

# CHAPTER I

## INTRODUCTION

*“Life is not merely to be alive, but to be well.” - Marcus Valerius*

We are living in an era during which people throughout the world have changed fundamentally their perception of human life and how it can be lived. In primitive cultures people had to be fast, agile and strong to survive – that is, they had to have a certain level of motor-performance fitness. Nowadays, with our reliance on technology and mechanization we no longer need to be physically active to survive in the outside world, yet our essential needs have not changed, and in order to function effectively and efficiently our entire system – physical, mental and spiritual – requires daily activity. Its lack is an issue of serious illnesses, deficiencies and premature death. Therefore in contemporary culture, health fitness has become a matter of survival, both for the individual and eventually for the species and is recognized as a crucial goal in modern life.

The modern age of rapid industrialization, urbanization and globalization has brought about a drastic change in the lifestyle of people in the entire world. With this change, most people hardly pay attention to their lifestyle and end up having an unhealthy life. Nowadays many people seem to take care of their cars and their

computers than they do of their bodies or their health. This results in an epidemic of lifestyle related diseases like obesity, coronary heart disease, hypertension, diabetes mellitus, bronchial asthma and psychoneurotic diseases like anxiety, depression and stress. These diseases are especially increasing in the developing countries where the lifestyle is changing rather quickly, causing a significant loss of lives and a huge economic burden to society.

## **HEALTH**

Sound health is a prerequisite for every man's earthly existence. Health is a fundamental human right and a world-wide social goal. It is the foundation stone on which human beings build their lives. A saying like 'health is wealth' signifies its need and importance far more than any riches. Health is often taken for granted, and its value is not fully understood until it is lost. To exist without diseases and work efficiently, all body systems need to be on the go. There has to be sufficient coordination between different organs to lead an active life.

Good health generated by physical fitness is the logical and necessary starting point for the pursuit of excellence in any field. A healthy and fit citizen is an asset while a weak person is a liability: is a truism; the former commands and the latter demands. Realizing that human efficiency and productivity are very much dependent on one's health and fitness, almost all the countries have been compelled to give

adequate attention to this vitally important aspect of their national life.  
(Kumari, 2009)

## **HEALTH: PAST AND PRESENT**

Historically, people wanted to be healthy and well in order to live a long life. That may have made sense in the 1900s when the average life expectancy was 47 years, but today, with life expectancy almost doubled, we are just as concerned with the quality of life. In the 1940s, the world health organization defined health as a “state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” (WHO, 1947) This definition was significant at the time because it challenged public health officials to see health as something more than the absence of disease. In recent years, this statement has been amplified to include the ability to lead a “socially and economically productive life”. (WHO, 1978)

Today, with most infectious diseases under control, diseases that can be directly linked to lifestyle are now among the leading causes of death. Poor health is highly related to the way we live. A majority of the problems seem to arise from the ‘Hurry, Scurry and Worry’ principle. We are all the time busy, busy, busy earning money and losing health and then busy, busy, busy losing money in trying to earn back health. A faulty lifestyle gives rise to premature heart attack, high blood pressure, high cholesterol, stroke (paralysis), cancer, osteoporosis, osteoarthritis,

gastric ulcers, irritable bowel syndrome, sexual disorders, a state of anxiety, sleeplessness, depression, addictions such as alcoholism and nicotine, personality disorders, recurrent infection and premature ageing. Experts are of the opinion that the menace of rising disease and disorder can be halted with an ideal lifestyle to have perfect health. (Chopra, 2006)

The current statistical estimates reveal that the main causes of death today are basically lifestyle related. A majority of the deaths are caused by cardio respiratory problems and the fact is that more than 75% of these could be prevented through a positive lifestyle programme.

In order to guarantee a better, healthier, happier and more productive life, each individual is to be taught to control his personal health habits. Breslow and Enstrom (1980), in a study on health and longevity have found out that practising the following simple lifestyle habits may significantly increase the quality of life and in turn enhance longevity.

1. Control of body weight, i.e. maintaining ideal body weight (proper ratio of lean body weight and fat weight)
2. Proper sleep – 7 to 8 hours each night
3. Developing good eating habits – not eating between meals, eating less sweets and fat and eating breakfast everyday
4. Exercising regularly
5. Control of tensions and management of stress

6. Avoiding intake of alcohol, smoking of cigarettes and refraining from hard drugs

It is recommended that each individual regularly take part in fitness and wellness programmes for developing positive addictions and continue with them till the end, to experience a “new quality of life”.

## **MEANING OF WELLNESS**

According to Pippin and Varnes (1996), wellness is a positive whole health approach that includes the physical, intellectual, social and emotional well-being. It is the constant and deliberate effort to stay healthy and achieve the highest potential for total well-being. Wellness means striving to live life to its fullest potential and acting in healthy ways to prevent or decrease the chances for unnecessary illness.

Powers and Dodd (1999) say that in a broad sense, the term wellness means healthy living. This state of healthy living is achieved by the practice of a healthy lifestyle which includes regular physical activity, proper nutrition, eliminating unhealthy behaviour and maintaining good emotional and spiritual health. A healthy lifestyle refers to a healthy behaviour aimed at reducing one’s risk of disease and accidents, achieving optimal physical health as well as maximising emotional, social, intellectual and spiritual health.

The term wellness involves a vast variety of activities which help human beings to recognize components of lifestyle that are detrimental

to health and then participate in different programmes and follow guidelines so as to improve quality of life and achieve total well-being. The concept of wellness goes beyond the absence of mere disease and optimal physical fitness.

Wellness is more likely to be present in individuals who assume responsibility for their own health. Taking responsibility for our own health includes caring for our senses as well as eating the right foods and getting enough exercise. The first step in taking responsibility for health is recognizing that we make healthy choices that impact our total well-being. Sometimes the choices we make allow us to experience positive health and high level wellness. Sometimes the decisions we make cause us to experience illness. Some of the factors that determine health may be beyond our control – our heredity and at times our physical environment are not things we can change but a system for making decisions can help us to handle times of conflict. To reduce our risk of illness, disease, or accident, we first need to assess the way we live. Another way to reduce risk is to learn to identify and avoid high risk situations.

According to Uppal (2004), our health depends a great deal on the decisions we make about risks in our life. Most risks are minor and don't have an immediate impact on us. Other risks may be more life threatening. Learning how to make the right decisions about our health

requires that we understand the elements of decision making. Making good health decisions and forming good life long health habits now, will help us to maintain a high level of wellness throughout life.

## **COMPONENTS OF WELLNESS**

Wellness is a state of optimal well-being that is oriented toward maximizing an individual's potential. It may be defined as an ongoing lifestyle which requires taking responsibility and making healthy choices. The key to health lies in our ability to achieve balance in life. Reaching a point of balance involves understanding four dimensions of wellness that affect our health.

### **PHYSICAL WELLNESS**

Physical wellness refers to the health of our body. It is achieved through exercise, proper nutrition, preventive care and avoidance of abusive substances.

### **INTELLECTUAL WELLNESS**

Intellectual wellness encourages us to continue gathering knowledge through stimulating learning experiences. As we challenge our mind, we improve our mental potential and ability. Good intellectual health helps us to solve problems.

## **EMOTIONAL WELLNESS**

Emotional wellness is achieved through awareness and acceptance of our feelings and self image. An emotionally well person is able to demonstrate self expression, self control, self evaluation and enthusiasm for life.

## **SOCIAL WELLNESS**

Social wellness refers to our relationship with others. It involves our ability to make friends, to cooperate with others, and to be productive members of a community and society.

The strength within and balance among all of these dimensions determines the strength of our well-being. Achieving personal wellness should be everyone's goal. When the dimensions of wellness are in a reasonable balance, a healthy life is more possible than when the dimensions are out of balance. Wellness is not always easy to obtain. Wellness does not mean that we always have to be the best. It means that we strive for our personal best and for balance.

## **EXERCISE**

Life is characterized by movement and it is imperative that all parts of the body should be exercised daily. The concept of exercise is with us right from the time we are in our mother's womb.

Exercise is considered a sub-category of physical activity and has been defined as planned, structured and repetitive movements which

result in the improvement and /or maintenance of one or more facets of physical fitness (cardiovascular fitness, muscular strength and endurance, body composition and flexibility) CJ Caspersen et al. (1985)

"Exercise" is narrower in focus and is defined as "one type of physical activity conducted with the intent of developing physical fitness." (Corbin and Pangrazi, 1998) The term is typically used for calisthenics, resistance exercises, stretching exercises designed for flexibility, and aerobic exercises specifically designed to improve cardio respiratory fitness. Sport, play, games, dance, and recreational activities are all different forms of physical activity, some more organized than others.

Physical exercise is the activity of exerting the muscles in various ways to keep fit. Any bodily activity that enhances or maintains physical fitness and overall health or wellness is termed as exercise. It is performed for various reasons. These include strengthening muscles and the cardio respiratory system, honing athletic skills, weight loss or maintenance and for enjoyment.

Many studies indicate that regular physical exercise, whether it is work related or recreational, contributes to health and well-being and lowers the risk of many diseases. Regular physical exercise improves health in the following ways:

- Reduces the risk of dying prematurely
- Reduces the risk of dying from heart disease

- Reduces the risk of developing diabetes
- Reduces the risk of developing high blood pressure
- Helps reduce blood pressure in people who already have high blood pressure
- Reduces the risk of developing colon cancer
- Reduces feelings of depression and anxiety
- Helps control weight
- Helps build and maintain healthy bones, muscles and joints
- Helps older adults become stronger and better able to move about without feeling tired
- Promotes psychological well-being

The human body adapts to exercise stress and in doing so improves fitness, likewise it also rapidly adapts to lack of exercise. Fitness gains that are not maintained through exercise will be lost in due course of time. When a person stops exercising, it can be expected that 50% of gains made will be lost in two months. Once a desired level of fitness is achieved, a maintenance program should be adhered to, to sustain those gains. Maintenance of fitness requires that the activity selected to remain fit, is engaged in regularly.

According to the American College of Sports Medicine, physical exercise of less than two times a week at less than 60% of maximum heart rate and for less than ten minutes per day does not help in developing and maintaining fitness. If physical activity is stopped, the

physical benefits are lost. Within two to three weeks the level of fitness is reduced, and within three to eight months, it will completely disappear if physical activity is not resumed and the person has to restart.

Blair et al. (1987) opine that people who engage in the appropriate duration, intensity and frequency of specific kinds of exercise, particularly aerobic exercise can more easily control their weight, reduce their percentage of body fat, improve their circulatory function, reduce their blood pressure, control their blood glucose levels and increase their insulin sensitivity.

Chopra (2006) emphasizes that exercise will make us fit, but fitness and health are not synonymous. Exercise alone is not enough to make us healthy. In order to achieve perfect health, exercise is an essential part of a comprehensive lifestyle programme.

## **FITNESS**

Hockey (1985) stresses that fit people make a fit nation. Fitness is that state which characterises the state to which a person is able to function more efficiently. Fitness is an individual matter. It implies the ability of each person to live more effectively within his potentialities.

Fitness is the successful adaptation to the stresses of one's life. It is a constant and deliberate effort to stay healthy and achieve the highest

potential of total well-being. It is that state which characterises the degree to which a person is able to function efficiently.

Halbert Dunn (1967) states it simply, “We cannot take high level fitness like a pill out of a bottle. It will come only to those who work at following its precepts.” To lead a happy and successful life, people have to develop physical fitness because it is necessary for the proper functioning of the body and the system. While fitness is important and functional, according to the activity or the game that one undertakes, health becomes a basic necessity for every human being to live to the best and serve to the best.

## **PHYSICAL FITNESS**

Good health, as a product of being physically fit, enables an individual to pursue excellence actively. Physical fitness is one’s richest possession, it cannot be purchased, but it can be earned through a daily routine of physical exercise. People, who possess optimal physical fitness, tend to look better, feel better and experience good health; all of which contributes to the quality of life. Total fitness is achieved when people possess all three parts of fitness – mental – emotional, social and physical. Physical fitness is achieved when people are able to carry out their daily activities with vigour, alertness and without undue fatigue. Physically fit people also have enough energy to participate in leisure

activities and to meet the stresses that are part of many emergency situations. (Mc Tendon, 1987)

Physical fitness has been defined in various ways. The American College of Sports Medicine (1990) has defined that “fitness is the ability to perform moderate to vigorous activity without undue fatigue and the capability of maintaining such ability throughout life.

Nieman (1990) defines physical fitness as “a dynamic state of energy and vitality that enables one not only to carry out daily tasks, active leisure time pursuits, and to meet unforeseen emergencies without undue fatigue, but also prevent hypo kinetic diseases, while functioning at an optimum level of intellectual capacity and experiencing the joys of life.”

Camaione (1993) states that physical fitness can mean many things to many people. To a physician, physical fitness may simply mean the absence of disease. To a weightlifter it may be synonymous with large bulging muscles. To a health or physical educator, physical fitness may mean the ability to perform a specific number of calisthenics activities or to run or walk one mile in a certain time. To a health fitness professional, physical fitness means being able to acquire and maintain specific health standards.

## NEW CONCEPT ON FITNESS

Research in physical education and medical science has led toward a changing concept of physical fitness – one that is not only more meaningful but also more useful in providing directions for sport, fitness and physical-education professionals as they implement programs designed to help people improve fitness. The first and most important step in changing our understanding has been to recognize that fitness is not a unitary concept; there are different types of physical fitness. (Siedentop, 1994)

Fitness is currently viewed as a series of components, each of which is specific in terms of its development and maintenance. They are divided into three main areas viz.

- i. Health-related fitness
- ii. Skill-related fitness
- iii. Cosmetic fitness

The components of the first two are shown in Table 1.

**Table I**

### COMPONENTS OF HEALTH AND SKILL RELATED FITNESS

HEALTH-RELATED COMPONENTS	SKILL-RELATED COMPONENTS
Cardio respiratory endurance	Agility
Body composition	Balance
Flexibility	Coordination
Muscular strength	Power
Muscular endurance	Reaction time
	Speed
	Strength

## **SIGNIFICANCE OF HEALTH-RELATED PHYSICAL FITNESS**

Greenberg and Pargnam, (1986) stress that health-related physical fitness is important to everyone and should be stressed by physical educators and medical people alike. Health related fitness is defined as the ability to perform strenuous activity without excessive fatigue showing evidence of traits that limit the risks of developing diseases and disorders which affect a person's functional capacity.

The components of health fitness are general in the sense that they apply to everybody and that each person should achieve and maintain certain levels of health fitness in order to stay as healthy as possible throughout a lifetime and to improve the quality of life. It is related to living better, to be more resistant to diseases, and even perhaps to living longer. The health components have their foundation in the prevention and remediation of disease and illnesses whereas motor performance components are related to areas such as improved sport performance. Therefore motor performance fitness is more functional and specific. Having skill related fitness means being able to carry out the special skills that are a necessary part of a certain sport or activity.

The difference is that motor performance fitness is not related to basic health or to the prevention or remediation of degenerative disease. Being well coordinated, strong, fast, powerful and agile will not help us to prevent or retard the onset of degenerative disease. Oregon track coach, Bill Bowerman (1967), in his popular book, *Jogging*, says, at the

start of the health fitness movement, “After all, when you are past 30, bulging triceps and pleasing pectorals may boost your ego, but your life and health may depend upon how fit your heart and lungs are.”

A health related fitness program improves sport performance by increasing muscular strength and endurance improving flexibility and reducing the risk of injury.

Cosmetic fitness is a positive addition to the overall fitness movement. It is fine as long as it takes place in an educational environment where acceptance of different body shapes is the norm.

Cosmetic fitness is important for psychological well-being and is part of today’s focus on an active, healthy lifestyle.

## **PRINCIPLES OF PHYSICAL FITNESS**

Proper development and maintenance of physical fitness demands a deeper understanding of the various principles that control the building up of the different components of physical fitness. The principles are:

1. Regularity
2. Progression
3. Total body involvement
4. Specificity
5. Tolerance
6. Warm-up
7. Limbering down
8. Rest and sleep

Health fitness is achieved through aerobic training, bouts of sufficient intensity, duration and frequency. To improve and maintain aerobic fitness, one must reach a threshold of training, sustain it for 15-30 minutes and repeat this exercise 3 to 5 times per week.

The three general principles for fitness training are: overload to stress the system, small increments for progressive change, and sufficient recovery periods to prevent injury.

## **COMPONENTS OF HEALTH RELATED FITNESS**

The health related components are essential for developing fitness. They are Cardio Respiratory Endurance, Body Mass Index, Flexibility, Muscular Strength and Muscular Endurance.

### **CARDIO RESPIRATORY ENDURANCE**

Cardio respiratory endurance is referred to as aerobic fitness and is considered to be a key component of health-related physical fitness. It is a measure of the heart's ability to pump oxygen-rich blood to the working muscles during exercise. It is also a measure of the muscle's ability to take up and use the delivered oxygen to produce the energy needed to continue exercising. In practical terms, cardio respiratory endurance is the ability to perform endurance-type exercises like distance running, cycling, swimming, etc. The individual that has achieved a high measure of cardio respiratory endurance is generally

capable of performing 30 to 60 minutes of vigorous exercise without undue fatigue.

Developing our cardio respiratory endurance is not an easy job. To develop this part of fitness, we must do an activity that pushes our heart beat rate to our target-pulse range. This range is 70-80% of our highest heart beat rate. For an activity to be beneficial, must maintain a heart beat rate within the target pulse range for at least 20-30 continuous minutes, and we must do this at least three times per week. The selected activity must be vigorous in order to develop the cardio respiratory endurance. Participating in sports such as cycling, cross-country, swimming and team sports like basketball can also help develop cardio respiratory endurance.

According to the American College of Sports Medicine, cardio respiratory endurance is considered health-related because low levels have been consistently linked with markedly increased risk of premature death from all causes, especially heart disease.

Nieman (1995) is of the opinion that high levels of cardio respiratory endurance indicate high physical work capacity, which is the ability to release relatively high amounts of energy over an extended period of time. To many leading fitness experts, cardio-respiratory endurance is the most important among the health-related physical fitness components.

## **BODY COMPOSITION**

Body composition refers to the relative amounts of fat and lean body tissue which consist of muscle, organs and bone that are found in our body. The rationale for including body composition as a component of health-related physical fitness is that having a high percentage of body fat, a condition known as obesity, is associated with an increased risk of coronary heart disease. Obesity increases risk of development of type II diabetes and contributes to joint stress during movement. In general, being “over-fat” elevates the risk of medical problems. Lack of physical activities has been shown to play a major role in gaining body fat. Conversely, regular exercise is an important factor in promoting the loss of body fat.

Both physical inactivity and constant negative calorie balance, low protein intake and certain disease conditions lead to a loss in lean body mass.

Doing almost any kind of regular exercise will help us develop a healthy body composition. Exercising can lessen body fat and develop muscle, provided that we eat a balanced diet. Exercising, however, does not always change our weight a great deal. Exercising may cause us to lose inches but not kilos. Our weight may stay the same because exercising develops muscle that weighs more than the fat we lose. Exercising makes us firmer and trimmer which means we will lose inches.

## **FLEXIBILITY**

Flexibility is the ability to move joints freely through their full range of motion. Flexible individuals can bend and twist all their joints with ease. Without routine stretching, muscles and tendons shorten and become tight; this can retard the range of motion around joints and impair flexibility. Individual needs for flexibility vary. Certain athletes such as gymnasts and divers require greater flexibility in order to execute complex movements. The average individual requires less flexibility than the athlete; however, everyone needs some flexibility in order to perform the activities of daily living. Research suggests that flexibility is useful in preventing some types of muscle-tendon injuries and may be useful in reducing low back pain.

Doing flexibility exercises stretches and lengthens muscles and, in turn, allows the joints to have a full range of motion. Doing stretching exercises such as side bends, toe touches, arm circles, leg swings, and knee pulls improves flexibility. Stretching exercises should be done slowly, holding the stretch position 5-10 seconds and then allowing the body to relax. The number of times each exercise is done should also be increased slowly. Flexibility exercises should be done along with exercises to improve strength. Developing strength in stretched muscles will help prevent injuries such as dislocation, strain and torn muscle tissue. Participating in activities such as dance and ballet will also improve flexibility.

Sports medicine specialists have indicated that many musculoskeletal problems which are injurious especially among adults are related to the lack of flexibility. Improving and maintaining a good joint range of motion is important to enhance the quality of life. Flexibility exercises have also been used successfully in the treatment of patients suffering from dysmenorrhea and general neuro-muscular tension.

## **MUSCULAR STRENGTH**

Muscular strength is the maximal ability of a muscle to generate force. It is evaluated by the amount of force a muscle or muscle group can generate during a single maximal contraction. Practically, this means how much weight an individual can lift during one maximal effort. Muscular strength is important in almost all sports. Sports such as football, basketball, and events in track and field require a high level of muscular strength. Even non-athletes require some degree of muscular strength to function in everyday life. For example, routine tasks around the home, such as lifting bags of groceries and moving furniture, require muscular strength. Weight training, which is also called strength training, results in an increase in the size and strength of muscles.

To develop muscular strength we must slowly increase the number of times we do an exercise. Push-ups, pull-ups, bend-knee sit-ups, and step-ups can help muscle strength if the number of times they

are repeated is slowly increased. If weight training is used to build muscle strength, there also needs to be slow building up in the resistance – the amount of weight against which our body must work.

### **MUSCULAR ENDURANCE**

Muscular endurance is defined as the ability of a muscle to generate force over and over again. Although muscular strength and muscular endurance are related, they are not the same. These two terms can be best distinguished by two examples. An excellent example of muscular strength is a person lifting a heavy barbell during one maximal muscular effort. In contrast, muscular endurance is illustrated by a weight-lifter performing multiple lifts or repetitions of a light weight. Most successfully played sports require muscular endurance. For instance, it is required by tennis players who must repeatedly swing their racquets during a match. Routine everyday activities like mopping the floor also require muscular endurance.

Slowly building up the length and time of exercise or an activity that is performed will develop muscle endurance. Increasing the number of times an exercise performed can also build muscular endurance. Muscular endurance can be developed by many of the same exercises that build muscular strength. Participating in activities such as swimming, cross-country, etc. can develop muscular endurance.

Singh (1991) explains that endurance activities have been found to be high value for maintenance of organic health for increasing the

general resistance against infections and for cure and treatment of various disease and metabolic disorders. Many people are still under the impression that muscular strength and endurance are necessary only for athletes and other individuals who hold jobs that require heavy muscular work. Strength and endurance, however, are important components of total physical fitness and have become an integral part of everyone's life. Nieman (1995) strongly feels that most of the health-related benefits of muscular skeletal fitness have focused on the contribution of abdominal muscle strength and endurance, and lower back hamstring flexibility for the prevention of low back pain.

## **YOGA**

In today's ever-changing, fast-moving world with its frenetic pace of life and financial pressures, more and more people are turning towards ancient ways to relieve stress and regain balance in their lives and thoughts.

Yoga is a scientific system of physical and mental practices that originated in India more than 3000 years ago. Its purpose is to help each one of us achieve our highest potential and to experience enduring health and happiness. With yoga, we can extend our healthy, productive years far beyond the accepted norm and at the same time improve the quality of our lives.

Yoga is a practical philosophy, not a religion, and requires no allegiance to any particular system of belief. The word “yoga” comes from the Sanskrit word “yuj” meaning to join, yoke or unite. Yoga means union between the individual (jeevatma) and the supreme soul, (paramatma). Its philosophy involves the integration of the physical and the spiritual in order to achieve a sense of well-being. Sage Patanjali, who systematised the teachings of yoga in the form of sutras, defined yoga as “a state where all the activities of the mind are channelised in one direction or the mind is free from distractions.”

Other definitions state yoga as “a state where an individual is efficient in action” or “to achieve something not achieved earlier or to reach the highest state of bliss.”

All these reflect the different conceptualizations of yoga.

The ashtanga yoga propounded by sage Patanjali involves eight steps of yoga which assures the above mentioned goals. The eight aspects or limbs of yoga are

1. Yama – social discipline (restraints)
2. Niyama – individual discipline (observances)
3. Asanas – postures (physical postures or exercises)
4. Pranayama – breath control (control of vital energy)
5. Pratyahara – withdrawal and control of the senses
6. Dharana – concentration
7. Dhyana – meditation

#### 8. Samadhi – self realization (culmination of yogic achievement).

In the practice of yoga, the body is linked to the movement, mind and breath to bring about a feeling of balance, relaxation and harmony. The practitioner uses the physical self to refine the mind. Through this thorough training of the body and thought, one is taught to awaken every cell of one's self and one's soul.

Patanjali shows how through the practice of yoga, we can transform ourselves, gain control over the mind and emotions, overcome obstacles hindering our spiritual enlightenment and attain the goal of yoga.

#### **TYPES OF YOGA**

As the different connections between the mind and body were explored, various branches of yoga developed. They are the ashtanga or power yoga, bhakti yoga, jnana yoga, hatha yoga, iyengar yoga, raja yoga, laya yoga and kundalini yoga. Today hatha yoga is the most commonly practiced form. It concentrates on the physical body as the way towards self-realization. It teaches us that gaining control over the body is the key to controlling the mind. Hatha yoga's emphasis on the physical helps to focus the mind and improve concentration and is therefore perfect for helping the more mental and spiritual practice of meditation.

## **YOGA AS EXERCISE**

While yoga evolved as a spiritual practice, it has now grown popular as a form of purely physical exercise. It is taught at local YMCAs, health clubs and yoga centres and is often part of disease prevention and management programmes in hospitals. Scientists say that yoga works like other mind-body therapies to reduce stress. Yoga promotes the release of endorphins i.e. natural pain killers and mood elevators, from the brain.

## **ROLE OF YOGA IN PERSONALITY DEVELOPEMENT**

Yoga is a character building programme. Each one of us develops habits and behaviours without giving a thought to them whether they integrate or disintegrate. Yoga is the pre-conditioning of the behaviour patterns in each of us, ensuring unity and harmony in each and every cell of our body, poise and calmness in the mind and serenity in self.

We are all endowed in our individual ways with innate capabilities which need to be unfolded. Yogic discipline is an aid in such an education. It attempts to remedy the defects and cultivate the good in the individual. It aims to bring discipline at the physical, the mental and the spiritual levels and makes the individual aware of his own strength as well as weakness. Through the practice of yoga, one attains not only physical well-being or toning of the body, but emotional stability and clarity in intellect also.

We are living in an era of speed, stress and strain. Such a life makes heavy demands on our nerves, which can lead to anxieties and neurosis of one kind or the other. Yoga acts as a natural tranquilizer. It is one of the systems which develops harmoniously both body and brain. It can be taught without heavy financial investment and without equipment. It can even be adapted to the needs of undernourished or overfed.

In the yoga systems, all movements are slow, gradual with proper breathing. Yogic exercises not only develop the exercises of the body but also broaden the mental functions of an individual. It brings about self change that is change through one's own efforts in the personality structure of the person. It helps to change the lifestyle of the practitioner and promotes psychological well-being.

Yoga as a therapeutic practice is different from conventional medical practices. It aims to develop the resistance capacity in the individual for various disturbances. Yoga can be a promotion oriented approach for health care as well as a preventive method.

### **BENEFITS OF YOGA**

Today, the focus is more on yoga's practical benefits. There is a definite difference between yoga and stretching and normal exercises. Yoga teaches the concept of focussing awareness while performing specific postures.

The benefits of yoga are numerous including improved physical fitness, stress control, general well-being, mental clarity and greater self-understanding. The poses enhance muscle strength, coordination, flexibility and agility and can help a person to feel better.

According to the National Institute of Health, when people actively seek to reduce the stress in their lives by quietening the mind, the body often works to heal itself. In this sense, yoga can be seen not only as a way to get into shape at several levels but also as a tool for self-healing.

Adding yoga in a routine training programme helps to develop strength, flexibility, concentration, cardio respiratory health and reduces stress, tension and tightness.

## **RECENT DEVELOPMENTS IN YOGA**

Nowadays yoga is becoming more and more popular. It attracts the attention of the whole world. Thousands of people, both men and women who are aware of the importance of personal growth have adapted yoga as a part of their life. Gradually, yoga is becoming a lifestyle, almost a fashion of the modern world. People adapt yoga as a tool to keep the body and mind fit, to cure diseases by improving functions of the vital organs of the body. Yoga and yogic practices awaken the inner strength of the body. The health of our body and mind depends upon the soundness of the health of internal organs.

Yoga is universal and benefits people of all ages. Yogic research has proven its efficiency in effectively maintaining and bringing about the psycho-physiological equilibrium and emotional stability and so far as the functional development is concerned, the yogic system is perhaps the best.

## ASANAS

Asanas are an integral part of yoga. Yoga uses the body to exercise and controls the mind so that at a later stage the body and the mind together may harmonize with the soul. The asanas affect and penetrate every single cell and tissues, making them come to life. Asanas are simple actions for keeping the internal and external parts of the body in good health. No activity can be performed well as long as the internal and external parts of the body are not in good health.

Asana means a state of being in which one can remain steady, calm, quiet, and comfortable, physically and mentally. It is holding the body in a particular posture to bring stability to the body and poise to the mind. BKS Iyengar says that "An asana is not a posture which you assume mechanically. It involves thought, at the end of which a balance is achieved between movement and resistance."

Asanas are practiced to develop one's ability to sit in one position without discomfort for extended lengths of time, as this is necessary during meditation.

The goal of asana is to begin from where the individual is and gradually lead individuals to a better status. It is beneficial to health rather than making an individual an asana expert.

### **BENEFITS OF ASANAS**

The practice of physical postures (asanas) improves a variety of ailments, strengthens and tones muscles and develops flexibility. Various movements in the postures result in blood saturating, nourishing and cleansing the remotest parts of the body. Psychologically, yoga increases concentration, stills the mind and promotes a feeling of balance, tranquility and contentment.

### **SPECIAL FEATURES OF ASANAS**

- a. Asanas give sufficient exercise to the visceral organs of the body unlike physical exercises which do not offer much to each and every internal organ of the body
- b. Asanas have more impact on the psychological functions than mere physical exercises.
- c. Asanas require the least possible use of physical energy; therefore one does not feel tired. On the other hand a feeling of well-being is induced.
- d. Yoga is not directly contradictory to any form of exercise but can only be facilitative or complementary.

e. Asanas are not limited to any one set of musculature. They regard the person as a whole and have a holistic influence on the individual.

The demands of modern life can bring about stress, which leads to illness as well as mental anguish. Good health is the harmony between body, mind and soul. It is a result of a balanced diet, exercise and a mind that is stress-free. In yoga, the asanas revitalize the body and pranayama brings about a sense of calmness. This helps to free the mind of negative thoughts caused by the fast pace of today's world. It is encouraging to know that in this age of pressure, there are well-established techniques in yoga to restore health and help contribute to a life of happiness and harmony.

## **PRANAYAMA**

Pranayama means control and regulation of breath. "Prana" is a Sanskrit word which means 'vital force', "yama", means the control of the Prana so Pranayama means the control of vital force (Prana) by concentration and regulated breathing. Prana is the vital power or force which is motivating every element on the earth and is the origin of the force of thought. There is a deep affinity between prana and mental force, between mental force and intellect, between intellect to soul, and between soul and God. The control of Prana through Pranayama shows that each part of the body can be filled with Prana.

Pranayama increases blood circulation and reduces oxygen consumption, which brings more oxygen to the brain and improves the efficiency of oxygen use in the surrounding muscle, making it more flexible. The practice of pranayama can also increase lung capacity. Getting ample air into our lungs helps us to feel alert and focussed.

Pranayama teaches us the correct methods of inhalation and exhalation of air through proper respiratory functions. Rechaka (inhalation), kumbaka (pause) and puraka (exhalation) are the three main steps under pranayama.

Once we are capable of performing it, we can dominate illness and suffering. Prana is accumulated where our mind is concentrated. As a wind drives smoke and impurities from the atmosphere, pranayama drives away the impurities of the body and mind.

Regular and constant practice of pranayama helps to ensure proper distribution of blood to all the nerves and glands evenly; hence all the nervous disorders will be effectively cured.

Pranayama helps to nourish the body and mind. Since more and more oxygen flows into the body, it helps to relieve the muscle pain, fatigue and other disorders.

## **PHYSICAL ACTIVITY**

Our body is designed for physical activity and the impulse to exercise is a natural human tendency like brushing our teeth early in life

to prevent cavities later in life. Engaging in regular physical activity early in life can lead to healthy activity habits later in life thus reducing the risk of disease and improving the quality of life.

Kumari et al. (2009) opine that physical activities denote the use of the human body and energy while performing different actions. Physical activity is strictly defined as “any bodily movement produced by skeletal muscles that result in an expenditure of energy”. It includes a broad range of occupational, leisure time and routine daily activities – from manual labour to gardening, walking or household chores. These activities can require light, moderate or vigorous efforts and can lead to improved health if they are practised regularly

Historically it has been well documented that through the millions of years of our evolution our cardio respiratory system and metabolism were used to vigorous physical activity. Until the 19<sup>th</sup> century vigorous physical activity remained an integral part of our daily life. With modern industrialization, we consume more and enjoy ample food and comfort with minimal physical activity. Sedentary jobs have made many of us inactive and lazy. We are all spectators, preferring to watch a game of tennis, cricket or football on television rather than playing these games ourselves. Thus the balance between energy supply and demand gets upset. A person will stay hale and healthy as long as he/she is physically active.

Physical activity is a process that produces improvement in health and fitness. Research has brought a new perspective to exercise, fitness and physical activity by shifting the focus from intensive vigorous exercise to a broader range of health-enhancing physical activities.

For health benefits physical activity should be moderate or vigorous and add up to at least 30 minutes a day. A moderate amount of physical activity is roughly equivalent to physical activity that uses approximately 150 calories/day, or 1000 calories/week.

Exercise, sport, play, games, dance - these and many other terms has been used to describe the wide variety of pursuits considered to be physical activity. "Physical activity" is a universal term defined as "bodily movement that is produced by the contraction of skeletal muscles and that substantially increases the amount of energy you expend" (USDHHS, 1996).

While we have known for some time that an active body is a healthy body, evidence supporting this act has gained increasing attention in the last decade. Where it was once thought that an activity had to be extremely stressful to bring about improvement in fitness, it is now recognized that physical activity of lower intensities is also beneficial. In fact, we now know that recreational and leisure activities of low to moderate intensity offer significant improvement in health status. One of the keys to achieving health benefits from physical activity is consistency. Physical activity should be performed on most, if

not all, three days of the week. It is the regularity of physical activity that is responsible for the long-term adaptations that bring about protection from hypo kinetic diseases. (USDHHS, 1996a)

Studies in physical activity and health reveal the following major findings:

- People who are usually inactive can improve their health and well-being by becoming even moderately active on a regular basis
- Physical activity need not be strenuous to achieve health benefits
- Greater health benefits can be achieved by increasing the amount (duration, frequency and intensity) of physical activity

A surgeon general's report on physical activity and health concluded that moderate physical activity can reduce substantially the risk of developing or dying from heart disease, diabetes, colon cancer and high blood pressure. Physical activity also protects against lower back pain and some forms of cancer.

Research has demonstrated that virtually all individuals will benefit from regular physical activity. Walking, gardening, briskly pushing a baby stroller, climbing the stairs, playing soccer, or dancing the night away are all good examples of being active. There are many types of activities for people who want to develop their fitness. One type of fitness activity involves aerobics. Aerobic exercise involves the intake of large amounts of oxygen for long periods. The aerobic

activities are aerobic dancing, running, cross-country skiing, walking, cycling and jogging. A second type of activity is anaerobic exercise. Anaerobic means without oxygen. Sprinting and weight lifting are examples of anaerobic exercise. A third type is the non-aerobic exercise. Non-aerobic exercises give little aid to the cardio-respiratory system because they involve little vigorous movement. Examples are isotonic and isometric exercises.

Physical activity plays an important role in preventing the onset of several degenerative diseases and can also play a role in disease treatment and rehabilitation. Healthy People 2010 lists physical activity as one of the major factors that can help improve the health of the nation. The Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the Surgeon General's Office have all issued statements declaring that regular participation and physical activity will make us live longer and improve the quality of our life.

Our goal is to have a better-functioning internal organism, better heart, lungs and blood vessels, firmer bones, stronger muscles, a better quality body to help us live a life filled with days of feeling good.

## **VARIED PHYSICAL ACTIVITIES**

People find exercising a difficult proposition. To make exercising fun and interesting, it is important to engage in activities which are to

the participants' liking. Engaging in a single sport or activity does not develop overall fitness. A person must engage in a variety of exercises in order to develop health related fitness. Each component of health related fitness – cardio-respiratory endurance, body composition, flexibility, muscular strength and muscular endurance can be developed by certain exercises and activities. Using a variety of exercise types, intensities and durations is important; i.e. not to get bogged down into doing the same exercise every time.

Doing some of everything and varying the program will keep one from becoming bored and motivate one to get back for more, as nothing beats the feeling of being fit and knowing that one looks good. Some other benefits are

- Variety eliminates the monotony often associated with the same exercise for a long period of time
- Cross-training program is effective for weight loss
- As it will be an interesting program, exercise can be performed more often
- Due to different muscles being exercised in different types of exercises, more muscles will be toned
- Overuse injuries will be eliminated

Kumari (2009) suggests that when commencing a program, twenty minutes of aerobic activity, conducted for a minimum of three times a week will improve one's fitness sufficiently. To obtain training effect one needs to exercise at a rate that requires one to breathe fairly

heavily and that causes one's heart to beat much faster than usual. It is important to start at a low intensity and increase this over the following few weeks as the exercitant feels easier. For example, 20 minutes of walking, jogging or a combination of walking/jogging may be sufficient to start off the program, but as the weeks go by one may need to increase the pace or introduce jogging up some shallow hills to achieve a further increase in fitness. To continue to increase the fitness level, one will have to increase the time spent exercising aerobically to thirty minutes/session for up to five sessions/week.

## **PHYSICAL ACTIVITY AND WOMEN'S HEALTH**

Women undergo a lot of stress due to the pressures of the present day world. Women are now entering into professions which were earlier considered as purely a man's domain. To achieve this, a woman must be strong both in her body and in her mind. She must have the stamina to cope with the twin responsibilities of being a homemaker and a breadwinner. Several researches show that physical fitness enhances women's health.

According to Wells (1996), there is strong observational and experimental evidence that physical inactivity plays a significant role in the development of cardio respiratory disease in women and that habitual physical activity and at least a moderate level of cardio respiratory fitness offers protection from these diseases in women as

well as in men. Although there is less research available, it seems clear that regular physical activity reduces the risk of hypertension in women and is a primary preventive measure against stroke.

Physical activity may also enhance the effect of estrogen replacement therapy and help decrease bone loss after menopause. Social support from family and friends has been consistently and positively related to regular physical activity. There is no physiologic reason for a healthy woman not to be physically active. (US Dept of Health and Human Services, 1996)

## **PSYCHOLOGY**

The word psychology come from the Greek work psycho, means mind or soul and logy means science. So the word psychology is the science of the mind and soul. It is defined as the science of behaviour or the science of mental life. Psychology studies human nature, science of the mind and soul. Psychology plays a major role in sports and is closely associated with psychological components.

In the words of Diane L. Cell (1972), sports psychology is defined as the scientific study of human behaviour in sport. Like the other discipline within sports and exercise science, sports psychology can be applied to varied skilled movements, physical activities and exercise programmes, such as corporate fitness, exercise rehabilitation and health

oriented exercise programmes as well as traditional physical education and competitive athletics.

According to Morrow (2005), sports psychology clearly underscores two main areas: performance enhancement and mental health. The performance aspect of sports psychology refers to the effects of psychological factors on sport performance. The psychological factors include anxiety, concentration, confidence, motivation, mental preparation and personality development. The other main focus of sports psychology is enhancing mental health and well-being through participation in sports, exercise and physical activity - the mental health aspect factors are anxiety, depression, self-esteem, self-concept, mood and anger. Research indicates that vigorous physical activity is related to the reduction in anxiety and depression. Similarly, sports participation has been related to an increase in self-esteem and self-confidence. In essence, sports, exercise and physical activity have been shown to have the capacity to increase our feelings of psychological well-being and thus exert a positive influence on our mental health.

Health psychology is the branch of psychology that studies the psychological factors and behaviours that relate to physical and mental health. Health psychology studies the effect of behaviour on health and the effect of health issues on behaviour and psychological well-being. Health psychology examines behaviour related to wellness, illness, prevention of illness and diagnosis.

Psychological well-being is a subjective term that means different things to different people. It means contentment, satisfaction with all elements of life, self-actualization (a feeling of having achieved something with one's life) peace and happiness. It is now seen as an important potential outcome from exercise participation. It is influenced by mood, affect, self-esteem, cognitive functioning, mental health disorders and the potential negative influences of participating in an activity.

Experimental trials support an improvement in psychological well-being immediately after participation in moderate exercise. Three exercise considerations are thought important to maximizing positive effects.

1. Choosing an enjoyable activity
2. Mode of activity
3. Training or practice factors

### **PSYCHOLOGICAL BENEFITS OF EXERCISE**

One of the main psychological benefits derived from regular body work is experiencing periods of relaxed concentration characterized by reduction in physical and psychic tensions, achievement of regular breathing rhythms and increased self awareness. Several other benefits are

- becomes a means for auto-hypnosis, which increases the tendency for creative visualization
- increases body's output of epinephrine which produces feelings of euphoria
- changes the pattern of the secretion of brain neuro-transmitters, which produces changes in mood
- increases the secretion of endorphins and enkephalines - hormone-like substances that can facilitate feelings of inner peace.

A person's well-being is greatly affected due to psychological aspects like, anxiety, aggression and self confidence apart from their health related fitness.

## **REASON FOR SELECTION OF TOPIC**

Johnson and Nelson (1988) emphasize that "Physical fitness is a matter of fundamental importance to individual well-being and to the progress and security of our nation." A nation's true wealth lies not in its land and waters, not in its forests and mines, not in its flocks and lambs, not in its dollars but in its healthy and happy men, women and children. Health-related fitness is important to everyone and should be stressed by physical educators and medical people alike. Therefore it is the responsibility of every country to promote physical fitness for its

citizens, because physical fitness is the basic requirement for most of the tasks to be undertaken by an individual in his/her daily life.

Women undergo a lot of stress due to the pressures of the present day world. Women are now entering into professions which were earlier considered as purely a man's domain. To achieve this, a woman must be strong both in her body and in her mind. She must have the stamina to cope with the twin responsibilities of being a homemaker and a breadwinner. Several researches show that physical fitness enhances women's health. It is necessary for them to have some activity which will enable them to improve their physical and psychological health in a limited time. This is also true of many college going women who take up part time jobs during their student life and have no time for any physical activity and end up having many health related and psychological problems. Considering this, the researcher introduced compulsory games and several other physical activities for college students.

The researcher was interested to find out whether activities in the form of yogic practices or varied physical activities would enhance the Health Related Physical Fitness variables and the psychological well-being sub-scales among college women. Hence, the research topic "Effects of Yogic practices and varied physical activities on health related physical fitness and psychological well-being among College Women" was selected.

Among all other activities, the researcher felt that these two activities would significantly achieve this end and therefore decided to embark on this study among college students.

Accordingly, the investigator makes an attempt to design a good health fitness programme by yogic exercises and various other physical activities and its influence on health related physical fitness and psychological well-being among college students.

## **STATEMENT OF THE PROBLEM**

The purpose of this study was to analyse the effect of selected yogic practices and varied physical activities on health related physical fitness variables - cardio respiratory endurance, body composition, flexibility, muscular strength and muscular endurance and psychological well-being among college women.

Thus, in this study, the investigator assessed the present status of college women's health related physical fitness variables and psychological well-being and found the effect of interventional programmes of yogic practices and varied physical activities, which determined which of the selected activities was beneficial to develop which of the selected variables among college women. This enabled the college women to be aware of their health related physical fitness and psychological well-being and suggested ways to improve their well-being by selecting a suitable activity.

## **HYPOTHESES**

To aid the findings of this study, the following hypotheses were formulated:

1. It was hypothesized that yogic practices would not significantly improve health related physical fitness variables among college women.
2. It was hypothesized that yogic practices would significantly improve the psychological well-being among college women.
3. It was hypothesized that varied physical activities would significantly improve the health related physical fitness variables among college women.
4. It was hypothesized that varied physical activities would not significantly improve the psychological well-being among college women.

## **SIGNIFICANCE OF THE STUDY**

1. The result of this study might be useful to understand the health related physical fitness status of college women.
2. The study would be helpful to the physical educationalists, fitness trainers and individuals in choosing the appropriate yogic form of training and physical activity for developing the health related physical fitness.
3. This study would be of much help to women, since these exercises can be practiced by anyone, anywhere.

4. The findings of the study may help the individuals to compare and contrast the changes that occur in health related physical fitness variables and psychological well-being before and after the specific training programme.
5. The result of this study would be a motivational factor to choose the right exercise schedule to improve the selected health related physical fitness and psychological well-being.

### **DELIMITATIONS**

The study was delimited in the following ways, which were taken into consideration while interpreting the results and arriving at conclusions:

1. The study was delimited to women students from Women's Christian College, Chennai whose age ranged between 18 and 20 years.
2. Only ninety students were used for the study.
3. The experimental period was restricted to twelve weeks
4. The following dependent and independent variables were selected for this study

## **DEPENDENT VARIABLES**

### **Health-related Physical Fitness Variables**

- i. Cardio respiratory Endurance
- ii. Body Composition
- iii. Flexibility
- iv. Muscular Strength
- v. Muscular Endurance

### **Psychological well-being Sub-scales**

- i. Anxiety
- ii. Depressed mood
- iii. Positive well-being
- iv. Self control
- v. General health
- vi. Vitality

## **INDEPENDENT VARIABLES**

- i. Yogic practices
- ii. Varied Physical Activities

## **LIMITATIONS**

1. Humidity, temperature and other environmental conditions, which could have a certain effect on the performance of the subjects during the time of data collection were not considered
2. Socio-economic background, diet condition and lifestyle factors were not taken into consideration

3. The subjects' previous training in physical activities and sports training was not taken into account
4. Heredity and living environment, which may contribute to the health-related components and psychological well-being were not considered

## **DEFINITION AND EXPLANATION OF THE TERMS**

The important terms used in this study are defined below.

### **FITNESS**

According to Karpovich (1962), "it is the degree of ability to execute a specific physical task under specific conditions."

### **PHYSICAL FITNESS**

Mathew (1976) opines that physical fitness is the capacity of an individual to perform given physical tasks involving muscular effort.

In the words of Getchell (1979), physical fitness is a capability of the heart, blood vessels, lungs and muscle function at optimal efficiency.

Uppal (1992) defines physical fitness as the capacity to carry out reasonably well various forms of physical activities without being unduly tired and includes qualities important to the individual's health and well-being.

## **PHYSICAL ACTIVITY**

"Physical activity" is a universal term defined as "a bodily movement that is produced by the contraction of skeletal muscles and that substantially increases the amount of energy you expend" (USDHHS, 1996).

In the words of Kumari (2009), physical activity is strictly defined as "any bodily movement produced by skeletal muscles that result in an expenditure of energy".

## **PHYSICAL EXERCISE**

Physical exercise is narrower in focus and is defined as "one type of physical activity conducted with the intent of developing physical fitness". The term is typically used for calisthenics, resistance exercises, stretching exercises designed for flexibility, and aerobic exercises specifically designed to improve cardio respiratory fitness.

## **CARDIO RESPIRATORY ENDURANCE**

Cardio respiratory endurance is the ability of the body's circulatory and respiratory systems to supply fuel during sustained physical activity

In the words of Tiwari (1991), it is the ability of the heart and lungs in supplying maximum oxygen through the blood to the active tissues during long duration exercise.

Bucher (1992) defines it as the maximum functional capacity of the cardio respiratory system to sustain work or physical activity involving large muscle groups over extended period.

## **MUSCULAR STRENGTH**

According to Mathews (1981), muscular strength is the ability of the muscle to exert force during an activity. The key to making your muscles stronger is working them against resistance, whether that is from weights or gravity.

In the words of Gothi (1993), muscular strength is the force that a muscle or muscle group can exert against resistance in one maximal effort.

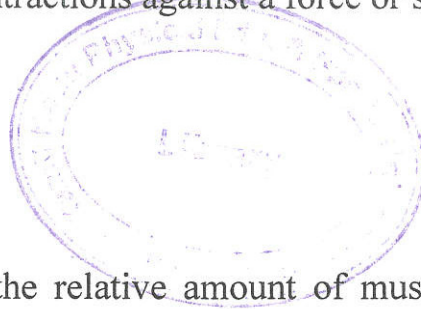
Thomson (1985) states that muscular strength is the amount of tension that a muscle or muscle group can exert in a single maximum contraction.

## **MUSCULAR ENDURANCE**

Mathews (1981) defines muscular endurance is the ability of the muscle to continue to perform without fatigue.

Uppal (1994) states that muscular endurance is the quality that enables a person to sustain localized muscle group activities for extended periods of time.

According to Bucher (1992), this is the ability of the muscle or muscle group to repeat muscular contractions against a force or sustain a contraction over time.



## **BODY COMPOSITION**

Body composition refers to the relative amount of muscle, fat, bone and other vital parts of the body. A person's total body weight may not change over time. But the bathroom scale does not assess how much of that body weight is fat and how much is lean mass, body composition is important to consider for health and managing.

According to Thomson (1985), body composition is the percentage of muscles, bone fat and other tissues that make up the body.

Tiwari (2000) states that the proportion of total body fat and the lean body mass together reveal the body composition.

## **FLEXIBILITY**

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Johnson and Nelson (1988) state that flexibility is the range of motion around a joint. Good flexibility in the joints can help prevent injuries through all stages of life.

According to Titte (1988), flexibility is the ability to move parts or parts of the body quickly or make rapid and repeated movements involving muscle suppleness.

Pollock (1985) says that flexibility can be defined as the range of possible movement about a joint or sequence of joints.

## **YOGA**

Iyengar (2001) says, “Yoga is the union of the individual self with the universal self.”

Yoga is a way of life which can be practiced by any human being regardless of age and condition of health. Yoga is a process of gaining control over the mind, thereby improving the physiological and psychological behaviour of an individual.

According to Gharote (1982), yogic exercise is a form of physical exercise. They involve stretching and contracting of all parts of the body in a specific sequence. Yogic exercise is mainly meant to the development of physical, mental and vital components of men.

## **ASANA**

Asana means holding the body in a particular posture to bring stability to the body and poise to the mind. The practice of asana brings purity in tubular channels firmness to the body and vitality to the body and mind.

Iyengar (2001) says, “An asana is not a posture which you assume mechanically. It involves thought, at the end of which a balance is achieved between movement and resistance.”

## **PRANAYAMA**

Pranayama means control and regulation of breath. “Prana” is a Sanskrit word which means ‘Vital force’, “Yama” means the control of

the prana, so Pranayama means the control of the vital force (Prana) by concentration and regulated breathing.

## **PSYCHOLOGICAL WELL-BEING**

Psychological well-being can be defined as a sense of satisfaction with life or degree of personal happiness. (Corbin, 2005)