

Weight Room Study Guide

Safety

- No horseplay
- ALWAYS use a spotter
- Lift in a slow controlled manner
- When lifting heavy weights, use 2 hands & bend at the knees.
- Always warm-up before lifting to prevent muscle pulls.
- Do not put hands near movable parts.
- Instructor must be present to be in weight room.

5 Basic Fitness Components:

1. Muscular Strength-

- Judged by 1 repetition maximum (1 rep max.)
- The maximum force that a muscle group can exert in one contraction.
- Strength is increased by lifting low repetitions (4-6) with higher weights.

2. Muscular Endurance-

- Many repetitions against resistance considerably less than the maximum.
- Endurance is increased with higher repetitions & lower weight (15-20)

A typical exercise program to increase strength & endurance will fall in between 3 sets of 10-12 repetitions.

3. Flexibility-

- Ability to move a body part through a full range of motion. Stretching after the muscle group is thoroughly warmed up can increase flexibility.

4. Cardiovascular Endurance

- Ability to take in & deliver oxygen efficiently. You can increase endurance through regular (3-4x) week, aerobic exercise at least (20-30) minute duration. Examples of aerobic exercise- jump-rope, running, aerobics, stair master, biking, etc. (weight training is not considered aerobic).

5. Body Composition

- Body Composition is the measure of what your body is composed of. It is measured by means of a skin fold caliper. This instrument takes your body fat %, & by calculation you can figure out how many lb's of fat you are composed of & how many lb's of lean body mass you are. From these #'s, one can monitor what they are gaining & losing in terms of fat & muscle. Adding muscle to your body by weight training can change body Composition. This not only adds muscle, but helps an individual burn fat at the same time.

Machines on the Circuit and the primary muscle they work:

Leg extensions	Quadriceps
Leg Curl	Hamstrings
Leg Press	Full Leg
Toe Raise	Calves
Abductor	Outer thigh
Adductor	Inner thigh
Lat pull down	Back/Lat muscle
Chest Press/Bench	Pectoralis Muscle/Chest
Assisted Pull up	Back/Biceps
Assisted Dips	Triceps
Shoulder/Military Press	Shoulders/deltoids
Bicep Curl	Biceps
Tricep Press down	Triceps
Upright Row	Shoulder/Traps
Crunches	Abdominals
Seated Row	Middle Back
Hyperextension	Lower back

Rules of Lifting:

1. Always exhale on the exertion & inhale while letting the weight down slowly.
2. Lifters talk in terms of sets & repetitions
3. Repetitions are a complete cycle of movements
4. Sets are how many cycles of an exercise should be done
5. The example earlier stated that the basic way to train is 3 sets 12 reps
6. When 3 sets of 12 reps become too easy, it is time to increase the weight.

Free Weights:

- Consist of exercises performed with a dumbbell or barbell. They are not part of the training circuit of machines. Free weights are better used for the more advanced person.

Nautilus Equipment:

- Machines that are designed to work all major muscle groups. They are designed to be safer than free weights because cables support them. They are good for all levels of training, especially beginners.