

Chapter 7

Cardiovascular Fitness

Cardiovascular Fitness

- The body's ability to continuously provide oxygen to muscles as work is performed over an extended period of time.
- Your heart is a muscle.

Circulatory System

- Blood and blood vessels
 - Heart
 - Arteries
 - Capillaries (Deliver oxygen and nutrients to the cells of your body)
 - Veins

Left side of heart pumps blood to the body.

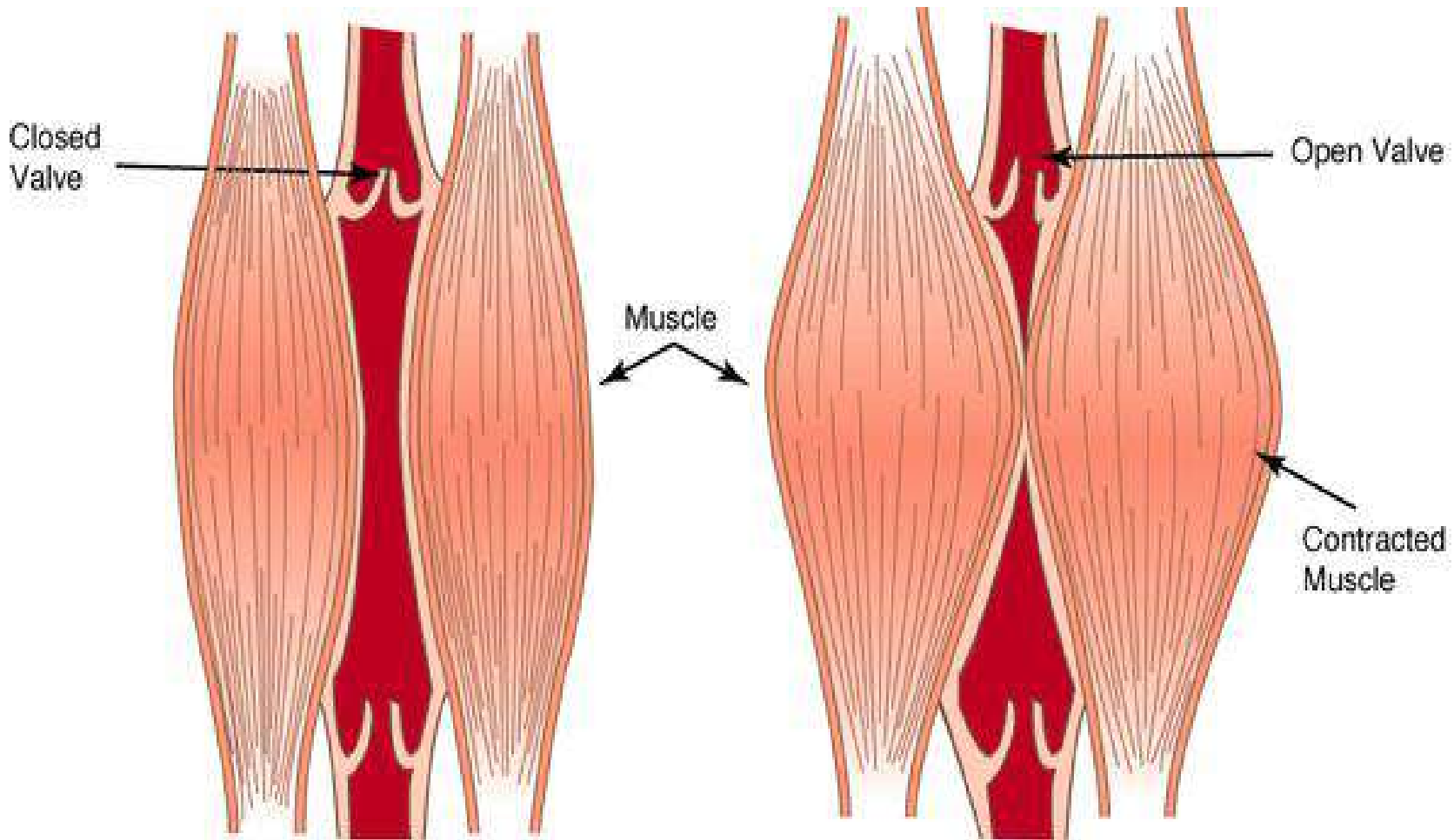
Right side pumps blood to the lungs.

Respiratory System

- Lungs and air passages

Muscles role in returning blood to heart

- Veins have valves



Resting Heart Rate

Take pulse just after waking in the morning in the same body position.

The best place to take pulse-wrist or neck.

Low resting heart rate usually indicates a good level of aerobic fitness.

Marathon runner	45-60 bpm
Fit individual	60-75 bpm
Not so fit individual	70-85 bpm
Not so fit smoker	80-110 bpm
Not so fit obese smoker	90-120 bpm

Target Heart Rate

This is where you want your exercise heart rate.

$220 - \text{Age} = \text{Maximal Attainable Heart Rate}$

60-90% of that is the Target Heart Rate Zone

Recovery Heart Rate

- Check pulse after exercise session.
- Heart rate 5 min. after workout= 120 bpm
- Heart rate 10 min. after workout=100 bpm
- If heart rate is above this amount-
Decrease intensity (run slower)
- If heart rate is below this amount-
Increase intensity (run faster)

Blood Pressure

- **Systolic** pressure-heart is contracting
 - This is the top number
- **Diastolic** pressure-heart is relaxing
 - This is the bottom number

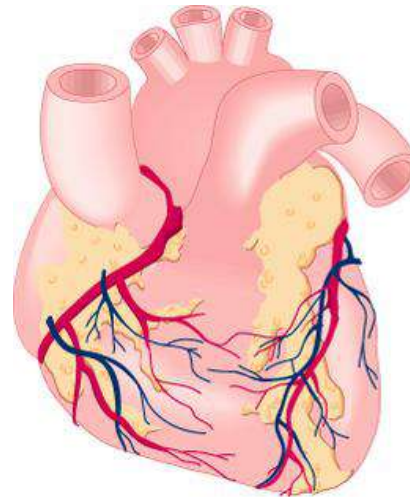
Normal blood pressure 120/80

High blood pressure is a risk factor for heart disease and stroke.

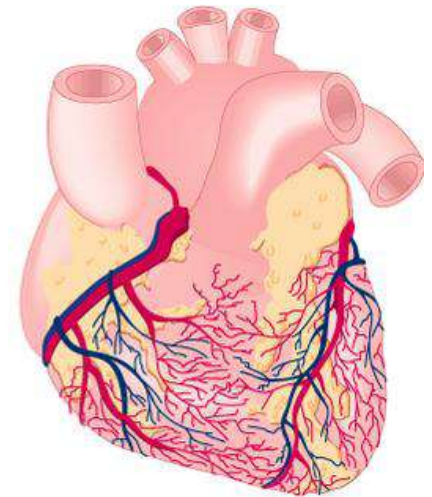
Cardiovascular disease is responsible for over 40% of all deaths in adults.

Cardiovascular benefits of exercise

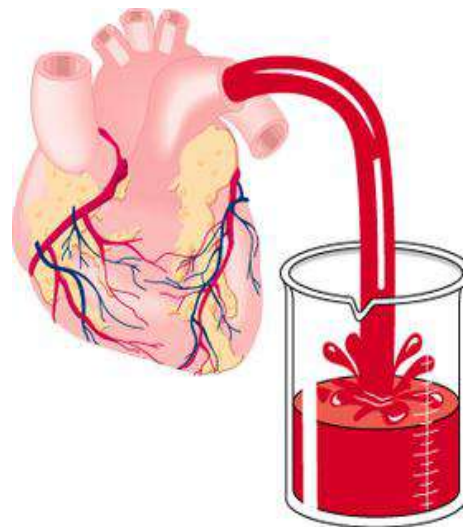
- Active people –Less heart disease, less likely to die from heart attacks. Develop extra coronary arteries in heart.
- Heart muscle gets stronger
- Improved ability to concentrate, cope with stress and improved self-concept.



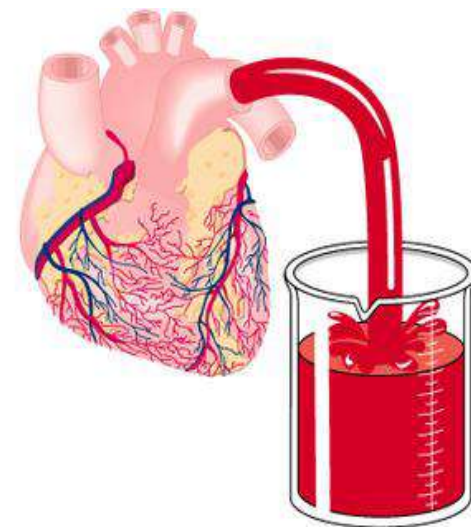
Normal Circulation



Extra Vessels from Exercise



Inactive Person



Active Person

To improve cardiovascular fitness you need to:

- Use large body muscles.
- Exercise 20 min-60 min
- Use oxygen (aerobic exercise)
- Do at least 3 times/week
- Examples: jogging, swimming, jump rope, bicycling