



CROSSFIT SPECIALTY COURSE: KETTLEBELL TRAINING GUIDE

CrossFit
TRAINING



DISCLAIMER

The exercises and advice contained within this manual may be too difficult or inappropriate for some people, and the reader(s) should consult a physician before engaging or prescribing them. This information is intended for participant reference only, not as a complete guide to strength, flexibility and kettlebell training.

The author and publisher of this manual are not responsible in any manner whatsoever for any injury which may occur through following the instructions herein.



TABLE OF CONTENTS

SECTION 1: INTRODUCTION	4
COURSE REQUIREMENTS	4
PERFORMANCE TEST GUIDELINES	4
GUIDELINES	5
TRAINING SCHEDULE	5
BASIC SAFETY RULES	6
SECTION 2: JOINT MOBILITY / FLEXIBILITY	7
JOINT MOBILITY DRILLS	7
POST TRAINING STRETCHING	9
SECTION 3: KETTLEBELL EXERCISES	11
I. SWING SERIES	11
II. TURKISH GET-UP SERIES	27
III. KETTLEBELL CLEAN SERIES	36
IV. OVER HEAD SERIES	44
SECTION 4: PROGRAM DESIGN	58
GENERAL GUIDELINES	58
MINIMALIST STRENGTH CIRCUIT	58
MAXIMUM RESULTS - MINIMUM TIME	58
THE 3-5 STRENGTH BUILDING PLAN	59
STRENGTH LADDERS	61
THE BENCHMARK "GIRLS": KETTLEBELL SUBSTITUTE WORKOUTS ...	62
TABATA INTERVAL	64
MAN-MAKER DRILLS™	64
CONCLUSION	64
SECTION 5: TEACHING MOTOR SKILLS	66
DEFINITION OF MOTOR SKILLS	66
LEARNING STYLES	66
ELEMENTS OF A GOOD DEMONSTRATION	67
PRACTICE SESSIONS	67
STAGES OF SKILL DEVELOPMENT	68
INFERENCE OF LEARNING	70
CONCLUSION	70
SECTION 6: SPECIAL REPORTS	71
OST PLACES SECOND IN 2007 WORLD SWAT CHALLENGE	71
THE ROLE OF BACK ENDURANCE IN BACK INJURIES' PREVENTION ...	76
THE MAIN CAUSE & PREVENTION OF BACK PAIN	76
CONTACT	77

COURSE REQUIREMENTS

The CrossFit Kettlebell Trainer Course is designed to provide the necessary skills to teach kettlebell exercises, detect and correct common errors, and safely conduct kettlebell training. The requirements for this course are quite stringent, primarily for your protection and the safety of those you train. The requirements are:

- Attendance 100%
- Participation 100%
- Pass all skills on Performance Test

- A. Due to the importance of the material presented in this course, there will be no exceptions to the above criteria.
- B. If, for any reason, you do not fulfill all the above requirements, you will be permitted to attend another course of the same level for completion* (see section # for details). All required criteria must be met before Certificates are issued.

PERFORMANCE TEST GUIDELINES

The student is graded on a pass/fail basis on their ability to correctly perform the physical techniques. The demonstrated techniques are done at the appropriate speed and amount of weight with the emphasis on precise technique/form. This evaluation is done on the last day of the course. Students will test one at a time or as a group. They will perform the exercises called out by the instructor.

If a student fails a technique, he continues with the evaluation. At the end of the evaluation, the student is informed on the failed technique, he is instructed on the proper way to do the technique, and is given a chance to go and practice the technique. At the end of the testing procedure for all successful students, the retest process will go to a second instructor (if available) to retest the failed technique. If he successfully performs the technique, he passes. If he fails the retest, he is not certified.

If you have exhibited minor technique flaws you might be required to submit a video-tape of yourself, the mistakes corrected, within two months of the course rather than be required to retake the course at the Chief Instructor's discretion.

If you are NOT planning on teaching others, you may choose to forego testing. You will be issued a certificate of attendance, instead of an instructor certificate.

GUIDELINES

During all hands-on training, please abide by these basic guidelines:

1. No horse play
2. Disclose any medical conditions and medications being taken.
3. When an instructor is talking to the class, please stop what you are doing and listen.
4. Hydrate
5. Wear appropriate loose fitting gym clothes.
6. Maximize training time – Be on time, keep breaks short.
7. Ask questions and take plenty of notes.

Your adherence to the above guidelines will assist you in the successful completion of this course.

TRAINING SCHEDULE

SATURDAY

0830 – 0900	Registration
0900 – 1230	Instruction & Practice
1230 – 1330	Lunch
1330 – 1700	Instruction & Practice
1700 – 1730	Q & A, Class Photo
1800 – 2000	Group Social (optional)

SUNDAY

0830 – 0930	Teaching Motor Skills (Lecture)
0930 – 1030	Program Design (Lecture)
1030 – 1230	Review, Instruction & Practice
1230 – 1330	Lunch
1300 – 1600	Review, Instruction, Practice
1600 – 1700	Performance Test
1700 – 1730	Course Evaluation & Conclusion

BASIC SAFETY RULES

Safety is paramount when training with the Kettlebells. We need to review the Safety Rules associated with Kettlebell Conditioning.

1. Train where there are no concerns about property damage or injury to anyone.
2. Practice all safety measures at all times, even with very light kettlebells, to develop good habits.
3. Work within your current flexibility limits
4. Build up your training load gradually using common sense.
5. Keep your arms loose in all dynamic drills (i.e. swings, cleans, and snatches).
6. Absorb KB impact as you would absorb a punch; actively exhale upon contact.
7. When cleaning and snatching, load the KB softly on your forearm; proper timing, hand angle and not pulling too high are the keys.
8. Kettlebell handle sets diagonally across your palm, resting low on the heel of your palm. This prevents hyperextension of your wrist.
9. Keep your weight on your heels (not toes) whenever your torso is folded forward.
10. Protect your lower back with good posture and intra-abdominal pressure.
11. Maintain total body tension, without weak links, when practicing strict, low-rep military press's.
12. Don't try to recover a questionable rep. When in doubt –drop the kettlebell(s). Guide a falling KB, if necessary, but don't fight it. Remember, "Quick feet are happy feet."
13. When in doubt, consult a sports doctor when dealing with pre-existing injuries.

Instruction cannot cover all contingencies: There is no substitute for good judgment.

The following mobility and flexibility exercises can serve as an excellent warm-up and/or cool down. Mobility drills are performed in a controlled rhythm, gradually increasing to maximum range of motion. Note: these drills are NOT static stretches. Nor are they bouncy ballistic movements! The emphasis is on smooth movement, staying within a comfortable range of motion (ROM), gradually increasing ROM as your muscles and joints warm-up (i.e. increase blood flow to muscles, sinovial fluid to the joints, body temperature, etc.). Think of it as “oiling” the joints. Be patient and consistent, gradually reclaiming your God-given freedom of movement.

Ideally, the repetitions should match the age of the participant. Realistically, 20- 30 repetitions one will be sufficient to achieve desired results. Initially you may have to break the drills into multiple sets of lower reps. Gradually work toward one less and less sets until your performing one set of the total number of reps.

JOINT MOBILITY DRILLS

The goal of Joint Mobility Drills are to rotate a joint through its anatomically complete range of motion (ROM), or attempting to approach that ROM if the joint is damaged, thus smoothing out the joint surfaces and lubricating them. This contributes greatly to the joint’s health. A full range of motion is gained or maintained.SJ

A few minutes of daily practice first thing in the morning, prior to a workout is ideal. If necessary, repeat before retiring. Habitual practice will put you on the right road to enhancing your joint health, economy of motion, and painless movement. Important; be sure to maintain good posture (i.e. open chest) during all mobility drills.

**“Practice
mobility before
flexibility &
agility”**

1. Neck

- a. Tilting-forward/back
- b. Rotating-left/right
- c. Tilting-left/right
- d. Shifting- forward/back
- e. Shifting left/right (arms overhead)

2. Shoulders

- a. Small circles over head (elbows locked, biceps close to ears)
- b. Shoulder rolls forward & back
- c. Alternating big circles forward & back
- d. Scare Crow
- e. Egyptian

3. Elbows

- a. Circles (arms out to the side, elbows shoulder height)
- b. Speed bag (arms in front, elbows shoulder height)

4. Wrists and fingers

- a. Wrist circles
- b. Interlace fingers and roll wrists
- c. Finger waves/extensions

5. Spine
 - a. Spinal Rotation (Arms loose)
 - b. Lateral Spinal Flexion
 - c. Spinal Flexion/Extension
6. Hip Rotation (i.e. hula hoop)
7. Knee
 - a. Rotation
 - b. Knee extension/flexion
 1. Feet together, hands on floor
 2. Feet shoulder width apart, hands on floor
 - c. Side Lunge (foot flat; toe up)

**“Do all things
without
complaining
and disputing.”**

Philippians 2:4

WARM-UP CRITERIA:

- Increase body temperature and heart rate
- Provide some stretching
- Stimulate the entire body and major biomechanical functions
- Provide practice for basic movements
- Prepare for rigorous athletic training. ^{CFJ}

POST TRAINING STRETCHING

The following stretching exercises should be saved for the end of the training session. The purpose is to increase flexibility and build strength at extreme ranges of motion with PNF/ isometric stretching. The key is to hold a steady isometric contraction for up to 30 seconds; don't hold your breath; breathe shallow and then let out a sigh of relief. When your intra-abdominal pressure drops, your muscles relax. The exhausted muscles should relax eventually.

GOOD MORNING HAMSTRING STRETCH

1. Begin standing with your feet shoulder width apart, knees slightly bent, back arched, weight on heels.
2. Bend over, folding at the hip, keeping back arched with chin up.
3. Inhale, contract your hamstrings, glutes, and lower back as hard as you can and count to five (seconds).
4. Exhale and relax your muscles, allowing upper body to drop closer to the floor.
5. Repeat steps 3-4 two more times.

RELAX-INTO-STRETCH TOE TOUCH

1. Begin standing with your feet together, knees straight (a slight bend is OK)
2. Bend over with a rounded back with the attempt to touch your toes. Don't reach any further than you can do so comfortably.
3. Inhale, contract your hamstrings, glutes, clench fists, and grip floor with your toes as hard as you can and count to five (seconds).
4. Exhale and relax your muscles, allowing upper body to drop closer to the floor.
5. Repeat steps 3-4 two more times. When finished, bend your knees and stand up.

Note: Staying in a toe touch. Not recommended unless you make an effort to 'lift your hips' and 'elongate' your lower spine instead of forcing it to round. The reason: possible overstretching of the lower back ligaments.

KNEELING HIP FLEXOR STRETCH

1. Kneel on right knee, toes pointed. Plant your left foot firmly in front of you: keeping it perpendicular to the floor.
2. Inhale, keep your hips square, your chest open, and contract the hip flexor by trying to bring your heel and knee closer to each other. Note: the foot and knee do not actually move. Hold for 5 seconds.
3. Exhale and relax, dropping your hip down closer to the ground. Keep your back arched, chest out and chin up.
4. Repeat steps 2-3 two more times.
5. Switch leg position and repeat steps 1-4.

SPINAL DECOMPRESSION HANGS

Perform in conjunction with dead lifts or at the end of your training session.

1. Grip a pull-up bar, hands approximately shoulder width apart, palms facing away.
(Note: this exercise works best when your legs straight, feet dangling off the ground.)

2. While hanging, keep the shoulders down and in their sockets by actively contracting your lats and scapulae.
3. Inhale, then forcefully contract all the muscles in your glutes, abs, legs, back, and arms for 3-5 seconds.
4. Passively exhale, instantly relax, allowing the entire length of your spine to elongate.
5. Repeat for 3-5 reps.

"Just do it."

Nike™ Slogan

SPINE DECOMPRESSION IS VITAL TO SPINE HEALTH AND MOBILITY

The authoritative *Soviet Physical Culture and Sports Encyclopedic Dictionary* stated that spine mobility is very dependent on the thickness of the intervertebral discs: the thicker the discs, the greater the mobility. The discs act as shock absorbers. Their spongy core does the job. When a disc absorbs liquid it can get almost twice as thick – which explains height fluctuations of a few centimeters throughout the day.

After fifty years of age discs dry up and a person shrinks and loses his flexibility. The value of traction or elongation exercises cannot be overestimated. "Just a little time will pass [since you started hanging on a pullup bar]" promises Russian coach Mark Tartakovsky, "and you will feel as if the bar has gotten lower, as if you have ground up or rather stretched out a centimeter or two..."

In a free hang Tartakovsky advises various leg and torso movements to amplify the effect: moving the legs back and forth or side to side, together and separate; non-ballistic turns of the torso and with the feet held together.⁵¹

I. SWING SERIES

RUSSIAN SWING

POWER SWING

AMERICAN SWING

TWO HAND SWING RELEASE

ONE-ARM SWING

HALF-ROTATION SWING

H2H SWING TM

CrossFit Journal Article Reprint. First Published in *CrossFit Journal* Issue 51 - November 2006

the **CrossFit**

JOURNAL ARTICLES

Kettlebell Basics

Drills for Improving Your Swing

Jeff Martone

The purpose of this series of articles is to share specific kettlebell training tips and progressions to assist the CrossFit community in maximizing the full potential of their kettlebells. The kettlebell is an extremely versatile “old school” strength and conditioning implement. Used properly, it can build functional strength, stamina, flexibility, and amazingly rehabilitate old injuries. Used incorrectly, it can aggravate old injuries or quickly create new ones. The difference is in the details.

Remember, attention to detail and mastery of the fundamentals is what separates world-class performers from the rest of the pack. It is also the key to minimizing risk of injury. The goal is to train, not maim (ourselves or anyone else).

Veteran CrossFitters are very familiar with the two-arm swing. The swing is the foundation of kettlebell exercises. You will reap big dividends if you invest a lot of time in this drill. Uncorrected technical errors in the swing will only be magnified as you progress to the more sophisticated kettlebell lifts such as the clean, jerk, snatch, hand-to-hand (H2H) drills, etc. World War II veteran Sergeant Steve Prazenka said it best: “Learn it right, and you will do it right the rest of your life. Learn it wrong, and you’ll spend the rest of your life trying to get it right... and in battle, you meatheads that get it wrong—the rest of your life will be very short.” Listed in the “Rules of Engagement” (following page) are proven teaching progressions that will help you to learn it right the first time and address common errors before they become habit.

This article addresses proper body alignment, proper breathing, and how to effectively recruit and stretch the hip flexors. If you study and apply the training sequences as prescribed, you will be well on your way to a more powerful and efficient American Swing. (Refer to issues 20 and 25 of the *CrossFit Journal* to see why the American Swing is CrossFit’s swing of choice.)



1 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© All rights reserved 2006

the **CrossFit**
JOURNAL ARTICLES

26

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Basics: Drills for Improving Your Swing *(continued)*

Rules of Engagement:

- Master each drill, in sequence, before progressing to the next drill.
- Limit the number of swings in your learning sets to 10 repetitions or less. At this point, the goal is perfect form—not a workout.
- Do not allow the kettlebell to swing higher than chest level (this is sometimes known as the Russian swing).

Note: There is a time and place for the overhead swing (aka American swing), but not until the Russian one is mastered. The most common error with swinging to overhead is for trainees to become so focused on *lifting* the kettlebell overhead that they forget all about driving through with their hips and overcompensate with their deltoids. The tell-tale signs are the infamous “droopy bell” and “smoked delts.”

- Focus your attention on the mechanics and nuances of generating maximum power from your hips.

Drill #1: Wall squat

This simple drill enforces proper movement patterns and discourages bad ones. It reinforces proper back and knee alignment and forces you to keep your weight on your heels. Perform 1 to 3 sets of 5 repetitions as a warm-up. This exercise also serves as an excellent remedial drill for the bad habit of allowing their knees to track in front their toes.

1. The stance.

Begin by standing in front of a wall with your toes about 3 to 6 inches away from the wall. Keeping your feet parallel, take a shoulder-width stance. As you become stronger and more flexible, you'll be able to perform this drill with your toes touching the wall. This is the same athletic stance you would take prior to performing a swing, deadlift, or standing vertical jump, etc.

2. The squat.

Jack-knife at the hips and slowly squat, keeping your weight on your heels. Maintain an “open” chest throughout the movement by pinching your shoulder blades together. Proper technique will keep your knicker from hitting the wall.

3. The hold.

Hold the bottom position of the squat for 5 seconds. Feel the glutes activate, and *do not* relax into the bottom. Definitely do not let your lower back round (i.e., don't let the tail tuck under). Keep your chest open.

4. The lift.

Slowly return to the standing position. It is critical that you “lock out” at the top. In other words, your

knees should be straight, quads and glutes maximally contracted. Some find it helpful to imagine pinching a coin between their cheeks (glutes).

5. The plan.

Repeat for 1 to 3 sets of 5 reps before proceeding to the deadlift.

Application: Deadlift.

Once you've established the proper “groove” with the wall squat, it's time to apply the principles to the deadlift. Deadlift the kettlebell for 5 reps. Do not worry about the weight (or lack thereof). Keep your head up, chest open, back straight, and your weight on your heels throughout the movement.



2 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© All rights reserved 2006

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Basics: Drills for Improving Your Swing *(continued)*

Drill #2: Hip flexor recruitment drill

This drill will teach you how to effectively engage your hip flexors during the “loading,” or descending, phase of the swing. It will also teach proper back alignment and optimum hip flexor activation.

1. Begin by lying on your back. Place the fingers of each hand on the creases of your hips. This will help you feel whether your hip flexors are firing during the drill.
2. Raise your feet off the ground and flex your feet back toward you. If you have a partner, have him hold your feet by grabbing the top of your foot with a thumbless grip, palms down. You won't get the right stimulus if he holds your feet by the heels with palms up. If a partner isn't available, use a resistance band to assist (see photos).
3. Starting with your legs straight, feet flexed, slowly bring your knees to your chest. The band or your partner is to provide a little resistance. Properly executed, the hip flexors should feel like they are cramping by the time your knees make it to your chest. Hold this contraction for about 3 to 5 seconds and make a mental note of that sensation.
4. Repeat 3 times. Take a short break and then proceed to the wall squat.

**Application:** Wall squat

Go back to the wall and perform one set of 5 reps of the wall squat. This time purposefully engage the hip flexors every time you descend. In other words, *pull* yourself down “into the hole.” Don't just yield to gravity. If you can't feel your hip flexors firing, repeat the hip flexor recruitment drill until you can. Shake out any tension, and then proceed to the deadlift.

Application: Deadlift

Deadlift the kettlebell for 5 reps, actively engaging your hip flexors. Proceed to the swing.

Application: Swing

Perform a set of 8-10 Russian swings. Start with very low swings and gradually build up the height with every rep. Keep your chest open, arms straight, shoulders relaxed, and allow the kettlebell to swing freely.



3 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© All rights reserved 2006

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Basics: Drills for Improving Your Swing *(continued)***Drill #3: Hip flexor stretch (shoulder bridge)**

Here are two great stretches that will help unlock the full power of your hips. Tight hip flexors are reaching epic proportions in twenty-first-century America. All the time people spend sitting causes neural shortening of the hip flexors, which in turn causes us to short stroke our swing. The end result is loss of power. This drill will help you find and get rid of these power leakages.

Stretch #1:

This drill will dramatically increase your ROM (range of motion) and power output. The total time invested is less than a minute. So, get ready to release the “parking brake” and unleash the power.

1. Lie on your back, with your feet flat and heels close to your glutes.
2. Place a small medicine ball between your knees and squeeze hard.
3. Perform a shoulder bridge. Slowly raise your hips toward the ceiling, keeping your shoulders and head on the floor. Hold for five seconds, and then relax as you return to the starting position.
4. Repeat 3 to 5 times.

Stretch #2:

Here is a more powerful variation of the previous stretch and my personal favorite. However, if you have acute lower back problems or are obese, you may want to stick with the previous stretch. This type of stretch will yield better gains in less time. Perform steps 1 through 3 as you did in Stretch #1. This time, add a 5- to 10- second isometric hold at the top position. More specifically:

1. When your hips reach the limit of your ROM, place the fingers of each hand on the front part of your hip bones. Keep your arms tight against your body and apply downward pressure by driving your elbows towards the ground. Maintain that position and be sure to maximally contract all the muscles of your lower body (i.e. glutes, quads, hamstrings, etc.) for 5 to 10 seconds.
2. Release your fingers off your hips and exhale (out your mouth), while continuing maximal glute contraction. Executed properly, your hips should float to a new ROM. The harder you hold the isometric contraction, the greater the ROM gain will be when you release the hold.
3. Repeat this drill 3 to 5 times.

4. Immediately stand up. You should notice an immediate change in your posture when standing. You will feel taller as your posture returns to its original vertical alignment.

5. Proceed to the deadlift.

Application: Deadlift

Deadlift the kettlebell for 5 reps, actively engaging your hip flexors. Now proceed to the Russian swing.

Application: Russian swing

Perform a set of 8 to 10 Russian swings. Start with very low swings and gradually build up the height with every rep. You should feel an immediate sense of freedom of movement and power from your hips. If you do not feel more power from your hips, then repeat the above sequence then practice a few standing vertical jumps. This should yield noteworthy results



4 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© All rights reserved 2006

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Basics: Drills for Improving Your Swing *(continued)*

I cannot overemphasize the importance of these drills. They will serve you well if applied prior to each training session or WOD.

Breathing tips

Proper breathing is essential for safety and maximal power. However, it is commonly overlooked and often not emphasized.

It is important to develop the habit of inhaling as 75-100% of your lung capacity prior to loading your muscles (i.e., lifting). Inhale through your nose on the descent prior to the deadlift or while descending during the swing

Rather than exhaling all of your air at once, forcefully exhale a tiny stream of air through your clenched teeth, while pressing

your tongue to the roof of your mouth. This will contract the diaphragm and the muscles of the abdominal cavity and increase your intra-abdominal pressure thus increasing the stability of the trunk and the transfer of force through it. On the upward portion of the swing, exhale a little bit of air, similar to a fighter exhaling on contact.

Make drill #1 and drill #3 a part of your daily routine. Employ proper breathing in all exercises. The difference is in the details, so work toward achieving perfect form. Think of each training session as just that: a "training" session, not a workout. Once you've mastered the kettlebell swing and these basics, you'll be ready for the many variations and challenging routines that I'll discuss in future articles.



Jeff Martone, the owner of [Tactical Athlete Training Systems, Inc.](#), was one of the first certified senior kettlebell instructors in the United States. He is best known as the creator of "Hand-2-Hand" kettlebell juggling, SHOT training, and the T.A.P.S. pull-up system. He is also the author of six training DVDs. He was the first to implement kettlebells into a federal law enforcement agency and now offers instructor-level certifications. He has over 15 years of experience as a full-time defensive tactics, firearms, and special response team instructor.

5 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
® All rights reserved 2006

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

CrossFit Journal Article Reprint. First Published in CrossFit Journal Issue 52 - December 2006

the **CrossFit** JOURNAL ARTICLES

Kettlebell Basics

Improving Your Swing, Part 2

Jeff Martone



“The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires.”

—William Arthur Ward

The July 2006 CrossFit Training Seminar, hosted at CrossFit San Diego, can be summed up in one word: inspiring. I found it inspiring for two reasons. First, it was an opportunity to get personal instruction from a diverse group of truly great teachers. Second, I was struck by observing the pervasiveness of a common thread of movement mechanics—specifically hip flexion to extension—that weaves through the disciplines that make up CrossFit.

1 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

the **CrossFit**
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Basics: Improving Your Swing, Part 2 (continued...)

During his presentation, Tony Blauer made the statement “good information doesn’t displace other good information.” The seminar was practical evidence of that assertion, as it seemed that the more different coaches offered information, the more it all came together and the more they reinforced each other’s points and methods. Look at Mark Rippetoe’s [detailed analysis of the deadlift](#). The mechanics of the deadlift and the importance of achieving and maintaining lumbar and thoracic back extension during the deadlift are also essential when performing Olympic lifts or kettlebell swings, cleans, and snatches. The same holds true for Coach Burgener’s definition of the Olympic lifts as “a vicious extension of the ankles, knees, and hips that creates momentum and elevation on the barbell.” This same “vicious extension” also takes place in the jumping

movements of gymnastics and parkour. One movement, many applications—now, that’s inspiring.

Last month I covered three drills to improve your body mechanics, range of motion, power, and efficiency of movement as applied to the two-handed Russian kettlebell swing. Adding the wall squat, hip flexor recruitment drill, and hip flexor stretch that I describes into your daily warm-up should lead to a noticeable increase in your “jumping” performance. The kettlebell should feel lighter and move faster with less perceived effort.

This month I will discuss a few additional kettlebell swing errors and their remedial drills, and then move on to the power swing and American swing.

Kettlebell swing troubleshooting

Problem: Rounded shoulders; shoulder blades sticking out

Solutions:

1. Look straight ahead, not down.
2. Force your chest open and pinch your shoulder blades together.
3. Perform wall squats with a rubber band or towel overhead. Concentrate on pinching your shoulder blades together.
4. Place your hand on the trainee’s back, with thumb and fore fingers touching the protruding shoulder blades, and pinch them together.



2 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Basics: Improving Your Swing, Part 2 (continued...)

Kettlebell swing troubleshooting (continued...)

Problem: Lumbar spine flexion (i.e., tailbone tucks under) at the bottom of the swing.

Solutions:

1. Activate your hip flexors upon descending into the swing. Use the hip flexor recruitment drill I described last month to help learn to do this effectively.
2. Tight hamstrings can be contributing factor. Practice the good morning stretch:
 - a. Stand with feet hip-width apart. Hinge at the hips and bend forward, maintaining lumbar extension and keeping your chest open and head up.
 - b. Once you feel a little tightness in your hamstrings, hold that position and isometrically contract all the muscles of your lower body. Hold for 5 to 10 seconds, then exhale and relax.
 - c. When you relax, let your hamstrings lengthen, increasing your ROM. Repeat the drill 3 times.



Problem: Technique is good, but you're still not generating enough power.

Solutions:

1. Synchronize your breathing; inhale through your nose and exhale through clenched teeth, similar to a fighter exhaling upon contact. Glutes and abs should quickly contract at the top of the swing.
2. Perform sets of standing vertical jumps between each set of swings. Remember, it's a "vicious extension of your hips, knees, and ankles."

3 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

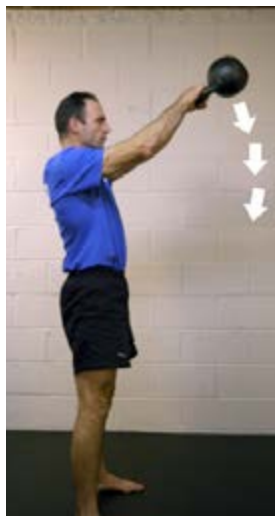
Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Basics: Improving Your Swing, Part 2 (continued...)

Power swing

The power swing increases the tempo and power output of the Russian swing. In addition, it will pressure test your form. This is truly a self-correcting exercise.

1. Perform a Russian swing (i.e., to eye level).
2. When the kettlebell reaches the highest point, immediately reverse the direction, pushing it back between your legs as hard as you can. Timing is everything. It's the simultaneous contraction of your abs, lats, and chest that is the key to quickly reversing the direction.
3. Never look down. Keep your head up and eyes focused on the horizon.
4. When the kettlebell reaches its lowest point, explode out of the hole. You will notice a lot more kinetic energy built up at the bottom of your swing and more power through out your extension. Try to move faster with every rep.
5. Be aware that your grip will be heavily taxed during this exercise. Be sure there is a clear impact zone in front and in back of you.



4 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Basics: Improving Your Swing, Part 2 (continued...)

American swing

This is CrossFit's swing of choice. The kettlebell moves through its extreme range of motion. The swing culminates at top with the kettlebell directly overhead, and then the bell strafes the ground as it passes between the legs at the bottom. This makes for a very demanding exercise, which is why CrossFit prefers it. (Refer to issues 20 and 25 of the CrossFit Journal for more details).

If you have taken the time to practice each exercise (in order) as I prescribed in last month's article, then you should possess more than enough power to make a safe and effective transition to the American swing.

Perform one to three Russian swings, and then take it overhead.

- Keep your back arched.
- Look straight ahead.
- Keep your arms straight throughout the move.
- Keep your chest high throughout the swing, especially in the bottom position.
- Drive your hips up and forward.

When taking the kettlebell overhead, most people have a tendency to overcompensate by using their deltoids to get the kettlebell from waist or chest level to overhead. This is common in beginners who are unfamiliar with how to use their hips properly. Experienced kettlebellers can also fall prey to this error, especially toward the end of a tough routine. Overcompensating with the deltoids is less than desirable for two reasons. First, it places unnecessary strain on the deltoids. Second, the momentum it creates can be difficult to control and can place undue stress on your shoulders and lower back. This is especially true if you wait until the last second to "put on the brakes." If you have a history of shoulder injuries, it is safer to activate the brakes a little earlier. End the top of the swing just in slightly in front of your head. Be sure to powerfully contract your abs and armpit muscles at the top of the swing. Your shoulders will thank you for it later.



You have now built for yourself a very solid foundation for future kettlebell exercises. Always remember: repetition establishes habit. Vince Lombardi said "it's not practice that makes perfect, but rather it's perfect practice that makes perfect." Perfect practice is the key; accept no less. Strive for perfection and you will achieve excellence.



Jeff Martone, owner of [TacticalAthleteTrainingSystems](http://TacticalAthleteTrainingSystems.com), was one of the first certified senior kettlebell instructors in the United States. He is best known as the creator of "hand-2-hand" kettlebell juggling, SHOT training, and the T.A.P.S. pull-up system. He is also the author of six training DVDs. He was the first to implement kettlebell training in a federal law enforcement agency and now offers instructor-level certifications. He has over 15 years of experience as a full-time defensive tactics, firearms, and special-response-team instructor.

5 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

CrossFit Journal Article Reprint. First Published in CrossFit Journal Issue 53 - January 2007

the **CrossFit** JOURNAL ARTICLES

Kettlebells One-Arm Swings and Beyond

Jeff Martone



In the last two issues, I discussed the mechanics and fundamental movements of the two-arm kettlebell swing. Through proper, regular practice, your swing should now be more efficient, consistent, and powerful. Now it's time to move to the next progression: the one-arm swing.

1 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

the **CrossFit**
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebells: One-Arm Swings and Beyond (continued...)

Performing the kettlebell swing with one arm at a time makes it a more demanding exercise, even though the technique is the same as for the two-arm swing. You will quickly notice increased demands on your grip strength and stamina as well as increased core activation. In addition, any previously undetected technical deficiencies will soon

become obvious. For these reasons, I highly recommend that you practice one-arm swings with a lighter kettlebell. If one is not available, then it is better to practice more sets with fewer repetitions in each. Strive to work as hard as possible, while staying as fresh as possible. Fatigue is counter-productive when learning new skills.

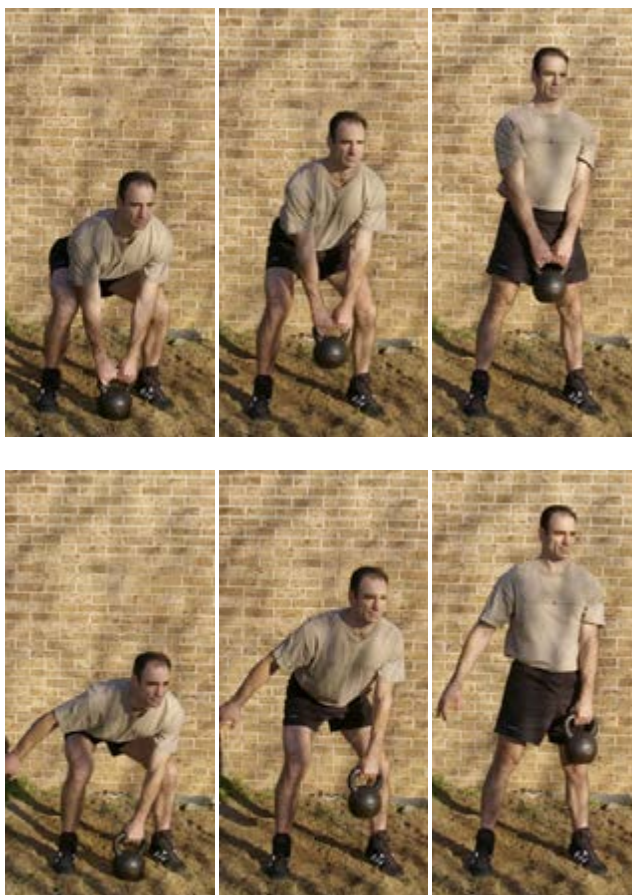
Drill #1: One-arm deadlift

Warm up by performing 3 to 5 reps of the two-arm kettlebell deadlift. This will establish a baseline and reinforce good mechanics.

Using the same form, perform the one-arm deadlift for 3 to 5 reps on each side, making sure you conform to the following guidelines:

- Make a conscious effort to keep your upper body square from start to finish.
- Do not allow your non-working hand to touch any part of your body.
- Be sure to fully extend your knees and hips at the top of the lift.

It is prudent to master the mechanics of the one-arm deadlift before attempting the one-arm swing, since the typical form errors are the same for both moves. The key to both the one-arm deadlift and the one-arm swing is to keep your upper body square to the kettlebell's path of movement during the entire exercise. Likewise, keep your hips square and your back in alignment throughout the movement. Nothing good will come from allowing your upper body to twist.



2 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebells: One-Arm Swings and Beyond (continued...)

Drill #2: One-arm swing

1. Set the kettlebell on the ground, centered in front of your feet.
2. Assume a good deadlift setup stance: head up, chest open, butt back, and weight on your heels. Grasp the KB with one hand.
3. Simultaneously extend your legs and pull (i.e., hike) the kettlebell up and back between your legs. (Don't worry if the bottom of the KB initially drags on the ground. It will soon be airborne.)
4. Once the kettlebell reaches the end of its arc, explosively extend your knees and hips. Your goal is to project the kettlebell to chest or eye level. Don't worry if it takes a few reps to get it there—that's normal.
5. Perform 5 to 10 reps, and then place the kettlebell on the ground. Resist the temptation to round your back when placing it on the floor. Instead, jackknife at the hips to sit back, keep your back straight at all times.
6. Switch hands and then repeat the sequence for another 5 to 10 reps.

2. Contract your obliques and lats (i.e., pretend you're squeezing a tennis ball in both armpits).
3. At the top of the swing, strongly contract all the muscles in your core by exhaling compressed air through your teeth.

Problem #2: The kettlebell does not project high enough.

Solutions:

1. Practice standing vertical jumps between sets.
2. Use a lighter kettlebell.
3. Contract your core harder
4. Employ proper breathing.

Problem #3: The kettlebell feels like it will slip out my hand.

Solutions:

1. Shorter sets performed more frequently will increase grip strength rapidly.
2. Change hands more frequently via the "half-rotation switch" or hand-to-hand swings (see below).
3. Use a lighter KB.

Troubleshooting the one-arm swing

Problem #1: The shoulders do not remain square.

Solutions:

1. Keep your chest open and your shoulders back and down.



3 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebells: One-Arm Swings and Beyond (continued...)

Drill #3: The half-rotation switch

The half-rotation switch is the easiest way to transfer the kettlebell from one hand to the other without stopping to put it down. This technique allows for continuous motion, which translates to increased work capacity. It also maximizes safety because you are transferring the KB from hand to hand when your spine is in a neutral position. And it reduces the likelihood of grip failure because it makes it nearly effortless to switch from one hand to the other when one is fatigued.

To perform a half-rotation switch:

1. As the kettlebell is moving to the top of its arc, rotate your hand palm up.
2. Simultaneously move your free hand up to the path of bell with the palm down.
3. Grasp the kettlebell with the free hand, release it with the other, and continue the motion.



Timing is key in the half-rotation switch. Switch the kettlebell from hand to hand when it is at the top end of the swing. The half-rotation switch is the method of choice for performing one-arm swings indoors.

Drill #4: Swing release (two hands)

The two-hand swing release is a foundational, yet demanding, exercise for “H2H” (hand-to-hand, or release) kettlebell work. This drill is not only fun and challenging, but also a necessary step to properly prepare you for the H2H swing (i.e., the one-arm version).

It is best to practice the H2H swing in an area where you can freely drop the kettlebell without worrying about causing property damage. After practicing the techniques, you may feel confident for indoor training. Practice for success by staying as fresh as possible by keeping your reps low. In the beginning, it's a good idea to sandwich 1 to 2 swings between each release to help reset and maintain good form. Fatigue and sloppy form should be avoided at all costs. Remember: Skill first!

To perform the two-hand swing release:

1. Begin by performing a regular two-arm swing.
2. When the kettlebell reaches chest height,



purposefully “drag” the fingers of both hands up and off the handle at a 45-degree angle.

3. Allow the kettlebell to rise to its highest position. The handle should remain horizontal and parallel to the ground while the kettlebell is airborne.
4. Grab the handle with both hands and resume the swing.

4 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebells: One-Arm Swings and Beyond (continued...)

Drill #4: Swing release (two hands) (continued...)

Troubleshooting the swing release moves

Problem #1: The kettlebell flips over.

Solution: At the top of the swing, pull the kettlebell handle slightly up and toward you. This action is very important. It will prevent the kettlebell from flipping and will keep the kettlebell within arms reach.

Problem #2: The kettlebell handle rotates clockwise/counter clockwise.

Solution: Make a conscious effort to release both hands at the same time. If one releases before the other, the handle will rotate. The handle must stay parallel to the floor.

Problem #3: The kettlebell drifts away from you.

Solution: Move your arms similar to a “high-pull” motion, with a slight arm bend, allowing your fingers to drag off the handle. Never reach for a kettlebell that is out of arm’s reach. It is better to let it fall to the floor than to attempt to grab it and have it pull you forward, out of position, possibly resulting in an injury.

Problem #4: The kettlebell moves too close to your face.

Solution: Release your fingers off the KB sooner or use less force in the “high-pull” motion.

Drill #5: H2H swing (a.k.a. DARC swing)

The “H2H” swing is a more versatile and demanding way to alternate the kettlebell from one hand to the other. The switch takes place at the highest part of the swing. This is where the KB momentarily becomes weightless. This exercise will really challenge your core and grip strength in a unique way. It will also improve your hand-to-eye coordination and hand speed.

To perform the H2H swing release:

1. Follow the technique for the one-arm swing.
2. When the KB reaches chest height, “drag” your fingers off the kettlebell (i.e., slightly pull it up and backwards at a 45-degree angle).
3. Keep your eye on the kettlebell and immediately grasp the handle with your free hand.
4. Resume the one-arm swing, now holding the kettlebell with your other hand. Never compromise form. If at any time you feel like your form may be compromised, immediately release the kettlebell and let it safely drop to the ground.



Note: Be realistic. You will drop the kettlebell. Get used to it. It’s not a big deal. It is far better to drop a kettlebell than to grab a poorly released, out of reach kettlebell. If the kettlebell gets too close to your face or body, simply push it away and step back. If the kettlebell moves too far away, watch it hit the floor. If the kettlebell handle twists, don’t try to grab it.

If you choose to practice H2H drills, then there are two H2H mottos I recommend you commit to memory and live by:

- Quick feet are happy feet.
- If you’re gonna be stupid, you’d better be tough.

5 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

II. TURKISH GET-UP SERIES

FLOOR PRESS

ARM-BAR STRETCH

TACTICAL TURKISH GET-UP

FLOOR PRESS, ARM BAR PRESS, TGU

ONE-ARM FLOOR PRESS

The one arm floor press is can be performed by itself or in conjunction with the Arm Bar Stretch or Turkish Get-up.

1. Lie supine on floor next to your kettlebell.
2. Use two hands to bring the KB into position. Always use two hand when picking-up or placing the KB down.
3. Keep your wrist straight, forearm perpendicular to the floor with a neutral grip.
4. Before attempting to press, pinch your shoulder blades together and down.
5. Make sure that your abs are tight, then flex your lat and press the kettlebell to arms length.
6. Pull the KB back to the starting position by utilizing your lats by keeping your elbow close to your torso. Repeat.

TWO-ARM FLOOR PRESS

Once you have mastered the one KB floor press, then it's time to try the two KB floor press. The exercise is performed exactly the same as you would with one KB. However, close attention must be paid to how you get the kettlebells into position.

1. Sit between two KB's and establish your grip on each KB, palms facing up, elbows resting on floor.
2. Keeping your elbows on the floor slowly lie back, keeping a 90 degree bend in your elbows. By the time your upper back touches the floor, both KB's will have been leveraged up and into the starting position.
3. Simultaneously press both kettlebells to arm's length. Keep your wrists straight and grip neutral. At arm's length, your hands should look as if they are at the ten and two o'clock position on a steering wheel of a vehicle.

OTHER VARIATIONS

- Hold one extended while pressing the other
- See saw press
- Press both KB's with feet together
- Press both KB's with feet spread apart

KETTLEBELL FLOOR PRESS VS. BENCH PRESS

The kettlebell floor press is a safe partial movement exercise that can serve as a substitute exercise for the barbell bench press. It is safe on the shoulders due to it's partial movement yet strengthens many of the stabilizing muscles within the shoulder girdle. In addition, you don't need a spotter. On average, there are 15 bench press related deaths each year. Do yourself a favor and choose the floor press; save your shoulders and possibly your life. Just say no to benching!

CrossFit Journal Article Reprint. First Published in CrossFit Journal Issue 57 - May 2007

the **CrossFit** JOURNAL ARTICLES

Turkish Get-Up: Part I

Jeff Martone



The Turkish get-up (TGU) is an outstanding exercise that develops strength, flexibility, and stability throughout the entire body. It has especially proven itself as an excellent prehabilitation and rehabilitation exercise for the shoulders. In addition, a mastered TGU will make all overhead exercises safer and easier.

Historically, the TGU was a staple exercise for old-time strongmen and wrestlers. It's been said that in the days of old, this was the first and only exercise taught to many aspiring weightlifters to practice. Supposedly, no other exercises were taught or practiced until the pupil could perform the TGU with a 100-pound weight in either hand. At first, I thought this might have been just weightlifting folklore. However, I decided to make the 100-pound TGU a personal goal. After reaching this goal, I quickly realized the wisdom behind the methodology. First, it takes tenacity and commitment to conquer this feat of strength. Second, it slowly yet steadily builds a solid foundation of strength that nearly "injury proofs" the body,

1 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Turkish Get-Up: Part I (continued...)

making it ready for more demanding training. Third, it significantly strengthens the major muscle groups, small stabilizing muscles, and connective tissues.

I first learned the TGU in December of 2001. At that time I was facing the grim option of having a third surgery on my right shoulder. I've had a long history of shoulder subluxations/dislocations. I have had two surgeries on my right shoulder (1985 and 1987) and one on my left (1989). Unfortunately, even after the two surgeries, my right shoulder would continue to dislocate a couple of times a year; sometimes while training, many times while sleeping. Talk about a rude awakening!

Over this 15-year period, I diligently practiced every rubber band exercise and rotator cuff program known

in the realm of physical therapy, but to no relief. In December 2001, I started practicing the TGU with dumbbells. (Kettlebells weren't available at that time.) I practiced this exercise with dumbbells, then later with kettlebells. Ultimately, I fabricated two homemade 110-pound kettlebells, and by spring of 2002 I was performing singles with them with either hand, reaching my goal.

Knowing what I know now, I'm thoroughly convinced that I could have avoided all three surgeries had I only known this valuable exercise. My shoulders are more stable and stronger now than ever before. The range of motion is completely restored. Best of all, I have not suffered a shoulder subluxation or complete dislocation in over six years.

The arm-bar stretch

The "arm bar stretch" is a simple but effective way to strengthen the stabilizer muscles in the shoulder and actively stretch the pectoral muscles. It builds strength at extreme ranges of motion and can be practiced as a standalone exercise or in conjunction with the TGU.

Begin with a light kettlebell or dumbbell. I prefer the kettlebell because of the way it rests on the back of the forearm. The offset weight has a tendency to pull your arm backward. Resisting that tendency and controlling the weight overhead simultaneously strengthens and stretches all the muscles in and around the shoulder girdle. Start with a light kettlebell until you have the movement mastered and are confident in your strength and ability to support increased loads.

1. Begin by lying on the floor, in a supine position (i.e., face up), with the kettlebell on your right. Lean toward the kettlebell, grasping the handle with your right hand, keeping your right elbow tight to your side. The left hand comes over the top to provide an assist (photo 1). Slowly roll back to the supine position, bringing the kettlebell with you. Your forearm should be perpendicular to the floor (photo 2). Get into the habit of always using two hands to pick up or put down the kettlebell when you are on the ground. This will protect your rotator cuff from potential injury.



2 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Turkish Get-Up: Part I (continued...)

The arm-bar stretch: The transition (continued...)

2. Press the kettlebell up in front of your chest to arm's length. If necessary, use your left arm to assist the lift or spot the weight. The goal is to get the kettlebell to the locked-out position. The purpose of this exercise is not to build a big chest through pressing. Once the elbow is straight, adjust the kettlebell to where it sits deep across the heel of your palm to take strain off your wrist (photo 3).
3. Post your right foot flat on the ground, with your heel close to your buttocks (on the same side foot as your working arm) (photo 4). This is the starting position for this stretch. Be sure to keep your eyes on the kettlebell throughout the entire exercise
4. Push off your posted foot, slowly rolling over to your left side. Reposition your left arm so you can rest the side of your head onto your biceps (photo 5). Continue carefully rolling over, keeping your arm vertical, until you are nearly prone (photo 6) or until you hit a sticking point. Hold that position for a few seconds and then return to the starting position.
5. Repeat for three to five reps; then switch arms.

**Tips**

- Keep your reps low (i.e., three to five). Train as heavy as possible but stay as fresh as possible.
- If for some reason you get distracted and begin to lose control or balance of the kettlebell, avoid the temptation to try to save it. Rotate your torso quickly in the direction the kettlebell wants to go and guide it into a controlled crash on the floor. Don't try to save it. The kettlebell will always win.

The tactical Turkish get-up

There are many ways to perform the TGU. The first variation I will share with you is the one that's simple, easy to learn, and has tremendous carryover to any sport or profession. It's called the tactical TGU because it mimics the tactical way of getting back to your feet

if you were knocked down during a fight. This skill is even more important when you find yourself in full kit and level-IV body armor.

To keep it simple, I will teach the tactical TGU in three parts: the sit-up, the transition, and the stand-up.

3 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Turkish Get-Up: Part I (continued...)

TGU: The sit-up

1. Begin by following the first two steps of the “Arm Bar” stretch to get into a position flat on your back, with the kettlebell extended straight up in front of your chest and your arm locked out (photos 1-3).
2. From the starting position, with your left hand flat on the ground, roll slightly to your left side and sit up (photos 7-10). In other words, allow the weight to drift just slightly forward, then push off your posted foot to help you sit up. It is acceptable to allow your free arm to assist slightly against the floor in sitting up. Finish with the right arm and the kettlebell vertical and your eyes on the bell.

**TGU: The transition**

The transition will move you from the sitting position to the kneeling position.

3. Begin by pressing the shoulder of your support hand (the hand that is on the ground) away from your ear. This is an important but often overlooked step. It puts your shoulder in a strong position. It keeps the shoulder “active,” as when you are performing dips on parallel bars.
4. Simultaneously press off your hand and your posted foot, lifting your hips off the floor. This will create the space necessary to bring your left leg underneath you (photo 11) as you slowly move into a three-point kneeling position (photo 12).



4 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Turkish Get-Up: Part I (continued...)

TGU: The stand-up

5. Slowly straighten your torso and pull your left arm up off the ground so that you are in a two-point kneeling position (photo 13). Keep your eyes on the kettlebell, and actively press the kettlebell straight up toward the ceiling throughout this step.
6. Keeping your right shin vertical, load your weight onto your heel, contract your outside glute and stand up, pushing the kettlebell up overhead as you rise (photo 14). Congratulations! You just successfully completed the first half of the tactical TGU.
7. Pause for a moment, gather your thoughts and breath, and then carefully reverse the steps to lower yourself to the floor and back into the starting position, flat on the ground with the kettlebell extended over your chest. Watch the kettlebell and actively drive it upward with your shoulder even as you descend back into a supine position.

**Tips**

- Stay tight, move slowly, keep your elbow locked, and remain focused on the kettlebell. This is especially important when transitioning from standing to kneeling, kneeling to sitting, and sitting to supine. The combination of a bent elbow, a little momentum, and the sudden jolt could cause the kettlebell to come crashing down. Take your time, and be smooth.
- Keep your reps low—three to five with moderate weight, say, or singles with heavy weight. This exercise is best practiced in parts or with a spotter until all the motions are mastered.
- My favorite way to practice the tactical TGU, especially when I'm short on time, is to set a timer for 10 minutes and perform singles (i.e., one rep consists of one up and one down), alternating sides after every rep. I've found this to be a safe and productive way to train tactical TGUs.

Mastering the TGU is an excellent investment of your time and effort. My personal success story has been repeated many times with the clients I train. Boxers, grapplers, no-holds-barred fighters, police officers, military personnel, and the average "Joe" or "Jane" all have reaped the benefits of the TGU. Whether you have a history of shoulder problems or are trying to prevent them, please heed my advice: Just say "No" to the bench press and "Hello" to the TGU.

In next month's issue I will cover some fun and challenging TGU variations.



Jeff Martone, owner of *Tactical Athlete Training Systems*, was one of the first certified senior kettlebell instructors in the United States. He is best known as the creator of "hand- 2-hand" kettlebell juggling, SHOT training, and the T.A.P.S. pull-up system. He is also the author of six training DVDs. He was the first to implement kettlebell training in a federal law enforcement agency and now offers instructor-level certifications. He has over 15 years of experience as a full-time defensive tactics, firearms, and special-response-team instructor.

5 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

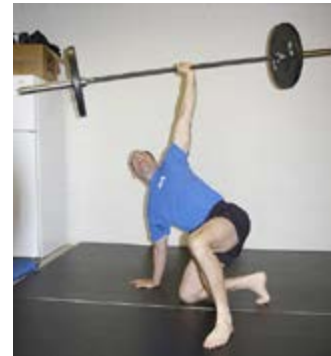
CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Turkish Get-Up: Part 2 (continued...)

**Implement variations**

If you travel a lot, there is a chance you may find yourself one day without your kettlebell. (Oh no!) If this happens, do not fear. With a little imagination, you can adapt and overcome. TGU's are beneficial regardless of the implement you practice with. Dumbbells are economical and plentiful, and they will work in a pinch. Unfortunately, a dumbbell doesn't have the benefit of an offset center of gravity, but it's better than doing nothing. Short, thick-handled barbells and full-sized Olympic barbells also lack the offset center of gravity but make up for it by the requirement of having to balance longer



and/or thicker bar. (Old-time strongman and stunt man Joe Bonomo demonstrates the use of the barbell for this exercise in his classic book *Barbell Training Routines*.) Sandbags and rucksacks are great options, especially in austere training environments. They both have an offset center of gravity, which strengthens and stretches the shoulder throughout the entire exercise. Whatever you "get up" with, be sure to keep your wrist straight.



4 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

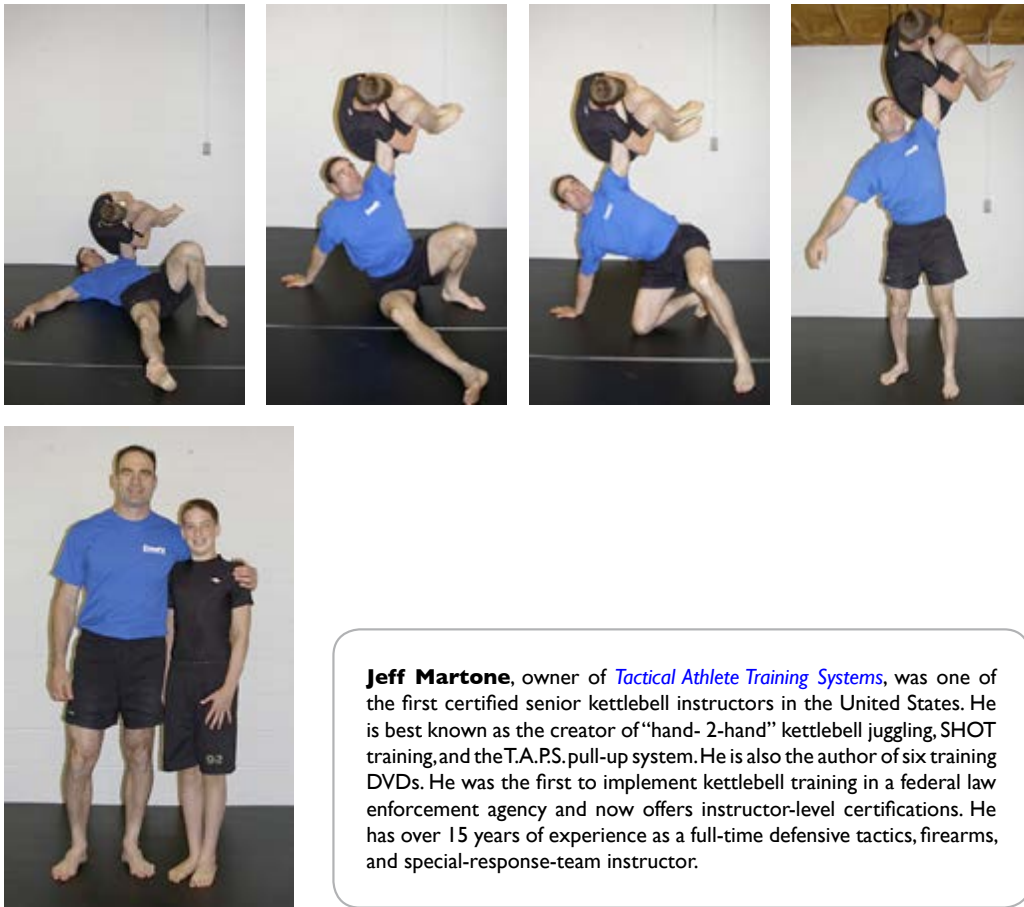
CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Turkish Get-Up: Part 2 (continued...)

Last but not least, a family man (or woman) is never without a training implement—kids! Unlike steel weights or sandbags, kids are dynamic and their lack of handles makes them challenging weights. But they're also breakable! Be careful. Before attempting to lift children, be sure your technique is flawless and your strength levels are well beyond the weight of the child. My kids love it. I've been practicing TGUs with my daughter and son since they weighed only 50 pounds. By God's grace, perfect practice, and continuous prayer, I can still lift them at ages 12 and 14. Michael's a wiry 118 pounds. At the rate of their growth, the next few years are going to be quite a challenge! (But I'm going to give it a go, Milo-like.)

My advice is to heartily go forth and have fun. Training doesn't have to be all serious and dour. Practice the gladiator and Turkish get-ups. Experiment with different resistance implements. You're limited only by your imagination.



Jeff Martone, owner of *Tactical Athlete Training Systems*, was one of the first certified senior kettlebell instructors in the United States. He is best known as the creator of "hand- 2-hand" kettlebell juggling, SHOT training, and the T.A.P.S. pull-up system. He is also the author of six training DVDs. He was the first to implement kettlebell training in a federal law enforcement agency and now offers instructor-level certifications. He has over 15 years of experience as a full-time defensive tactics, firearms, and special-response-team instructor.

5 of 5

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

III. KETTLEBELL CLEAN SERIES

ONE-ARM CLEAN

DEAD CLEAN

BOTTOMS-UP CLEAN

TWO-ARM CLEAN

COMBINATION DRILLS 1-4

CrossFit Journal Article Reprint. First Published in CrossFit Journal Issue 55 - March 2007

the **CrossFit** JOURNAL ARTICLES

Kettlebell Clean

Jeff Martone

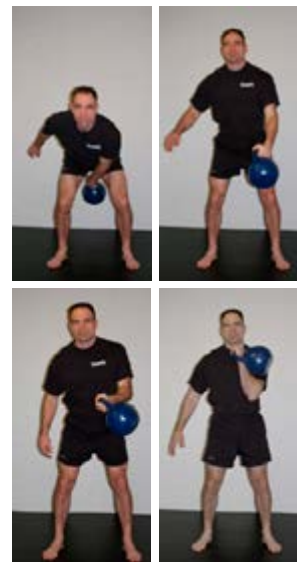
The clean is a traditional and versatile kettlebell exercise that everyone needs to master. Its original purpose was to provide a safe means to get one or two kettlebells in position for overhead lifts. The clean is the precursor for the military press, push press, double jerk, etc. The clean can be used by itself as an exercise for strength and endurance or in combination with bodyweight exercises or other high-repetition kettlebell exercises. Many combination exercises will be addressed in future articles. For now, let's concentrate on mastering the KB clean.

Contrary to the belief of many beginners, the KB clean is not supposed to be a forearm-toughening exercise! When properly executed, it should land as light as a feather and cause no bruising or pain to either the forearm or shoulder. Make a permanent "note-to-self": Sharp pain, consistent pain, or bruising usually means one thing—you are doing it wrong! Stop, assess the situation, make the necessary corrections, and then move on. The goal is training—not maiming.

The Standard

1. Start as if you were going to perform a one-arm Russian swing (described in CFJ # 53). All the points that apply to the swing also apply to the clean, minus the straight-arm requirement. The arms must stay loose, and the hips must do all the work of driving the kettlebell upward. Avoid the tendency to curl the KB.
2. The kettlebell should travel the shortest distance possible, following a vertical path, rather than an arc.
3. Pull the kettlebell into the body at shoulder height, allowing it to "roll" over onto the forearm on both the negative and on the positive. Do not allow the kettlebell to flip up and "crash" on your forearm.
4. The KB, the elbow, and torso must become one solid unit at the top of the clean. The shoulder must be pressed down, armpit squeezed tightly, triceps resting on the ribcage, and kettlebell resting between the forearm and the biceps, almost in the crook of the elbow.
5. Upon lockout, as the kettlebell lands on your forearm and upper arm, immediately tighten the abs and let out a little bit of air (similar to a boxer exhaling with a punch).
6. Keep the wrists straight and neutral; no flexion!

Tip: Contracting your glutes and abs hard will generate the power necessary to project the kettlebell.



1 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

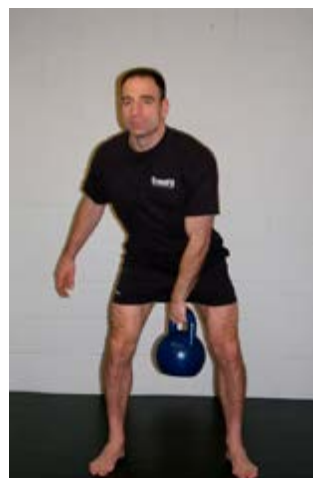
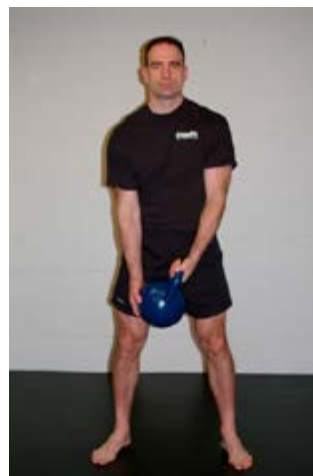
Kettlebell Clean (continued...)

Troubleshooting

Problem #1: The KB crashes on the forearm

Solutions:

1. Master the clean in reverse: Using two hands, set the kettlebell in the “rack” position. Perform only the negative portion of the clean. Allow the kettlebell to roll off your forearm, hinge at your hips, and allow the KB to swing between your legs.
2. It is important to slightly rotate the thumb toward the back as the KB swings between your legs.
3. Reset with two hands and repeat for 5-10 reps.
4. Switch hands and repeat steps 1 through 3.
5. Perform the entire clean from the rack position: first the downward phase and then the upward one, returning the KB to the rack position.
6. The kettlebell should roll around, not over, the hand onto the forearm.
7. Use slightly less power in your hip drive than is necessary for snatches. Keep full hip extension, but employ less power.
8. “Receive” the kettlebell (as in the childhood game of egg tossing); don’t let it bang your forearms.



2 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Clean (continued...)

Problem #2: The KB swings out too far forward

Solutions:

1. The kettlebells must travel the shortest distance possible—straight up, rather than arcing out.
2. Stand facing a wall while performing cleans. (Toes about 6 inches from the wall is about right.)

Caution: If you are too far from the wall, you won't get the desired training effect. If you're too close, your forehead will smack the wall. Hopefully, it will only take a rep or two for you to make the proper adjustment!

**Problem #3: The KB swings too far outside the shoulder**

Solutions:

1. Perform the clean while standing with your side close to a wall.
2. Squeeze your lats and press your upper arm against the ribcage. (Imagine you are holding a book under your arm. If you let your elbow flare out, you will drop the book.)



3 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Clean (continued...)

Problem #4: Your wrist hurts

Solutions:

1. Do not flex or extend the wrist. Keep it straight and neutral at all times.
2. You should be able to extend your fingers when the kettlebell is in the "rack position." It is important that the kettlebell handle is placed diagonally across your hand, similar to a "false grip" on the rings.

**Problem #5: Your elbow hurts**

Solutions:

1. Squeeze your fists, lats, abs, and glutes just before the KB touches your forearm.
2. Gradually build up to heavy weights or high reps.

Problem #6: Your lower back hurts

Solutions:

1. Sit back, rather than down.
2. Keep your shins nearly vertical throughout the movement.
3. Keep intra-abdominal pressure and glute tension high.
4. Keep your chest "open" by pinching your shoulder blades together.
5. Inhale through your nose as the weight descends.

The kettlebell clean is a great alternative to the barbell clean, especially if you have wrist flexibility issues. It teaches your body to generate power from the hip and to absorb impact and decelerate force. The benefits of these skills transfer to many sports and occupations. As with all foundational lifts, invest extra time learning the basics, and you'll soon be ready for the many variations.



Jeff Martone, owner of [Tactical Athlete Training Systems](#), was one of the first certified senior kettlebell instructors in the United States. He is best known as the creator of "hand- 2-hand" kettlebell juggling, SHOT training, and the T.A.P.S. pull-up system. He is also the author of six training DVDs. He was the first to implement kettlebell training in a federal law enforcement agency and now offers instructor-level certifications. He has over 15 years of experience as a full-time defensive tactics, firearms, and special-response-team instructor.

4 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

CrossFit Journal Article Reprint. First Published in CrossFit Journal Issue 56 - April 2007

the **CrossFit** JOURNAL ARTICLES

Kettlebell Clean Combinations

Jeff Martone



In the last issue, I outlined the basic mechanics, common errors, and corrective drills for the traditional kettlebell clean. This month, I will quickly cover two variations on the move—the dead clean and the bottoms-up clean—and then give you several challenging combination drills that incorporate them. These drills are best performed on a flat, level surface with a kettlebell that has a flat and even bottom.

1 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Clean Combinations (continued...)

**KB clean variation 1:
Dead clean**

The dead clean is a little more challenging than the traditional KB clean, which typically cycles immediately from one clean into the next, because it has removes momentum from the complex and because each rep begins and ends on the floor.

1. Place a kettlebell on the ground between your feet.
2. The starting position is the same as if you were going to perform a one-handed deadlift. Look straight ahead and keep your chest open and your weight on your heels.
3. Clean the kettlebell to the “rack” position (with the handle at shoulder height and the bell resting between the forearm and the biceps, almost in the crook of the elbow).
4. Return the kettlebell to the floor.
5. Repeat for reps or time on each side, or alternate hands after every rep.

**KB clean variation 2:
Bottoms-up clean**

The bottoms-up clean is a great grip and wrist strengthener. It is also a great exercise when the calluses on your hand start acting up.

1. The bottoms-up clean is performed exactly the same way as the traditional KB clean, except that you do not allow the kettlebell handle to rotate in your hand. The KB remains upright (bell over handle) at the top of the clean.
2. It is critical to instantly and simultaneously tighten your entire body, especially your grip and glutes and the armpit of the working arm at the moment the kettlebell reaches the “bottoms-up” position.



2 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Clean Combinations (continued...)

**Combo drill 1:
Squat thrust and dead clean**

By inserting a squat thrust between the reps, you'll dramatically increase the intensity.

1. Place a kettlebell between your feet
2. Perform a squat thrust over the kettlebell. Resist the urge to perform a push-up in this position.
3. Inhale deeply through your nose as you move back into the squatting position. It is essential to pressurize your abdominal cavity by breathing "into the belly" and bearing down with the diaphragm.
4. Simultaneously place your left hand on the kettlebell handle.
5. Perform a dead clean.
6. Immediately place the kettlebell back on the floor, perform one squat thrust, and dead clean the KB with the right hand.
7. Alternate hands after each squat thrust rep.
8. Perform for time or reps.

**Combo drill 2: Squat thrust/
offset push-up/dead clean**

This is a great exercise for anyone whose job or sport requires being able to move quickly into and out of the prone position with the use of one arm.

1. Place the kettlebell between your feet.
2. Squat as if you were going to perform a standard squat thrust.
3. Place your left hand on the KB handle and your right hand on the floor to the right of the kettlebell.
4. Quickly extend your legs until you are in the push-up position.
5. Perform an offset push-up, loading most of your weight on your right arm.
6. Explode out of the push-up position into a squat and then dead clean the KB with your left hand.
7. Place the KB back on the floor, switch hand positions, and repeat on the other side.



3 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

IV. OVER HEAD SERIES

KETTLEBELL PRESS

PUSH PRESS

FRONT SQUAT

KB THRUSTER

SNATCH

CrossFit Journal Article Reprint. First Published in CrossFit Journal Issue 62 - October 2007

the **CrossFit** JOURNAL ARTICLES

The Kettlebell Press

Jeff Martone



Pressing weight overhead has been one of the classic tests of strength for centuries. Pressing barbells, dumbbells, kettlebells, sandbags, logs, bodyweight, etc. all have their place in a well-balanced training program, and all offer slight variations in stimulus and technique. Kettlebells, like dumbbells, have the advantage of permitting either one-arm or two-arm lifts, and they are biomechanically easier on the elbows and wrists than barbells and most odd objects. Regardless of the implement used, the tips and techniques outlined in this article will increase your strength and safety while pressing your implement of choice. The difference is in the details.

I know many people who have completely removed pressing movements from their training programs because they tend to aggravate a chronic wrist, elbow, shoulder, or back injury. If this is true for you, try the exercises below and pay attention to the subtle techniques of generating maximal tension before completely throwing in the towel on presses. Begin with a light weight, be patient, and practice the high tension skills outlined below.

1 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2007 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

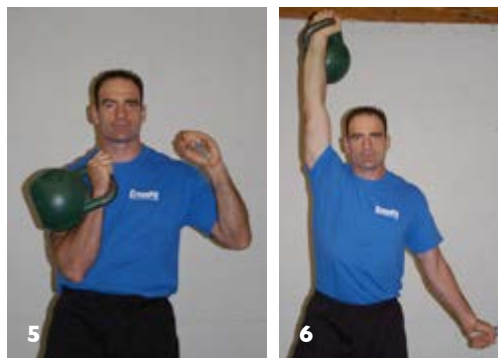
The Kettlebell Press (continued...)

Execution

1. Clean one kettlebell to the racked position at the shoulder (i.e., with your hand below your chin, elbow in contact with your torso) (photo 1).
2. Pause motionless in this position for long enough to make sure you will not be using the momentum generated by the clean for the press. Be sure to keep your focus straight ahead.
3. Press the weight upward with your knees locked. Grip the floor with your feet, contract your quadriceps and pull your knee caps upward. Keep your glutes and abs tight, minimizing back bend (photo 2).
4. Recruit your lats, biceps, and grip while pressing. (See the strength tips listed below.)
5. Actively exhale (i.e., through clenched teeth) while pressing the weight up.
6. Lock out your elbow and pause motionless with the weight overhead (photos 3 and 4).
7. Working in the same line of action, actively pull the weight back down to the racked starting position.

**Strength Tips**

- It is important to instantly contract your abs, glutes, and armpits (lats) when you receive the kettlebell. This action is similar to that of taking a body punch; exhale on contact. You can practice heavy kettlebell cleans to help improve your skill at loading the tension for the press.
- Recruit your grip.
 - Crush the handle of the kettlebell, especially at the sticking point.
 - Make a fist with the free hand in one-arm presses, especially at the sticking point.
 - Try squeezing a gripper or a ball in the free hand.



2 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2007 All rights reserved.

the **CrossFit**
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

The Kettlebell Press (continued...)

I found this practice to be extremely helpful in overcoming sticking points (photos 5 and 6).

- Recruit your biceps.
 - Keep your forearm vertical at all times.
 - Don't press a kettlebell straight up but slightly to the side and spiral it upward. It makes for a more efficient use of your shoulder and biceps strength.
 - Practice "bottom up" presses (photos 7-10).
- Recruit your lats.
 - Keep the weight of the kettlebell on the heel of your palm.
 - Practice "see-saw" presses. Press one kettlebell overhead while having the other in the rack position. Actively pull down the overhead KB while simultaneously pressing the racked KB. This is not an alternating press. As one comes down the other is going up, passing each other at about head height (photos 11-13).
 - Try alternating sets of clean and presses with sets of weighted pull-ups.



3 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2007 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

The Kettlebell Press (continued...)

Assistance Exercises

- Walk with one or two kettlebells pressed overhead to increase shoulder strength, flexibility, and stability.
- Practice Turkish get-ups (see [CrossFit Journal issue 57](#) [May 2007]).
- Practice pressing two kettlebells simultaneously (photo 14).
- Practice military presses with your heels together. (It is called a military press because the feet are pressed together in the position of attention.) Be sure to press your heels and legs together to generate maximal tension in the legs. You will be amazed at the stability and strength you'll have after practicing the press this way for a while (photos 15-17).



Sets and Reps

There's no magic number or set regimen for working your kettlebell press. Do as many as you can with perfect form. If your tension is high, your reps should be low, in the range of about three to five. Multiple sets of singles or doubles are great for building pure strength.

The sport of kettlebell lifting is one of strength endurance more than pure strength, and kettlebell work is particularly good at developing your ability in this realm. While training with world kettlebell champion Valery Fedorenko, I witnessed him press the 32-kg bell for 35 reps with each arm nonstop in ten minutes. That was motivating! So, here's another approach to developing strength endurance. Let's say you can perform five reps with the biggest kettlebell in your arsenal. Set up in front of a big clock, pace yourself for the greatest number of reps you can perform in one minute; then switch hands and repeat. Learn to pause and relax in the rack position. Instantly generate maximal tension needed for the press, and then relax, pause, and repeat. In only a couple of weeks, I went from pressing the 24-kg bell 10 times per side in two minutes to doing 25 reps per side in two and a half minutes. Granted, these numbers are pathetically weak in the kettlebell sport world, but the improvement shows the effectiveness of training with time under tension.

Whichever method you choose, stay focused on the details and never compromise good form for numbers or time. May you all reach new personal bests.



Jeff Martone, owner of [Tactical Athlete Training Systems](#), was one of the first certified senior kettlebell instructors in the United States. He is best known as the creator of "hand-2-hand" kettlebell juggling, SHOT training, and the T.A.P.S. pull-up system. He is also the author of six training DVDs. He was the first to implement kettlebell training in a federal law enforcement agency and now offers instructor-level certifications. He has over 15 years of experience as a full-time defensive tactics, firearms, and special-response-team instructor.

4 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2007 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

CrossFit Journal Article Reprint. First Published in CrossFit Journal Issue 65 - January 2008

the CrossFit[®]

JOURNAL ARTICLES

Double-Kettlebell Push Press and Jerk

Jeff Martone

The push press and jerk are essential functional exercises in the CrossFit toolbox. These movements can easily be adapted from traditional barbells to dumbbells, kettlebells, sandbags, etc. In this article, you will learn how to perform the double-kettlebell push press and jerk. To get there, we must first cover the proper method of cleaning two kettlebells and establishing a comfortable rack position.

Double-kettlebell clean

1. Set two kettlebells on the ground in front of you, handles on the diagonal (photo 1).
2. Take a slightly wider stance than you would to clean one kettlebell.
3. Set your grip in the corners of the handles (photo 2).
4. Keeping your head up and back straight, extend your legs and pull (i.e., hike) the kettlebells up in a backward arc between your legs (photo 3).
5. Once the kettlebells reach the back end of the arc, explosively extend your knees and hips to drive the kettlebells forward and up, cleaning them to the rack position (photos 4, 5, and 6).

Caution: It is imperative that you unwrap and tuck your fingers as the kettlebells reach the rack position (photo 7). If you forget, it will be a “self-correcting,” since tucking your fingers will keep them from accidentally getting crushed between the two handles. Trust me, it will only happen once!



Photo 1



Photo 2

Photo 3

1 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2008 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Double-Kettlebell Push Press and Jerk (continued...)



Photo 4

Photo 5

Photo 6



Photo 7

The rack

Once the kettlebells are cleaned from the ground, a comfortable and solid rack position is essential for effectively performing a double overhead press, push press, or jerk. A good rack position has the following characteristics:

1. Knees are straight but not overextended.
2. Elbows are directly over the hips. It's best to actually rest your elbows right on the bony part of the hip (photo 8). This will allow you to "relax" between reps, letting much of the weight of the kettlebells be supported by your body rather than your arms. If your body type doesn't allow your elbows to rest on your hips, make sure the backs of your arms are glued to your torso.

3. The web of your hand should be deep into the corner of the kettlebell. The handle itself should be diagonally across your hand, resting on the base of your palm. Your wrist should be straight or just slightly flexed.

4. Open your grip and tuck all fingers except the forefinger. You don't need a tight grip on the handle when it's in the rack position. In fact, it's best to give your grip a rest by relaxing your hands.

A solid and comfortable rack position is key to creating a positive transfer of force from the ground through your legs, hips, and trunk to your arms with no power leakage. If you allow space between your arms and torso, your efficiency, stamina, and power will decrease.

There's a saying in BJJ that "contact equals control and space equals escape" and in weightlifting that "when the arms bend, the power ends." The same principle holds true here—for effective transmission of force, there should be no gaps between the links in the system.

Push press

The learning sequence for overhead lifts moves from least to most dynamic and powerful: press, then push press, then jerk. The push press builds on the strict



Photo 8

Photo 9

2 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2008 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Double-Kettlebell Push Press and Jerk (continued...)

press (see CFJ issue 62) by tapping into the power of the hips and legs to help propel the weight overhead.

1. Start by cleaning two kettlebells to the rack position (photo 9).
2. Unlock your knees and hips to dip slightly, keeping your torso upright and the kettlebells firmly racked. Your knees will move slightly forward but not past the toes (photo 10).
3. Powerfully push the floor away, extending your legs and hips, and open your chest. It is this explosive movement that will propel the kettlebells overhead. Note that the legs will then straighten powerfully, but there is no rebend, or “double dip,” in the push press when you drive the kettlebells overhead (photo 11).
4. The arms move straight up from the rack. There is no need to rotate your palms forward as your arms extend. As the kettlebell passes eye level push your chest slightly forward. As your chest moves forward, keep your knees locked and do not bend them until it's time to lower the kettlebell. Be sure your knees and elbows are straight at the termination of the lift.
5. Lower the kettlebell back to the rack position. This should take a minimal amount of muscle or energy. Think of it as more of a controlled fall and catch. Unlock your elbows and slightly lean your upper body rearward. Tighten your abs just before your triceps touch your ribcage. As contact is made, absorb the impact by bending your knees and exhaling a little bit of air (photo 12). This helps facilitate a much softer landing, and it gets you into the right position to immediately perform another rep.

A great way to practice the push press is to perform as many strict overhead presses as possible. When you come to the point just before failure to complete the lift, switch to the push press and crank out as many reps as possible. This forces you to use the power from your legs. If you don't, the weight will never make it overhead to lock out.

Practice for reps or for time. A fun and challenging drill is to perform as many push presses as you can in one minute. Another way to change it up is to push press one kettlebell for one minute, then switch hands and perform as many reps as possible for one minute; repeat.

A third way is to turn the push press into a thruster by adding a front squat before it. For an interesting change-up the next time you do “Fran,” try the thrusters with two kettlebells instead of a barbell.



Photo 10



Photo 11



Photo 12



Photo 13

3 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2008 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Double-Kettlebell Push Press and Jerk (continued...)

JerK

The jerk is a very efficient way to get a heavy object overhead—especially when the weight is too heavy or your muscles are too fatigued to press or push press it.

The first three steps of the jerk are exactly the same as in the push press. The difference is that, in the jerk, you drop under the weight as you drive it overhead, so that you land with flexed hips and knees in a high partial squat position before extending them to stand fully extended.

1. Start by cleaning two kettlebells to the rack position (photo 9).
2. Unlock your knees and hips to dip slightly, keeping your torso upright and the kettlebells firmly racked. Your knees will move slightly forward but not past the toes (photo 10).
3. Powerfully push the floor away, extending your legs and hips, and open your chest. It is this explosive movement that will propel the kettlebells overhead (photo 11).
4. “Drop and lock” by quickly sitting back (actively pulling your hips back and down and bending your knees) at the same time that you extend your arms overhead (i.e., lock your elbows straight) as you lean your upper body forward slightly (photo 13).

5. Extend your knees and pause at the top position, with elbows and knees straight and torso tight (photo 11).

6. Lower the kettlebells safely to the rack position (as in step 5 for the push press, above).

Practice jerks when your legs are fresh but your arms are tired from a high volume of presses. Make sure to extend the hips completely before making the second dip into the catch position. The hip drive is the power behind the movement; don’t cut it short. As with the push press, you can combine the jerk with a front squat make a demanding full-body strength and coordination challenge, especially when done for reps.

One of the biggest benefits of learning the movements of the push press and jerk with kettlebells is the ability to train around injuries. Many folks have chronic wrist or elbow injuries that can be aggravated by cleans and dynamic presses with a barbell. Remember, as Coach Glassman says, “the magic is in the movement,” not in the implement. The important thing is to keep training and keep safe. Whatever the implement, master the movements and don’t get hung up on the tools.



Jeff Martone, owner of *Tactical Athlete Training Systems*, was one of the first certified senior kettlebell instructors in the United States. He is best known as the creator of “hand-2-hand” kettlebell juggling, SHOT training, and the T.A.P.S. pull-up system. He is also the author of six training DVDs. He was the first to implement kettlebell training in a federal law enforcement agency and now offers instructor-level certifications. He has over 15 years of experience as a full-time defensive tactics, firearms, and special-response-team instructor.

4 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2008 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Kettlebell Clean Combinations (continued...)

**Combo drill 3:
Dead clean/swing/clean**

This simple, yet demanding, combination of the dead clean and the swing will challenge both your cardiovascular and strength systems.

1. Perform a dead clean.
2. Allow the kettlebell to swing between your legs; then perform a Russian or American swing.
3. Allow the kettlebell to swing between your legs again; then immediately perform a traditional clean. Be sure to “dial down” the power for the traditional clean (you don’t need as much power for the clean as for the swing), but make sure that you still extend your hip fully.
4. Place the kettlebell on the floor between your feet.
5. Switch hands and repeat the sequence.
6. Alternate hands after every DC/S/C combination.
7. Perform for sets or time.

**Combo drill 4: Squat thrust/
clean/swing/clean**

We’re going to add one more element and pick up the pace for this combo.

1. Place a moderate-weight KB between your feet. Perform a squat thrust and then, keeping your arms straight from the squat thrust, inhale and pressurize your midsection.
2. Grab the KB handle with your right hand, rip it from the floor, and perform a dead clean, followed by a swing, and then a traditional clean. Return the KB to the floor between your feet.
3. Perform another squat thrust and repeat the dead clean/swing/clean sequence with your left hand.
4. Completing the combo with both hands equals one repetition. Perform one repetition every 30 seconds for 10 minutes.

Mastery of even just these few moves opens the door to a number of combinations you can do. Your goal should be to become “brilliant in the basics” and then begin to mix them up.

Here are a few combinations I particularly like:

- Squat thrust / bottoms-up clean
- Dead bottoms-up clean / swing / bottoms-up clean
- Squat thrust, dead bottoms-up clean / swing / bottoms-up clean

But there’s nothing sacred about these particular groupings. Be creative about putting together new complexes of KB moves and about constructing varied workouts by combining them with other exercises in couplets, triplets, chippers, or any number of functional groupings.



Jeff Martone, owner of [Tactical Athlete Training Systems](#), was one of the first certified senior kettlebell instructors in the United States. He is best known as the creator of “hand- 2-hand” kettlebell juggling, SHOT training, and the T.A.P.S. pull-up system. He is also the author of six training DVDs. He was the first to implement kettlebell training in a federal law enforcement agency and now offers instructor-level certifications. He has over 15 years of experience as a full-time defensive tactics, firearms, and special-response-team instructor.

4 of 4

© CrossFit is a registered trademark of CrossFit, Inc.
© 2006 All rights reserved.

CrossFit
JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

THE FRONT SQUAT

The Kettlebell Front Squat is develops outstanding strength and flexibility in the hips and legs. It also teaches abdominal pressurization. The front squat can be performed with one or two kettlebells.

FIND YOUR IDEAL STANCE:

Squat down (rock bottom) without weight and start shuffling your feet until you find a position where your knees, hips, and ankles are comfortable and where you can stay for a while. You may hold a light kettlebell for balance. Don't allow your knees to bow in. Keep your feet flat and weight on your heels.

DOUBLE KETTLEBELL FRONT SQUAT

1. Clean two equal sized kettlebells to the rack position. Men may stack the handles and overlap their grip to keep a tight rack; some women may need to keep the KB's to the sides of breasts.
2. Inhale through your nose, attempting to breath deep into your lower abs.
3. Sit back and down, elongating your spine, keeping your weight on your heels. Open your hips and knees as you descend to the bottom position (i.e. crease of hip lower than top of knee cap).

Note: The elbows have a tendency to slightly drift away from the torso in the bottom position.

4. Stand up by contracting your glutes and abs. Drive your heels through the floor, maintaining same back angle. Do not lead with your butt!
5. "Power Breath" as you stand up:
 - a. Clench teeth
 - b. Press tongue to roof of mouth.
 - c. Force pressurized air out through your front teeth. It should sound like a loud hiss, similar to the sound of a punctured tire leaking air.
6. When you reach the top position, be sure your knees are straight, glutes tight, and elbows arms reattached to your torso.

SINGLE KETTLEBELL FRONT SQUAT VARIATION

1. One KB/One Arm: For extra core stability strengthening, perform the front squat holding one KB with one arm in the "rack" position (i.e. top of the clean).

KETTLEBELL THRUSTER

The Kettlebell Thruster is a variation of the barbell Thruster. The movement is the combination of a front squat and push press. "Fran" performed with two 36- pound kettlebells produces about the same times and felt exertion as the prescribed weight of 95-pounds using a barbell.

1. Clean two kettlebells to the rack position
2. Perform your front squat.
3. Smoothly accelerate out of the bottom position, driving off your heels.

4. Ensure your elbows reattach to your torso at the quarter-squat level.
5. At this point, rapidly extend your legs and hips and expand your chest, propelling the kettlebells off your chest.
6. Lock your elbows straight over head, hands maintain a neutral (i.e. 45 degree) position. Do not rotate your palms facing away from you (i.e. as if you were holding a bar over head).
7. Unlock, your elbows allowing the kettlebells to come back to the rack position.
8. Repeat above sequence for time or reps.

SNATCH

The snatch is a great total body exercise that is strengthens backs, hips, and fingers, develops outstanding cardio-respiratory endurance, and has tremendous carryover to running, jumping, rucking, fighting, etc.

In the former Soviet armed forces, the Kettlebell snatch was tested instead of pushups. The US Secret Service Counter Assault Team tests total number of snatches with a 24kg kettlebell in 10min. The agent may switch hands as many times as he wants; the sum of both arms is the total.

TECHNIQUE EXECUTION

1. All the techniques that apply to the swing apply to the snatch.
2. Pick up the kettlebell, swing it back between the legs, and snatch it overhead in one uninterrupted motion. Up to a straight-arm lockout.
3. Catch the KB's softly without banging your forearm.
4. The snatch may be performed with or without a knee dip.
5. Maintain the fixation for a second with the arm and legs straight and the feet and body stationary.
6. The participant lowers the kettlebell between the legs in one uninterrupted motion without touching the chest or shoulder. Keep your arm(s) loose.
7. The free hand may be placed on the hip, waist, or out to the side but not on the thigh.
8. The kettlebell may not touch the platform until the completion of the set.
9. The participant may "rest" during the lockout.
10. No extra swings back are allowed except for one when switching hands.

Mastering the snatch is only a matter of minutes once a student has mastered the Swing. Establish a solid foundation in the Swing before attempting the snatch.

TECHNIQUE VARIATIONS

1. High-pull Swing - Practice one-arm kettlebell swings. Pull the kettlebell back towards you when it is about to clear your head. Don't pull with your biceps; rather shrug your shoulder back – not up. The kettlebell will reach maximum just above your head, then return in a swing motion back between your legs.
2. Perform the High-pull Swing but this time when the kettlebell reaches maximum height, punch your arm straight overhead, leaning your upper body slightly forward. Be sure to keep the handle of the kettlebell low on the heel of your hand.

Keep your reps low until you can lockout without impact. Allow the kettlebell to roll around your forearm (i.e. not over the top of your hand).

NOTES

Our goal as instructors is to train, not maim. Program design is the key to effective training. There's a fine line between the optimal training and over training. We can reduce over use injuries training by training smarter not harder. Listed below are some general training guidelines. Remember; there's no substitute for common sense.

GENERAL GUIDELINES

- Never sacrifice form for time or reps.
- Low rep strength practice BEFORE skill work
- High repetition kettlebell lifts/routines should be placed AFTER all sport- specific skill work has been practiced. In the weight room, they should be performed AFTER slow strength training.
- Perform as many reps in strict form. Terminate all sets BEFORE form deteriorates.
- Instead of risking injury, by forcing more reps, incorporate longer active rests (i.e. jogging, jumping rope, walking stairs, etc.)

**"It's not practice
that makes
perfect, it's
perfect practice
that makes
perfect."**

— Vince Lombardi

MINIMALIST STRENGTH CIRCUIT

- Dead-lift
- Military Press
- Pull-up (weighted)

MAXIMUM RESULTS - MINIMUM TIME

- Perform exercises in a continuous circuit
- Follow the 3-5 Strength Building Plan principles
- Apply high tension techniques, one at a time, for each lift. Take the time to feel the desired effects of each tension technique. Repeat this sequence for each of the above exercises.

Note: Strength is technique. Maximum power generation is a science and an art.

THE 3–5 STRENGTH BUILDING PLAN

It is important for many athletes and fitness enthusiasts to learn how to build strength without gaining weight, while minimizing soreness and recovery time. Unless you're a Sumo wrestler or Football lineman, your goal should be to get as strong as possible, at the lowest possible bodyweight. This is achieved by "high tension", low repetition training. Increase your "reserve of strength". A high ratio of strength to bodyweight will make you quicker and faster.

THE 3-5 STRENGTH BUILDING PLAN

- 3–5 exercises (performed in a circuit)
- 3–5 repetitions* (lift slow and tight, stop a rep or two short of failure)
- 3-5 sets (shake out all tension between sets)
- 3–5 minutes of rest between the sets
- 3–5 workouts per week

An effective strength program must meet the following criteria:

1. Develop a high level of strength with a minimal increase in muscle mass.
2. If strength is built through muscle hypertrophy rather than neural adaptations, the weight gain outruns the strength gain. Anyone who has competed in sports that have weight classes knows that moving up to a higher weight class, due to an increase in bodyweight (i.e. muscle or not), usually doesn't lead to better performance.
3. Eliminate or minimize post-workout soreness and fatigue.
4. A bodybuilder can afford to limp around for five days following his squat workout; Athletes cannot.
5. Maximize training safety
6. All of the above requirements can be met by heavy (80-90% 1RM), low rep (3-5) lifting not to failure. Striving for maximum muscular tension, not muscular fatigue. It is the natural way for the body to protect itself and is the opposite of isolation.

Lift as heavy as possible, staying as fresh as possible, as often as possible

Practice the skill of generating tension.

THINK 'PERFECT PRACTICE' — NOT 'WORKOUT'

SAMPLE WORKOUTS:**5 ROUNDS FOR TIME:**

10 American Swings
10 Power Swings
10 Russian Swings
10 Swing Releases
10 One-Arm Swings – Alternating Half Rotation Switches 10 One-Arm Swings – H2H Switches

3 ROUNDS FOR TIME:

10 Turkish Get-ups R/L (24 kg)
10 Muscle ups

5 ROUNDS

250 Jump ropes
25 Ring Push-ups
20 KB Swings (24 kg)

WARM-UP

5 minutes of various two and one-arm Swings

5 Rounds for Time:

3 Deadlifts (90% of 1 rep max)
3 Pull-ups (32 kg)
3 Handstand Push-ups (Rings or parallettes)

Finish:

5 50 yard Sprints

STRENGTH LADDERS

Performing Ladders is a great way to increase the volume of reps while minimizing fatigue. This technique works best in small groups of 2-5 people.

Example: Pull-ups (bodyweight or weighted):

- Line up single file behind a pull-up bar.
- #1 man does 1 rep, #2 man does 1 rep and so on, until everyone has done 1 rep.
- #1 man now does 2 reps, #2 man does 2 reps and so on, until everyone has done 2 reps.
- Rep progression increases one rep at a time stopping just short of muscle failure.
This concludes the first set.
- Immediately start second set with one rep.
- Then progress one rep at a time, stopping one rep short of previous set.
This concludes the second set.
- Repeat above sequence until final set equals one rep, then you are done.

Example 6 rep Ladder

1, 2, 3, 4, 5, 6 (set 1)

1, 2, 3, 4, 5 (set 2)

1, 2, 3, 4 (set 3)

1, 2, 3 (set 4)

1, 2 (set 5)

1 (set 6) Done!

A Six-rep ladder - Total reps performed = 56 reps

**“Therefore,
Strengthen your
feeble arms and
weak knees.”**

-Proverbs 24:5

VARIATIONS:

- Squat-Thrust/Pull-up combo -Perform in ladder format.
- Heavy Swings, Cleans, Jerks, C&J, Military Press, etc. — Perform in ladder format

THE BENCHMARK “GIRLS”: KETTLEBELL SUBSTITUTE WORKOUTS

Listed below are tried and true CrossFit Benchmark workouts with suggested kettlebell exercise substitutions. These substitutions may be necessary if you find yourself training locations without a Olympic Bar and weights and/or Dynamax Medicine Balls. The suggested KB poundage is not written in stone. Please scale up or down to fit your conditioning and skill level.

ELIZABETH

- Clean 135 lbs or (2–53 pound kettlebells)
 - Ring Dips
- 21-15-9 reps, for time*

FRAN

- Thrusters 95 lbs or (2–36 pound kettlebells)
 - Pull-ups
- 21-15-9 reps, for time*

GRACE

- Clean & Jerk 135 lbs (2–53 pound Kettlebells)
- 30 reps, for time*

HELEN

- 400 meter run
 - 1.5 pound (53 lbs) American Swing x 21
 - Pull-ups x 12
- 3 rounds for time*

ISABEL

- Snatch 135 lbs or (one arm Snatch—72 pound KB)
- 30 reps each arm for time*

JACKIE

- 1000 meter row
 - KB Thruster x 50 reps (2–26 pound KBs)
 - Pull-ups x 30 reps
- For time*

LINDA (A.K.A. “3 BARS OF DEATH”)

- Deadlift 1½ BW
 - Bench BW or Floor Press two very heavy Kettlebells
 - Clean ¾ BW or Clean 2—appropriate sized Kettlebells
- 10/9/8/7/6/5/4/3/2/1/ rep for time*

NANCY

- 400 meter run
 - Overhead squat 95 pounds x 15 or 2 – appropriate sized Kettlebells
- 5 rounds for time*

KELLY

- Run 400 meters
 - 30 box jump, 24 inch box
 - 30 Wall ball shots—20 pound ball, or Wall-Ball Substitute—36/lb Kettlebell
- Rounds for time*

“...it is important to not only be faster, but to maintain that speed through time. This endurance is made possible through physical and mental fitness.

Physical fitness develops not only speed, energy, and agility to move faster, but it also develops the endurance to maintain that speed for longer durations. With endurance, we not only outpace the enemy but maintain a higher tempo longer than he can. Mental fitness builds the ability to concentrate for longer periods of time and to penetrate below the surface of the problem.”

- Warfighting, USMC

TABATA INTERVAL

20 Seconds of work followed by 10 seconds of rest repeated six to eight times

This interval protocol has been proven to produce remarkable increases in both anaerobic and aerobic capacity. Variety is limited only by your imagination.

SINGLE:

KB Swing of choice, followed by 10 seconds rest or active rest. (4 minutes)

COUPLET:

KB Swing of choice, followed by 10 seconds rest Pull-ups, followed by 10 seconds rest, repeat.
(8 minutes)

TRIPLET:

KB Swing of choice, followed by 10 seconds rest
Pull-ups, followed by 10 seconds rest
Ring Dips followed by 10 seconds rest, repeat
(12 minutes)

THE SCRAMBLER:

Kettlebells: Interval Training for Women (men too!) by Maureen Martone. This DVD contains 78 exercises and has an “automatic random shuffle” feature that will never give you the same work out twice. For more information: www.tacticalathlete.com

MAN-MAKER DRILLS™

Man-Maker Drills™ are a simple form of circuit training for strength/endurance and cardiovascular conditioning. Alternate sets of high rep KB drills with a few hundred yards of jogging. Don't run hard; jogging is a form of active recovery. Build up slow! Sets can be done for time or reps. Always keep perfect form and stop BEFORE your technique deteriorates!

CONCLUSION

There are many Kettlebell exercise variations. Master the basic lifts (virtuosity) and the principles of power generation. When training with Kettlebells, use liberal amounts of common sense. Finish your sets **before** your form starts to deteriorate. **Never** go to failure! Treat each workout as a practice session and constantly try to improve your form and make each exercise effortless.

**“High physical
condition is vital
to victory”.**

*- General George Patton,
US Army*

**“...Let us run
with Endurance
the race that is
set before us.”**

- Hebrews 12:1

NOTES

The ability to successfully teach motor-skills is partially dependent on your knowledge of the basic principles related to motor-skill learning and development. This knowledge will aid you in your ability to model the basic skills, evaluate progress, individualize instruction and develop testing criteria.

It is important for instructors to understand the reasons behind the methods that we use, as well as be able to use the appropriate method or technique at the right time. Understanding the ‘why’ behind teaching is part of becoming a professional instructor.

DEFINITION OF MOTOR SKILLS

Motor skill can be defined as any an act or a task that has a goal to achieve and that requires voluntary body or limb movement to be properly performed.

Gross Motor skills: involve the use of the larger muscles found in the arms, legs, and torso and where precision of movement is not as important to successful execution of the skill. Examples would be running, walking, throwing, squatting, and kettlebell-lifting.

Fine Motor skills: Use and control of small muscles of body found in the hands and precision of movement is very important. Examples would be typing and writing. Under stress, fine motor skills are the first to go.

LEARNING STYLES

As an instructor, it is important to understand that there are three primary styles of learning. Adult learners generally have their preferred method of learning, even though they use a variety of all three styles.

VISUAL

Visual learners key on the visual part of the instruction. Demonstrations are vital to this learner. Visual learners have a need to “see” everything. They tend to sit/stand in the front of the classroom/group.

Although they like to be in the front of the class they tend to not want to be too close. They want to take in the “entire picture”. Visual learners tend to use “visual references” in their speech like “I don’t see the big picture” or “I just can’t imagine that”.

KINESTHETIC

Kinesthetic learners are the “feelers” of the group. They need to touch and feel everything. This can be physically or emotionally. Practice sessions are

the key to this type of learner. The practice sessions allow the learner time to get the “feel of the motor skills they are attempting to learn.

Characteristically kinesthetic learners must be comfortable in the learning environment. They tend to sit at the back of the classroom often with their feet kicked up and their chair leaning back against the wall. They may seem not to be paying attention as

their focus is not at the instructor but wandering around the learning area. They will be anxious to get to the practice session so they can check themselves out on the skill.

Kinesthetic learners tend to use “physical/emotional” references saying things like: “I can’t get a handle on this” or “I don’t feel like I am getting this”.

AUDITORY

People who are auditory learners tend to take in their information through the hearing process. These learners like a good verbal description of the task required of them.

The most common type of auditory learner is the digital. Digital learners like to learn the task in a logical, sequential order. They prefer to have the task broken down into numbered steps. These steps should be taught in the correct order.

These learners tend to have their ear toward the speaker and will be greatly distracted by noise outside the learning environment. They will use references like “There is a piece missing” or “This doesn’t make sense”.

Remember: all learners use all of the above styles. They just tend to have their favorite one and will use it as often as they can. Oddly enough, by following the Military Teaching Strategy (i.e. tell, show, do,) you will address all three learning styles.

ELEMENTS OF A GOOD DEMONSTRATION

As an instructor, the ability to provide your students with a quality demonstration cannot be overemphasized.

A Quality Demonstration will:

- Set the standard for performance, i.e. provide a ‘mental template’ or good example to be followed. What they see will dictate what they do.
- Capture students’ interest and gives the learner an overall view of the skill (the “big picture”).
- Make students think about what is being done and why it is done that way.
- Provides an easy transition from observing to doing it in practice.

Note: when you are demonstrating a technique for the first time, focus student’s attention on what to do right. Don’t demonstrate the incorrect method or most common errors as the visual impact may remain with the students and confuse them. It’s OK to explain what can go wrong but keep the amount of verbal detail limited.

PRACTICE SESSIONS

Practice is essential for students to improve their skill ability. It is important to provide students with an opportunity for supervised practice as soon as possible after the demonstration. Instructors should design practice sessions that are informative, individualized and timed appropriately to allow the maximum benefit for the student.

Repetition establishes habit. Practice only makes perfect if what is being practiced is correct. W.W.II Sergeant Steve Prazenka sums it up this way;

“Learn it right and you will do it right the rest of your life, learn it wrong and you’ll spend the rest of your life trying to get it right, and in battle, you meatheads that get it wrong, the rest of your life will be very short.”

It is our duty, as instructors, to make sure our students learn it right the first time.

WHOLE VS. PARTS

There is a need to address the concept of practicing the new skill as a whole or to break the skill down into parts and practice the parts until performed correctly, then combine them into the whole skill. This decision is based on your knowledge of the complexity of the skill. Generally, the more complex the skill the better it is to break the skill down into parts and practice the parts. If the skill is simple then it could be practiced as a whole. When in doubt, keep it simple and break it down.

VARIETY

A variety of experiences is an essential ingredient for practice conditions that will lead to maximal test performance.

FEEDBACK

Feedback is information given to learners that helps them learn, modify, and correct their performance. Feedback is often called knowledge of results.

Knowledge of results is critical to learning motor skills.

There are two types of feedback:

External

External feedback is knowledge of results that one receives from an outside source (i.e. Instructor). There are two types of external feedback.

1. Concurrent feedback is given while the student is performing the skill.
2. Terminal or delayed feedback is provided after the skill is practiced. This allows learners to think back about what they did right or wrong.

Internal

Internal feedback is the sense that one gets from inside about how well they are doing (i.e. something doesn’t feel right). Most kettlebell exercises are self-correcting. If something doesn’t feel right, stop and re-access.

Most likely, there is a flaw in your technique.

STAGES OF SKILL DEVELOPMENT

In learning and developing motor skills, a person progresses through three stages of skill acquisition. Recognizing what is peculiar to each stage of development will help you assist

your students to acquire motor skills more quickly and with greater effect. It is important to consider each stage separately so that your student can progress from novice to expert in the most efficient way possible.

COGNITIVE STAGE

This is the first stage of learning. Learners at this stage have a lot of questions, make lots of mistakes, unable to detect and correct errors. They are either *unconsciously incompetent* – ignorant of the subject or unaware the skill existed or *consciously incompetent* – aware the skill exists but has no realistic idea of how to perform (that's why they are seeking your instruction).

This is the first experience the learner has with a skill. At this stage the learner needs one or two simple instructions to concentrate on and plenty of demonstrations of the correct skill. Keep your practice sessions short, give plenty of rest periods and avoid the temptation to overload too much information.

ASSOCIATIVE STAGE

During this stage many of the basic skills are to some extent learned. The learner is attempting to refine the skills they have developed and have some ability to detect errors. Errors have become less frequent and the skill more refined. The learner is now consciously competent – aware and performing the skill, as long as they are given the time to think, decide then take action.

Continue to keep practice sessions short and happy. The key to progressing to the autonomous stage is to find an analogy or make a link from an existing skill and apply it to the new skill they are practicing (i.e. vertical jump for hip snap).

AUTONOMOUS STAGE

The last stage is the autonomous stage. At this point the skill appears to have become automatic or habitual. The learner does not have to attend to every phase of the skill, learner is able to detect and correct their own errors. This is referred to as *unconscious competence* (mastery). This autonomous stage is only accomplished with practice. *It is only in this stage that skills should be practiced in a fatigued state.* The more familiar they are with this state and understand its constraints the better they can perform. Remember to always terminate practice when proper form begins to deteriorate.

“Amateurs practice until they get it right, professionals train until they can't get it wrong.” – John Chapman

How much practice is necessary to create the autonomous stage? There is no definite number of repetitions or hours of practice. Some research by the military has suggested 100% more repetitions than it took for the student to accomplish the skill one time correctly without help. Other studies have shown that the higher the motivation and importance – fewer repetitions are needed to become skillful.

INFERENCE OF LEARNING

How can we know if learning is taking place? What indicators is there that would lead us to believe that the student has in fact learned the skill or skills required? There are three indicators:

PERFORMANCE

One of the first indicators is performance. The performance of the skill at a later date should be more skillful than it was at an earlier date. The performance should also become more consistent.

RETENTION

Another indicator is the retention test. Can the student perform the skill correctly after the break, at the end of the day, or at the next training session? The usual way to do this is develop an appropriate skills test, administer the test on the first day then again at some later date. The difference between the scores would be the learning indicators.

TRANSFER

The learner should be able to transfer the skills they have been practicing but in a new situation. The same hip drive used for the vertical jump necessary for the proper execution of the swing. It is the same for the clean and the snatch. Slow it down and it's the same movement used in the dead lift.

CONCLUSION

Teaching can be challenging and very rewarding. It has been said that there are no such thing as bad students, just bad teachers. It is important to take the time to understand the reasons behind the teaching methods you use and to use the appropriate method or technique at the right time. It is in the understanding of the “why” behind teaching that is part of becoming a professional instructor.

As an instructor, you must decide whether you want to impress or influence your students. You can impress your people from a distance but you have to get close to influence them. When you do that, they will be able to see your flaws. That's OK. The most essential quality for leadership is not perfection, but credibility.

People must be able to trust you or they won't follow you. How do you build credibility? Not by pretending to be perfect, but by being honest.

**The mediocre
teacher tells.
The good teacher
explains. The
superior teacher
demonstrates.
The great
teacher inspires**

- William Arthur Ward

OST PLACES SECOND IN 2007 WORLD SWAT CHALLENGE

NNSA Office of Secure Transportation (OST) Federal agents finished second overall in the 2007 World SWAT Challenge, an international competition held recently at Camp Robinson, Ark. The event included a total of 28 Special Weapons and Tactics (SWAT) teams from the U.S. Aruba,

Germany, and Canada.

Each of the teams had ten members who rotated through the physically challenging events, but because of mission commitments, the OST team had only six members - which resulted in each individual having to compete in every event. This left absolutely no room for error or injury.

The three-day competition included handgun, rifle, shotgun, and sniper rifle marksmanship events. Each event tested the competitor's physical fitness ability with obstacle courses and 175-pound dummy carries while wearing full tactical gear. The OST team also had the best "raw" times for each event by a wide margin. They physically dominated all the other teams.

Josh Scherrey - team captain, share's their secrets of success.

"Preparation for the World SWAT Challenge involved a great deal of precision shooting with both rifle and handgun. Along with handgun and rifle marksmanship we also knew we had to be prepared for was 50-200 yard sprints to designated shooting positions

**"Those who hope
is in the Lord
shall renew
their strength.
They will soar on
wings of eagles;
they will run and
not be weary;
they shall walk
and not be faint."**

- Isaiah 40:31



to engage targets, as well as traversing over obstacles such as 8 foot walls in tactical gear. Jeff taught us numerous drills to focus our physical training around accelerating and de-accelerating to and from the start/stop lines we would see during the competition. Jeff's warm-up drills also better prepared us for reducing the risk of injury, during our competition training, allowing us to train hard and safe".

That's the secret; Hard work, master the fundamentals of marksmanship and train like an athlete, a "Tactical Athlete". Just say no to the bench press and curls!

This is the second World SWAT Challenge appearance by OST. They placed fifth in 2006, earning best "Rookie Team" of the event. The 2007 World SWAT Challenge will air on Versus TV on July 1.

**"Amateurs
practice until
they get it right.
Professionals
train until they
cant' get it
wrong."**

- John Chapman

PROGRAM DESIGN FOR FIGHTERS

By Steve Baccari

Program design and keeping accurate training logs are key components to improving a fighter's performance. When I put together a strength and conditioning program for one of my boxers I have a set of specific rules I follow.

They are:

1. The exercise must be safe
2. The exercise must be easy to learn
3. The exercise does not require elaborate equipment
4. The exercise and equipment must be effective
5. The over all program must be short, as not to burn the fighter out.

Along with these five rules I also incorporate the five basic laws of strength training as established by Tudor O. Bomba PHD in his excellent book "Periodization training for Sports".

They are:

1. Develop joint flexibility
2. Develop tendon strength
3. Develop core strength
4. Develop stabilizers
5. Train movement not individual muscles

Kettlebells are the best training implement I have ever used to meet all ten of these rules. That is why I refer to them as a stand-alone implement.

Having established what we want to do and what we are going to use to do it, the next step is the training log.

There is a saying amongst historians "Those who ignore history are doomed to repeat it." The same is true in your training if you do not keep track of what works and what does not how can you improve. This is especially true when working with many athletes at the same time.

At the present time I am working with nine boxers ranging in age from 10 years old to 30 something. There is no way I could keep track of that many individual programs with out writing them down. Even if you only train yourself it's next to impossible to keep track of all the different variables with out a training log. The best time to record a work out is during the actual training session. So bring your notebook to the gym! If you wait until you are done training you will likely forget something.

Introduce 1 new exercise at a time and run it through a 2-4 week cycle. Longer, if there is a hard learning curve. This is the only way to see how effective the exercise is. Coaching many fighters at the same time makes an excellent test bed for new exercises.

Here is what I do:

- *If the fighter is new to strength training, you have to keep the reps very low 1-3 reps, 5-10 sets.*
- *If body weight is an issue, maintain the five minute rest interval (to keep hypertrophy*

One of my former coaches used to say you may think you are in shape... but your opponent will find out for sure!! Be sure to keep accurate notes and keep swinging!

down), if not compress the rest interval. Be sure to apply all power generation principles from PTP.

- When using the explosive lifts, perform as many reps in strict form. Terminate all sets before form deteriorates. Instead of risking injury by forcing more reps, incorporate longer active rests (i.e. shadow boxing, walking stairs).

To figure out which exercises carry over best to your actual sport:

- Keep one group of fighters on whatever program they presently are doing. Put the other group on the new or modified program. Let them both run 2- 4 week cycles and then see which group performs better at the given sport you are training for.
- Competition is your ultimate test, not how much weight you lift or how many reps you do unless of course you train weight lifters/ power lifters.



Kimura BJJ:

From Left to right -

Jeff Martone, Jean Kleber, Mike Martone, and Steve Bacarri

BALANCING SKILL, STRENGTH, & STAMINA*By Steve Baccari*

The following program has been designed for and used by top amateur and professional boxers with great results. Perform **high-repetition kettlebell lifts following sparring sessions**—either directly after or several hours later on the same day.

Slow strength drills are performed prior to **skill work**—either directly before or several hours before. These two different training methods are performed on alternating days—for the reasons given below. But first, an example:

Day 1: following 3 hard rounds of sparring, the boxer would perform a Man- Maker variation of one-arm kettlebell snatches followed by an interval of jump rope.

Day 2: the same fighter would perform dead-lifts alternating with decompression hangs prior to hand-pad drills.

This way, the fighter can train six days in a row and never burn out. The slow strength day works as an active rest for the dynamic high repetition day.

Likewise, for sprints/cross-country style runs. The sprints would be on the sparring and high rep drill day, so that **all ballistic movements take place on one day**. **Slow strength** and **skill drills** are performed the following day. If you perform ballistic drills 2 and 3 days in a row, your fighter will burn out within a couple of weeks. For example: if you spar on Monday and do high rep or ballistic drills on Tuesday, you would not sufficiently recover for Wednesday's sparring session.

**“Those who
hope in the Lord
shall renew
their strength.
They will soar
on wings like
eagles; they will
run and be not
weary, they will
walk and not be
faint.”**

- Isaiah 40:31



Jackson's Submission Fighting – Albuquerque, NM

Top row:

Rashad Evans, Nathan Marquardt, Ali, Keith Jardine, Danny Higgins, and Jeff Martone

Bottom row:

Richie Carter and Aaron Cornett

THE ROLE OF BACK ENDURANCE IN BACK INJURIES' PREVENTION

(Based on McGill)

Burton et. al (1996) demonstrated that police officers in Northern Ireland who wore body armor developed back pain symptoms faster than their English colleagues who did wear body armor. Obviously, carrying combat gear is not going to improve your back. Note that the Irish cops' body armor weighed only 18 lbs., one fifth of the load some SOF units have to ruck. Since getting rid of the hardware is not an option, it is logical to prepare the operator's body for handling it.

Surprisingly, lower back strength does not appear to reduce the odds of back problems (Biering-Sorenson, 1984). However, muscular endurance does (Luoto et. al, 1995). The high repetition kettlebell swing is a highly effective means of developing the endurance of the back and waist muscles.

THE MAIN CAUSE & PREVENTION OF BACK PAIN

(According to McKenzie)

Most back pain is triggered by overstretching of the ligaments and the surrounding tissues. Which is in turn often caused by bad posture, especially the loss of the arch in the lower back? "After activity, the joints of the spine undergo a loosening process. If, after exercise, we place the back in an unsupported position for long periods, distortion within the joint readily occurs. This is true whether we sit in a slouched position or whether we stand, bending forward with our hands on our knees."

Avoid slouching and perform five back bends immediately before and after lifting. "By standing upright and bending back before lifting, you ensure that, as you begin the lift, there is no distortion already present in the joints of the lower back." Place your hands in the small of your back pointing your fingers downward and keep your legs straight. Bend your back slowly using your hands as the fulcrum. Pause for a second and return to the upright position. Try to bend further with each successive rep.

Just because your back started hurting immediately following a given activity, you should not automatically blame it. Things are not always as they appear to be; most likely it was your slouch. So avoid slouching after any vigorous exercise and wrap up with the same five back bends.

CONTACT

Email

Web <http://tacticalathlete.com/>

