

# **Functional Fitness Defined**

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# INTRODUCTION

Would you like to be able to help your neighbor by carrying the shingles up the ladder onto his roof for the weekend roofing job? Are you worried about pulling a muscle while helping your ten year old daughter warm up for soccer practice? Maybe you just want to be able to do several loads of laundry in the basement without having a sore back the next day. Being in a physical condition that enables you to be able to do life's activities is what Functional Fitness is all about.

Statistics change and can be misleading. Nonetheless, I want to throw a few at you to set the tone. One third of Americans fall each year. Americans who are overweight are fifteen times more likely to get injured, while obese Americans are forty eight times more likely to get injured. Eighty percent of Americans claim to have had lower back pain in their lifetime.

These statistics are used to illustrate the dangers we face as we age, but you will see how Functional Fitness is your best weapon to combat aches, pains, and injuries. This book was created to be your guide to the concepts of Functional Fitness.

I feel it is important to address an important issue that will arise in this book. It may appear that I am placing body building and weight lifting at odds with Functional Fitness, with arguments that Functional Fitness is superior to the others. For starters, I am not addressing folks who perform muscle isolating exercises to build and shape their bodies for the sport of bodybuilding. That is a sport and those people are training properly for their sport. In the same light, many people preparing for strongman competitions or who are attempting to reach a level of intense strength in general are again focusing on sport or a goal. Therefore, performing Olympic lifts to achieve massive strength is appropriate for them.

However, there are millions of people whose goal is to achieve a balanced, total-body, general level of overall fitness, but all they have been taught are *bench presses*, *bicep curls*, *tricep pull-downs* and the like. They are also often taught to have a bicep and tricep day, followed maybe by a chest and back day, etc. These people are the people I am speaking to when I compare the benefits of Functional Fitness as opposed to bodybuilding and weight lifting.

# CHAPTER 1

## What Functional Fitness looks like

We will get into some concrete concepts later in this book, but for starters I find it useful to describe Functional Fitness in the context of life. What exactly do I mean by that? In short, Functional Fitness means that you can shovel your driveway without being crippled the next day. Functional Fitness means that you can carry a 4X8 sheet of half-inch paneling board from the trailer to your kids' clubhouse and hold it up against some studs with one arm as you nail it into place.

Functional Fitness means that you can, at any age, pick up your children and eventually your grandchildren without moaning and groaning. It also means that you can run along side of your six year old as she learns to ride her bicycle without her training wheels. Essentially, Functional Fitness means that you can perform the movements and tasks necessary in life.

In law enforcement we say that we train to fight, meaning that we recreate the intensity in training so that when we get into situations out in the street and our stress levels are high, we act without thinking. We prepare for real life scenarios by making our training scenarios as real as possible. Functional Fitness is similar in that you exercise in a way to mimic real life situations so that your body—and your mind—are prepared to work naturally when you need it.

I realize a point can be made that if we are training to be able to do life's activities, why not just do more of life's activities? Well if you are truly active enough in your normal daily living, you wouldn't have to have a fitness program. I'm guessing you won't see too many construction workers on gym membership rosters. However, if the rest of us are honest with ourselves, we are busy, but not active. We might not have a lot of spare time, but we are not running, lifting, pulling, carrying, and moving enough to be fit.

A look at any statistics on people's health will prove my point—I referred to some of the statistics in the introduction. It should be obvious the majority of Americans and others in the world need a fitness program to have a healthier life. Following the logic that we need a fitness program, I



further suggest that a Functional Fitness program is the most effective and efficient program to achieve proper health and fitness for the average person.

The term *functional* as related to fitness can be a vague term, open to interpretation. For example, if you are an ultra marathon runner, the simple act of running is an extremely functional method to train. Or, if you are entering a body building competition, isolating muscles with machines and benches may be a functional way to prepare for your sport.

However, I am attempting to define Functional Fitness as a specific concept, referring to balanced, total-body, overall fitness programs—hence the capital letters in Functional Fitness. In order to define the specific term of Functional Fitness, I have determined there are four dimensions. They are that Functional Fitness works movements as opposed to muscles, is core-centered,

involves developing more than functional strength, and often encompasses High Intensity Interval Training. I will explain these dimensions thoroughly in the following chapters.

# CHAPTER 2

## Dimension 1: Movements versus muscles

The first dimension of Functional Fitness means our bodies are meant to work as a whole. We need to train our muscles to work together, and that takes practice, especially if you have been isolating muscles for years in a body building program. In order for muscles to work together, your brain needs to create the neural connections. It may be helpful to think about how you need to train your brain to activate all the muscles—not just the big ones—at the same time in order to accomplish a task such as carrying your couch up from the basement.

In that example, you are not just activating your pectorals and biceps. You don't bench press or curl your couch. Instead, you walk awkwardly up the stairs with one foot higher than the other as you turn a sharp corner, while at the same time listening to your wife tell you not to bang the walls, which is next to impossible as you shift the position of the couch and your grip in order to make it past the railing. That is your muscles working in groups!

Vern Gambetta, considered the founder of sports functional training, wrote in the book, *Functional Training*, that the body is a link system, sometimes called the kinetic chain. He explained the brain does not recognize individual muscles, but rather patterns of movement, so we train our parts to work together in harmony to produce smooth, efficient patterns of movement (Alfieri 2001).

This is why Functional Fitness programs such as P90X, Core Performance, Crossfit, and Kemme Fitness do not put *bicep curls* and *tricep pull-downs* in the program. Exercises in Functional Fitness programs may range from bodyweight movements to *deadlifts* with heavy barbells, but what they have in common is the focus on movements that engage the maximum amount of muscles at one time.

This chapter is also an appropriate spot to explain a method to increase a person's efficiency with a movement—a method called "Grease the Groove." Grease the Groove is a term Pavel Tsatsouline used in his strength training book, *The Naked Warrior*. Essentially, Grease the Groove dictates you practice a specific movement, like *pull-ups*, frequently to build up the neural connections. The result is an increased ability to perform the movement. Specificity plus frequency equals success (Tsatsouline 2003).

What this means for *pull-ups* on a practical level is this: Try performing a *pull-up* on a bar hanging in your basement every time you go down to do laundry or get supplies from your storage area. In addition, you can perform a *pull-up* on an open door at work each time you pass through it. It doesn't matter where you do them, just how often you do them. The higher the frequency, the better the results you will receive.

After weeks of doing just one or two pull-ups a day, you will find that you can perform more *pull-ups*, and with better form, at any one given time. This method of Greasing the Groove can be applied to almost any movement because the focus is on creating neural muscular connections in addition to the actual muscle capability or strength.

Avoiding muscle isolating and developing your ability to perform movements is only the first dimension of Functional Fitness. In the next chapter, I will talk about a term recently made popular—the core.



# CHAPTER 3

## Dimension 2: The core

The second dimension of Functional Fitness is that it is core-centered. The pillar, or the core, represents the central part of the body, the torso, and the hips. That is where strength and power come from and the strength of the extremities should not exceed that of the core (Cook 2003).

The core is indeed quickly becoming a popular term in the fitness industry in general. Many programs such as Core Performance have become successful, and several fitness certifying bodies offer core specialist certifications. In fact, my current certification is in Core and Functional Fitness.

The idea of a person's core, however, is often misunderstood. Your abdominal muscles are *not* the core. The abs are an important part, but should never be totally isolated in training because they are never totally isolated in movement, as they work in coordination with the hip and back muscles during any type of activity (Cook 2003). The first dimension of Functional Fitness, that of working movements as opposed to muscles, also applies to training your core.

To make this point clear, realize that performing 100 *sit-ups* is not working your core. Doing *ab crunches* from a lying down position focuses on the frontal outer muscles, which are the rectus abdominis and the external obliques. To strengthen your core, you also need to address the inner muscles that stabilize your whole body: the diaphragm, the multifidus (deep stabilizer muscles on your back), the pelvic floor muscles and the transverse abdominis muscle (Alfieri 2001). In fact, some experts will define a person's core as the entire region from the hips to the shoulders.

The purpose of having a strong core is to stabilize your body as you perform life's various activities, which gives you the ability to be more strong and reduce the risk of injury. A truly stronger core means that you have strengthened your entire center and taught it to work with the rest of your body, which will allow for more flexibility, agility, power, and strength. Does that sound like something you would need to get that nasty old couch up from the basement?



# CHAPTER 4

## Dimension 3: Functional Fitness is not functional strength

The phrase above hits on the third dimension of Functional Fitness. Strength, even functional strength, is only a small part of fitness. Crossfit.com lists ten physical skills as a component of fitness. They are cardiovascular/respiratory endurance, coordination, agility, balance, stamina, power, speed, accuracy, flexibility, and *strength* (Glassman 2010). Other fitness certifying bodies define fitness as involving power, agility, reaction time, speed, skill, and *strength*.

In either case, notice that strength is only one of the physical measures used to describe fitness. Please understand, strength is extremely essential to training, as well as to life. When you build muscle strength, your tendons and ligaments get stronger too, which reduces the risk of injury. Strong muscles are more responsive, adding to a person's agility. Strength training also builds muscles, increasing the amount of metabolically active tissue in your body so you burn fat and become leaner (Raugh 2009). An excellent example is the *Biggest Loser* television show. They are not just on the treadmill. They are strength training.

If you are unfamiliar with the other measures of fitness, do not fret. The purpose behind this dimension of Functional Fitness is to help open your mind to the notion that just being strong is not the end-all of fitness. Again, if you have a goal of participating in a strongman competition, or you just simply want to be massively strong, then go right ahead and make that your focus. I would, however, still recommend that you turn to Olympic lifts such as *deadlifts* and *squats*, which are great movements that avoid muscle isolation. The essence of dimension 3 is that most people will benefit from accepting the idea that there is a great deal more to fitness than merely strength.

Strength alone is not what will keep you from needing an inhaler after playing an ad-hoc game of soccer with your grandchildren—or children for that matter. And strength alone is not what will reduce your risk of injury when you chase your dog around the yard.

Whether you play sports, or just want a better balanced level of fitness as you live your life, a Functional Fitness program may be the most efficient and effective way to increase your level of fitness in all of those components listed above.



# CHAPTER 5

## Dimension 4: High Intensity Interval Training

The fourth concept of Functional Fitness, High Intensity Interval Training, or HIIT, is built into many of the workouts at Kemme Fitness. HIIT can best be described as performing high energy burst exercises with short rest periods, divided up into cycles. It doesn't matter so much what exercise you are performing, but at what speed, length, and intensity you perform the exercise.

I will use a scenario to further explain how HIIT is used as contrasted against aerobic exercise, so you can fully understand the research I am going to discuss. Envision your friend running on a treadmill. She is going to run at a medium pace for forty five minutes to simulate a common day at the gym. In contrast, you will stand near her and do a different exercise, maybe rotating between three or four exercises. You perform the exercise(s) as fast and intensely as you can for a few minutes. Then you take a break to catch your breath, while your friend keeps running. That will be one interval. You will repeat the interval of work and rest for a total of about twenty five minutes or so. In the scenario you did intervals at high intensity, while completing your workout in twenty minutes less than your friend.

The benefits of HIIT is based upon a fair amount of research, most of which is not terribly controversial. Some of the earlier studies only used healthy college age participants and focused on very high intensity exercises. However, later studies were done with a more realistic "high" intensity to including older folks and those who were less able to be quite as intense. The totality of the research so far shows us a few things. First, the research seems to indicate that the HIIT group burned more fat tissue than the low and moderate intensity "cardio" groups who were chugging along on treadmills. (Bryner, R.W., R.C. Toffle, I.H. Ullrish, R.A. Yeater 1997; Pacheco-Sanchez, M., K.K. Grunewald 1994).

High Intensity Interval Training has also been shown to speed up your metabolism which helps you burn more calories throughout the day (Bahr, R., O.M. Sejersted 1991). Several studies show that high-intensity intervals with very short rests, maximally stresses both aerobic and anaerobic systems. To understand what that means, think about having the ability to run far and long (aerobic), but also the ability to recover from short bursts of energy more quickly (anaerobic). Further, the studies show that even longer rests between intervals are more effective for anaerobic recovery training, as the body can learn to buffer the acidosis and mobilize the anaerobic enzymes during the rest period.

The short version here is that exercising more intensely, taking breaks for recovery, and repeating the intervals, can be an extremely effective way to exercise. You can either work out less during the week, or instead workout the same and burn more fat and calories. The point here is that you can get in excellent shape and obtain the body you want without having to spend your whole life in a gym. You just need to learn how to exercise smarter, not longer.

All and all, Functional Fitness is not revolutionary in any way. I am merely saying many people could benefit from taking a more holistic and realistic approach to exercise. This begins by understanding the dimensions of Functional Fitness and changing the way we *think* about exercise.



# CHAPTER 6

## A change in thinking

The big question becomes: What do you want?

Do you want to have good looking arms and chest? Then go build your muscles up with *benches presses* and *bicep curls*.

Do you want to have good endurance? Then go running.

Do you want flexibility? Try yoga.

Do you simply want to be stronger? Read some Pavel Tsatsouline books.

Or, do you want to be able to function efficiently and effectively at a multitude of life's tasks—in all levels of life—with ease and confidence? If so, then you need Functional Fitness.

I have argued why a Functional Fitness program is the most effective and efficient way to get fit, but we have to begin by changing the way we *think* about exercise. We have to change the way we think because a large percentage of people who exercise fall into two main camps. There are the cardio people, which includes runners, bicyclists, and those that do other similar aerobics. In the other camp are regular folks who learned to exercise by following bodybuilders and weight lifters.

Of course I am simplifying things by talking about the two camps. There are clearly exceptions. Gyms do have a small percentage of people doing circuit training, and depending on what those circuits consist of, they may be considered a Functional Fitness program. However, generally you will find one group chugging it along on the treadmills, bicycles, or on the track, while the other group is pushing around weights.

We already discussed how the traditional body building exercises are muscle isolating, however, your brain operates by recognizing movements and not targeted muscles. Further, we talked about how even dynamic movements used by weight lifters, such as *deadlifts* and *squats*, are missing out on other components of fitness such as agility, endurance, speed, stamina and others. It should also be clear how both of those programs lack in the other two dimensions of Functional Fitness, as neither one is core-centered nor utilizes High Intensity Interval Training.

If we hop over to the other camp I mentioned above—the cardio group—you typically will not see any of the four dimensions of Functional Fitness either. Runners have great endurance and excel in one plane of movement. However, runners are missing out on most components of fitness including power, strength, agility, flexibility, and balance. Runners move in the sagittal or median plane, while neglecting movements along the coronal (frontal) and transverse (horizontal) planes. Planes are used to describe a way to section off your body into halves. The median plane cuts your body into left and right. The frontal plane cuts your body into front and back, while the horizontal plane is used to illustrate twisting motions at your waist.

Runners move their arms and legs from front to back, sliding along that median plane. However, no part of their body is moving side to side or is twisting horizontally. Why is this important? Think back to that scenario of carrying your couch up from the basement. You need to be able to move in all directions or planes of movement to be functional in that scenario. Runners are

essentially not preparing for many of requirements of daily living.

If runners do sprint work, they may have increased anaerobic capacity, which is essentially the ability to recover from quick bursts of energy, or the strength in your muscles to keep going. However, many runners and bicyclists move at a medium pace for a set distance or period of time with little variation, and therefore lack anaerobic capacity. Runners typically lack core strength and stability as well. Ultra marathon runner and barefoot/bareform running expert, Jason Robillard, heavily relies on a Functional Fitness program for his ultra marathon training. The benefits range from proper posture, to increased strength, to the ability to even carry a water bottle 100 miles (Robillard 2010).

What if your goal is to complete a marathon, then why switch to a Functional Fitness program? Obviously you will need to run in order to train for a race that far, however, there are benefits from cross training with a Functional Fitness program part of the week. Both short and long distance runners can get benefits from a stronger core, including the ability to maintain proper posture with a relaxed frame. Cross training for runners is also a way to fill the void when you get burned out until you are ready to add the miles back. When you do so, you might just be able to run stronger and faster.



If you are among the millions who simply wants to be as fit as you can without spending half your week in a gym, then Functional Fitness may be the most efficient and effective program for you. And depending on your goals, you may benefit from even mixing Functional Fitness into your current program. Whatever program you choose, remember the four dimensions of Functional Fitness to determine if the program is truly right for you.

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