

8th Grade Weight Training Information



INTRODUCTION

Weight training is an exercise that utilizes resistive movements, typically with free weights or exercise machines. It is typically used to gain strength, hypertrophy or endurance. Weight training has become popular for several reasons: for the sport, to enhance performance in other sports such as football or track and field, or as a means of exercise. Weight training programs will produce benefits such as increased strength, increased muscle size, an increase in fat-free mass, and decreased stress levels.

VOCABULARY TERMS

- ❑ **Concentric Muscle Action**- when the muscle shortens because the contractile (human) force is greater than the resistive (weight) force
- ❑ **Eccentric Muscle Action**- when the muscle lengthens because the contractile (human) force is less than the resistive (weight) force
- ❑ **Muscular Strength**- the ability of a muscle to exert a high force while contracting at a high rate of speed
- ❑ **Hypertrophy**- the muscular enlargement that results from weight training
- ❑ **Muscular Endurance**- ability of a muscle to continue to perform without fatigue
- ❑ **Spotter**- someone who assists in the execution of an exercise to help protect the athlete from injury
- ❑ **Rest Period**- time dedicated to recovery between sets or exercises
- ❑ **Frequency**- refers to the number of training sessions conducted per day or per week
- ❑ **Intensity**- effort expended during a training session
- ❑ **Time**- refers to the length of time a training session is conducted
- ❑ **Repetitions**- number of times an exercise is repeated without stopping
- ❑ **Set**- a specific number of repetitions
- ❑ **Overload**- a principle of exercise that states the only way to improve fitness is to exercise more than the normal
- ❑ **Progression**- a principle of exercise that states a person should start slowly and increase exercise gradually
- ❑ **Specificity**- a principle of exercise that states specific exercises must be performed to develop specific aspects of the body.

- ❑ Isometric Exercises – a type of strength training which the joint angle and muscle length do not change during contraction. The joint / muscle are worked against an immovable force.
- ❑ Isotonic Exercise – exercise when a contracting muscle shortens against a constant load. (concentric and eccentric)
- ❑ Isokinetic Exercise – Exercises which are performed with a specialized apparatus. This ensures that no matter how much effort is exerted, the exercise movements take place at a constant speed.

TRAINING CONCEPTS

For Strength Gains

- ❑ Heavy Weight
- ❑ Few Repetitions (3 to 6)
- ❑ Long Recovery Period (2-5 minutes between sets or exercises)

For Hypertrophy (muscle size)

- ❑ Moderate Weight
- ❑ Medium Volume of Repetitions (6 to 12)
- ❑ Moderate Recovery Period (30 seconds to 2 minutes between sets or exercises)

For Muscular Endurance Gains

- ❑ Light Weight
- ❑ High Volume of Repetitions (12 or more)
- ❑ Short Recovery Period (30 seconds between sets or exercises)

MUSCLES-MACHINES



Listed below are several exercises/machines that can be found in a weight room. Next to each exercise there is a name of the muscle group(s) that is being used while performing the exercise.

<u>Exercise/Machine</u>	<u>Muscle Group(s)</u>
Chest Press	Pectoralis Minor/Major
Leg Extensions	Quadriceps
Leg Curls	Hamstrings
Pull Ups	Latissimus Dorsi

Box Jumps	.....	Gastrocnemius
Arm Curls	.....	Biceps
Sit Ups	.....	Abdominals
Shrugs	.....	Trapezius
Shoulder Press	.....	Deltoids
Squats	.....	Glutes
Dumbbell Lunges	.....	Quadriceps, Hamstrings, Glutes
Triceps Extensions	.....	Triceps
Pectoralis Flys	.....	Pectoralis Major
Back Extensions	.....	Erector Spinae