Cardiovascular Endurance

Cardiovascular endurance refers to body's ability to take in oxygen and deliver it to working muscles. People who are in shape have a more efficient oxygen delivery system than people who are out of shape.

The muscles of the body require oxygen to work and the harder they work the more oxygen they require. Without sufficient oxygen, muscles fatigue and their ability to perform work diminishes.

Individuals get in shape and improve their oxygen delivery system by participating in aerobic activities. These activities include, but are not limited to, walking, jogging, swimming, cycling, cross country skiing, and any activity that uses the larger muscles of the body in a rhythmic fashion for extended periods.

Participation in aerobic activities helps the body adjust to increasing workloads. Good endurance is a critical component of injury prevention. As people fatigue, they lose the ability to react quickly to new situations and meet increasing physical demands.

Like other muscles, the more the heart is exercised, the more efficient it becomes. The chart below displays how efficient the heart becomes as a person's cardiovascular condition improves.

HEARTBEATS	AVERAGE HEART	ATHLETIC HEART	DIFFERENCE
1 minute	75	50	25
1 hour	4,500	3,000	1,500
1 day	108,000	72,000	26,000
1 year	38,880,000	25,920,000	12,960,000
Lifetime	2,799,360,000	1,866,240,000	933,120,000

CARDIOVASCULAR ENDURANCE

Talking Notes

POINTS TO REVIEW

1. **Breathing in through your mouth is only a small part of getting oxygen to the working muscles.**
   Think of your body as a machine, such as a car. Being out of shape is like having a dirty fuel filter. You can breathe as much as you want, or fill your car with gas, but you are still going to have trouble reaching your final destination. Getting in shape is like cleaning out the fuel filter and improving the flow of fuel.

2. **You can improve your condition by performing simple aerobic activities.**
   Simply by taking a daily walk, riding a bike a few times a week, or performing any of the other activities considered aerobic, you can improve your physical condition. Our bodies operate on an overload principle. If you ask your body to do more, it will adapt to make it easier to do more.

QUESTIONS FOR DISCUSSION

1. **Why is breathing more complex than just opening your mouth and taking a breath?**

2. **What are some activities that can improve your cardiovascular system?**

3. **Why is endurance an important part of being able to work efficiently and safely?**