Functional Training Intro

What is it? Myths and misconceptions

Introduction

We all want exercise that is both efficient and effective. Effective means that it works. It works to improve both form and function. Efficient means that there is no wasted effort. We want exercise that works and is free of wasted or useless effort. In performing an efficient and effective squat we want to ensure minimal joint risk and maximize the ROM (range of motion), tempo (speed of movement), and direction of movement from a position of standing to the biomechanical (study of the impact of forces upon the body) limitations at the end range, or "fully seated," position. This is functional exercise. Functional exercise works because it focuses on involving the muscles we need and use daily. This means ALL muscles and their integrated functions during increasingly complex movements. Functional training only works if the exercises are successful in activating the muscles we need when we need them and in the order and sequence they are needed. This is not easy. And that is what this course will set out to do.

The techniques in this program will add another tool or set of tools to your toolbox. It is very common within the fields of personal training and exercise science for a trainer to understand the purpose of a "tool" and be able to explain why the tool is important, but not be able to apply the proper method for using the tool. A great screwdriver makes a very poor hammer. A seated knee extension machine may be great for beginners learning to activate the quadriceps, an elderly individual to achieve isolated strength or a bodybuilder to achieve greater mass, but what effect does such an exercise have on function? Will the benefits of such an exercise increase biomechanical functionality, or the ability to handle greater loads with increasing speed and control in multiple directions? A ball crunch can also be a great exercise, but not for someone with poor proprioception (coordination in hip and spinal musculature) and excessive muscle tightness in their hips (typically hip flexors). The right tool in the wrong hands or for the wrong purpose serves no benefit and either wastes time or creates new problems. If a trainer either uses a great exercise for the wrong purpose, or teaches improper technique of a great exercise, more harm than good will result. Ever hear of "good mornings"? There's a reason for that. When was the last time you saw this exercise utilized with any significant frequency? Why do you suppose that is?

Functional training is human movement training within the guidelines of proper biomechanics. The body was designed for infinite numbers of movements. Each functional movement of the body has specific capabilities in its ability to handle variable loads, containing different muscle fiber types, and biomechanical limitations. If all of these factors are not involved in program design, performance will suffer. If any of the various functional movements of the body are not enhanced, the body will lose its ability to perform them and increase its opportunities for injury or dysfunction.

If only it were as easy as "functional training is training like we move in real life". While this is

true to a point, it may be oversimplifying the case. Just because an individual "normally" (what *IS* "normal"? Normal compared to others or compared to the individual themselves?) runs with exaggerated internal rotation of the hip upon landing, excessive extension of the lumbar spine during the swing phase, and pronation at the ankle during footstrike does not make it functional! We must be careful not to confuse the dictionary's description of "function" and the means by which we utilize the concept of func-

tional exercise to improve performance, increase longevity in performance and decrease potential injury. This increase in performance from functional training benefits the athlete who wishes to avoid shin splints, patellar tendonitis, and hamstring pulls as much as the sedentary office employee who sits all day, has low back pain, anterior shoulder pain and neck pain from being in the same unorthodox position day in and day out. Functional training is more than increasing the ability to perform everyday activities.

However, with great opportunity comes great responsibility. It is the responsibility of the functional training specialist to know and understand the anatomical capabilities and limitations of each individual, by careful introductory and ongoing assessment, and to be able to apply the principles of biomechanics to enhance performance with the greatest chance for success. That ability to enhance performance begins now!

Functional Training: Top 10 Common Questions

Question 1: What is functional training?

Functional training is the utilization of exercises which involve complex, multi-joint movements of the upper body, core and lower body in each exercise. These movements enable greater overall bodily functioning and performance enhancement through improved coordination and the proper stimulation of muscular "firing" patterns. Functional training is more than just training the body for "life" movements, it is preparing the body to be able to react and function better and more efficiently in any environment or situation.

Question 2: How is functional training different from bodybuilding?

Any individual who states that either "functional", "bodybuilding", or any other single format for exercise is the only or best way to train either does not understand the concepts of the various forms of training or is too close-minded to recognize new possibilities. Unfortunately, there are too many individuals who tout the benefits of one form of training over another without determining the true needs of the body as it coincides with the goals of the individual. In other words, what is the body:

- Capable of doing?
- Meant to do?

A balance must be drawn between these two concepts. Too often choices are made based upon what an individual would like to do contrary to their current capabilities and overlooking what the body was meant to do. Just because the body CAN move in a given direction does not necessarily mean that it should be reinforced through repetitive movement patterns, with explosive tempo and heavy loads. We need more information before making these choices.

Functional training does not deny the benefits of traditional bodybuilding. Functional training does not deny the benefits of most theories of training. Training should be goal and individual specific. Many training programs sacrifice functionality and skip efforts to improve function to meet aesthetic goals. Whether the goal is aesthetics or performance, functionality will improve both. Traditional bodybuilding alone is simply not sufficient to enhance function and improve performance. There is only so much hypertrophy muscles can handle before function is impaired by overuse. The muscles surrounding the shoulder complex or glenohumeral joint are often very small and thin. With prolonged or excessive loading for building size or strength of the upper body, the shoulder can take quite a beating. Every movement involving the arms or upper torso affects the shoulders. Overuse or excessive heavy loading may create the visual effect of greater muscular size and an increased temporary ability to move heavy loads, but smaller muscles such as those of the rotator cuff (SITS - subscapularis, infraspinatus, teres minor, and supraspinatus) and scapular musculature (rhomboids and serratus anterior) were not meant to handle such loading.

When the damage done to connective tissue and overuse is observed many years later, it may be much more than a loss of muscular strength that occurs. Movement impairment is likely to occur due to overuse. Choosing an exercise or motion based purely upon feel is not an acceptable rationale. The body is intelligent and will accommodate most "requests" (such as heavy loading or excessively rapid movement while loaded or unloaded) regardless of whether this action is detrimental to the continued functioning of joints, muscles, and connective tissue.

The muscular system has a remarkable ability to dramatically and rapidly adapt to the imposed demands from almost any stimulus. In most cases, adaptations such as changes in strength or size are considered to be beneficial. However, such adaptations can also be detrimental and lead to impaired movement of the most mobile joints in the body such as the hips, shoulders, and spine. With great mobility, like that of the hips and shoulders, comes great instability. Therefore, excessive care must be taken in performing any movement utilizing the shoulders and hips to be certain that neither sustained postures or positions nor repeated or