

WEIGHT TRAINING

What Can Weight Lifting Do For You?

1. Raises metabolism. Muscle burns more calories than fat. The more muscle you have the more calories you burn all day long.
2. Strengthens the bones as well (women are more at risk of osteoporosis.)
3. Makes you stronger and increases muscle endurance.
4. Helps avoid injuries.
5. Increases confidence and self-esteem.
6. Improves coordination and balance.

Safety

1. Always warm-up before doing any heavy lifting – jogging, stretching, or a light set at a station.
2. Use a lifting belt when using back muscles.
3. When working with free weights, have spotters available to help and use collars on the bar.
4. Know the correct technique before you start lifting. Read the directions on the machines or ask the teacher for the proper way to lift with free weights.
5. Do not try to lift too much too soon. As you progress through your program make sure you can control the weights on that level. You should be able to go through a full range of motion correctly before advancing to the next weight increase.
6. Do not hold your breath when lifting. Exhale on the lifting phase and inhale on the return phase.
7. Cool down and stretch after your workout to avoid soreness.
8. No horseplay and **CLEAN UP** all weights – off the bars and off the floors!!!

Considerations

1. Frequency - Lift 2 to 3 days a week with 48 hours rest before lifting with the same muscle group.
 - Advanced programs require lifting everyday but focus on specific body parts each day, example – biceps/triceps Monday, hamstrings/quads Tuesday.
 - Do not lift with the same muscle group 2 days in a row.
2. Weight - Begin by trial and error selecting a weight you are able to lift properly 12 times for 3 sets for a basic lifting program (this changes as you become advanced,) increase the amount of weight on 2nd and third sets
3. Rest - Allow 1.5 to 2 minutes rest between sets for a basic program.
 - To save time a lifter could lift using a second muscle group during the rest period of the first muscle group
4. Sets - Basic program consists of 3 sets up to 6 sets for advanced.
5. Reps - 8-20 reps with low weights for muscle hypertrophy (getting bigger)
 - 2-6 reps with moderate weight for strength
 - 2-3 reps with high weight for power
 - 1-3 reps with very high weight for peaking
6. Last Reps of a Set - Should be difficult to complete using proper form.
7. Partners/Spotters - Used for safety and to help lift the weight off of the bar or you.
8. Machine Weight Exercises – Designed to perform a specific exercise.
 - Rarely require spotters, easy to use, good way for a beginner to start a weight lifting program.

Terms

- Barbell – steel bar 4 to 7 feet long, weight can be adjustable or set, requires use of 2 arms
Collar – clamps used to keep weight plates on a barbell
Decline Bench – head is lower than hips
Dumbbell – Short bar 12 to 16 inches long, weight can be adjustable or set, used in one hand only to find muscle imbalances between the body's two sides
Exercise Ball – used for body weight exercises, dumbbell exercises can be performed on these
Free Weights – barbells and dumbbells.
- not limited to a specific type of exercise
- requires other muscles to help control the weight during each exercise
Incline Bench – head is higher than hips
Repetitions (reps) – Number of times exercise is repeated without stopping
Resistance – Amount of weight or pressure muscles work against
Set – Specific number of repetitions
Strength – see definition below under Fitness Components
Weight Plates – added to barbells to increase the weight

Principles

- Overload – Working harder than normal, increase the load either by weight or repetitions, as muscles adapt to the load and it feels easy.
Progression – Overloading gradually.
Specificity – Exercise specific muscles expected to develop, do strength exercises that closely resemble the movement you eventually want to use.

Fitness Components Worked Through Weight Lifting

1. Strength – ability of a muscle to produce force. It is measured by the amount of weight you can lift in one repetition. *Power* is a different component. $Power = strength + speed$.
 2. Muscular Endurance – ability of a muscle to produce force repeatedly over a period of time. It is measured by the number of repetitions of the movement or skill.
- **Strength and Muscular Endurance are best improved through strength training.**
3. Cardiovascular Endurance – capacity of the respiratory system (lungs and blood vessels) and the circulatory system (heart, arteries, capillaries, veins) to supply oxygen and nutrients to the muscle cells so an activity can continue for a long period of time.
 4. Flexibility – range of motion possible in the joints. This is controlled by the muscles, tendons, and ligaments. Flexibility can be increased through stretching.

****Cardiovascular endurance can be improved through strength training in a circuit type of workout.**

****Flexibility can be improved through strength training correctly and performing each exercise through the full range of motion.**

Major Muscle Groups

1. Biceps
2. Triceps
3. Shoulders – deltoids, trapezius
4. Chest - pectorals
5. Back - lats
6. Hamstrings
7. Quadriceps
8. Calves – gastrocnemius, soleus
9. Abdominals