Functioning at a healthy level and preventing disease consist of the 5 Components of Fitness:

Cardiovascular endurance- The ability of lungs, (respiratory system), and heart (circulatory system) to take in and transport adequate amounts of oxygen to the muscles for activities that are performed over long periods of time.

Muscular Strength- The force produced when a muscle group is in the process of lifting, moving, or pushing a resistance; the greatest force the muscles can generate against a resistance.

Muscular Endurance- The ability of a muscle to maintain a continuous contraction or repetition over a period of time.

Flexibility- The movement of a joint through the full range of motion.

Body composition- The proportion of body fat to lean body tissue. The human body is composed of a variety of tissue types. The so-called “lean” tissues, such as muscle, bone, and organs are metabolically active, while adipose, or fat tissue is not. Normal body fat percentages, or those associated with no increased risk for diseases are generally 12-20% for men and 16-25% for women. Too little under 5% for males, under 12% for females. Too much- over 25% males, over 32% females.

Training guidelines:
F.I.T.T.
Frequency- The number of exercises or how often you work out per week.

Intensity- The level of physiological stress on the body during exercise (60-85% of Max Heart rate for cardiovascular endurance-varies for the other components).

Time- Amount of time utilized for each exercise or between exercises. (Between 30-60 minutes is recommended for a good workout).

Type- What kind of exercise you before (include strength training in your workouts to maximize benefits).

How to Find Your MAX HEART RATE: Take 208- (.7X your age): To get your Target Heart Rate always use 60%-85%.
MUSCLES

TRAPEZIUS - Located on the upper back, triangular in shape, aids in lifting the shoulders and adducting the shoulder blades (scapulas). Military press, shoulder shrugs, upright rowing and bent rowing.

LATISSIMUS DORSI - Large broad muscle of the back. Aids in adduction of the arms. Straight arm lat pulls, bent rowing, palms away pullups.

DELTOIDS - This muscle is located on the shoulder and is the prime abductor of the arm. Has three sections: anterior, middle, and posterior. Rowing, military press, standing flies, and cleans.

PECTORALIS MAJOR - This muscle covers the chest and attaches to the upper part of the humerus. Adductor of the arm and shoulder. Aids in the act of throwing. Push ups, bench press, supine flies, and deep dips.

BICEPS - Upper anterior part of the arm. Flexor of the elbow joint. Curls and open grip pullups.

TRICEPS - Upper posterior part of the arm. Extensor of the elbow joint. This muscle is the antagonistic muscle to the biceps and very important in the act of throwing. Pushups, dips, last part of military press.

GLUTEUS MAXIMUS - A large thick muscle that forms most of the buttocks. It is extensor of the hip joint. Not used in ordinary walking. Squats, cleans, and sprints.

QUADRICEPS - This group of muscles is located in the anterior thigh, and they are primary extensors of the knee joint. The sartorius and rectus femoris aid in hip flexion. Vastus lateralis and the vastus medialis are the other two muscles in this group. Squats, cleans, leg press, jumps, knee extensions, and sprints.

HAMSTRINGS - This group of muscles is located in the posterior thigh. Flexors of the knee joint and along with the gluteus maximus help extend the hip. Biceps femoris, semitendinosus, and semimembranosus make up this muscle group. Sprints, bicycling, and leg curls.

GASTROCNEMIUS AND SOLLEUS - These muscles are located on the posterior lower leg (calf). Ankle extensors. Heel lifts; hops, jumping, rope jumping, and sprints.
AB’S- Slang for abdominal muscles
BARBELL- Weight used for exercise, consisting of a rigid handle 5’-7’ long. A 7’ bar weighs 45 pounds.
BICEPS- Large muscle located at the front of the upper arm, below the shoulder.
CIRCUIT TRAINING- A series of exercises, performed one after another, with little rest between. Resistance training in this manner increases strength while making some contribution to cardiovascular endurance as well.
COOL DOWN- A gradual reduction of the intensity of exercise. Helps avoid pooling of blood in the legs and may help reduce muscular soreness.
COLLARS- Clamps used to secure weights onto bar. Should be used on all free weight exercises regardless of lifter’s experience and the amount of weight being used.
DELTOIDS- Large muscles of the shoulders. They act as the prime mover in all arm elevation movements.
DUMBBELL- Weight used for exercising. Hand held bar about 14” long. Provides greater range of motion and helps teach balance.
ENDURANCE- The capacity to continue a physical performance over a period of time.
FATIGUE- A loss of ability to continue a given level of physical workload or performance.
FIVE POINT CONTACT- Method utilized while performing the bench/incline press. Both feet, butt, shoulders and head all are in contact with either the floor or the bench.
FLEXIBILITY- Range of motion around a joint.
GASTROCNEMIUS- The calf muscle.
HAMSTRING- Big muscle along back of upper leg which extend from above the hip to below the knee.
LATTISIMUS DORSI- “Lats” for short-the large muscles of the upper back.
MAX- Maximum effort for 1 repetition of a weight training exercise. Also expressed as “1rm” or “one rep maximum”
OBLIQUES- Muscle on either side of the abdominals that rotate and flex the trunk.
PECTORALIS- “Pecs” for short-large muscle group of the chest.
PROGRAM- Also called a “routine”, is simply something you follow that tells you when and what exercise to do, as well as the sets and repetitions required.
PRONATED GRIP- Overhand grip where palms are down and thumb is wrapped under the bar.
QUADRICEPS- “Quads” for short-Large muscle group located in the front of the thigh.
REP OUT- Repeat same exercise movement until you are unable to continue. Also is considered “failure”.
REPETITION- One complete movement of an exercise.
REST INTERVAL- Pause between sets of an exercise which allows muscles to recover partially before beginning the next set.
SELECTORIZED WEIGHTS- A set of weights that are stacked vertically and a pin is used to select the amount of weight desired by the lifter.
SET- A group of repetitions of an exercise movement done consecutively, without rest, until a given number, or momentary exhaustion is reached.
SPOTTER- A person who helps an individual complete a given movement.
STRENGTH TRAINING- Using resistance training to build maximum muscle force.
SUPINATED GRIP- Underhand grip where the palms are up and the thumb is wrapped over the bar.
TRAPEZIUS- “Traps” for short-the large muscles of the upper back and neck.
TRICEPS BRACCII- Muscles of the back of the upper arm.
WARM-UP- Raising the body temperature to help facilitate proper stretching and preparation for more strenuous activity.
Weight Training Guidelines and Programs

1. Workout Routine:
   a. Warm-up (aerobic) - five minutes low intensity to break a sweat. (Examples: running, cycling, walking, etc.)
   b. Pre-exercise stretching - hold at a gentle stretch for a ten count; do one to two repetitions of each stretch, no bouncing. Stretch muscles that you'll be using during your workout. (Example: hamstrings, calves, quads and chest)
   c. Weight training - choose iron programs described on the back of this page.
   d. Post-exercise stretching/strengthening - 1 to 2 minutes/muscle group for stretching, and add abdominal and low back strengthening if they have not been included in your weight training routine.

2. Number of exercises for each muscle group per session: From 1 to 3.

3. Order of exercises: Start with large or multiple muscle groups (chest), followed by small muscle group (triceps).

4. Amount of weight: The correct weight should produce fatigue by the last repetition in each set, or determine resistance by using a percentage (typically 60-80%) of your one repetition maximum. (Example: If you can lift a maximum of 50 lbs, one time during leg extension, 70% of that would be 35 lbs.)

5. Rest: 48 to 72 hours between workout sessions for each muscle group.

6. Frequency (Number of sessions per week for each muscle group): 2 to 3 sessions, on non-consecutive days.

7. Lifting technique: Maintain proper postures and move through the lift in a slow, controlled manner (usually 2-4 count for the push/pull/contraction with a 4-6 count for the relax/recovery phase).

8. Range of motion: Each lift should be done through a joint’s entire range of motion.

9. Muscle balance: Balance the program to include opposing muscle groups (Example: hamstrings oppose quadriceps.)

10. Criteria for progression: Increase the resistance or weight of an exercise when you are able to complete all repetitions of the last set without muscle fatigue.

11. Warm-up and cool-down: Brief aerobic exercise will warm the muscles, making them flexible and ready for activity. Cool-down exercises are important to return the body to resting level.

12. "No Pain, No Gain": Wrong attitude! Pain is your body's warning signal to stop before you hurt yourself.