



St. Francis Sports Medicine

Functional Strength Training Program

What is Functional Strength Training?

- Functional strength training is a training approach whereby bodily movements are trained and targeted NOT just individual muscle groups.
- Humans do not move by isolating muscle groups. Think of how a well conditioned, skilled athlete moves. Most athletes don't move like robots in just one plane, using one muscle group, therefore we should not spend a good deal of time training in this manner.
- With functional training, the body is trained in all three planes (sagittal, frontal and transverse) in a closed chain environment (feet on the floor,) in order to incorporate stability, coordination, balance, agility and proprioception into each exercise.
- Multiple muscle groups are worked in an integrated fashion with combinations of exercises performed in multiple planes of movement.
- In actuality, we are training to enhance the coordinated working relationship between the nervous and muscular systems.
- The best way to train for a sport is with a functional training program where the movement patterns of the training will closely mimic the activity targeted for improvement. You will be better prepared for the rigors of the sport and be less prone to injury.

Why not use the exercise machines exclusively?

- For sports performance enhancement it is critical for the body to move freely in training instead of sitting on an exercise machine isolating a muscle group and moving weight in one plane of motion in a stabilized, controlled environment.
- Strength machines position the exerciser to move repeatedly in the same path, an artificial environment that limits the free-flowing motions of function.
- Machines limit the ability of an exerciser to stabilize "from the ground up." This is because the client is sitting while exercising. Training this way may result in less functional improvement.
- Machines can help strengthen a weak link in the kinetic chain, but they also prevent the body from moving in the most functional manner within the three planes of motion.
- For strength exercises to effectively transfer to other movements, several components of the training movement need to be similar to the actual performance movement. This includes coordination, types of muscular contractions (concentric, eccentric, isometric), speed of movement and range of motion. In simple terms, you will be successful with functional training when you simulate an actual sporting movement or activity using all four of the components listed above.



General Guidelines for a Functional Strength Training Program

- An athlete's program needs to be individualized or designed for them. The only way to do this is to work with a coach or athletic trainer who specializes in the particular sport and can custom design a program. A qualified trainer can easily include functional training in an athlete's exercise program, whether they are recovering from an injury or preparing for competition.
- An athletic trainer will determine the frequency, intensity, time and type of exercises to be performed in the program with the proper progression. Progressive training steadily increases the strength demand from workout to workout. Most people are aware of the need for this in relation to traditional strength training; however, it is sometimes overlooked in functional training. Functional training involves varying speeds of movement or weight load gradually to make it more sport-specific.
- Supervision is critical when starting a new exercise program. The movements must be smooth and controlled and not unstable or off balance (jerky motions). Strength and stability needs to precede balance (cannot have good form with instability). Maintaining strict form will ensure maximum results and more importantly prevent injury. Prevention of injury is as important as performance.
- Always exercise in pain free ranges. Pain is the body's way of telling us there is a problem that needs to be addressed. If you experience pain in or around a joint with a movement, slow down, make modifications (check your form) or stop what you are doing. If you continue to work through pain, you will either injure yourself or exacerbate a previous existing injury.
- Core stability is crucial for any sport or activity. A stable core allows for more efficient transference of power from the lower to upper body, and an increased ability to maintain correct athletic posture over long periods of time. Be aware of the core and "Neutral Spine" when performing an exercise. Your trainer can help you recognize what neutral alignment looks and feels like. This is the position in which the spine is best equipped to deal with external stress. You should be able to move into neutral alignment while sitting, standing and moving.
- Never hold your breathe for extended periods of time with weight resistance training. As a general rule, breathe out (exhale) when performing the repetition and breathe in (inhale) when returning to the starting position.
- Periods of rest are important for reaching maximum results in your program. The body needs time to repair muscle tissue that has been stimulated with resistance training. Skip a day in between working the same muscle group. For competitive athletes, their functional training needs to fit into their competitive cycle of competition; this is called "periodization". In broad terms, this means that the program will vary throughout the year to achieve optimal results, peaking for competitions or races and building in recovery time.
- Vary exercise programs to combat boredom and to keep them challenging and fun. You will greatly increase your chances of adhering to an exercise program long term if you enjoy what you are doing.
- Check your exercise equipment or functional training aids periodically for wear and tear. Equipment must be safe and in good working order. For example, if your stability balls or elastic tubing bands have small rips or tears in them they need to be replaced immediately.
- Exercise in the proper environment with the proper exercise clothing and footwear.