

A man in a blue tank top is performing a pull-up on a horizontal bar. Attached to the bar is a large stack of colorful folders (red, white, and blue) that are hanging down. The man is looking up at the camera with a slight smile. The background is a wooden floor.

Mastering the OPD PT Test

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with Angela Voraotsady, NSCA-CPT

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This book is by no means a comprehensive guide to the tactical strength and conditioning programs offered by Competitive Edge Fitness and Competitive Edge Combat. Rather, it is more of a Cliff Notes version, packed with easy to implement strategies to help the reader pass the Ogden City Police Department physical fitness test.

For officers who don't struggle with the test at all, this book can still be very beneficial. 25 push-ups is NOT a lot of push-ups for a fit individual. We have our own progressive, level changing standards at Competitive Edge that we encourage you to pursue. The same strategies that will take someone from 15 push-ups to 25, can also be used to take them from 70 push-ups to 100, or even 100 on up.

Every portion of the PT test CAN be improved. We encourage officers not to set their sights on simply passing the PT test with a good score by someone else's standards, rather to become the best that they themselves personally can.



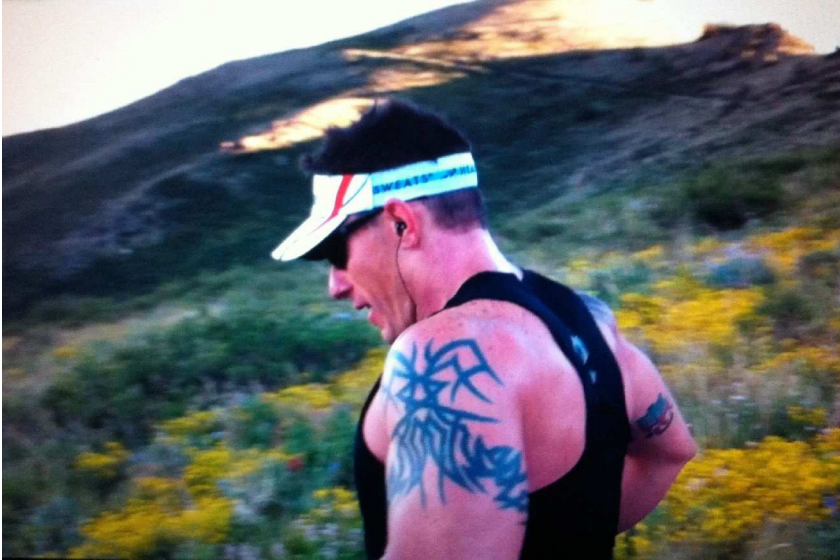
POST Entrance and Exit Requirements

Entrance

1.5 Mile Run - 15:54
Max Push-ups - 18 Reps
Vertical Jump - 16 Inches
Sit-ups - 26 Reps (1 minute)

Exit

1.5 Mile Run - 14:46
Push-ups - 21
Vertical Jump - 17.5 Inches
Sit-up - 29 Reps (1 minute)
300 Meter - 64 Seconds



Mastering the 1.5 Mile Run

When training for the 1.5 mile run, we will approach it from a variety of different angles. The first thing to do is to run 1.5 miles and see where we're at. With the standard being 15:54, we are looking at pretty close to a 10.5 minute mile. If mile is 10+ minutes, we NEED to train to improve speed.

To meet this time requirement, or any goal we might set for ourselves, we will approach training from multiple angles. We want to incorporate speed intervals, circuit training, and running the actual distance (or more) on trails.

Circuit Training

It may seem obvious that the best training to improve time would be running, but I'm going to place priority on circuit training. Most people who can't run the 1.5 mile run in 15 minutes, aren't unable to do it because they enjoy running and aren't fast enough. Most of them are likely overweight and DO NOT like to run! Circuit training is great for dropping weight. It is amazing, especially at lower fitness levels, what a difference regular circuit training can make on run time even if the person seldom runs.

For years I tested 1-mile time at the beginning and end of each 8-week group fitness class. During the classes, we rarely ran; we may have run one mile 2-3 times during the entire 8 weeks. It always surprised people then, when we re-tested at the end of the session that their mile time usually improved substantially. Our less fit clients were finishing their mile 2-5 minutes faster

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while our very fit clients were still improving their already decent times 30-90 seconds.

We didn't run much, but what we did do, was a lot of circuit training. Every other day, we would do circuits, quickly moving from one exercise to the next with minimal rest. By the end of 8 weeks, clients were stronger, faster, leaner, functioning better aerobically, and in general, much healthier!

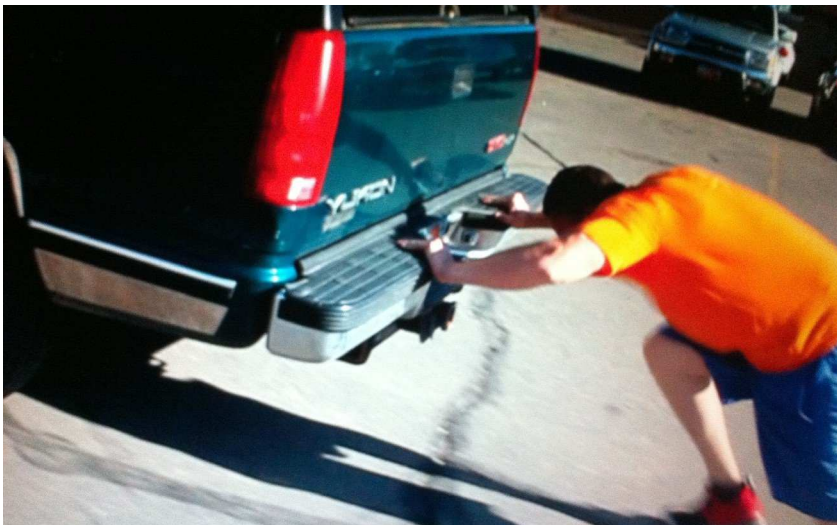
Circuit training, especially when designed with the right exercises and times, can be a huge boost for your mile and a half time. We want our circuit to be a total body circuit that keeps our heart rate up while building strength. Below are a couple sample circuits. Perform each with minimal rest.

Circuit #1

Alternating Lunge	3 x 1 minute
Push-up	3 x 1 minute
Resistance Band Row	3 x 1 minute
Bodyweight Squat	3 x 1 minute
Moving Plank	3 x 1 minute
Jumping Jack	3 x 1 minute

Circuit #2 - As many sets as possible in 15 minutes

Barbell Squat	x 8 repetitions
Bench Press	x 8 repetitions
Hang Clean	x 8 repetitions



Without running at all, Rob went from a 12:47 mile and a half to a 10:13 in 8 months of circuit training. Oh yeah, and he weighs in at 235 lbs!



Competitive Edge trainers Arlo, JB Junior, and Steve show their dedication to running.

Interval Training

While circuit training is great and can certainly improve run times, we are still going to make you run. By doing circuit training AND running, we will see improvement quickly. Our top pick for improving time? Intervals.

Interval training is extremely important to increasing speed. To run a faster 1.5 mile, it is important to adapt to running at those faster speeds. If you continue to run the speed that you currently run, even if you go greater distance, it will be difficult to get faster. It is much more effective to train shorter distances at the speed you want to go and work on going further. Intervals will also help your 300 meter time.

Workouts for 1.5 mile Run

- 1) 1 mile timed run
- 2) 300 meter (m), 200m, 300m, 200m, 300m, 200m, 300m, 200m
@ goal pace
- 3) 400m, 300m, 200m, 400m, 300m, 200m, 400m, 300m, 200m
@ goal pace

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- 4) 6 x 400m @ goal pace
- 5) 4 x 600m @ goal pace
- 6) 800m 600m, 800m, 600m @ goal pace
- 7) 4 x 800m @ goal pace
- 8) ,2 x 1 mile @ goal pace
- 9) 2 x mile @ goal pace, 1 x 800 m as fast as possible
- 10) Test 1.5 mile, attempt to run at goal pace

The rest between intervals should be between 50-100% of interval time. Less experienced runners should stay closer to 100%. So, if a 400 m interval takes 2 min, then recovery time should be between 1-2 minutes, depending on individual.

Trail Running

The last approach we will take to training for our 1.5 mile run is trail running. Ogden is lucky to have one of the best trail systems in the entire country. We should certainly take advantage of it! I love trail running in preparation for running tests for a couple reasons. One, the ups and downs, and unevenness of the trail make it great for strengthening the legs, hips, knees, and ankles. The increased difficulty also makes running a flat track much easier when it is time to test. Second, it is much more enjoyable than running on the road, around a track, or on a treadmill.

As part of our program, we will run 2+ miles on the trails once a week. You can substitute a 2-4 mile hike with a 30+ lb. weighted backpack. Again, we are trying to overload the body, so that running is easy when we only go only 1.5 miles on flat ground with no additional weight. Every 3-4 weeks, time the 1.5 mile on the road or track to gauge improvement and work on test pace.



Injury Prevention

Overuse injuries are very common with running. Because we will do only a couple runs a week and supplement with circuit training, injuries will be minimized. For extra assurance however, we will also do a DAILY pre-hab routine designed to prevent common running injuries.

Hip Flexor Stretch - Tight hip flexors are a common cause of low back and hip pain, hamstring pulls, IT band tightness and pain, and other knee issues.

For this stretch, kneel on a mat facing at a slight angle in front of a 12-inch box. Place foot from outside leg on the box. Keep weight on the down knee. By raising the arm on the side of the leg that's back, you can increase the stretch slightly. Hold 30-60 seconds each side.

Dead Bug - Poor core strength is a big factor in anterior pelvic tilt. Anterior tilt leads to IT band issues, low back and hip pain and hamstring injuries.

For this exercise, lay with legs and arms off the ground, low back pressed against the floor, and shoulder blades off the floor. Arm outstretched overhead will be on the same side as the straight leg. Hold 15-30 seconds each side.

Fire Hydrant - Weak and/or inactive gluteals are an athlete's worst enemy. This issue is the causal factor behind many running injuries and also set a person up for potential ACL tears. Fire hydrants will help to activate and strengthen the gluteals while improving him mobility.

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Starting on hands and knees, make circles with your knee. Start small and gradually make the circles larger and larger. Do 10-20 circles forward, then 10-20 circles backward.

Gravity Drop Ankle MOB - Tight calves and are the culprit behind plantar fasciitis, achilles tendonitis, and frequently shin splints and knee pain. We must maintain good mobility at the ankle to run injury free.

This stretch varies from a traditional calf stretch in that we will stretch both legs at the same time, we keep our knees, hips, and shoulders directly over our ankles and we will hold it for at least 1 minute. Start with balls of feet on a calf block or stair. Try to relax into the stretch, letting gravity pull your heels toward the floor. As you get longer into the stretch, you may feel your calves burning. That is good. Hold 1-2 minutes.

Supine Toe Taps - Weakness of the anterior tibialis (shin muscles) are the other factor in shin splints, plantar fasciitis, achilles tendonitis and various knee concerns. The anterior tib is commonly lengthened and weak, allowing the tight, overly strong antagonist calf muscles to control ankle mobility. Poor mobility frequently leads to injury.

Begin on back with knees bent and feet drawn in halfway to glutes. Extend hips to bridge into air and hold this position (isometric glute engagement is the bonus benefit of this exercise). From here, keep heels down and tap your toes as fast as possible. Begin with 30 seconds and work up to 1 minute.

Backward Treadmill Walk - Knee pain caused by lateral tracking of the patella is also a frequent issue for runners. The vastus lateralis (lateral quadriceps muscle) is overly tight on most athletes (and especially runners), while the vastus medialis and specifically vastus medialis oblique (tearshape muscle right above kneecap on inner thigh) is typically weak and underdeveloped. This muscle, the VMO, is what pulls the patella (kneecap) in and helps keep it centered. When weak, the patella often will be pulled laterally by the vastus lateralis.

As the VMO is responsible for approximately the last 30 degrees of knee extension, we need a closed chain (feet on ground) exercise where we can focus on that movement to effectively train the VMO.

Walking backwards uphill on a treadmill IS that exercise. Put the grade of the treadmill at 12-15, the speed at 1.0 to 1.5mph, hop on backwards and get started! Faster does not mean better. It's based more on leg length and what speed feels most natural. Most people are great at 1.1 to 1.2mph. Walk backwards for 5 minutes, trying not to hold on to handles.

The Running Program

There is plenty of room for adjusting to fit individual schedules, but here is an example of what a weekly running routine might look like:

Prehab Routine - DAILY

Sunday - Rest

Monday - Circuit Training

Tuesday - Speed Workout

Wednesday - Circuit Training

Thursday - Rest

Friday - Circuit Training

Saturday - 2+ Mile Trail Run or Weighted Hike

Our circuit training days will also include specific training in the workouts for the other 4 portions of the Ogden City Police Department PT Test, so don't worry about where to fit everything else in.



Mastering the 1 RM Bench Press

The bench press is by many considered the standard for how strong someone is. It's always, "How much do you bench?", rarely, "What do you push press, or "How much do you bent-over row?" While I have may have a different opinion on what the king of exercises is...cough...dead...cough...lift...cough, cough...,the bench press is indeed a fantastic compound upper body lift very indicitave of upper body strength.

There are many different strategies to training the 1RM bench press, and a lot of different tools we can use to break through plateaus. Chains, bands, boards, all have a place in our program, but for simplicity, and convenience of the reader, we will outline a program that can be used by anyone, anywhere there is a bench.

A great way to improve any major lift is to employ the Russian Conjugate Method, made famous to those of us in the United States by Louie Simmons and Westside Barbell (Simmons actually formulated the Westside version by combining characteristics of both the Russian Conjugate, and Bulgarian Conjugate systems). The Conjugate Method involves three styles of workout dedicated to the following three different lifting techniques:

Max Effort

This is the heavy day. A powerful lift is the combination being able to apply a lot of force to the bar, and being able to apply force quickly to the bar. To increase the amount of weight you lift, it is important to lift heavy. To improve raw strength, it's necessary to lift at least 70% of your 1RM, and the goal should be to lift as much as you possibly can that day. So, for example, if we have a lifter with a 1RM of 200 lbs., we will structure our workout as follows:

Warm-up, 5-10 reps @ 115

1 rep @ 140 (70% 1RM)

1 rep @ 155

1 rep @ 175

1 rep @ 195

1 rep @ 205*

(*We are always trying to best our previous performance on last set.)

Rest 1-5 minutes between sets once it starts getting tough. From a strictly strength perspective, it is beneficial to take a little longer between sets. I have trouble doing this personally, and feel combat athletes may benefit more by taking shorter rests. As long as you are still hitting your lifts, I see no harm in shorter rests. It would be a good idea to take several minutes before a PR.

Also, by doing limited reps, we keep volume lower, and are able to lift heavy and make great progress with minimal wear and tear on the body.

Because continually repeating the same exercise over and over, week in, week out, eventually leads to plateaus, we will mix up the exercise, doing different variations, all of which will help our flat bench press. For example, we may rotate between: Flat bench, narrow grip bench, floor press, incline bench, dumbbell bench, etc., always trying to beat your previous best on that exercise.

Dynamic Effort

The other factor in a powerful lift is the ability to contract the muscle fibers quickly. To this end, we also incorporate a speed day. As with the max effort day, we will use many different bench press variations, but we will stick with 1 lift a bit longer. We will do one exercise dynamically for 1-3 weeks, then switch it up, rather than doing a different exercise every time. The goal behind the dynamic day is to control the weight on the way down, then move it as fast as possible (though still in control) on the way up. Use a weight that is around 50% of 1RM. Perform 8-10 sets of only 2-3 repetitions.

Repeated Effort

The repeated effort day is simply a high volume workout, focused on raising work capacity (muscle endurance), hypertrophy (or muscle growth) and even restoration. Bigger muscles have more strength potential (notice I didn't say have more strength - that is not always the case), so putting on lean body mass will typically make an athlete stronger.

Louie Simmons prefers slow repetitions for time, rather than going for number of reps, and never with a main lift, and who can argue with Louie? We frequently do this for 2-5 minutes with push-ups, alternating 1-arm snatches, plate halos, medicine ball throws, and planks. We don't usually program a designated day for this, rather just include it on our other days as a finisher. Our push-up training will frequently be our Repetition work for bench press.

For restoration and recovery, it is important to use no more than 30% of 1RM on a given exercise. For strength and size we use 30-40% of 1RM.

Injury Prevention

An essential part of training the max bench press is strengthening the upper back. This stabilizes the entire shoulder girdle, resulting in a better ability to press more weight, as well as playing an important role in injury prevention.

Training only chest while neglecting upper back will result in forward rounded shoulders and set an officer up for shoulder impingement syndrome. Our favorite exercises are inverted rows, bent-over rows, seated cable rows, T-bar rows, face pulls, and resistance band pull-aparts.

In addition to strengthening the upper back, it is also important to keep the chest loose and stretched out. A daily chest stretch in a doorway or barbell rack is essential. Hold 30-60s.

An even more effective (though more expensive) option for opening up the chest is getting regular bodywork. I recommend seeing a qualified massage therapist once a month. Sure it's okay to go a little longer without bodywork here and there, and going MORE frequently is fantastic, but once a month is something to shoot for.

An alternative to visiting a massage therapist is self massage, using foam rollers, medicine balls, lacrosse balls, etc. Though not as effective, these are certainly better than no bodywork, and much more convenient.



The doorway stretch is an injury prevention must!



The inverted row is a staple in all of our programs.



Mastering the Maximum Push-up

To train for the maximum push-up test (and other maximum repetition tests), we will again use a multi-faceted approach. Using a combination of 3 different strategies, we can attack an officer's push-up goal from all sides. Depending how close to the goal the individual is, we will put more emphasis on different techniques. Let's take a look at the 3 approaches:

Grease The Groove

First, and foremost, we need to work on standard push-ups. In military boot camp, recruits do push-ups all the time. Twenty here, twenty there, day after day. In no time, thirty, forty, or fifty push-ups is nothing. This is how most people train to get better at push-ups, and it is indeed a valid strategy. By doing lots and lots of push-ups, you get better at push-ups.

World renowned strength coach, and former Russian Special Forces soldier Pavel Tsatsouline calls this Greasing the Groove. By continually doing the same movement over and over, an individual becomes both technically proficient at the movement AND neurologically more efficient. This is what people refer to as muscle memory. Rather than just frequently doing as many repetitions as you can, Pavel makes the stipulation that you do about half of your max repetitions. As the muscles fatigue, form breaks down and push-ups start to look ugly. By only doing half as many repetitions as possible, you keep good clean form, making sure your muscles remember the quality repetitions.

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It's okay to do more than half max reps as long as every repetition is perfect and it is never a struggle. Because we are trying to increase the amount of push-ups we can do, we need to repeat our half max reps a lot! Stop frequently throughout the day to repeat your push-ups. We want to hit a total daily volume of 2-3 times our goal repetitions. For an officer who can do 15 push-ups, but needs to do 25, we'll do 7-10 perfect repetitions, at least 7 times throughout the day. The exact number isn't really important, rather just be sure to hit at least twice the number of reps you want to be able to do. This can be done throughout the day, or condensed into a single workout. Another benefit of greasing the groove is that because you never go to failure and never really struggle, there is minimal to no muscle damage and soreness, so a day off isn't always needed, and it's fine to do push-ups 3-5 days a week. Because during the test an officer WILL go to failure, every 2 weeks they should max out to get used to doing so, and to update half max rep number.



Stairs are a good way to change push-up height.



Elevated reps can be a huge help for high rep training.

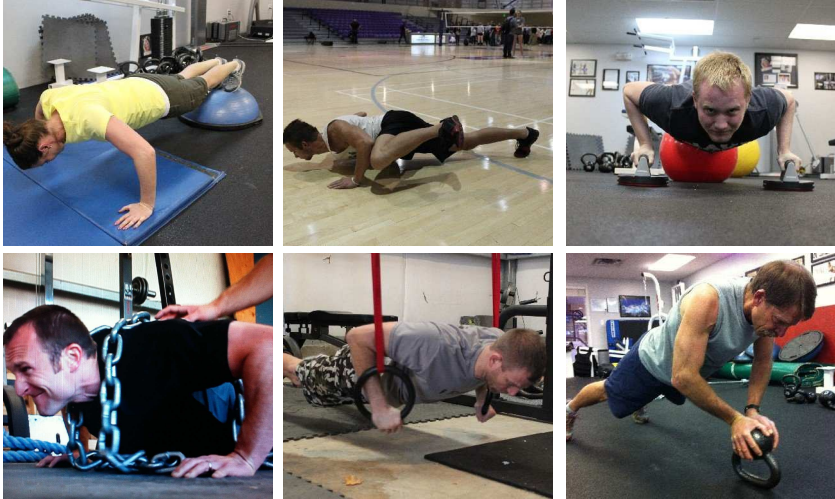
Assisted Repetition

Assisted repetitions are beneficial regardless of how many repetitions an individual is trying to hit, but will be used more for officers struggling to make the minimum requirement.

The idea is simple. Elevating the hands makes push-ups easier. For our training purposes, we will set hand height as high as necessary to be able to do the goal repetitions. If we take our officer who can only do 15 reps and elevate their hands enough, they will be able to do the full 25. By finding a spot they can do their goal reps, we give them a huge mental boost. Over time, we gradually lower the height of their hands, still requiring they do 25-30 repetitions. By combining Assisted Repetitions with Greasing the Groove, we will quickly improve the number of push-ups our officer can do.

Benches, boxes, stairs, and basically anything else can be used to elevate the hands, but our favorite method is using an adjustable squat rack. The pins can be placed at basically any height, and lowered in 2 inch increments. When an individual can do 5-10 reps more than their goal, it is time to drop the bar.

Assisted repetitions can also be used as forced reps following max repetitions of standard push-ups. For an athlete who can already do 70 or so repetitions, but has a goal of 100, they can do



as many as possible on the floor, then try to finish out to 100 on an elevated bar.

Resisted Repetitions

Another great method for improving push-ups is by simply making the push-ups harder, so that the officer becomes stronger at push-ups. The stronger the individual is at the push-up movement, the easier standard push-ups will be when it's time to max out on them.

There are countless ways to make push-ups harder. Some of our favorites though are elevating the feet, spiderman push-ups, rotating handle Perfect Push-ups, weight vest push-ups, push-ups with chains, suspended push-ups from rings, the TRX, or superbands, and unstable push-ups on kettlebells or medicine balls.

We will train resisted push-ups in much the same way as standard push-ups, utilizing the Grease the Groove technique most of the time, but occasionally going to failure. Our goal is to hit a cumulative number of resisted reps that is at approximately as many as your max repetition standard push-ups. If I can do 100 standard push-ups, I might do 20 sets of 5, 10 sets of 10, 7 sets of 15, or 5 sets of 20. The harder the push-up, the more sets of fewer reps I will do. Often if I have a standard push-up goal I am trying to achieve, I will do that many cumulative reps of resisted push-ups.

A great way to train with resisted push-ups (and standard push-ups as well) is to set total goal reps and break it down into many sets of only a few reps (for example 20 sets of 5 if my goal is 100). Start with 30 seconds rest in between sets. Next time rest only 25 seconds between sets. Continue to decrease rest until you can no longer get 5 reps for all sets. Stay at that point



Be sure to balance push-ups with upper back exercises. At age 50, Steve recently PRed with 101 push-ups in 2 minutes.

until you can, and then continue to decrease rest again. The eventual goal is to make it to all 100 reps without resting between.

Injury Prevention

As with bench press, an important part of training for push-ups is strengthening the upper back. Again, this stabilizes the entire shoulder girdle, resulting in a better ability to perform push-ups, as well as playing an important role in injury prevention.

The same exercises and stretches we use for injury prevention apply to balancing push-up training. A daily chest stretch in a doorway or barbell rack is essential. Hold 30-60s. Also, do plenty of inverted rows, bent-over rows, T-bar rows, band rows, etc.

I recommend seeing a qualified massage therapist once a month. If not, be sure to do self-myofascial release with foam roller, medicine ball, or lacrosse ball.



Mastering the Maximum Sit-up

I despise sit-ups. Yep, it's true. From a lumbar health standpoint, high repetition sit-ups and crunches are not ideal exercises to train the core. The world's leading spinal researcher Dr. Stuart McGill likens the spine to a credit card. Bend it, bend it, bend it, bend it, and a line of stress begins to appear. Keep bending, bending, bending, and eventually it will snap. Over the years, repeated lumbar spinal flexion and extension leads to potential disk herniations. But, as virtually every law enforcement and military test requires the maximum sit-up test, we can, and will train it.

To train for the maximum sit-up test, we will again approach it from a couple angles. First off, we will regularly do the Combat Crunch. This is a drill we stole from Brazilian Jiu-Jitsu that seems to correlate well with the sit-up test. Of the athletes we've tested, their Combat Crunch max and Sit-up max have been within 10 repetitions on scores of 80-100+ (2 minute test). The best part of the Combat Crunch is that it seamlessly transitions into several Jiu-Jitsu submissions and sweeps. If we are going to train an exercise that is less than healthy, we want to make sure it is practical!

As with the push-up, we will also do resisted repetitions. There are many different variations to make sit-ups more challenging. As the danger with sit-ups and crunches lies in overly repetitive lumbar flexion, doing difficult sit-up variations increases abdominal bracing and limits repetitions. In addition to sit-ups, we do a lot of core stabilization exercises such as planks, side planks, roll-outs and boat pose variations.

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The Combat Crunch

The combat crunch begins with a partner inside the guard (on back with legs around partners waist). Grasp partner's right wrist with left hand and roll to left side while sitting up. Right arm crosses ABOVE partner's right elbow and threads through to grasp your own left wrist. Release your wrist and roll back to starting position. Without letting head or shoulders touch the ground, quickly transition to the other side, grasping partner's left wrist with right hand and sitting up to the right.

Photos 1 & 2: Transition to Kimura

Photos 3 & 4: Transition to Guillotine

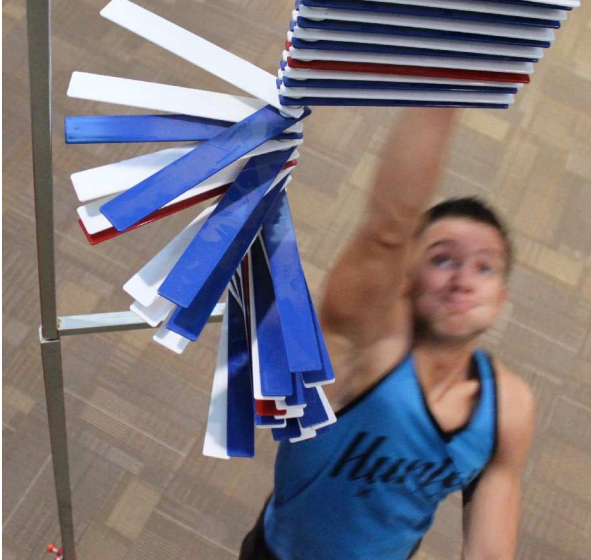
Photos 5 & 6: Transition to Sweep



Resisted Repetitions

Another strategy we use to improve maximum sit-ups is doing exercises that are significantly harder than the sit-ups you will test. Some of our favorite exercises are Turkish Get-ups and Half Get-ups with dumbbells, barbells, or heavy bags. Stability Ball Pikes, V-ups, Sledge Hammer Swings, Medicine Ball Slams, Rope Slams, and Partner Guard Sit-ups, are also all great exercises to build sit-up specific strength and power.

We train sit-up variations twice a week. One day we will do combat crunches, the other day we will do some form of resisted sit-up. Every 2-3 weeks, we will max out on regular sit-ups to gauge improvement.



Mastering the Vertical Jump

Power is defined as force multiplied by speed. Jumping is a quick, powerful, explosive movement. To optimally train for powerful movements, it is important to train both strength and stretch reflex (fast rubber-band-like contraction of the muscles caused by eccentric pre-loading of the muscles and tendons during a countermovement). While most people can benefit from both increased strength and training speed of contraction, determining what area an officer has developed most and focusing on the other is a great way to speed up results. $\text{Force} \times \text{Speed} = \text{Power}$. So, by focusing on the part of the equation each individual is lacking, we can make everyone more powerful, higher jumping athletes.

It is not always easy to determine which factor an individual needs help with. So which do we focus on, strength training, or plyometric type exercises? There are various ways to test this, but we will use a very simple guideline. Test vertical without an approach (no step at all, just squat and jump), then test it again with an approach. Take 1-3 steps, but be sure to jump off both feet. If the results are nearly identical, the officer should work more on plyometric movements. If the approach jump is more than a couple inches higher than the standing jump, the athlete needs to increase strength and will benefit more from a good lifting program.



Some athletes are very strong, but need to work on speed of contraction, aka., plyos.



Some athletes are already very explosive and will be better off focusing on strength.

Some athletes are both strong and have good stretch reflex. Some athletes are also weak and slow. In this case, a training program would address both factors.

One other very important factor in vertical jump is the pull of gravity against the jumper. Quite simply, the more a person weighs, the harder they must work to get off the ground. Officers carrying excess weight are at a major disadvantage. The leaner you are, the higher you will jump.

A Blended Approach:

Unless it is obvious that an individual is lacking in one area or the other, we will include both strength and speed (max effort and dynamic effort). There are two ways for us to do this. We can either program both a separate max effort workout and a dynamic effort workout each week, or we can put both together in the same workout.

By putting max lifts and dynamic lifts in the same workout, we can use the neural activation and muscle recruitment of a heavy squat or dead-lift to our advantage when we go to the plyometric exercise. When the nervous system is fired up from a near max lift, that carries over into our jump. An example of this style program is below:

A1	Box Squat	12 x 1 Rest 30-60s
A2	Depth Jump	12 x 2 Rest 60-120s
B1	Bulgarian Split Squat	12 x 2 each side Rest 30-60s
B2	Vertical Jump	12 x 2 Rest 60-130s

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The squat has always been the gold standard exercise for jumping higher.



Dead-lifts could be THE best exercise you can do. Period.

Strength Training - There are many exercises to build leg strength and power as it relates to improving vertical jump. We will focus on three of the most effective: squats, dead-lifts, and Bulgarian split squats. The jumping movement involves rapid triple extension of the hips, knees, and ankles. Many people train the calves extensively to improve jump. But, the movement really begins with the hips. While each of these exercises trains hips, quads, and ankles, they each have a purpose.

Dead-lift - The dead-lift is without a doubt one of the greatest exercises in the world. It is a tremendous triple extension exercise that emphasizes the hips and mimics the jumping pattern almost exactly. In addition to being great for jumping, it is also a great exercise for maintaining great posture, and for strengthening gluteals to prevent many injuries (here is MORE running injury prevention!).

Barbell Squat - The squat, front or back, is also a great triple extension exercise, and emphasizes knee extension. Squats will strengthen the quadriceps, hamstrings, gluteals, and the spinal stabilizers. A good deep squat also requires good ankle mobility, which, you guessed it, is more injury prevention!

Bulgarian Split Squat - We also find it very important to include single-leg movements into the program. Of the single-leg exercises, the Bulgarian split squat is our favorite. Single leg movements like the split squat increase gluteal involvement, improve balance and lateral knee stability, help minimize strength imbalances between legs, and allow us to stretch the hip flexors under load. Again, injury prevention, injury prevention, injury prevention, injury prevention. All while being a phenomenal strength exercise!



The Split Squat can be done bodyweight, with dumbbells, or a barbell.

When training for strength and power, it is important to keep the weight high and the reps low. We aren't trying to completely fatigue the muscles, rather, we want each rep of each set to be full power. We will typically do one of the following:

5 sets of 3-5 reps
8 sets of 2-3 reps
12 sets of 1-2 reps

Plyometric Training - The goal behind plyometric exercises is to train the speed of contraction through the stretch reflex. When a muscle is rapidly stretched prior to contracting, it stores energy in the tendon, which can be transferred to the concentric contraction, in this case, the jump.

There are many different types of plyometric exercises that can be beneficial in developing a higher vertical jump. We will keep it simple, starting with...the vertical jump.

Vertical Jump - Just like during testing, do a quick countermovement (partial squat with downward arm swing) and jump. We will program the vertical jump both with, and without an approach, depending on what the individual needs.

We can also do this with a full squat prior to jumping, rather than a partial squat.

Split Squat Jump - Begin in a lunge position. Jump as high as possible, switching feet in the air and landing softly with both feet in the opposite lunge position.

Depth Jump - The depth jump is a more intense plyometric exercise and requires a good strength base. A general guideline is that an athlete be able to squat 1.5 times his body weight to do depth jumps.

Begin by stepping off a bench or box approximately 18-inches high. Land with both feet at the same time, absorbing the impact with hip, knee, and ankle flexion, then immediately jump as high as possible. Try to minimize time on the ground.



Physical Readiness

In addition to being able to pass the PT test, Ogden City officers are called to be able to perform essential physical activities such as: running sprints, jumping and vaulting over obstacles, climbing fences, moving heavy objects such as equipment and road debris, lifting and carrying victims, pushing cars off the roadway, use of force by pushing and pulling in self defense situations

As these are duties specific to being a police officer, we will consider this *Task Specific* work. Every strength training workout will have a Task Specific section, characterized by pushing cars, swinging sledge hammers, flipping tires, doing heavy farmer walks, performing sustained heavy bag strikes, etc.

Task specific work is frequently done for time, but may also be a given amount of reps on an exercise. This section of the workout can be fun, but will also be quite challenging. In addition to preparing an officer to do tasks that may potentially be required of them, the task specific portion of the workout is great for metabolic conditioning and will be very valuable for officers who need to lose body fat.



The Big Picture

Now that we have looked at all the variables, how do we put it all together? Are the workouts going to take all day? Not at all. We will be following a very simple system developed at Competitive Edge. Every workout will have a Strength and Power (bench and vertical jump) section, a Test Specific (push-ups, sit-ups, 1.5 mile run), and a Task Specific section.

In this format, we don't neglect one area of fitness to focus on another. We are accomplishing our #1 priority of continually making our officers more durable, while simultaneously improving their test scores. Here is a sample training day:

Dynamic Warm-up/Mobility

Strength/Power

A1	Hex Bar Dead-lift	6 x 2 (work up to 2RM)
A2	Push-up w/Chains	6 x 5
A3	Vertical w/Approach	6 x 2 (for max height)

Test Specific

B1	Elevated Push-up	3 x 25-50
B2	Combat Crunch	3 x 25-50
B3	Band Pull-apart	3 x 25-50

Task Specific

C1	Airplane Tire Drag	4 x 100 yds
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Regeneration

Foam Rolling/Stretching



The Nutrition Advantage

by Angela Voraotsady, NSCA-CPT

As mentioned in the running chapter, most individuals who are trying to improve their 1.5 mile run time have a difficult time, not because they aren't physically able to increase speed but because they are overweight. This doesn't just apply to the run portion of the PT test. Losing weight will help in all areas of the PT test. Increasing physical activity is a great way to lose that extra weight but it is only half of the equation, training + x = weight loss. That missing x is improving why you eat, how you eat, & what you eat.

Why We Eat

Doctors will often tell new mothers not to worry about how little their toddler is eating; when they are hungry they will eat. Somewhere between childhood and adulthood, we lose the

ability to know when to stop eating. This isn't because everyone out grows it, rather all of the outside stimuli prevent us from paying attention. Most people have memories from childhood about the dining room table.

“Clean your plate,” “There are starving children in Africa,” “No dessert until you eat all of your food,” etc.

I encourage you to forget those rules and instead listen to your body. Are you eating because you are hungry or because those childhood rules are still guiding your satiety? Turn in your membership to the “clean your plate club.”

Practical Applications

- When you think you are hungry, take 5 minutes to stop doing what you are doing and really decide if you are hungry or bored
- If you want a snack while watching TV, put a portion in a bowl so there is an end to your snack.
- Stop and think, “Have I been drinking my water?”
Often when we think we are hungry we are really thirsty.

How We Eat

We are a busy society. Everything has sped up in the last 100 years. We want things done quickly and immediately. Unfortunately our health is suffering in a lot of ways because of this mindset. One (definitely not the one and only) of the reasons this affects our weight is through multi-tasking. We are too busy to stop and eat. We eat at our desks, in our cars, while we get ready for the day, etc. We seldom take time to sit at a table and fully cut and chew our food. Often times the thought is “How does that affect our weight?” The biggest way our health suffers from this goes back to why we eat. If the mind is focused on all

of the projects that need to be accomplished today you are not paying attention to when the body says “stop, stomach full.”

Practical Applications

- Set time aside to eat each meal
- Don't bring anything to the table with you.
- Eat slowly. When you eat too quickly the stomach becomes overfull by the time the mind gets the memo to stop.

What We Eat

It always amazes me when people label things as junk food but continue to put them into their bodies on a regular basis. I am a firm believer in enjoying life and I also believe that sometimes that includes consuming junk, but I also believe that there is a balance. I will not feel guilty about eating that piece of cake if I know that the majority of my food is coming from whole, quality sources.

There are a lot of companies out there causing a lot of confusion. Remember, they are out for a profit. Health food sells. Be leery of the claims made by companies. A great rule of thumb is to avoid processed food at least 80-90% of the time. Choose foods that are as close to their original state as possible. For that 10-20% of processed foods try to find foods that have 5 ingredients or less and make sure you know what the ingredients are. Think of the Breyer's commercial.

Practical Applications

- Fruits and vegetables are great sources of fiber, vitamins and minerals. They are also low in sugar content.
- Lean meat is a high in complete protein. Protein will

help the body stay full for a longer period of time and also helps when the body is feeling tired. A serving of protein at lunch or for an afternoon snack will help with the afternoon lull where most people add a sugary beverage. Make sure it is as close to natural state as possible, avoiding processed meats such as deli meat, bacon, sausage, etc.

- Whole grains are also excellent sources of fiber. Small portions of whole grains will help fill the stomach for longer periods of time. This is a tricky area though. Many grains will be labeled whole grains but that doesn't mean that all of the grains in the product are whole, just some are. Stick to whole wheat bread, whole wheat pasta, brown rice, quinoa, etc. Whole grains are considered complex carbohydrates. Simply put, complex carbohydrates will increase your blood sugar levels but the levels will decrease at a slower, steadier rate than with simple carbohydrates such as white bread, cereal, and instant rice.

- Dairy is also a great source of protein and calcium. Yogurt also adds the benefits of pro-biotics. When choosing yogurt it is best to choose a plain yogurt. Even if you have to add sweetener (honey or real maple syrup are great options) you won't add as much as is added to flavored yogurt.

These are just a few pointers to get started. You can simply start being more aware or you can commit to counting your calories, making sure not to consume more calories than are being expended. There are also some great advances in technology that can help with this area. These are both ways to start making progress towards losing unnecessary weight.



Arlo Gagestein

Arlo is owner of Competitive Edge Fitness and founder of Competitive Edge Combat. A lifelong competitive athlete, he has tried just about everything, and continues to compete in Brazilian Jiu-Jitsu, obstacle racing, and beach volleyball. Arlo is extremely passionate about health and fitness, and is obsessed with improving performance, both for himself and his clients. He lives in Ogden with his wife, Amanda, and two young children, Kydan (3), and Ariela (1).

Education/Certification

Bachelor's Degree in Human Performance Management
Licensed and Certified Sports Massage Therapist
Structural Integrator
NSCA Certified Strength and Conditioning Specialist
ACE Certified Advanced Health and Fitness Specialist
MMACA Certified Mixed Martial Arts Conditioning Coach





BATTLE TESTED
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COMBAT

PERFORMANCE CONDITIONING