

Lifting Technique information

Proper form and technique is essential to gain the most from your exercise program. Your personal trainer can provide direct instruction and hands-on supervision of your form and technique. This handout will outline the basics so you have a good understanding of form and technique. You and your trainer can use those basics to build and reinforce your individual exercise technique.

Each joint of the body has specific motions. For instance, the knee essentially bends and straightens. Some joints have several different motions such as the shoulder. It is important to know what movement you are working on in order to maintain the proper motion during the exercise.

For each motion there are specific muscles or groups of muscles that move the joint through that motion. For an exercise to be effective, it is important to challenge that muscle or muscle group. To best challenge the muscle the weight or resistance needs to be in direct opposition to the movement, and so one needs to understand how the muscle best moves that joint. This also helps to further refine the specific movement and path of movement of that joint.

Knowing the proper path of movement for an exercise is necessary to insure that the machine or exercise is working the joint and muscle both in a safe manner and to the best advantage. This is where form enters the equation. For instance if one is trying to work on the Pectorals, it is important to maintain a specific arm and elbow position throughout the exercise. Your trainer can provide these specifics as you are instructed in your program.

Another key factor is the amount of distance to take the joint through. This is called the range or range of motion. For each exercise there are certain ranges, which will best target the muscle or muscle group. Going farther can be wasted effort and time and not completing the appropriate distance or range will make the exercise less effective. Many times the effective range may be less than the full range the joint may have.

Load or resistance on the joint and muscle is important to consider as well. Initially, it is important to perfect the proper form and technique. That means performing the exercise in the right path, through the proper range, as well as with the rest of the body in a correct position for the exercise. Begin with lighter weights and master the form and technique first. Then gradually increase your resistances. This provides a safer program, and helps the muscles acclimate to the program as well. It also gives you a chance to prevent substitution.

Substitution is when other muscles take over for the prime muscle that you are

exercising. This usually happens when the prime muscle cannot perform the lift because the load is too much, or when fatigue sets in and the body tries to enlist other muscles or muscle groups to help. When this happens, the prime mover is not being effectively trained and the chance of injury increases. The overload can injure the prime mover, and the muscles that are enlisted to help may be in an incorrect position or advantage to effectively help, thus become prone to injury and undue strain. For instance, look at a biceps curl. If the weight is too much for the muscle to lift, several things occur. The shoulder and upper arm may try to raise the arm, the trunk may twist or lean to one side and the low back may arch to gain momentum to complete the lift. The person may jerk the movement to gain momentum to assist the effort. These substitution movements can injure the shoulder or mid to low back, and the biceps does not complete the lift under its own power, the exercise does not effectively allow the biceps to perform the movement through the complete proper range. Substitution is seen often and in many facilities, usually when a person is trying to use a higher resistance than is possible for them, or when fatigue sets in. Concentrate during an exercise and do not allow substitution to occur. If it is occurring, either the load is too excessive or the muscle is fatigued. Get help from your trainer. One must either reduce the load or the reps or maybe both.

The last factor is stabilization. It is related to substitution in a way. In order to maintain the proper position and path during an exercise, it is necessary for the rest of the body to remain stable. This provides a solid platform for the movement to occur around. For instance with the dumbbell biceps curl, for the biceps to just bend the elbow, the wrist (holding the weight), the shoulder, and the trunk must remain immobile. To do this the muscles of the forearm, shoulder girdle and trunk tighten and hold those body parts in place and stable. If this does not occur, the proper range, path and mechanics cannot be attained. Therefore, it is important to maintain stability in the joints above and below the one being exercised as well as the trunk itself. If there is not enough strength in those areas to maintain stability there are options. Train the stabilization muscle to attain the needed strength and stability control. Use outside aids to provide the stability, such as a training bench. Many machines have benches, platforms or chairs to assist in stabilization in order to concentrate higher loads on certain muscles or muscle groups in a safer manner. Your trainer will instruct you on proper stabilization techniques for each of the exercises.

Form and technique are important to understand and utilize in order to prevent injury and to maximize your program. Understanding proper range, path and loading is crucial. Implementing stabilization concepts and avoiding substitution patterns are imperative when one is exercising.