



# FUNCTIONAL FITNESS FOR WELLNESS & SPORTS

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## ABSTRACT

The fitness industry is experiencing a renaissance. The machines have gone, the floor has been freed, and people are turning to functional training for an effective, modern workout. One of the most influential fitness trends in the recent past is Functional training. It works multiple groups at once, whilst allowing you to tailor your training towards a specific sport or activity.

Per Olof Astrand coined the term functional training in a landmark article titled "Why Exercise?" He stated, "If animals are built reasonably, they should build and maintain just enough, but not more structure than they need to meet functional requirements" (1992, p. 154). Dr. Astrand was ahead of his time in predicting that people would soon be focusing more on why they should exercise, rather than on how exercise changes their physique.

In a recent article on trends in fitness and wellness, Archer (2007) suggested that people need more of a sense of purpose for why they exercise and predicted that soon there will be a blending of fitness and wellness.

Every individual has a specific reason as to why he or she exercises. While we all have our own personal motivations and fitness goals, it generally falls somewhere between:

- 1) IT IS TO LOOK BETTER. 2) FEEL BETTER 3) OR IS TO LOOK GOOD, MUSCULAR, FEEL BETTER AND AT THE SAME TIME PERFORM BETTER IN OUR DAY TO DAY ACTIVITIES.

JUST IMAGINE YOURSELF IN ONE OF THESE SITUATIONS

FEEL UNEASY TO LIFT AND HUG YOUR CHILD STANDING UP FROM A LOW CHAIR DIFFICULTY IN LIFTING A SUITCASE INTO AND OUT OF THE TRUNK OF THE CAR.

If you can relate to any of these situations, you're not alone. In fact, that's why the concept of functional fitness has become so popular among people of all ages and ability levels. Whether you are active and want to improve your ability to perform in sports or hobbies, or you are more sedentary and find yourself having trouble maintaining your independence with daily activities, functional fitness is for you.

Our ancestors were always functionally fit because they spent their days staying active: walking and running many miles per day; gathering and preparing food; hunting/fishing; playing sports and holding athletic competitions; taking care of children; building homes; the list goes on.

In indigenous cultures, for most of history, movement was so heavily integrated into daily life that the ancestors did not need a gym or special space for "fitness," and there was no need to set aside extra time for fitness training.

Today, the world is different. People are often stuck behind a desk or sitting on a couch or in a car most of the day. Because of our sedentary lifestyles, we need to focus on spending some extra time training in order to avoid becoming sick with modern lifestyle diseases such as diabetes or obesity. Hence Fitness, today as we all know has become a buzz word. Coaches, athletes, personal trainers, athletic trainers, physical therapists and even the general public have woken up big time to fitness. But do these people choose a proper and effective fitness regime? Today we have many fitness concepts catering to different priorities but what we will be discussing today is the backbone of all fitness training. Every human being irrespective of his occupation involves himself in some or the other physical

movement and every movement has a purpose. To make the movements efficient a training method has to be purposeful.

Our bodies are an amazingly complex web of interconnected muscles, joints, fascia, ligaments, tendons, bones, and other tissues and organs that work synchronously and seamlessly. When we are lean and fit, every cubic centimeter of our bodies has a purpose, a function to help us survive and thrive. We all know that our body is this interconnected web that's really more like one unit, one muscle, Then why would we focus on only one muscle group during a workout or one type of exercise activity? The idea of focusing on only one muscle group in a workout is definitely not efficient, nor is it athletic.

Nature has designed our body to be athletic so that it can perform tasks necessary for our survival. IT is the unnatural routines of our everyday life that cause weak muscles and poor postures. On doing functional training our body becomes athletic and will be very easy to do the daily chores. To perform Daily tasks we know that we require: strength, coordination, balance, speed of reaction and flexibility and in order to improve these we need to do exercises.

At its core, exercise is all about movement. Learning and understanding each basic movement pattern is a critical first step in any type of training.

Today there are so many different opinions on how one should exercise. "What type of training is the best?" is the big question.

"Does one perform slow or fast reps? Is a a bench or a physio-ball better? One body part at a time or full body?"

The answer is that everyone should be training in a manner that relates to their individual goals. There is no set routine that equally benefits everyone who does it.

Performing a typical gym program of random exercises, three sets of ten, with one minute rests has benefits but will not be the most efficient way to attain your goals or address your specific needs for your day to day activities. Training primarily with machines and not using

free weights is inefficient because you are moving resistance along a fixed axis, not freely in space as the body normally functions.

Machines have limited functional strength transfer to real life situations in most cases, and can actually create poor motor patterns in some people. Machines have value when integrated properly but are often misused.

This is where functional training comes into picture. Functional training is best characterized by exercises done with the feet in contact with the ground. It teaches us to handle our own body weight in all planes of movement.

The muscles are trained and developed in such a way as to make the performance of everyday activities easier, smoother, safer, and more efficient. Functional exercises aim to improve the ability to function independently in the real world. In short, functional training is fitness training for life. Of course, everyone leads different lives; some spend their days lifting and carrying, others work in factories, many others sit all day long at their desks or driving in their cars. In real life, you hardly ever work just one muscle at a time. The idea of many muscles working all at once to perform smooth and efficient real-world movements is the idea behind functional exercise.

Almost everyone performs routine and familiar movements such as walking, standing up, sitting down, and bending over to retrieve something from the floor. The goal of functional training is to train the body to handle these and other real-life situations easily and safely.

It encourages the training of balance and the balancing of training. The key to functional training is integration. It's about teaching all the muscles to work together rather than isolating them to work independently. This training method is not just about getting stronger or bigger but also about reducing injuries and improving performance at the same time. It focus on building a body capable of doing real life activities in real life positions .It is the logical future of the field of performance enhancement.

In this article we are going to find out why Functional training method is best suited for everyday life.

## What's the goal of functional training?

To answer this, take a moment to think about why you train.

While we all have our own personal motivations and fitness goals, it generally falls somewhere between:

- Look better
- Feel better
- Perform better

It's that last point – **perform better** – that functional training aims to address by helping you to:

- Upgrade the way your body moves and functions
- Improve your strength across movement patterns
- Increase the physical performance of your body

Functional training (done right) has a huge carry over to life outside the gym. So, whether you're training for sport or the game of life, **everyone** can benefit from it.

Traditionally, exercise scientists and fitness professionals have focused on standard weight room-type exercises for muscle conditioning, often performed on machines. While these exercises certainly have merit, they have tended to isolate specific muscles; in other words, only a single joint may have been used, while all other joints were kept still. A good example of this is a biceps exercise performed on a standard biceps curl machine. Here, the only moving joints are the elbows; all other joints are stabilized against the chair or strategically placed pads. Although such an exercise can be an excellent way to strengthen the biceps muscles, most of us do not use our biceps in this isolated way in real life.

**Origin-** Functional training has its origins in rehabilitation. Physical therapists developed exercises that mimicked what patients did at home or work in order to return to their lives or jobs after an injury or surgery e.g., if a patient's job required repeatedly heavy lifting, rehabilitation would be targeted towards heavy lifting. Functional training involves mainly

weight bearing activities targeted at core muscles of the abdomen and lower back. Most fitness facilities have a variety of weight training machines which target and isolate specific muscles. As a result the movements with the weights do not necessarily bear any relationship to the movements people make in their regular activities or sports. Movement in sport does not involve joint isolation, and therefore FT does not train in isolation. Functional training attempts to adapt or develop exercises which allow individuals to perform the activities and movements of daily life more easily and without injuries.

**Meaning and Definition** - Functional training is purposeful training. Function can easily be defined as “performing a duty for which a person is intended for”. Function is how the body moves everyday. Therefore, FT would be to train the body for the movement it is intended for and performs everyday, or exercise that more closely mimic normal body movements. If one wants to get better and stronger at an activity, one would instinctively rehearse the activity, or at least parts of that activity. In sports we always say, the best functional training for a particular sport, is that sport! Although this is an oversimplification of the concept of functional training, it is its essence. FT trains movements, not body parts”! Today when we have a look at any gym we will see 99 percent of the people training in a non-functional manner. In fact, many gyms spend as much as 75-95% of their equipment investment on non-functional equipment. FT follows functional biomechanics, not academic anatomy. For example, in an anatomy class you are taught that the quadriceps extends the knee and the hamstrings flex the knee. Therefore, every time we look at a movement where the knee is being extended, we think the quadriceps is doing it. Conversely, every time we see the knee flexing during a movement, we think it is the result of the work of the hamstrings. What they forgot to tell us in the anatomy class is that the quadriceps extend the knee and the hamstrings bend it only when the foot is hanging in mid air; not planted on the ground. When the foot hits the ground, everything changes". every muscle from the trunk down has one simple function, the muscles of the lower body glutes, quads, hamstrings all act together eccentrically to stop ( deceleration ) the ankle, knee and hip from bending in order to prevent falling to the ground. Within a fraction of a second all the lower muscles contract concentrically and act as a unit to create the next movement (acceleration).

Many training methods break down the human body into a series of single joint actions, but this form of isolation fails to take into account the **real-world muscle action** which is why our body is pre-programmed with "basic patterns" of motor control with a relative timing sequence, or rate at which body segments move relative to one another, which allows them to be easily modified in countless ways to react to gravity, ground reaction forces and momentum or in other words the principles of functional fitness.

## PRINCIPLES OF FT-

1) **MOVEMENT SPECIFIC-** Most people use the same movement patterns throughout the day. These Movements can include : walking, sitting, standing, and carrying objects. One of the key principles in Functional training is to have the Exercises chooses which mimic the movement of the daily activities .Be specific, or mimic, the target activity. This includes all of the appropriate joints, as well as the speed and amplitude of movements. The principle of specificity dictates that we “train like we play/live”.

2) **KINETIC CHAIN PRINCIPLE** – all the movements are the result of synergistic work of different joints in multi planar pattern, e.g. a golf swing is a multi planar movement which is engraved in our brains in a neural pattern but not isolated muscle movement.

Whenever a work is to be done, it is usually well done when there is continuity in the process of doing the work. Likewise when the body is especially doing a movement of especially lifting a object, it is easily done when the weight is lifted and shifted in a continuity. The energy is transferred right from the calf muscles to the thigh to the core muscles and then shifted to the arms.

3) **ALL PHYSICAL MOVEMENTS ARE A RESULT OF GRAVITY, GROUND REACTION FORCES AND MOMENTUM.-** . We constantly use gravity, ground reaction forces and momentum to “load systems” so that we can generate power, such as in a jump or a throw.



**4) STRENGTHEN THE CORE-** Strong core muscles make it easier to do many activities, such as swing a golf club, get a glass from the top shelf and bend down to tie your shoes. Your core muscles play a huge role in your everyday activities, from getting out of bed, to walking down the street, and bending over to grab your purse-but, most importantly, they literally help you stay upright. They completely surround and support your spine and pelvis and connect your upper body and lower body, effectively transferring forces from one to the other. Strong core muscles are also important for athletes, such as runners, as weak core muscles can lead to more fatigue, less endurance and injuries. Weak core muscles can also leave you susceptible to poor posture, lower back pain and muscle injuries. Strengthening core muscles may also help improve back pain.

### **Benefits of FT-**

#### **Injury Prevention**

Functional training greatly improves strength and stability across a variety of movements. This makes your joints better protected and muscles more resistant to common injuries like strains. The well-balanced nature of training ensures that you don't develop any weak links which is a very common reason why active people so often get injured. Functional training may lead to better muscular balance and joint stability, possibly impacting the number of injuries sustained and individual's performance in a sport. The benefits may arise from the use of training that emphasizes the body's natural ability to move in three anatomical planes of motion. In comparison, though machines can often be safer to use, they restrict movements to a single plane of motion, which is an unnatural form of movement for the body and may potentially lead to faulty movement patterns or injury.

#### **Better Mobility**

Training across movement patterns ensures that your joints are moving through a full range of motion and that you are building strength across a full range of motion. This is key to maintaining proper joint function. Improving core stability also goes hand in hand with



mobility gains. A classic expression by Dr Stuart McGill – “Proximal stability for distal mobility”.

## ‘Real World’ Strength

Building muscle in isolation does not transfer well to life outside the gym. Functional training does. This means it will improve your ability to perform every day tasks like carrying your groceries, mowing your lawn and picking up your kids. It will also improve your performance across recreational physical activities that you enjoy doing – whether that’s riding a bike, hiking, climbing or something more team sport oriented like playing football or basketball.

## Athletic Performance

Functional training will improve your athleticism. Whole body strength, stability and movement quality will all be greatly enhanced. You’ll also be more robust and resilient to injury. All in all, this is going to transfer to better athletic performance. In sports, FT attempts to develop strength, power, skill, movements and energy systems of an athlete’s sport. FT places great emphasis on replicating the functional demands of sports within a training program. Functional training is not necessarily sports specific but also a prerequisite for general population to perform day today activities. It gives postural awareness and improves ability to perform daily task more easily and efficiently. FT places great emphasis on replicating the functional demands of sport within a training program.

**Important considerations-** Following considerations we need to take into account when we are implementing functional training. These points deal in one way or another with the kinetic chain principle, gravity, ground reaction forces or momentum.

1. Be specific, or mimic, the target activity. This includes all of the appropriate joints, as well as the speed and amplitude of movements. The principle of specificity dictates that we “train like we play/live”.
2. Not be restricted or supported by external means. No machines or artificially stabilized positions. If we are going to isolate and support for the sake of improving isolated strength integrate it ASAP and regularly into its functional/integrated role.

3. Eventually integrate a significant amount of controlled chaos into the training. Sports and life in general, are chaotic and unstable in nature. The more chaos an individual rehearses, the better they will react under unrehearsed-play conditions.
4. Deal with multi-joint, multi-planar movements. In real life, especially sports, movements do not occur along a single joint or a single plane of motion. Therefore, the kinetic chain must engage all three planes simultaneously.
5. Approach loading and development from the inside out. Load the system internally (i.e. bodyweight) first, then add external resistance. Develop the core of the body first, and then develop the extremities.
6. Have “causative cures” as a rehabilitative or conditioning goal. That is, the cause of an injury must eventually be part of its cure, or prevention. For example, if planting a foot and rotating to change direction injured the ACL, then, planting and rotating must eventually be part of the conditioning program to prevent the injury from reoccurring. It is specificity at its simplest form.
7. Have an evaluation criterion that is incorporated into the training. That is, the tests must be part of the training and the training part of the tests. This way a “test/evaluation” is merely seen as training by the athlete. Again, specificity of testing and evaluation!
8. Be progressive in nature. Basic conditioning and skill acquisition before advanced conditioning and skill execution. Slow and controlled to fast and chaotic.
9. Be fun and make sense. If it is not fun, then compliance will suffer and so will results. If it does not make sense, chances are it’s not functional and not optimally effective.

## EQUIPMENTS USED IN FUNCTIONAL TRAINING-

Though functional training exercise can be efficiently done using your own body weight, there are various equipment's which aid in the improvement of performance in a better way.

Some of the equipment's are – Agility ladders, small hurdles, Kettle bells, dumbbells, Battle rope, Bosu ball, Trampoline, Rowers, Steppers, Sand bags, ankle and wrist weights etc.

Functional training is the most effective approach to performance enhancement. However, not to the exclusion of all other approaches to training. YES, this includes bodybuilding and machine work. Everything has a place in the overall training scheme. Functional training must dominate that scheme within an integrated paradigm.

GO FOR FUNCTION AND YOU WILL NEVER GO WRONG.



SOME OF THE REGULAR AND PROMINENT FUNCTIONAL FITNESS EXERCISES –

