

# WEIGHT TRAINING



## History:

- Weight training trains and develops the muscles for power, the ability of the muscle to do maximum work within the shortest amount of time.
- Strength training increases bone density and tendon and ligament thickness, and decreases the risk of injury by increasing overall structural strength.
- Muscle atrophies at a rate of about 6.6 pounds per decade of age past 20 years old if not exercised.
- Strength training can avoid muscle atrophy due to the aging process.

## Benefits of Weight Training:

- Helps control blood pressure
- Reduces body fat
- Improves posture
- Increases muscle strength
- Raises basal metabolic rate
- Increases bone density
- Prevents injury from normal activities
- Improves physical appearance

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## **Guidelines For Lifting Weights:**

- Lift weights from the floor with legs and not the back.
- Use a smooth full range of motion.
- Don't jerk the weights.
- Don't lock the knees (keep them slightly bent).
- Don't put pressure on the teeth because the enamel can crack.
- Don't flex or hyperextend the back.
- Always concentrate during lifting.
- Un-oxygenated muscles can cramp; breathe on exertion.
- Always stretch prior to lifting, work up to maximum desired weight, and then work back down to starting weight.

## **Free- Weight Spotters:**

- It is important to use a spotter whenever free weights are raised over the lifter's head.
- A spotter's responsibility is to insure the safety of the user during the execution of the exercise.
- The spotter must observe the condition of the user and try to anticipate exhaustion.
- The spotter must also insure that balance and an even lift are executed, that proper breathing technique is adhered to, and that proper form is being executed by the user.

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## Determining the Amount of Weight to be Lifted:

- A repetition is referred to as a *rep* and is a single lift of the weights.
- A group of reps is called a *set*.
- An exercise is generally composed of 3 to 4 sets.
- The amount of weights to use is dependent on the goal and fitness level of the participant.
- If the goal is to build muscle at the fastest rate, then 6 to 8 repetitions should be done with a heavier weight.
- If the goal is building or toning, then 8 to 12 repetitions should be done with a medium weight.
- If the goal is to simply tone or maintain the existing muscle strength, then 12 to 16 repetitions should be done with a lighter weight.
- Participants should never use the heavy weight category if they have not lifted before or if significant amount of time has passed since they have last trained.
- When initially beginning a training program, it is recommended to use the lighter weights for at least 3 to 4 weeks before progressing to the medium weights.
- A basic method that can be used to determine the weight to use for a particular exercise is to simply estimate the initial weight.
- A participant should complete as many as possible.
- If the goal is to build muscle at the fastest rate and the participant can complete more than 8 reps, the weight is too light. If the participant cannot complete more than 6 reps, then the weight is too heavy.
- According to the American College of Sport Medicine (ACSM), the recommended minimum weight training is one set of 8 to 12 repetitions of eight to ten exercises that work the major muscle groups at least two times per week.

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## Order of Muscle Groups When Exercising:

Prior to strength training, warm-up and flexibility exercises should be performed. The warm-up should include at least 5 minutes of aerobic activity to provide increased blood oxygen levels and increased body temperature, which will increase the effectiveness of the strength-training workout.

Exercise sessions should be organized so that the larger muscle groups are exercised first, followed by the smaller muscle groups. For example:

- Abdomen
- Hips and lower back
- Upper legs
- Calves
- Chest
- Upper back
- Shoulders
- Triceps
- Biceps
- Waist
- Neck

## Muscles Exercised by Specific Exercise:

### Chest Exercises

### Muscle Groups

- |                 |                                     |
|-----------------|-------------------------------------|
| ➤ Bench Press   | Pectorals, Triceps, Deltoids        |
| ➤ Incline       | Fly Pectorals, Anterior Deltoids    |
| ➤ Incline Press | Upper, Pectorals, Triceps, Deltoids |
| ➤ Decline Press | Pectorals, Triceps, Deltoids        |
| ➤ Push-up       | Triceps, Anterior Deltoids          |

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## Back Exercises

- Shrugs
- One-Arm Row
- Pull-up
- Back Extension
- Seated Row
- Lateral Pull-Down

## Muscle Groups

Trapezius  
Trapezius Latissimus Dorsi  
Biceps, Rhomboids  
Erector Spinae,  
Erector Spinae, Latissimus Dorsi, Biceps  
Latissimus Dorsi, Biceps

## Shoulder Exercises

- Overhead (Military) Press
- Lateral Raises
- Front Raises
- Prone Fly

## Muscle Groups

Deltoid Triceps,  
Deltoid  
Deltoid  
Deltoid, Rhomboids

## Arm Exercises

- Barbell Curl
- Dumbbell Preacher Curl
- Seated Hammer Curls
- Seated Inlined Curls
- Seated Overhead Extension
- Lying Extension

## Muscle Groups

Biceps, Forearm  
Biceps  
Biceps, Forearms (Brachialis)  
Biceps  
Triceps  
Triceps

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## Lower Body Exercises Squat

- Squat
- Front Lunge
- Calf Heel Raise
- Hip Extension
- Hip Abduction
- Hip Adduction
- Leg Press
- Leg Extension
- Leg Curl

## Muscle Groups

Gluteus Maximus, Quads, Hamstrings  
Gluteus Maximus, Quads, Hamstrings  
Gastrocnemius, Soleus  
Gluteus Maximus  
Abductors, Outer Thigh  
Adductor, Inner Thigh  
Gluteus Maximus, Quads, Hamstrings  
Quads  
Hamstrings

## Abdominal Exercises

- Crunches/Inclined
- Crunches/Leg Raises
- Side Crunches

## Muscle Groups

Sit-up Upper Abdomen  
Lower Abdomen  
Outer Obliques