that, because of the high intensity, workout time is shortened. With time a resource always in short supply, military personnel can achieve high fitness levels with workouts that generally last approximately twenty minutes. After following CrossFit for several months, however, you may find something strange happening to you when a long monostructural metabolic workout comes up in the workout of the day (WOD) rotation. At about the 35th minute of a 10k run you may look at your watch and find yourself extremely...bored. Accustomed to the frenetic pace and

exercise variety of most WODs, the long duration and low intensity of the long-distance effort may leave you feeling frustrated and unpracticed when these types of efforts appear. For a civilian this is not a big issue. For a military type in certain trades, however, such as infantry/SF, maintaining the both mental and physical ability to conduct the long slog is an absolute necessity. CrossFit is the best general physical preparedness (GPP) conditioning program by far, but, as with all specialized physical endeavors, there is nothing that can prepare you mentally and physically for a fifteen-mile rucksack march better than rucksack marching. The WODs will ensure that soldiers have the ten general physical skills necessary to complete the march; actual marches will toughen the feet, back, and the mind for these types of events. A good solution to this challenge is to take out one of the workouts in every second three-day WOD rotation posted on the Internet (so, every six workouts, or about once a week), and replace it with a march.

There is another way to use the CrossFit program to mimic field conditions. Consider what may happen to soldiers on operations overseas. They may go on a ten-hour foot patrol, carrying approximately forty pounds of gear, not knowing whether a contact will occur—or whether it will occur at the beginning, middle, or end of their long-distance walking effort. Should the contact occur, the soldiers will require enough energy to



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perform a mixed-modality high-intensity variable operation using functional movements. (Notice how the description of combat approximates the definition of CrossFit?) In order to train for this event, take your soldiers on a weighted march. Somewhere en route, make sure you go by some pull-up bars. When you reach the pull-up bars, whether at the beginning, middle, or end of the march, have them stop and take off their rucksacks. Now, announce: "Remember 'Fran' we did last week? Your rucksack is the thruster weight. Begin." You have now roughly approximated the physical demands of combat duty.

good idea unless you are incredibly foolhardy. Imagine subjecting your recruit platoon to a 95-pound "Fran" on their first morning. No knowledge of the squat, overhead lifts, kipping pull-up, correct lumbar spine position, and hip activation would constitute an unmitigated disaster, and the only message that would be sent was that you were out to injure everyone. Instead, use a smart approach and spend the appropriate time learning and perfecting the basic movements before launching into an actual WOD. The table below lays out on possible plan for the first week of CrossFit PT in a recruit course.

and point out to you the salient features you explained. Correct as necessary.

- Go outside with the sticks. Demonstrate a perfect deadlift at each phase, highlighting the salient features.
- Break the recruits into partners and have one deadlift while the other points out faults. This proves extremely beneficial, as you develop coaches at the same time as athletes. You as the instructor correct both coaches and athletes.
- Every ten minutes or so bring the group in and explain the common faults you are seeing. The faults are always the

Day	Activity	Remarks
Monday	PT Test	Standard operating procedure on a recruit course. Repeat this at the end of the course to chart progress.
Tuesday	CrossFit introduction; The air squat	Mixed lecture/practical class.
Wednesday	Squat variations (front/back/OHS)	Practical class using sticks (dowels). These are indispensable and should be issued to recruits, who will bring them to every PT period.
Thursday	The deadlift	This will be a mixed lecture/practical class. Use sticks and a light bar.
Friday	The overhead lifts (press/push press/push jerk)	This will be a mixed lecture/practical class. Use sticks and a light bar.

Remember, the workouts that are posted on the Internet are just a basic construct, and you can and should modify the program as necessary to ensure success in your given endeavor.

## Principles of group CrossFit

### Train the movements before performing actual "workouts"

The tradition in military basic training has been to "send a message" to the recruits in the very first PT period. The instructors, also known as the alpha males, normally take the recruits out for a run at a torrid pace, stopping periodically to provide "rest" with push-ups and leg lifts. If you are planning to use CrossFit as your military group PT program, this approach is not a

Here are some suggestions for managing this five-day introduction:

- In the lectures on the movements, explain why the lift is important using real-world practical examples (e.g., deadlifting an ammunition palette).
- Show the movement broken down into its distinct phases using photos. For the deadlift, show the starting position, bar at the knee, and end position. PowerPoint and pictures from the CFJ have been used with success for these lectures. (If you wish to use any of these lectures for this purpose, contact Coach Glassman.)
- Point out the salient characteristics of the movement at each phase. For the deadlift starting position, for example, emphasize heels down, lumbar spine curve, hips just above knees.
- At the end of the lecture have the recruits come up to the photos at each phase

same no matter what group you are working with, and this will save you from repeating yourself fifteen times. Training a large group is not like personal training; you have to find ways to maximize your efficiency.

- At the end, highlight the key points of the period.

With this five-day introductory schedule you will be ready starting the following week to tackle about 50 percent of posted WODs from the Internet site. The trainees will not have achieved what could be termed "mastery" of the movements, but they at least should be safe and somewhat effective. Now, this all may be a little tough for experienced recruit instructors to follow. The recruits will likely not throw up during these periods, and they will be learning something and probably even having a little fun. As well, since these

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periods will not be executed at high intensity, how will they be ready for the field training portions of the course? Well, don't worry. The gut checks will start next week when the WODs start, as will the fitness improvement that comes with high intensity. Look at it this way: although the intensity has not been high, you have in fact increased their fitness much more than five days of "dumb PT gut checks" ever could. You have taught the recruits how to safely and efficiently pick objects off the ground, lift them overhead, flex and extend their hips, and maintain proper spine position in movement. These skills will serve these recruits for their whole careers. These five days *are not wasted*.

## As the group leader you are now the coach

If there is any leadership principle that gets drilled into our military officers and NCOs in the school system, it is *lead by example*. If you expect your subordinates to do something, you had better be prepared and capable of doing it yourself. On PT, this means setting the pace on group runs, calling out the count while performing push-ups, and in general doing whatever you order the recruits to do, but trying to appear less stressed by the effort. This is possible with "dumb PT." With CrossFit it will not be as easy. Back to the high-skill firearm analogy: when acting as the range officer for a live fire attack, you would not grab a machine gun and provide fire support to the assault group attacking a fortification. Instead, you would be ensuring the safety and proper execution of the range. The same holds true as a CrossFit instructor. If you are performing "Fran" with your group, you are concentrating on getting air into your lungs and not dropping the bar on your head, not on correcting the technique and monitoring the intensity of your trainees. This is going to take a mind shift for the "alpha male" who needs to show how fit he is in front of his troops. Here are some suggestions for overcoming this challenge:

- Do the exact same workout the recruits are going to do, but do it before they show up, or the day before at lunch. Tell them your time before their WOD starts. Now the troops know you lead

by example and share their suffering, and it gives them something to strive for. Who doesn't want to beat the boss? If someone does manage to beat you (or—even better—if no one does), reward the whole group with wall-ball shots or burpees. They will appreciate the care and concern you are showing them.

- If the workout is a "lower skill" one, such as "Chelsea" (pull-ups, push-ups, squats) you could go ahead and throw yourself in the mix, although even here, there is ample coaching and correcting to keep you busy. During your rest breaks you can correct improper form.
- If you have another qualified instructor in your cadre, you can switch off supervision duties daily. One can supervise while the other gets in and works out.
- A final point on this principle: if you are going to be teaching and correcting these CrossFit movements, you had best be competent at them yourself. It's just another facet of leading by example.

Spend your limited funds on lots of simple, effective equipment instead of one piece of fancy equipment

## Packages

### "Fancy" Package.....\$2,500

- High-speed elliptical trainer
- Cybex-type chest thing

### "Simple" Package.....\$2,500

- Ten Olympic bars with spring collars
- Twenty 10-pound plates
- Twelve 25-pound plates
- Sixteen 30-pound dumbbells

If you manage to convince your superior to supply you with some funding for your "crazy new PT program," you have some choices to make. Having been giving \$2500 (if you're lucky), and armed with your shiny new fitness catalogue, you narrow the choices down to the two packages shown in the table on this page.

Even for working out by yourself, the "fancy package" is pretty useless. How do you think you could train a group of thirty with it? With the "simple" package plus some pull-up bars (or a tree branch, or ladder, or whatever you can find), you can accomplish about 70 percent of CrossFit workouts with your group, providing you as a leader use your ingenuity when modifying the workouts. What if you cannot get even the funding outlined above? You can still perform the workouts if you are creative; the hip extensors don't know the difference between cleaning a dumbbell or an ammo can filled with sand. Making homemade equipment is a great project for your group when they have some downtime anyway. In a group of thirty soldiers you will always have a couple that are pretty handy at carpentry or metalworking. Draw up a rough idea of what you want, supply the materials, and in no time you can have high-quality sets of rings, plyo boxes, medicine balls, and parallettes.

## Maximize PT time by learning and practicing new skills

Most military courses and unit physical training periods are allotted one hour per day. When you subtract the ten-minute warm-up, five-minute WOD explanation, twenty-minute WOD, and five-minute cool-down, you have twenty minutes of unused time. Not only can you use this time, you need it to ensure the skill progression of your CrossFit group continues throughout the time you have with them. In this twenty minutes you can introduce, practice, or refine a skill in gymnastics or weightlifting. The table on the following page shows how, in five days of these twenty-minute blocks, you can have your group performing the snatch with a stick, assuming you have already introduced the overhead squat to them. (See the table on this page...)

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Day	Activity	Remarks
Mon.	Snatch intro	-Explain why Olympic lifting is important, both physiologically and in real-world applications. -Demo and explain the salient phases of the lift: starting position, first pull, second pull, third pull, recovery.
Tue.	-The power position  -The second pull	-Have students learn the power position by performing the dip of a push press, dropping their arms so the stick touches the legs, and then widening the grip to snatch width. -Simply extend the hips (jump) and shrug.
Wed.	-The third pull  -Pressing snatch balance and snatch balance	-Have the students start in triple extension, bring stick properly to overhead position. -As explained in <i>CFJ</i> issue 39.
Thur.	-Starting position -The first pull   -The scoop	-Your group knows how to deadlift; just use a wider grip. -Lift the stick to above the knee. A common fault will be moving the bar around the knee instead of moving the body around the stick (caused by not pushing the shins back to vertical or by changing the starting trunk angle in relation to the ground.) -With the stick in the proper position just above the knee, lift the chest and rotate the hip and trunk to get the body into the now-familiar "power position." -A good check is: once in the power position, take the stick back to the push press dip. Correct as necessary.
Fri.	-Putting it together   -Full snatch	-Break the movement into parts and practice like a drill, moving from the start position to the knee; scooping from the knee to the power position; then jumping from the power position to landing and into an overhead squat. Repeat. -Now try some full snatches. These will be ugly. The most common faults will be no scoop, swinging the stick out away from the body, and incomplete hip extension.

level. Send two soldiers on a demanding, stressful navigation course with the same equipment and same level of instruction, and the one who finishes will be the one in better physical condition who has taken in the correct fuel. The mind will be sharper; fatigue will set in later; and injury will be resisted. Competency in theory and practice of the human body must be looked at as one of the essential base skills for a military professional, and currently it is not.

Since you are reading this article, you must believe that physical fitness knowledge is essential for your group. How to introduce it into an already-constrained schedule is the difficulty. The ideal would be to take a week of classroom and practical time on a recruit course to explain and practice the workings of the body and nutrition. It is extremely doubtful that

you will be able to replace other training considered essential with this physical fitness material. Here is a strategy that has worked well in the past on military courses with only PT periods used for fitness instruction:

- You as the group leader pick relevant articles/material that you want the group to learn. The *CrossFit Journal* is one great resource, but anything goes.
- Issue the material to the students and tell them that one of them will be chosen the next day to brief the whole group on the content of the article. To really shake things up, pick the same soldier twice in a row (people get caught in this all the time).
- Give the soldier five minutes at the end of the next morning's fitness period to brief the group. Correct any errors, add anything you think is pertinent, and stimulate discussion. If the soldier obviously didn't read the article, fill the

So in five PT periods, while still getting in five WODs, you have taught your group how to snatch with a stick. They will still need a lot of work before adding weight, but now if the group practices and refines these movements a couple times a week, they will soon be able to safely perform lightweight dumbbell and barbell snatches as part of a WOD. The snatch is just one example of how you could use your new "extra" twenty minutes. You could work on handstands, levers, rolls, cleans, or whatever skill you think the group is ready for. Unless your group consists of class "E" gymnasts who are also getting ready for the Pan Am Olympic Weightlifting national team, there are enough skills in the CrossFit repertoire for your group to work toward for years—literally.

## Educate your group about fitness

By the time military officers reach the end of their training, depending on their classification, they will be able to provide an explanation of how radio waves work, describe the inner workings of mechanized vehicles and thermal sites, site a defensive position to maximize the ballistic effects of automatic weapons and missile systems, navigate in pitch black using only compass and foot pacing, and demonstrate mastery of a host of other subjects. Yet, most will not know the difference between joint flexion and extension, how to correctly use their core musculature to stabilize themselves when moving a load, or the difference between protein, carbohydrate, and fat sources. This does not seem logical. If the human body is not performing to its maximum capacity, all other skills acquired are going to be performed to a submaximal



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five minutes with wall-ball shots and burpees and discuss that article in the next session.

- This approach has multiple advantages besides the obvious benefit of increased fitness knowledge. Course candidates practice the essential skill of absorbing a large amount of material and breaking it down to the essential points for group presentation. They also practice their briefing skills, a must for officers and non-commissioned officers.
- If you really want to shake things up, have the soldiers complete a short written quiz on the material. Encourage those who fail to do better next time by giving them extra wall-ball and burpee practice.

figuring out what running route to use and where to stop for push-ups along the way. This will no longer cut it. If you are going to run a CrossFit session, you will want to plan in advance:

- What workout/lesson you will use
- How to modify the workout for your group's size and equipment
- What equipment you need
- What facilities you need
- How to score the workout
- How to scale the workout to your group members' abilities
- How you will explain and structure the workout
- What diagrams are necessary
- What skill(s) the group will work on
- What transport will be present to move equipment if necessary

to have negotiated beforehand which platoon will be using what equipment on which day. You get the idea. Instead of planning your PT period five minutes before it begins, you are probably going to want to plan a whole week of periods, and likely a week ahead of time as well; this ensures that all logistical considerations can be managed. Since you have reached the point of your career where you are the leader of your group, you have obviously demonstrated the planning ability necessary to complete this fairly simple task and there should be no problems—except maybe when it rains and you were planning on doing muscle-ups on the soccer nets.

## Logistics and equipment

Once you have convinced your superiors to let you use CrossFit with your group and have followed the principles described above to get you on your way, the main

### Plan in advance for PT periods

Pre-CrossFit, you may have been standing in front of your troops while the battalion commander was giving his morning address,

If you are a platoon leader and there is only one set of equipment for the whole company (a likely scenario, as there are three to four platoons in a company, for those non-military readers), you will need

Equipment	Quantity	Cost
Sticks	30	Free if you use camouflage mounting poles.
Medicine balls	10	Five dollars each if you fill cheap basketballs with sand and duct tape them.
Rings	10 Sets	Free if you use the webbing straps, carabineers, and PVC piping in the system to make your own.
Olympic bars with spring collars	12	About \$110 each.
Weights	10 x 5 lbs 20 x 10 lbs 20 x 25 lbs 10 x 35 lbs 10 x 45 lbs	About 59 cents per pound. (This list is the ideal; if you don't have the funding, maximize the 10 and 25 lb plates. Most WODs use 95 lbs or less.)
Dumbbells	10 x 25 lb 10 x 35 lbs 10 x 45 lbs	About 69 cents per pound. It is better to get more of these mid-range weights than a lesser number of a larger weight. Most WODs and the capacity of your group will be in the listed range
Parallettes	10 Sets	About \$30 or less per set homemade, or free if you can get some free ABS/PVC piping or wood through the system.
Pull-up bars	MAXIMIZE	You want as many as possible. A tree branch can be a pull-up bar; you have to get creative.
Plyometric boxes	6 sets	Get some plywood sheets, cut 20-inch by 20-inch sections, hammer together and you have 20-inch jump boxes for about \$25 per box. Or free if you use existing benches, boxes, platforms, or other stable objects in your environment.
Rubber Matting	24 x 18 x 24-inch squares	Use these to rest your weights on if working on concrete or indoors. If you buy four 3 x 6-foot rubber horse stall mats and cut them to size, they will cost about \$10 per square.
Bumper Plates	10 x 10 lbs 10 x 25 lbs 10 x 35 lbs	These are really expensive, about \$3-4 per pound. They are a necessity, however, when starting to go heavy on cleans and snatches. If you are lucky enough to have the funding, buy them. If not, make it a long-term project.
Climbing Ropes	3	You are on a military base, right?

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difference between CrossFit training for groups and for individuals is largely a matter of managing equipment and resources. I have already discussed how a basic set of equipment will allow completion of a large number of workouts; the equipment listed in the table on the previous page (which assumes a platoon of thirty personnel) will allow you to push this to more like 90 percent.

This equipment will allow a platoon-sized organization to conduct group CrossFit workouts. Really though, it outfits a company. Almost no WOD requires every piece of equipment in the above list, although it would certainly be challenging to perform one. (Do *not* take that as a hint, Coach Glassman.) While the first platoon is doing “Fran” with the Olympic bars, a second platoon can be using the dumbbells for “Helen,” a third platoon can be on a rucksack march followed by ten minutes of “Cindy,” a fourth platoon can be learning the tuck planche and back lever using the parallettes and rings, and company headquarters can be using the medicine balls and plyo boxes to do “Kelly.” Five groups, five different workouts, five unique sets of equipment drawn from the same equipment pool. If the company headquarters has planned properly, they can rotate the groups through these five workouts within the same training week.

As for facilities, the ideal is to perform your workouts outside, weather permitting. All you have to do is have the equipment loaded from your stores area onto a truck the night before, and have it delivered and set up the next morning at the designated area, whether that be running track, obstacle course, or mud pit. As an added benefit, this is a good leadership project for the student-group senior on leadership courses. If the correct equipment doesn’t show up as you directed, have some of the platoon run back to get it while the rest practice wall ball and burpees.

Even with all the equipment listed above, you will not have the resources necessary to do all the WODs on the CrossFit website as written. For example, “Linda,” also known as “Three Bars of Death,” requires an individual to bench, clean, and deadlift three different bars with three

different weights—each customized for their bodyweight. It is nearly impossible to hog that much equipment by yourself in the weight room; it would be completely out of the question for a group of thirty to perform “Linda” in this manner in a one-hour PT period. Here are some suggestions, using “Linda” as an example, for implementing workouts designed for individuals in your group setting:

- Alter the exercises so they hit the same muscles and movements but use different equipment. For a group “Linda,” ring dips (or weighted push-ups), dumbbell cleans, and barbell deadlifts would preserve the flavor and stimulus of the original but lessen the need for a specific piece of equipment—in this case, Olympic bars.
- Alter the way the workout is performed. For “Linda,” instead of doing the workout individually, do it in groups of three, with one trainee at each movement. The three complete their assigned repetitions at their station at the same time and then rotate stations when the last group member has completed their repetitions. This takes a little bit of planning, as you want soldiers of similar size and strength in the same group so time is not wasted changing bar loads to accommodate widely differing body weights and capacities.

These are just some examples. You as the group leader have to apply your ingenuity to the problem and arrive at a workable course of action. Give ten group leaders the same problem and they will likely arrive at ten different ways of tackling the workout. There are no wrong answers as long as fitness is improving. “Team Workouts” in *CFJ 14* is a goldmine, as a lot of your work is already completed for you. A progression of team workouts for groups of ten is already done; you just have to adjust them for a larger group.

## Scoring

I mentioned earlier how important it is to score workouts to induce competition. Trainees will not work as hard in an unscored workout; you will see it, and the fitness period will be less effective than it

could have been. An exception to the rule is that you will not score when using a fitness period for skill learning and refinement. If you are using the WODs from the CrossFit website as the template for your modified group workouts, the WOD explanation will normally tell you how to score. In some cases, you will need or want to modify the specified scoring method for your group. Here are common types of scoring schemes:

- Minimize the amount of work necessary to complete a set amount of work. This can be done individually or modified for a group. For example, the workout known as “Frelen” (five rounds for time: 800-meter run, fifteen 75-pound thrusters, 12 pull-ups) can be modified for a group as follows: The group of thirty is broken into six groups of five trainees. Each team will have two bars, two pull-up bars, and a common running track. The clock starts for all teams at the same time, and stops for a team only when the last member finishes his last pull-up of round five. Members of a team can provide assistance only to members of their own teams, and when team members have completed their assigned work they may no longer assist others at all.
- Maximize the amount of work performed in a set time period. Similar to the above workout, but count the maximum number of rounds of, for example, an 800-meter run, 15 75-pound thrusters, and 12 pull-ups completed in twenty minutes. Same setup as above, but different scoring and time domain. You could add up total number of rounds performed by the team, or only count the lowest score on each team, or only the top four scores, or whatever system you decide on.
- Maximize the load lifted for a specific exercise. This is the “Deadlift 3-2-2-1-1-1-1 reps,” with heavy loads and long rest. Do not skip these types of workouts in favor of always inducing a “metabolic effect” in your group with mixed-modality WODs. The maximal load workouts are extremely beneficial and an integral part of CrossFit. Why?
- This is how your soldiers will learn to manage heavy loads. This article will not delve into anatomy and physiology; suffice it to say that it is important to



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train the nervous system—strength is a skill, and moving heavy loads must be learned and practiced. Some critics will say that moving heavy loads is dangerous. The opposite is true; it is soldiers who don't know how to move heavy loads who will be dangerous to themselves and others. This will not be their fault, it will be a result of our negligence as trainers. Think about it: there may come a time when a soldier has to pick up a wounded 230-pound comrade in full gear. If the lifting soldier has never mastered a 275-pound deadlift with correct form (230 pounds plus the 45 pounds of gear the lifter is wearing), the lifter is likely to injure his back and be unable to rescue his wounded comrade. *This is the dangerous situation, not the heavy deadlifting with proper form.*

- Endurance and performance on the WODs (and therefore combat readiness) will improve. If a trainee can perform a 190-pound thruster for one rep, then the 95-pound thrusters in “Fran” are performed at 5 percent of maximum capacity. How much faster could “Fran” be performed if the weight were only 33 percent capacity, which for this trainee would be 63 pounds? If you've never tried it, attempt “Fran” at 65 pounds instead of 95; you will take minutes off your time as the number of reps you can perform without rest skyrockets. One way to improve the “Fran” time for this trainee is to make 95 pounds into 33 percent of their capacity by driving their maximum thruster up to 285 pounds. Performing the maximum load workouts is what will do this kind of thing.

Here is an example of how you could score max lift workouts for a group, using the deadlift as an example. Divide your group of 30 into six teams of five, and line each team up behind a 135-pound barbell. Have each trainee attempt a set of three reps; increase the weight after each full round. Any team member who gets three reps in a turn moves to the back of the line; one who fails due to inability to move the load or

bad technique has to leave the line and practice deadlifting off to the side with the last weight lifted safely and successfully. As the supervisor, you must be vigilant about technique during these types of efforts. This is a race or timed workout. Give everyone two minutes of rest after their last successful set of three, and you will have plenty of time to supervise the lifters. At the end of the workout, rank trainees from one to thirty based on the last load successfully lifted; add up the rankings for each team to provide an overall team total. Alternatively, you could add up the total load lifted for each team.

If you have a group doing CrossFit for a relatively long time, like a six-month recruit course or your own platoon in a line unit, you can perform some interesting ongoing scoring. In the recruit course example, you could break the group into permanent five-man teams. Using logical pre-existing groupings such as half squads, for example, builds cohesion during PT that will carry over into later field training. Every day the group will perform individual or team workouts. You can assign individual or group points each day, and both if you wish.

Points will be added up throughout the course to give an overall winner at the end of the course. I have discussed how to use group scores for workouts done in teams. But you can also use group scoring for workouts that trainees perform as individuals, using a method such as the following:

- Give points to individuals according to finishing place—one point for first place, two for second, and so on.
- The team score is then calculated something like in Formula One racing. If individuals in team one come in 1, 2, 3, 4, 5th place, their team total is 15. If team two gets 6, 7, 8, 9, 10th place, they get 40 points. Team one gets one “overall” point for getting the best team score and team two gets two “overall” points for second-best team score, and these get added to the team totals cumulated from previous competitions. So even though your soldiers are performing the work individually, if they come in dead last the team score will suffer, and the team will be none too pleased. The table below shows how this was done with one group of twenty doing “Fight Gone Bad” as individuals;

Rounds	ONE	TWO	THREE	FGB SCORE	FGB RANK	CUMULATIVE SCORE	CUMULATIVE RANKING
<b>TEAM ONE</b>							
Soldier 1	124	91	81	296	2	18	1
Soldier 2	68	54	52	174	18	102	19
Soldier 3	85	77	71	233	9	49	7
Soldier 4	89	63	58	210	11	82	17
Soldier 5	77	63	63	203	15	34	4
<b>TEAM TWO</b>							
Soldier 6	141	88	87	316	1	46	5
Soldier 7	77	70	60	207	14	97	18
Soldier 8	116	89	78	283	4	68	11
Soldier 9	91	65	64	220	10	72	12
Soldier 10	103	93	88	284	3	33	3
<b>TEAM THREE</b>							
Soldier 11	97	80	71	248	8	78	14
Soldier 12	87	63	51	201	16	74	13
Soldier 13	96	DNF	DNF	96	19	79	16
Soldier 14	73	65	59	197	17	66	10
Soldier 15	109	70	74	253	6	61	8
<b>TEAM FOUR</b>							
Soldier 16	81	69	60	210	11	64	9
Soldier 17	82	67	60	209	13	78	14
Soldier 18	108	77	86	271	5	47	6
Soldier 19	93	81	78	252	7	31	2
Soldier 20	77	85	71	233	9	61	8

TEAM	TEAM FGB TOTAL	TEAM FGB SCORE	TEAM CUMULATIVE SCORE	TEAM CUMULATIVE RANKING
TEAM ONE	55	3	17	2
TEAM TWO	32	1	19	3
TEAM THREE	66	4	22	4
TEAM FOUR	45	2	13	1

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both individual and team points were awarded.

- If you repeat your PT test at the end of the course, as suggested, you could use the CrossFit PT sessions as 50 percent of the final score, and the results of the final PT test as 50 percent of the final score—kind of like “regular season” and “playoffs.”

In my experience with one military officer course, implementing CrossFit PT and scoring it in this fashion led to an interesting dynamic that was previously unseen. First of all, the daily competition was fierce, and there was always a crowd around the bulletin board when the daily and cumulative scores were posted. Second, the group became self-correcting, calling out other teams’ technique faults in order to minimize cheating. Finally, the team with the fittest members didn’t always win. When my group did “Frelen” as described above, the team having several of the fittest group members took off as individuals, leaving their weaker teammates behind. Although these fit members finished at the top individually, their effort was wasted since the time for the group stopped only when the last member finished. They did not listen to the instruction that once they had completed their work, they could no longer assist their teammates on pull-ups. They had to sit and watch, their work completed, while their weaker team members struggled on the bar and other teams pulled ahead. Contrast this with another team of less-fit individuals who made a plan and worked as a team. They completed the workout together, assisting each other on pull-ups to minimize the time spent on this station. The group finished at the same time and won the event. This group came in first because of good leadership, teamwork, and planning ability. In this PT session, the soldiers completed an excellent physical fitness training session, practiced leadership and planning, and learned a valuable lesson about group cohesion. What more could be asked for from a military leadership PT session?

## Injuries

One of the major challenges faced by group fitness leaders is how to incorporate trainees with injuries into regular PT sessions. You don’t want to change the whole workout plan to accommodate one soldier, and you certainly don’t want to send that soldier to the gym to ride the recumbent bike while everyone else is working as a group. Your goals with injured soldiers should be straightforward: to increase their fitness in spite of the injury, and allow them to keep participating with the others to maintain their sense of group cohesion. The solution to this challenge can be found (where else?) in a back issue of the *CrossFit Journal*. The article “Working Wounded” (issue 33) is of great benefit for group leaders trying to keep injured soldiers involved in group fitness training.

- When a soldier comes to you with an injury, instead of dwelling on all the exercises they can no longer perform, start thinking of all the exercises they can perform that you can substitute. Someone with a separated shoulder will be doing a lot of one-arm cleans and snatches, for example. Between specially adapted variations and all the exercises in the CrossFit roster that can be performed without the use of the injured muscle or joint, there will still be plenty for them to do and work on.
- Now look at the workout you will be having the group perform, and make appropriate substitutions.
- Make the substitutions worse than what the rest the group will be performing, for several reasons: first, if the soldier is perhaps not as injured as he makes himself out to be, this will likely substantially (if not instantaneously) speed up his “rehab.” Second, if the soldier actually is injured, his doing substitutions will not be held in contempt by the rest of the group. At the end of the session, you want the group to come up to the injured soldier and say: “Am I ever glad I’m not you!” This will allow the soldier to not be ashamed of either the injury or having

to do an altered workout.

To give an example of this, last summer a soldier in a military officer course had stress fractures in his lower legs. His medical exam form stated he could not perform impact PT, which pretty much ruled out running and marching. By chance, the “Working Wounded” article had just come out, so I called “Mac” and asked him for some assistance. The next morning, the group did “Fat Helen” (running, dumbbell swings, and pull-ups). I asked the injured soldier if swings and squats hurt (no impact), and he said “No problem.” So, the soldier did the swings and pull-ups as usual, and, as a substitution for the 800-meter runs, did burpees with no jump at the end. When you think of how long it takes the average person to run 800 meters, you know that this guy was hurting. Ever do four straight minutes of burpees? Eventually I took mercy on him and let him alternate five burpees and five knees to elbows—if you want to call that mercy. The next day was a 5k run, so he rowed 5k on the highest setting. Those in the know will understand these are not exactly equal. He performed the same types of workouts as the group, and usually with the group. He healed after six weeks of this sort of “rest.” Despite not running for six out of eight weeks of PT sessions, when he took the end-course PT test, he had the best obstacle course time improvement and the third-best run time improvement. Now that is rehab.

## Conclusion

Hopefully large-group fitness leaders have been able to draw something of use out of this article. Large groups can and even should train CrossFit-style. The challenges to implementation are largely logistical and easily overcome with a little ingenuity on the part of the leader. It is up to you to implement the program that will take your group to a level of physical conditioning that would not have been thought achievable—the type of fitness that will be a force multiplier in whatever arena your group plies its profession in.





# Perpetual Education and the Direction of CrossFit Seminars

— Tony Budding —



*Clockwise, from top left: CrossFit certification seminars, August 2003, October 2004, May 2006.*

What does it mean to be a great trainer? What does it take to become one? These two questions have recently driven the biggest development of CrossFit seminars since their inception. The short answer to the first is getting others to move better. The short answer to the second is perpetual education.

Knowing what to do and how to do it are distinct skills. Everyone can say, "Don't bend your arms in the second pull of the clean and snatch," but most of us do bend our arms, especially as the weight increases. Why? The intellectual knowledge (don't do it) and the kinesthetic ability to "jump a barbell through a range of motion" (as Coach Burgener puts it with straight arms) are almost completely independent of each other. Athletes need only the ability; trainers need primarily the knowledge.

But just knowing what to do is insufficient. There are many knowledgeable but

ineffective trainers out there. Human performance is infinitely complex. A particular cue may work beautifully with one client and terribly with another. A client may see great gains for a time, only to plateau suddenly and become frustrated. A good trainer has to know both what to do *and* how to get people to do it, and do it consistently.

In CrossFit and in life, the importance of proper movement and functional strength can't be underestimated (see Coach Glassman's article on Virtuosity in the fundamentals). We have to be able to apply our strength in real-world environments. To be great, CrossFit trainers should develop not just an understanding of the fundamentals of gymnastics (broadly defined as effective movement of one's own body), weightlifting (effective movement of external objects), sport (dynamic application of both with competition), and combat (defense and

control of an aggressor), but also the ability to improve their clients' performance in them all.

This is a tall order—so tall, in fact, that it can never be fully achieved. We can make great strides, and many in our community have. But I believe that the minute we think we know enough, think we don't need to learn anything new, we're no longer great trainers. Instead, we must constantly seek improvement in both understanding and delivery.

## New types of CrossFit seminars

CrossFit certification seminars began in November 2002 with Coach Glassman presenting the principles of CrossFit to an audience of two. The last few certification seminars have had over 100 participants, at least 10 presenters, and 30+ trainers

# Perpetual Education and the Direction of CrossFit Seminars

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each. The growth has been steady and organic, adding disciplines as the coaches became available. As great as these seminars were, we couldn't escape the feeling that we needed to do more. No one can really learn the essentials of gymnastics or Olympic-style weightlifting in a couple hours, no matter how great the coach may be, and they certainly can't internalize both those basics and also how to teach them. So after a long process, we have evolved four categories of seminars to address the perpetual needs of education for trainers.

## CrossFit Certification Seminars

Two days and limited to about 30 participants, CrossFit Certification Seminars present the practical and theoretical foundations of fitness and proper movement. CrossFit is most succinctly defined as a program that incorporates a wide variety of functional movements performed at (relatively) high intensity. The main purpose of the seminar is to establish and teach CrossFit principles and standards of mechanics, range of motion, attention to detail, virtuosity, and intensity. Achieving these standards—and the ability to coach them—is a lifelong pursuit. A Level I certified trainer should understand these standards. A Level II certified trainer should be able to apply these standards to others in real terms. A Level III certified trainer should be able to help others apply the standards. We assert that this is the best fitness training in modern history.

## CrossFit Training Seminars

Each CrossFit Training Seminar is two-day summit bring together two to three dozen exceptional coaches from a wide range of specializations, who will be ready to provide coaching, demonstrate and critique movements and techniques, answer questions, and run workouts in their respective disciplines. This is an opportunity to get your questions answered by the experts, watch them train others, get new ideas, and generally hang out with the best CrossFit has to offer. You create your own curriculum by spending as much time as you like with each presenter.

## CrossFit discipline-specific certifications

These two-day certification seminars dig in to a single discipline, giving you a chance to develop both your own skills and your abilities as a trainer. We currently offer them in Olympic-style weightlifting and CrossFit (a blending of CrossFit and mixed martial arts training), but we have several more in development—hopefully rolling out later this year or early in 2007.

## CrossFit-sponsored one-day virtuosity workshops

These are non-certification workshops taught by a variety of coaches and hosted by private facilities (CrossFit affiliates, in many cases). They focus on developing virtuosity in the fundamentals, and can be oriented toward skill development in athletes or coaching development in trainers. The purpose is to make continual education more accessible by bringing the training out to the community at a wide range of locales and at reasonable cost. The host pays a flat fee (typically in the \$1250–\$1750 range) plus travel expenses for the coach(es) and then sets its own size limits and fees for participants.

CrossFit trainers improve the way people move. Attending a seminar or receiving a certification does not itself make a good trainer. We are not impressed with degrees and certificates (our own or others'), but we are impressed with results. These seminars and workshops are designed to give you the greatest access to the broadest functional skills known. There's no magic pill, and no one gets it overnight. In the end, your abilities are your responsibility. But never before has such broad and highly skilled training been so accessible to so many. And, like getting in shape, it doesn't happen by talking about it.



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Your input will be greatly appreciated and every effort will be made to answer e-mails.

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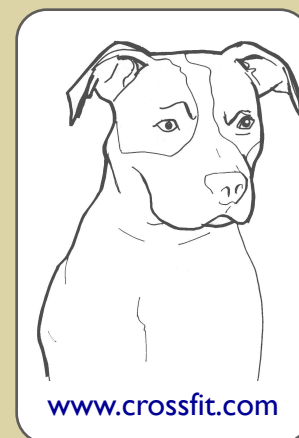
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