



## Functional Firefighter Fitness

*The information provided is for informational purposes only and is not intended as a substitute for the advice of, or treatment that may be prescribed by your physician. Before adhering to any of the information or recommendations, or undertaking any exercise or diet regimen, you should consult your physician.*

Firefighting work places heavy physical demands on a person. The nature of shift work requires long hours on duty, probable sleep deprivation and intense physical efforts with little or no advanced warning. Firefighters are required to perform in darkness, intense heat, and cramped spaces and in environments that contain both low oxygen levels and toxic gases. Having a sound strength and conditioning program not only ensures that one is physically capable of performing these duties but may also be a major contributing factor to surviving the dangerous circumstances encountered in the line of duty.

Firefighting is an anaerobic job that also requires a high level of aerobic ability. An aggressive interior attack, scaling a ladder with heavy tools in order to ventilate a roof, or lifting and carrying an unconscious victim, all require high levels of both strength and high intensity endurance. The fact that most duties are performed while wearing heavy personal protective equipment only compounds the difficulties that all firefighters face in performing their jobs.

A conditioning session should ideally include a mix of lighter weight drills and sustained efforts to mimic the metabolic demands of firefighting. A high repetition set followed by jogging or jumping rope as active recovery works very well. Start at two sets of five continuous minutes with a short break between and build from there. Another great session includes full body functional/core training. Incorporating some body weight drills such as push-ups, squats, or burpees, with kettlebells into a short circuit that can be blown through several times without rest is another great option. This will develop both muscular and cardiovascular endurance.

A good way to structure your sessions is to alternate between whole body strength days and conditioning days, taking a rest day when needed.

### Example:

- **6 days a week** for at least an hour do some sort of running - Walking, Jog, Long Slow Distance (LSD), [Fartlek](#), Hills, Sprints, Intervals or combination of all.
- **6 days week** - plank and grip
- **1 day week** - Upper body power workout (low reps/high weight -about 1/2 hour)
- **1 day week** - Lower body power workout (low reps/high weight -about 1/2 hour) + stairs
- **3 days week** - Full-body Functional training (high reps/low weight) for at least 2 hours
- **1 day week** - [Plyometrics/in-depth jumping/bounding](#) (not after Lower body power workout)
- **1 day week** – rest

## **SAMPLE FUNCTIONAL/CORE WORKOUT**

*This is only a sample program. You should seek a fitness professional, preferably with knowledge of the unique physical demands of the Fire Service, for consultation on a program tailored to your specific capabilities and needs.*

*You may want to start keeping track of your morning resting heart rate. If your morning rate starts to increase, you may be overtraining.*

*With any program, stop all workouts if you develop any sharp pain and/or any discomfort that last for more than a week. Then promptly see your physician.*

### **Warm Up**

**20x Kneeling Elbow Curls** – On knees with knees directly under hips, place knuckles on temples with thumbs pointing to shoulders, bring elbows together and apart.

**20x Kneeling Pullovers** – On knees, straighten arms and interlace fingers with palms facing your body. Keeping arms straight, raise arms above head as far as is comfortable then lower them back down toward waist. Repeat up and down.

**30x Crunches** – Lie on back with knees bent and feet flat on floor; place hands behind head, elbows back, and chin off chest. Contract abdominal muscles while lifting shoulders off the floor and relax. Repeat up and down.

**15x ea. leg Wishbone Kicks** – Lie on back with knees together and feet apart with hips and knees bent at 90 degrees. Extend right leg toward the sky and lower back down to 90 degrees. Repeat, extending the left leg toward the sky and back down. Repeat, extend and relax.

**20x Active Shoulder Bridge** – Lie on back with knees bent, feet flat on the floor and both knees and feet at hip width. Squeeze glutes raising hips and lower back off the floor and back down. Repeat up and down.

**1 min per side Lower Spinal Floor Twist** – Lie on back with left leg straight and resting on the floor, lift and bend right knee so that your right knee and hip are at 90-degree angles, grab right knee with left hand and pull it across body towards the floor and hold. Repeat on other leg.

**10x Kneeling Rollercoasters** – On knees, straighten arms and place palms flat on the floor in front of you, bend over bringing chest toward knees, and sit back toward heels. Starting in this position bend elbows, move face forward between hands just above the floor then drop hips to floor and straighten arms raising chest upward. Lift hips up, return to the original position and repeat.

**20x Spread Foot Glides** – With hands in middle, bend right leg and keep left thigh tight as if you are sitting back into a chair. Then switch by straightening right leg and bending left leg; alternate side to side.

**10x ea. side Static Lunges** – Stand with hands behind head, right leg out in front of you and left leg behind. Bend both knees allowing your left leg to drop toward the floor, press feet into floor lifting hips and straightening legs. Repeat up and down then switch legs. Repeat other side.

**10x Full Squats** – Standing with feet directly under hips and toes pointing forward, place hands behind head and pinch shoulder blades together. Without letting heels come off the floor, squat down as far as is comfortable and back up. Repeat up and down.

*This warm-up is specific to this workout but if time is limited, a general warm-up can be substituted.*

**WORKOUT** *Repeat 2-3 times – Dumbbell weight, when indicated, will depend on strength levels.*

**Flutter Kicks** 50x – Lie on back with legs straight, thighs tight and toes pulled back; raise head off the ground so you are looking at your feet. Keeping legs straight and thighs tight, alternate kicking legs up and down 6” above the floor, ½ of reps are done with toes pulled back and ½ with toes pointed forward.

**Wishbone Bench Press** 8-10x – Lie on a bench on back with knees together, feet apart keeping hips and knees bent at 90-degree angles. Holding a dumbbell in each hand bend your arms and lower your elbows as far down as you can comfortably and in control. Then lift weights back to original position by pressing them toward the sky and straightening your arms. Be sure the motion is fluid and controlled, not allowing dumbbells to touch. Repeat up and down.

**Kneeling Active Clock** 20x ea. position – On knees with arms down by your side and thumbs pointing forward pull arms up to the 12 o'clock position, and back down. Repeat start with hands in front of body and pull arms at 45-degree angles up and away from body with arms going to the 10 and 2 position. Finally, starting with arms extended in front of you at shoulder level and thumbs pointing away from each other. Pull arms back and away from each other, pinching shoulder blades as you pull back to the 9 & 3 position.

**Back Leg Elevated Static Lunges** 10x ea. leg – Stand with hands behind head, right leg out in front of you and left leg behind on a bench/step. Bend both knees allowing your left leg to drop toward the floor; press feet into floor lifting hips and straightening legs. Repeat up and down then switch legs. Repeat other side.

**Kneeling Bridge** 30 sec. – On knees with knees directly under hips and toes under feet, grab heels with hands so that thumbs are inside of heels, squeeze glutes and push hips forward into the air and hold.

**Inchworms** 5x – Stand with feet at hip width and toes pointing forward, keep legs straight, bend over at the waist until hands are flat on the floor. In this position walk hands out in front of you as far as is comfortable then walk legs up to hands while keeping legs straight and thighs tight. Repeat.

**Single arm Dumbbell Row** 8-10 x – place one knee and same side hand on a bench. With the other arm dangling holding a DB, bring the DB to your hip, focusing on the scapula pulling back and repeat.

**Spread Foot Rollercoasters** 10x – Walk hands out in front of you and spread hands so they are slightly wider than shoulders. Bend arms and pull face just above floor in a “U” motion. Drop hips toward floor and press arms straight. Return to original position by lifting hips into air and shifting weight back onto feet. Repeat.

**Full Squats** 20-30x – Standing with feet directly under hips and toes pointing forward. Place hands behind head and pinch shoulder blades together. Without letting heels come off the floor, squat down as far as is comfortable and back up. Repeat up and down.

**Kneeling Dumbbell Military Press** Up to 10x – On knees with knees directly under hips. Start with dumbbells in hand, palms facing forward just above shoulders; press dumbbells upward overhead then lower back down. Do not allow weights to touch above head. Repeat.

**Kneeling Alternating Bicep Curls** 10-20x – Kneeling on a bench, shoulders back, arms hanging down with dumbbells in hand. Keeping elbows pinned to your sides curl arms up toward chest and then back down. Repeat

**Frog Abs** 30-50x – Lie on back, place soles of feet together, relax, and spread knees apart letting them fall towards the floor. In this position place hands behind head keeping elbows back. Then squeeze and hold glutes while contracting abdominal muscles and lifting shoulders off the floor and back down. Repeat up and down.

## **Cool Down** – *This is an essential part of this Workout*

**20x Clappers** – Lie on back with knees bent and feet flat on the floor, arms straight out from shoulders with palms facing up. In this position gently press back of hands into floor and draw arms together gently pressing palms together above chest. Repeat back and forth.

**20x Overhead Extension Pullovers** – Lie on back with knees bent and feet flat on the floor, extend arms above chest and interlace fingers, palms facing away. Keeping arms straight lower hands toward the floor above your head as far as is comfortable then pull them back toward your waist. Repeat back and forth.

**20x Crunches** – Lie on back with knees bent and feet flat on floor; place hands behind head, elbows back, and chin off chest. Contract abdominal muscles while lifting shoulders off the floor and relax. Repeat up and down.

**20x ea. leg Leg Lifts** – Lie on back with left leg straight along the floor and right knee bent so that your right foot is flat on the floor. Keeping left leg straight and thigh tight, lift leg up as far as is comfortable then lower back down towards the ground. Repeat up and down.

**20x Active Shoulder Bridge** – Lie on back with knees bent, feet flat on the floor and both knees and feet at hip width. Squeeze glutes raising hips and lower back off the floor and back down. Repeat up and down.

**20x Static Back Splits** – On back with legs resting on a block at 90 degrees with legs held in the air, bring knees and feet together then open legs up spread knees and feet apart. Repeat back and forth.

**1 min. ea. side Lower Spinal Floor Twist** – Lie on back with left leg straight and resting on the floor; lift and bend right knee so that your right knee and hip are at 90 degree angles; grab right knee with left hand and pull it across body towards the floor and hold. Repeat on other leg.

**10x Cats & Dogs** – On hands and knees with hands under shoulders and knees under hips, arch back up and pull chin to chest, then lower back toward floor and raise head up. Repeat back and forth.

**30 sec. Downward Dog** – On hands and knees, with hands in front of and slightly wider than shoulders, knees under hips and toes curled under feet. Straighten legs by lifting knees off the floor, pressing heels towards the floor and lifting hips towards the sky; keep thighs tight and press chest toward legs and hold.

**30 sec. Kneeling Bridge** – On knees with knees directly under hips and toes under feet, grab heels with hands so that thumbs are inside of heels, squeeze glutes and push hips forward into the air and hold.

**1-2 minutes Air Bench** – Stand with back against a wall, knees and ankles at hip width. Keeping back against the wall, lower yourself into a seated position against the wall so that knees are at 90 degrees and thighs are parallel with the floor. Keeping weight on heels, lightly press lower back into the wall. Make sure that your knees do not go out past ankles.

## **SAMPLE ADDITIONAL WORKOUT**

*If your conditioning is already high, you can get a lot more creative with your sessions.*

Find a great set of stairs (100 or more steps), get a 40-pound bag of sand, and put it into a backpack.

1. Before your standard warm-up - take your pulse. This will be your “base” heart rate. Do your standard warm-up.
2. Start at the bottom of the stairs wearing the backpack.
3. Stop every 20 steps (or on the landing), remove the backpack, and do 20 reps of a core/functional exercise listed in the workout above that can be completed safely (alternating upper and lower body exercises – if legs get tired go to all upper body exercises), then put the backpack on and continue upwards.
4. Once you reach the top take your pulse. If it is above 175, you need to decrease the number of steps by 1/3.
5. Walk down slowly as your active recovery. Take your pulse.
6. If you are less than 9 points above your “base” rate, you are ready for another set of stairs. If it is more than 10 points above your “base” wait one minute and take again.
7. If after 5 minutes, you cannot get back to within 9 points of your “base” you are finished for the day.

The number of sets you can complete is a great way to gauge the progress you are making in your fitness program. Although, this is an intense workout and obviously should not be done too often.

*If your morning resting heart rate is higher than normal, do not do this workout. Wait another day.*

## **Advice from Previous Recruit School Members – as written by them**

*It would be impossible to provide each passing candidate a workout that would be custom tailored to his or her specific needs. What we can offer is advice given by previous Recruits.*

**QUESTION - If you could give advice to someone in the next class – what would you say was the number one thing to do to be physically prepared?**

Endurance circuit training  
Cardio  
Stairs, squats – endurance weight training  
Power lifting – Stairs  
Endurance – cardio – stairs – shoulders, back and abs strength & endurance training  
Endurance – cardio – arms & shoulders  
Good Cardio and sleep patterns  
Stair work  
Endurance Running  
Preparing for the lifestyle change the first two weeks  
More gym endurance workouts  
Stairs and stairs with added weight  
Not to lift for power but low weight/high rep, forearm work, cardio + weight, neck exercises  
Stairs – upper body strength and endurance workouts

**You need to do whatever it takes for you to be as prepared as possible.**