Presentation:
Ralph is a sedentary 36-year-old male tool and die engineer. His father survived a heart attack at age 70. Ralph reports that his blood pressure has been recorded at 136/86 mmHg and that his total cholesterol is 250 mg/dL, with an HDL of 45 mg/dL. His BMI has recently been measured at 30, his hip circumference is 40 inches (102 centimeters), and his waist girth is 47 inches (119 centimeters). Ralph reports no signs or symptoms and indicated that he quit smoking seven months ago.

Risk Factors:
- Sedentary Lifestyle
- Body Mass Index ≥ 30
- Total Cholesterol is ≥ 200 mg/dL

Risk Stratification:
Ralph is considered to be at the moderate risk stratification level in regards to exercise. This is because he has greater than or equal to two, in this case three, risk factors but does not experience any signs or symptoms or have any diseases. At this level of stratification Ralph is at an increased risk to experience an acute cardiovascular event. However, Ralph should be able to safely engage in low to moderate intensity physical activities without the necessity for medical examination and clearance. An exercise program targeted to moderate workloads, a medical exam and supervision are not necessary.

Program:
Based upon Ralph’s information, the program I create will be for moderate intensity. This means he will be working out at least 5 days a week at a moderate intensity. Considering Ralph has not only two risk factors, but three, I have decided to keep his target heart rate to be about 40% of his VO2R. To do this I will plug his resting heart rate and age predicted heart rate max into the Karvonen equation, where his % intensity desired will be between 40% and 50%. I think this is an important way to start considering his previously sedentary life style.

\[
\text{THR} = \left(\text{HRmax} - \text{HRrest}\right) \times \text{% intensity desired} + \text{HRrest}
\]

From this equation we will find a target heart rate that will be able to be monitored throughout his workouts to determine an increase or decrease in intensity.
Program:

Monday-Wednesday-Friday------Aerobic

Warm Up: 5 to 10 min

Foam Rolling
Walking/Jogging around a track or on a treadmill
Dynamic Stretching of entire body
  • Knee Raises
  • Alternate Quad Stretch Hold each 3-5 sec, switch, continue
  • Trunk Twists
  • Arm Circles, alternate directions and locations, etc.
There is room for many different options in stretches. The main goal of this is to get blood flowing and the heart rate increased.

Conditioning: 20 min

Treadmill Walk/Jog program

  • Ralph will be instructed to walk or jog on the treadmill, one minute on, one minute off, for at least twenty minutes. If Ralph is not able to jog, to increase intensity, the incline will be increased on the “one minute on” phase.
  • The “one minute off” phase is intended to be a leisurely walk. If Ralph is unable to jog, the incline would then be removed in the off stage.
  • As Ralph progresses through his program, the duration of this exercise can be increased in a variety of ways such as 2 to 1, two minutes on, one minute off. This program is intended to be progressive as his fitness improves.
  • It is necessary for him to track his heart rate, knowing when he can increase and when he should back off.

Cool Down: 5 to 10 min

Slow walk to gradually decrease an elevated heart rate but still keep muscles moving to avoid cramping and discomfort

Stretching: 10 minutes

Ralph should partake in a variety of static stretches that engage his whole body, especially his legs.
Tuesday-Thursday--------Resistance Training

The primary goal for Ralph will be mostly muscular endurance mixed with hypertrophy.

Warm Up: 5-10 min

Foam Rolling
Walking/Jogging around a track or on a treadmill
Dynamic Stretching of entire body
- Knee Raises
- Alternate Quad Stretch Hold each 3-5 sec, switch, continue
- Trunk Twists
- Arm Circles, alternate directions and locations, etc.

There is room for many different options in stretches. The main goal of this is to get blood flowing and the heart rate increased.

Work Out:

We are working towards high reps, with lower/moderate weights, with low rest in between. It is my goal to improve Ralph’s muscular endurance and technique before we focus on strength which may come in the next progression of the program.

The exercises are grouped together to show an alternation between push a pull. Each exercise requires approximately 30-90 seconds rest in between each set. The program is designed so that while one muscle group is resting, the other can be worked by alternating the exercises each set.

Squat: 3 x 10
RDL: 3 x 10

DB Bench Press: 3x15
DB Row: 3x15

Bicep Curls: 3 x 12
Box Dips: 3 x 12

Medicine Ball Twists: 3 x 40

Cool Down/Stretch:

A variety of static stretches focusing in on the muscles worked.