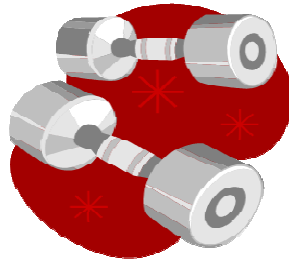


# Strength & Conditioning Packet

## Unit 1- Basics & Benefits



Over the course of this unit we will be learning about weight room safety, etiquette, various machines/equipment and the benefits of strength and conditioning training.

### **Directions for completing packet:**

Packets will be distributed at the beginning of each unit and are due upon the completion of the unit. The three worksheets at the back of the packet are due\_\_\_\_\_.

**NO late work will be accepted. All work turned in after the due date will result in a zero.**

### **Worksheets Due:**

1. Student Response Packet (Use Power Point - 5 questions)
2. Crossword
3. Equipment Worksheet

**\*\*\*\*Make sure your NAME is on EVERY page.\*\*\*\***

# Strength & Conditioning: Basics and Benefits

## Unit – 1 (Intro)

### Unit Essential Question(s):

Why is it beneficial to me to participate in Strength & Conditioning and to attain knowledge of weight room equipment, safety and etiquette?

### Benefits of strength & conditioning training:

- More energy, Improve athletic performance & decrease chance of injury
- Improved self-image/self efficacy (toned muscles, muscle mass)
- Weight-bearing exercise helps to prevent osteoporosis (bone density)
- Improve mood, management of stress & counter feelings of *depression*
- Improve performance of heart & lungs (Cardiovascular Health)
- Improved metabolism (BMR), weight & appetite control
- Better ability to fall asleep and stay asleep
- Strength contributes to the overall efficiency of the human body (posture etc)
- Quicker healing process and improves immune system

Just some statistics...

- Only 19 % of all high school students are physically active for 20 minutes or more in physical education classes every day during the school week.
- Nearly 50% of young people aged 12-21 are not vigorously active on a regular basis.
- Currently, more than 33% of youth aged 2 to 19 - more than 25 million youth - are overweight or obese.
- Child obesity has been shown to reduce life expectancy (Kids are going to die younger than they should)

**Overweight children and adolescents have about a 70% chance of becoming overweight adults... If this trend continues it could cut two to five years from the average life span"**

What about fitness & academics?

- There is a direct correlation between more cardiovascular activity and better grades.
- Top academic performing schools; where at least 90% of the kids pass the state assessments tests – 80% of the students are fit.
- At the poorest performing schools, only 40% make the fitness grade.



## **Weight Room Equipment:**

When you step into a weight room/gym setting you will notice a wide variety of devices and exercise equipment to choose from. Exercise equipment falls into two categories based on the type of exercise provided: cardio or strength training.

**Cardiovascular Fitness Equipment:** Cardiovascular, or cardio, exercise helps to increase heart health and burn fat by raising the heart rate. Cardio exercise equipment includes stationary bikes, treadmills, elliptical trainers, and stair climbers. Most exercise equipment of this type at a typical gym includes a display screen which tracks your heart rate and provides options for customizing your workout. Other information about your workout, such as the amount of miles (or kilometers) you have traveled and your total calories burned, may also be displayed. Regularly varying the type of cardio machine you use will help you to exercise more effectively.

**Exercise equipment for strength training** is more varied. Free weights, weight machines, and balancing or resistance equipment can all be used for strength training. Weight training helps to build muscular strength and helps to maintain the results of cardio exercise.

**Free weights** come in many different shapes, sizes, and weights. Round weights may be used on their own or placed on the end of barbells. Small handheld barbells and medicine balls are other options. Many people prefer free weights to weight machines because you must use muscles throughout your entire body to maintain balance as you lift them. However, weight machines are safer and easier to use than free weights and may allow you to lift greater amounts.

**Strength Training machines** have a stack of incremental weights attached to a pulley which you can lift by pulling or pushing other parts of the machine. This type of exercise equipment is more user-friendly than free weights, as there is often a clear illustration of correct use posted on each machine. You can use a pin to select the amount of weight you want to lift and adjust the machine to accommodate your body type.

**Resistance and balance exercise equipment** can also be effective for strength training. This type of exercise equipment can be used on its own or in combination with free weights. Doing crunches on an inflatable exercise ball or lunges on an inflatable pad work muscles all over your body by forcing you to keep your balance as you complete strength building exercises. Resistance equipment such as elastic bands can build muscular strength without the use of weights.

Some strength training exercise equipment does not include weights, but allows you to use your body weight for resistance. Chin up bars, which work the biceps and triceps, and crunch machines, which work the abdominals, are examples of this type of exercise equipment.

Most gyms provide plenty of options for you to customize and vary your workout. Before using any exercise equipment for the first time, you should be sure that you understand how it works and how to use it most effectively.

Below are some examples.....

## Cardio Machines/Devices:

*Treadmill*



*Stair Steppers*



*Elliptical*



*Row Machines*



*Stationary Bikes*



## Strength Training Machines/Devices:

*Chest Press*



*Leg Press*



*Cable Pulley Device*



*Smith Machine*



*Assisted Pull-up Machine*



## Resistance (Body Weight) Devices:

*Chin – Up/ Dip Bar*



*Decline Ab Bench*



*Power Rack*



*Bench Press*



## Other Equipment:

*Barbell*



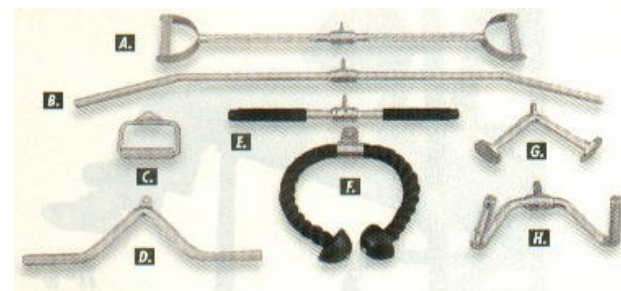
*Dumbbell*



*Clips*



*Various Cable Handles*



## **Pros & Cons of using free weights vs. machines:**

### **Free Weights-**

#### **Pros:**

Research shows that free weights promote quicker strength gains and they require more balance and coordination than do the weight machines. Free weights are also more versatile than machines because they allow for more variations in range of motion.

#### **Cons:**

Free weights require the help of a spotter, and if not used properly can result in more injuries than machines. You also must hand load all the weights you would like to use. You must be able to balance the weight as well as be coordinated enough to go through the entire range of motion. Can cause the workout to be longer because of having to change the weights by hand. Must use clamps to secure the weights on barbells.



### **Machines-**

#### **Pros:**

If you are a beginner or if you are working out alone, machines are the best bet. Machines provide safety by utilizing a more controlled motion and can specifically isolate certain muscle groups. You also don't necessarily need a spotter with machines because it limits your range of motion to ensure a safe and smooth path. Can result in quicker workouts based upon not having to get up and change the weight by hand.

#### **Cons:**

While limiting the range of motion; you don't utilize the stabilizing muscles of the joints. Machines are not portable. They are big complex machines. They don't build coordination or stabilization. Machines are not one size fits all; you must adjust to fit your body style. Only work in 2 planes of motion (ROM).





## Safety in the Weight Room



### 5 Most Important Rules of the Weight Room:

1. No Horseplay in the weight room (Running, Playing etc). The weight room is not a “jungle gym” if you are not using the weights properly you can be seriously injured.
2. Be aware of your surroundings & stay focused while exercising or spotting
3. Always use a spotter when using free weights & always use collars when using barbells
4. Report any equipment that may be functioning improperly immediately
5. Do not use more weight than you can handle

### 10 most common causes of weight room injuries....

1. Incorrect technique or poor training
2. Using too much weight
3. Bad spotting
4. Incorrect use of forced reps or negatives
5. Training too often
6. Not securing the weights
7. Inadequate warm up or not stretching
8. Improper dress or footwear
9. Inappropriate behavior (horseplay etc.)
10. Lack of concentration



## Weight Room Etiquette

When you use a weight room, remember that others also have to use it. Many people who lift weights require intense concentration to maintain proper form and to avoid injuring themselves or others. Avoid any behavior that is distracting.

- Wear proper athletic shoes and clothing.
- Carry a workout towel and wipe off equipment when finished.
- Ask for assistance if you do not know how to use equipment.
- Avoid making loud sounds (banging weights, yelling, dropping dumbbells).
- Ask if you may "work in," and always let others work in.
- Be patient when waiting for equipment, and be efficient when using equipment while others are waiting for you.
- Re-rack weights and return all other accessories to their proper locations.
- Be aware of others around you. Don't stand in front of the weight rack while lifting; you may be blocking others from getting to the weights.



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## Vocabulary – Unit 1

**Spotter**

**Etiquette**

**Free Weight**

**Barbell**

**Dumbbell**

**Clips**

**Self-Image**

**Stress**

**Cardio Devices**

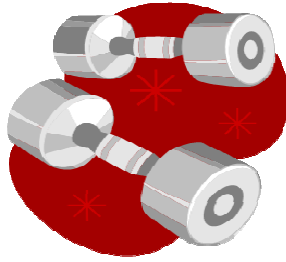
**Free Weight Devices** (*Ex. Power Rack, Bench Press*)

**Strength Training Machines** (*Ex. Chest Press, Leg Press*)

**Resistance Devices**

# Strength & Conditioning Worksheet

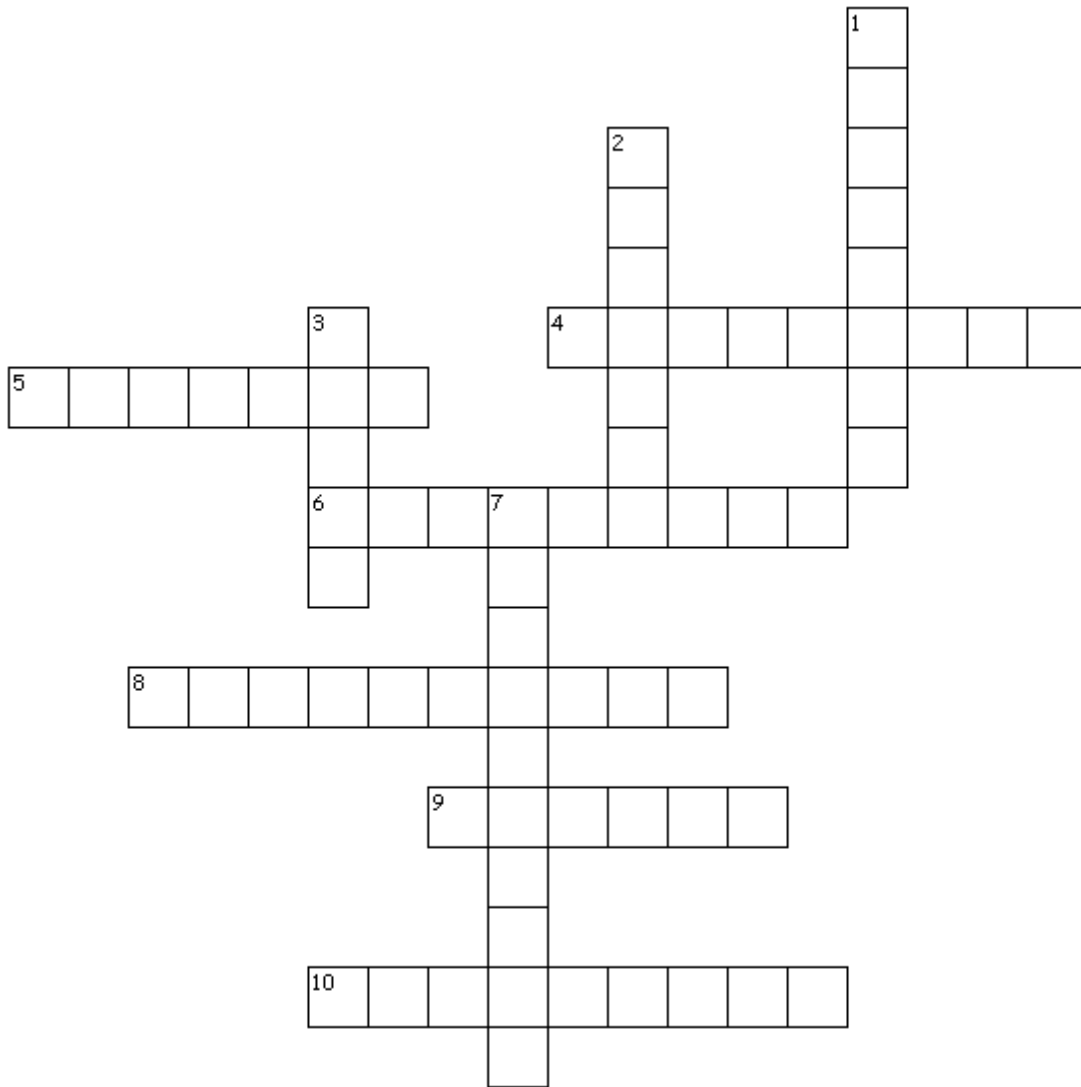
## Unit 1: Basics & Benefits



1. List 2 benefits to regularly participating in strength & conditioning?
  
2. What are 3 differences between using free-weights and using machines?
  
3. Improper dress or footwear can lead to a weight room/training injury.
  - A. True
  - B. False
  
4. All these are examples of body weight devices except \_\_\_\_\_.
  - A. Pull-up Bar
  - B. Dip Bar
  - C. Decline Bench
  - D. Chest Press Machine
  
5. List 3 examples of weight room etiquette.



# Unit -1: Basics & Benefits

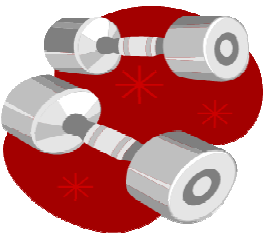


## Across

4. cleaning off the equipment after you use it is an example of weight room \_\_\_\_\_.
5. bar lifted by two hands that weight can be added at each end, lifted for sport or exercise.
6. known as a squat rack, is an item of weight training equipment designed to allow for a safe free-weight workout using a barbell.
8. is weight, such as a barbell or dumbbell, that is not attached to another structural device and is raised and lowered by use of the hands and arms in weightlifting.
9. strength & conditioning training can help manage \_\_\_\_\_.
10. exercise device consisting of a continuous moving belt on which a person can walk or jog while remaining in one place.

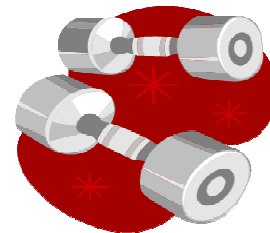
## Down

1. weight consisting of a short bar that is lifted with one hand only for muscular development and exercise.
2. who is responsible for watching and guarding a performer during practice to prevent injury, as in gymnastics or weightlifting.
3. are used to hold weights securely on a barbell.
7. exercise machine that uses a combination of stair-climbing and a treadmill actions.



# Strength & Conditioning Worksheet

## Unit 1: Basics & Benefits



Match the picture letter with the correct equipment name.

\_\_\_ Dumbbell

\_\_\_ Elliptical Trainer

\_\_\_ Chest Press (Machine)

\_\_\_ Decline Bench

\_\_\_ Barbell

\_\_\_ Stair Stepper

\_\_\_ Leg Press (Machine)

\_\_\_ Power Rack

\_\_\_ Plates (Free Weight)

\_\_\_ Bench Press

