INTRODUCTION

Aerobic exercise is sometimes known as "cardio" - exercise that requires pumping of oxygenated blood by the heart to deliver oxygen to working muscles. Aerobic exercise stimulates the heart rate and breathing rate to increase in a way that can be sustained for the exercise session. In contrast, anaerobic ("without oxygen") exercise is activity that causes you to be quickly out of breath, like sprinting or lifting a heavy weight. Examples of aerobic exercises include cardio machines, spinning, running, swimming, walking, hiking, aerobics classes, dancing, cross country skiing, and kickboxing. There are many other types. Aerobic exercises can become anaerobic exercises if performed at a level of intensity that is too high. Aerobic exercise not only improves fitness; it also has known benefits for both physical and emotional health. Aerobic exercise can help prevent or reduce the chance of developing some cancers, diabetes, depression, cardiovascular disease, and osteoporosis.

An aerobic exercise plan should be simple, practical, and realistic. Specific equipment (such as cardio machines) may be used but is not necessary for successful aerobic exercise. Regular aerobic activity such as walking, bicycling or swimming can help you live longer and healthier. Need motivation? See how aerobic exercise affects your heart, lungs and blood flow. Then get moving and start reaping the rewards.

How your body responds to aerobic exercise

During aerobic activity, you repeatedly move large muscles in your arms, legs and hips. You'll notice your body's responses quickly.

You'll breathe faster and more deeply. This maximizes the amount of oxygen in your blood. Your heart will beat faster, which increases blood flow to your muscles and back to your lungs.

Your small blood vessels (capillaries) will widen to deliver more oxygen to your muscles and carry away waste products, such as carbon dioxide and lactic acid.

Your body will even release endorphins, natural painkillers that promote an increased sense of well-being. These factors happen to start with the letter “S”, stamina, strength, suppleness, speed & skills.

Better performance and physical fitness are closely interconnected. Being physically fit not only helps player’s better performance, it also helps players live longer physical fit. Physical activity is defined as any movement that spends energy. Exercise is a subset of physical activity, but it is an activity that is structured and planned. Aerobic exercise, is known as cardio exercise, can give long-term effects to your body, especially your cardiorespiratory system. Your cardiorespiratory system consists of your heart, blood vessels and lungs. The effects of aerobic exercise can be an effective way to increase the endurance of your cardiorespiratory system. By
maintaining the aerobic phase of exercise for at least 20 to 30 minutes, three to four times a week, the cardiorespiratory system can improve in many ways.

Increase in Stroke Volume at Rest

Stroke volume is the amount of blood pumped from your heart each time it beats. Each time you exercise, you increase the oxygen intake for your body. Your heart begins to function at a higher level than it previously did. Over time, your stroke volume will increase by pumping more oxygen-rich blood throughout your body while you are at rest. With consistent aerobic exercise, your heart is working at a higher efficiency with less work.

Lower Resting Heart Rate

Now that more blood is pumping with each beat or contraction, you will begin to notice a reduction in your resting heart rate. Aerobic exercise has produced a greater oxygen delivery through the red blood cells within your body. Since the heart is functioning at a higher level, more blood is pumping fewer times per minute. This benefit is seen as a lower resting heart rate with regular aerobic exercise.

Lower Blood Pressure

Blood pressure is the measurement of the amount of pressure as your heart contracts and sends blood through your body. With more oxygen being delivered to the body with each heart beat through aerobic exercise, your heart is now better conditioned. It does not need to work harder to rest or deliver blood to the body. A consistent aerobic exercise program will help to lower your blood pressure reading and relax the body and mind.

The effects of training are widespread and may be observed throughout the body. There are a number of bio-chemical changes occurring at tissue level. Likewise there are a number of systematic changes primarily affecting the circulating and respiratory system. Finally there are a multitude of other changes such as lowering of blood cholesterol and triglyceride levels and change in body composition.

By nature human beings are competitive and aspire for excellence in every given field. Sports are not an exception. Not only individuals but nations also want to show their supremacy in the field of sports. This friendly rivalry has inspired and motivated all to sweat and strive, to run faster, jump higher, throw longer and exhibit greater strength, endurance and skill in the competition. Sports play a major role in the lives of practically every one the players, the coaches, the officials and spectators.

Sport is a worldwide phenomenon today. The need and importance of performance in sports has increased rapidly in the last few decades. It has a very prominent role in modern society. It is important to an individual, a group, a nation and indeed the world. Throughout the world sports has a popular appeal among people of all ages and both sexes. Now-a-days specific
training has been playing a predominant role with emergence of different methods having sustained scientific knowledge for outstanding achievements in various levels of competition. The sportsman is able to achieve a high level of performance by concentrating on major areas like physical power, physiological efficiencies, psychological development, application of biomechanics and environmental adjustments. For the achievement of such a great extent we need some specific training and that training is only adapted by the individual if its body fit enough to work hard. Aerobic exercises improving their basic fitness and systems so that he or she can easily adapt the specific training.

Heart rate reserve

Your heart rate rises during aerobic exercise. It can rise from 70 beats per minutes (bpm) at rest to as high as 170 bpm or even higher during exercise, depending on the intensity of the exercise, your fitness level, your age, and other factors. Whether you’re training is aerobic or anaerobic is determined by the intensity of your workout, and monitoring the intensity is the key to know which one you’re doing.

For many individuals, simply monitoring how the body feels while exercising is enough to determine the proper aerobic intensity. I recommend "warm and slightly out of breath" as the cue for aerobic activity; that is if you feel warm and slightly out of breath while you’re exercising, then that’s good enough.

One more thing that I like to mention in my study is that, the scholar conduct a pre-test for the subjects and make the necessary groups randomly as per the requirement of the study and out of the so many aerobic activity scholar plan to set –of aerobic exercises in which all body parts will involve so that all the parts will conditioned properly. That exercise plan is as follows.

1. 20-30 minutes jogging in a progressive manner and load will be increasing gradually.
2. Followed by callisthenic exercises.
   Such as neck rotation, hip rotation, forward bending, trunk twisting.
4. Followed by stretching exercises.

**Cardiovascular variables**

ENDURANCE

HEART RATE

BLOOD PRESSURE

**PULMONARY VARIABLES**

VITAL CAPACITY

RESPIRATORY RATE

FORCED VITAL CAPACITY
PEAK FLOW RATE

VO2 MAX

BREATH HOLDING CAPACITY