## WEIGHT TRAINING AND FITNESS

Health, strength, skill and beauty are among the rewards of a systematic program of exercise. However, the benefits are not physical alone; the ultimate achievement will be a well-adjusted, coordinated and controlled mind and body with which to meet life.


Weight lifting and resistance exercise are considered by medical and other authorities to be the best form of exercise for the average person. With the proper equipment and a planned program, you can accomplish your objective, whether it be build muscles and lose weight or build muscles and gain weight.

Start gradually, vary the routines, stop when you are tired, exercise in a ventilated room, follow the instructions, and if you maintain your program, benefits will soon become evident.

There are several different types of lifts and programs available for Weight Training. They are all worthwhile and will do some good if certain guidelines are followed. The following are some "musts" if you want to see some solid gains in strength, size, definition of muscles, and quickness.

1. You must adhere to an organized program for $6-8$ weeks. You will notice positive gains much sooner than this, but at the 6 week mark, significant gains should be noticed.
2. High intensity work-outs are the most efficient. Work hard, but do not over-do it. A 3045 minute high intensity work-out will be sufficient.
3. Make sure you do all the exercises, all the sets, and all the reps for each workout. Don't leave things out.
4. A general rule for weight training is: To build size-use heavy weights and low reps. For muscle definition and muscle tone-use light weights and high reps.
5. If fatigue sets in, where you can't finish the sets and reps or your exercise and your strength seems to be going down, take 3-7 days off totally and rest the muscles. They need recovery time. Usually a few days off will bring them back.
6. For best results, a person should work different muscle groups each day. For instance, the lower body one day and the upper body the next.
7. The number of exercises to be done is based on what you want to accomplish and how much time you have. Large muscles come first.
8. To appreciatively work the muscles with significant gains in mind, one should do a minimum of 3 sets per exercise, with a total of 24 (e.g. 10/7/7) to 36 (e.g. 12/12/12) repetitions, depending on the amount of weight used. The heavier the weight, the fewer the reps, the lighter the weight the higher the reps.

## Weight training workout:

1. You will design your own weight training program based on the type of weight training you wish to do (refer to class discussion).
2. Your program must be planned and recorded daily on the weight training card provided. You will turn in your card with your weight training and fitness evaluation on $\qquad$ . Anything turned in after that day will be a deduction of 1 letter grade per day it is late.
3. You will work both arms and legs on the same day.
4. You will work with a partner so you will have a spotter for free weight work.
5. Observe all safety procedures in the weight room.
6. All students must do $\mathbf{3 0}$ abdominal exercises each day. You may choose the type of ab workout you would like-you must have it approved by your instructor.
Along with your 30 abdominal exercises choose 4 of the following:
a. Bench press
b. Front lat pull-down
c. Bent arm fly
d. Double arm curls
e. Single arm curls
f. Triceps pull-down
g. Triceps extension

And choose 4 of the following
a. Hamstring curl
b. Quadriceps extension
c. Dumbbell lunges
d. Dumbbell squat
e. Calf machine
f. Calf raises
g. Leg press

You may substitute other exercises IF approved by your instructor.

## Remember these things when utilizing a weight training program:

1. Raise the weight slowly and smoothly eliminating bouncing, jerking, and throwing. (2 second count)
2. Lowering the weight is an important aspect of weight training as the same muscles are used to lower as raise the weight. (4 second count).
3. Proper breathing is essential in weight training. Lifters should exhale when exerting or lifting the weight and inhale while lowering the weight. (i.e. "blow the weight away")
4. Using momentum to lift a weight is poor technique.
5. Muscles work in pairs to perform an action so it is important to emphasize both muscles in training to keep the movement fluid and prevent injury during activity.
6. Larger and stronger muscles should be exercised first and proceed to the smaller ones (buttocks, legs, torso, arms, abdomen).
7. Muscle failure should occur on the $9-10^{\text {th }}$ rep. When you can do 12 reps of an exercise without muscle failure you are to add a weight.
8. A better workout is obtained by working with free weights than with the universal weight machine. Example: If you are weaker on the left arm when doing a bench press on the universal your right are can compensate. If you are doing a bench press with free weights your right arm will not be able to compensate for a proper lift.

## TERMINOLOGY:

FITT Principle

Target Heart Rate
Resting Heart Rate
Active Heart Rate
Agonist Muscle
Antagonist Muscle
Barbell
Collars
Curl
Endurance Training

Extension
Free Weights
Full Range of Motion

Muscle Failure

Reps
Sets

Frequency: How often a person works out.
Intensity-How hard a workout is.
Time-How long a workout lasts.
Type-The kind of activity being done in a workout. Optimal heart rate during activity that will promote fitness. Heart rate when your body is at rest.
Heart rate when the body is active and exercising. The muscle in the pair that performs the action(arm curlbiceps are agonists)
The muscle in the pair that resists and stabilizes the joint (arm curl-triceps are antagonists)
A long bar to lift heavy weights, it weighs 45 pounds
Attachments to put on the end of the bar to keep weights on the bar.
An exercise that brings 2 body parts together-arm curl Weight training designed to improve your muscular endurance (ability to do things longer) by lifting less weights more times.
An exercise that straightens a joint-quadriceps extension The use of barbells and dumbbells in a weight program To lift and lower a weight all the way to achieve maximum benefit
The point at which the muscles cannot properly lift the weight
The number of times you do a specific exercise
The number of times a group of repetitions (reps) of each exercise is performed

| Strength Training | To work out to develop strength by using weights (more <br> weight and fewer reps) |
| :--- | :--- |
| Weight Training | Using free weight machines in an exercise program <br> A weight machine where many different exercises can be <br> done and the weights are attached |
| The Universal | Training for a specific result. Ex-weight training to <br> increase muscular strength or jogging to increase aerobic <br> endurance. |
| Principle of Specificity |  |

## WEIGHT LIFTING DOES THE FOLLOWING:

1. Produces greater speed
2. Greater flexibility
3. Increase muscular endurance
4. Increase strength, power and muscle tone
5. Help prevent injury in sport
6. Help rehabilitate joints and muscles after injury
7. Promote muscular growth

## ETIQUETTE:

1. When you are done with a machine, put your weights away
2. When you are done with a machine allow someone else to use it
3. Don't make rude comments to others
4. Encourage your partner
5. The room is small and enclosed so good personal hygiene is a must.

## SAFETY:

1. Don't attempt any lifting without proper instruction and supervision
2. Check machines before lifting and adjust machine for your ability. Stretch out before lifting
3. Proper gym attire is required. Tennis shoes must be worn
4. Collars and spotters are a must when using free weights
5. Place unused weights on the rack, not the floor.
6. Load bars evenly
7. Ask for help on free weights when you reach muscle failure so your partner to assist you
8. Do not distract lifter
9. Be aware of bars sticking out
10. Insert all pins fully
11. Always use a slow and controlled movement
12. Use the correct breathing-exhale when lifting the weight
13. Use the full range of motion
14. Bend your knees when lifting weights onto the bar
15. Grip the bar so that it is balanced evenly
16. Use a closed grip-thumbs wrap around the bar
17. Keep weights close to your body
18. Communicate with your spotter
19. NO HORSEPLAY!

## FITNESS

No matter your choice of activity, the benefits of regular exercise are undeniable. But true fitness is more than simply meeting the recommended 30 minutes a day of physical activity.

There are many ways that people evaluate their level of fitness. Some focus on maintaining a healthy weight, while others determine how fit they are by their ability to do a certain number of push-ups or run so many miles. However, fitness is the ability to balance all 5 of these components - cardiovascular endurance, muscular endurance, muscular strength, flexibility and body composition - in a way that works for you.

## BENEFITS OF DAILY PHYSICAL FITNESS ACTIVITIES:

1. Helps combat chronic diseases-heart disease, diabetes, obesity, stroke, some cancers
2. Increases energy levels
3. Help manage weight
4. Improves balance and coordination
5. Improves mood
6. Increases self esteem
7. Promotes better sleep
8. Enhances social well being
9. Improves cognitive function (learning)

## 5 COMPONENTS OF HEALTH RELATED PHYSICAL FITNESS

1. AEROBIC (CARDIOVASCULAR) ENDURANCE: This is the ability of the heart, lungs and vascular system to deliver oxygen-rich blood to working muscles during sustained, moderately intense physical activity.
a. Maintain workout for 20-30 minutes at your target heart rate (jogging, swimming, bicycle riding)
b. Workout 3-4 times per week
c. Increase intensity moderately to avoid injuries
d. Allow your body to recover by alternating days and staggering the intensity of the workout. Listen to your body for signs of overwork.
2. FLEXIBILITY: The ability to stretch your muscles and the tendons and ligaments that connect them to your bones- (Pilates, yoga)
a. Stretch before a workout AFTER warming up.
b. Stretch after workouts to help relax strained muscles and prevent cramping.

c. Stretching should not be painful stretch gently so you feel it but not so you that it hurts.
d. For best results stretch at least 5 days a week.
3. MUSCULAR STRENGTH: The capacity of your body's muscles to generate extreme amounts of force in a short period of time utilizing anaerobic energy.
a. Use exercises that work specific muscle groups using proper form to isolate individual muscles. (Weight lifting)
b. Warm up and stretch before workouts and stretch after workouts
c. Use the overload principle but increase the amount of weight in workouts gradually
d. Rest-give a muscle group 1-2 days recovery time after a workout.
4. MUSCULAR ENDURANCE: The capacity of your body's muscles to generate small amounts of force for a long period of time.
a. Use exercises that work specific muscle groups using proper form to isolate individual muscles
b. Warm up and stretch before workouts and stretch after workouts
c. Use the overload principle but increase intensity gradually
d. Rest-give a muscle group 1-2 days recovery time after a workout
5. BODY COMPOSITION: The amount of fat in the body compared to the amount of lean mass (muscle, bones etc.).
a. Healthy males body should be approximately $12-18 \%$ fat and females between 14-20\%
b. Avoid being under fat. You need to have some fat for your health.

Note: A scale can tell you your weight (gravitational force to the earth), but it does not take into consideration the makeup of your body. Remember, muscle weighs more than fat. This means that you can lose fat and inches without losing a pound if you are gaining muscle. Measuring your body composition will allow you to see a clear picture of your progress.


## 6 COMPONENTS OF SKILL RELATED FITNESS:

There are six skill-related fitness components: agility, balance, coordination, speed, power, and reaction time. Skilled athletes typically excel in all six areas.

1. Agility is the ability to change and control the direction and position of the body while maintaining a constant, rapid motion. For example, changing directions to hit a tennis ball.
2. Balance is the ability to control or stabilize the body when a person is standing still or moving. For example, in-line skating.
3. Coordination is the ability to use the senses together with body parts during movement. For example, dribbling a basketball. Using hands and eyes together is called hand-eye coordination.
4. Speed is the ability to move your body or parts of your body swiftly. Many sports rely on speed to gain advantage over your opponents. For example, a basketball player making a fast break to perform a layup, a tennis player moving forward to get to a drop shot, a football player out running the defense to receive a pass.
5. Power is the ability to move the body parts swiftly while applying the maximum force of the muscles. Power is a combination of both speed and muscular strength. For example, fullbacks in football muscling their way through other players and speeding to advance the ball and volleyball players getting up to the net and lifting their bodies high into the air.
6. Reaction Time is the ability to reach or respond quickly to what you hear, see, or feel. For example, an athlete quickly coming off the blocks early in a swimming or track relay, or stealing a base in baseball.
