50th INAUGURAL LECTURE

HUMAN BODY, HUMAN WELLNESS: THE PERPETUAL ANTIDOTES

ВУ

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Ladies and Gentlemen

INTRODUCTION

I start this Inaugural Lecture by giving all praises and thanks to the Almighty Allah, the most Gracious, the most Merciful for making it possible for me to stand before you and share the knowledge He has allowed me to acquire over the years. I also thank the Vice Chancellor for giving me the opportunity to deliver the 50th Inaugural Lecture of the Lagos State University and the first in 2013. The 49th edition was from the Faculty of Education and the 51st edition will also come from the same Faculty, "three in a row, back to back". I consider this to be great and historic not least during my tenure as the Dean.

Physical Education, my area of study, is an educational process that uses physical activity/movement as means of acquiring skills,



knowledge and attitudes that contribute to optimal development and wellbeing of man. Of course, to survive, man must move from one place to the other; therefore, Physical Education that teaches the correct economy of movement is crucial to the provision of an all-round development of man. Within Physical Education, mv area of specialization is Exercise Physiology which covers implications/effects of physical activity on the functions of human body either for the purpose of attaining peak performance in sports or for the purpose of healthy living. My concentration has been on the latter and my research efforts over the years have revealed that the human body and human wellness should really be the focus of healthy living.

After this lecture, you will appreciate the need for you to consult me more than you do a physician or a physiotherapist because I deal with people of all ages and prevent them from being sick whereas a physician or physiotherapist is visited most often when one is ill/sick or injured.

HUMAN BODY

The study of human body begins with the knowledge of Human Anatomy which dates back to the ancient times. The body itself from the beginning serves as the main instrument for practical acquisition of knowledge of Anatomy. The body is observed, investigated and dissected (cut up) for which the results even assist to a great extent in the acquisition of knowledge and practice of medicine, (Plagge, 1982).



The body is a model, well designed and shaped by Almighty God Himself. The holy books contain references to God's perfect creation of man. For example, in the Holy Qur'an 95 verse 4, Allah says "verily, we created man in the best stature (mould)". In Qur'an 64 verse 3, we read ...He shaped you and made good your shapes. Also Qur'an 82 verse 7 reads "Who created you, fashioned you perfectly and gave you proportion".

From the above verses, it becomes evidently clear that the body does not come to be, by accident; rather from conception, the body was properly modelled, shaped and fashioned into the best stature. Thereafter, the human body is nurtured and handled by individuals.

The body as a frame- small, medium or large has internal or external segments or parts. From the outside, body is complete only when the head, hands, stomach/spine and legs are seen. Internally, the body has cavities in the head, chest, stomach/spine and hip regions. These cavities house vital organs that control actions of the body. They are the eyes, tongue, brain, spinal cord, heart, lungs, kidneys, testes and ovaries. Covering the whole body and shielding the internal structure is the skin which on its own is a special structure with many features. The body can equally be appraised from regional angle. Two regions are more often appraised

- i. The axial region which consists of the head, neck, and the trunk containing thorax, abdomen, pelvis, perineum
- ii. The appendicular region which consists of upper and lower limbs.



The body along with its segments contains substances and in Exercise Physiology they are termed 'Body Composition' which refers to both the fat and non-fat components of the body. The portion of the total body weight that is composed of fat tissue is referred to as the "percentage body fat". The portion of total body weight that is composed of non-fat or lean tissue which includes bones, muscles, connective tissue and so on is referred to as "lean body weight".

The knowledge of Anatomy has revealed that the body has structural organisation which is hierarchical. The hierarchy, according to Marieb, Mallatt and Withelm (2005) starts from chemical level in which atoms combine to form small molecules and larger macromolecules which form the cell. Cell is the smallest living unit in the body upon which all structures of the body are built. Next is the tissue level which consists of a group of cells combined to perform a common function. The organ is the next level and an organ is made up of different types of tissue that work together to perform a common function. The last level in the hierarchy is the organ systems. An organ system consists of different organs that work closely together to perform body function.

The organs are the functional agents of the body and they are strategically located with necessary protection in the body cavities. The cavities(space) are located at the upper part from the hip region to the head. There is no cavity at the lower part of the body because it consists of only limbs. There are two large cavities and five small ones in the body.



The large cavities by location are dorsal cavity and ventral cavity. The dorsal (back) is divided into:

- i. cranial cavity in the skull and contains the brain
- ii. vertebral cavity in the vertebral column and encases the spinal cord.

The ventral (front) cavity is also divided into two:

- i. the superior thoracic cavity which has two lateral parts each encloses a lung and a central part which houses the heart, oesophagus and trachea (windpipe)
- ii. the inferior abdomino-pelvic cavity which has a superior part called abdominal cavity that contains, stomach, kidneys, livers, and a lower part called pelvic cavity that contains the bladder, rectum and some reproductive organs.

Four of the small cavities are in the head and these are:

- i. Orbital Cavity: it is the cavity that houses the eye
- ii. Nasal Cavity: it serves as part of the passages of the respiratory system
- iii. Oral Cavity (Mouth): It contains the tongue and teeth; it links the digestive tube internally.
- iv. Middle Ear Cavity: It contains tiny bones that transmit sound vibrations to the organ of hearing in the inner ear.



Other small cavity is synovial cavity – it is found at the freely movable joint of the body such as the knee or hip joint.

I wish to make it clear that the concept of Anatomy in Physical and Health Education is to understand human body as the main tool/instrument for movement since the subject has much to do with learning through movement. In most cases, systemic approach to learning Anatomy is adopted in Physical and Health Education programme because it is best for relating structure to function; hence, the study of Anatomy and Physiology is taken together. In Medicine, much more detailed approach is adopted to study anatomy and physiology because an extensive knowledge is required of each part or region of the body.

TISSUES AND ORGANS WITH SPECIAL IMPLICATION ON MOVEMENT OF THE BODY

At this point I want to direct our attention to some tissues and organs with special implication on movement of the body. These are:

- ✤ Adipose tissue
- Muscle
- ✤ Heart/Cardiovascular
- ✤ Joint/Skeleton/Bone

Adipose Tissue

Adipose tissue is a loose connective tissue in the body. About ninety percent (90%) of its mass is made of fat cells. It carries out nutrient – storing



function by removing lipids from the bloodstream after meals, store for sometimes and later releases them into the blood when it is needed. Adipose tissue is abundant in the body, ideally it accounts for about fifteen per cent (15%) of male body weight and about twenty – two per cent (22%) of female body weight.

Adipose tissue is found all over the body and much of it is in the layer beneath the skin and in the mesenteries that hold the stomach and intestines in place. It also forms cushioning pads around the kidneys, heart and behind the eyeballs in their orbits. Some quantities are found around lymph nodes, within some muscles and in the bone marrow. Apparently, large store of adipose tissue occurs in the abdominal area, neck, hips and thighs in some people.

The number of adipose cells and the size of the adipose cell, according to Prentice (1994), are the two factors that determine the amount of fat found in the body. The number of adipose cells increases before birth and continues to rise until puberty and the number may increase under certain conditions during adulthood. Too many fat cells in childhood or adulthood would lead to overweight or obesity.

Adipose cell size is in response to the amount of fat stored within it. In childhood, adipose cell size increases until early adulthood and thereafter, in the mature adult, adipose cell size fluctuates as a function of caloric balance. If more calories are taken than needed the excess is converted to fat and stored in adipose cells and become swollen with fat leading to overweight or obesity. When the energy from fat is used up or lesser calories are



taken consistently for days, adipose cell loses stored fat and the sizeshrinks.

Adipose tissue cells greatly determine the weight of a body and weight has much implication for movement of the body.

The Heart

The heart is the most important organ that keeps the body alive. One of the very first few structures of the body to be observed and conjectured by the early anatomists is the heart. As at then it was identified to be centrally located. The heart was conjectured then as the "whole thing" about the body. It was referred to as the soul of the body or the seat of intelligence, or the seat of operation of the body.

In emphasising the importance of the heart, Falase (2009) writes that it is logical and sensible to give diseases that affect the heart the seriousness they deserve, thereby guarding our hearts, the wellspring of our lives.

Modern anatomy has made description and function of the heart more explicit. The heart is about the size of the fist located in the thoracic cavity behind the sternum. The heart is made up of special muscle (cardiac) with ability to contract on its own due to availability of in-built conducting tissue. Tortora and Derrickson (2009) describe the heart as being about 12cm long, 9cm wide at its broadest point and 6cm thick, with an average mass of 250g in an adult female and 300g in an adult male. The heart rests on the diaphragm and it can be visualized as a cone lying on its side with



about two third $(^2/_3)$ of its mass lying to the left of the body's midline (hence you can palpate the heart just below the chest at the left side of the body).

Chambers and Walls of the Heart

The heart has four chambers. Two of the chambers are located at the upper part (atria or auricles) and they receive blood from all parts of the body while two others are located at the lower part (ventricles) and they pump blood to all parts of the body. Because of the receiving and particularly pumping action of the heart, its wall is made up of muscle tissue called myocardium (heart muscle). This muscle, though striated like skeletal muscle. cardiac muscle is involuntary like smooth muscle. The cardiac muscle actually propels the hearts and enables it to carry out its main function of pumping blood and the impact of this function also reflects on the cardiac muscle particularly the left ventricle with thickest muscular wall due to its action of pumping blood covering great distances to all parts of the body at higher pressure.

The function of the heart in the body is unequalled. Tortora and Derrickson (2009) say that the heart has unique properties that permit it to pump for a lifetime without rest. For the fact that blood must be constantly pumped in the body so that it can reach all cells (including the heart itself) and exchange materials with them, the heart beats about 100,000 times every day which adds up to 35 million beats in a year. To buttress the uniqueness of action of the heart, Falase (2009) reveals that the average heart of a human being beats about 2,500 million times within a 70-year lifespan without a single shutdown for repairs unlike man-made machine. It is apparent that



utmost functionality of the heart cannot be compromised and coupled with the fact that heart function is propelled by its muscles which remains active when it is constantly toned up, then exercise, the ingredient for muscle tone has vital role to play in sustaining effective heart function.

The Muscle

The mass of tissue in the body is the muscle. It covers an average of forty five per cent (45%) of total body weight. The body's appearance is manifested through the muscle and it follows the design of bone frame to give body its shape. In mv profession, Mr. Vice Chancellor sir, this aspect in Anatomy and Physiology is highly emphasised. major muscles of the body Although are emphasized, the knowledge of details of such muscles is a must for whoever is to be certified a specialist in Physical and Health Education. The reason for this is simple, Physical Education is a body of knowledge acquired extensively through movement and muscle is the structure in the body in which its actions of contraction and relaxation result in movement.

The whole part of the body is a moving entity. Similarly nearly every component of the body experiences one form of movement or the other; hence, muscle constitutes walls of nearly all structures in the body. The three types for which muscles in the body have been categorised show that most structures in the body have muscles. These are:



- 1. **Smooth muscle** found in the walls of hollow internal structures such as stomach, intestines, airways and blood vessels; the involuntary contraction and relaxation of muscles of these structures assist in internal processes such as digestion, respiration and regulation of blood pressure.
- 2. **Cardiac Muscle** this is a special muscle found only in the heart. It forms the bulk of the heart wall. The contraction of cardiac muscle is involuntary and usually ignited by an in-built battery called pacemaker or sino atria node.
- Skeletal Muscle this muscle is attached to bone in the body and moves part of the body. It forms majority of muscles in the body and it contracts and relaxes by conscious control.

Generally, the muscle has four characteristics relating to its functions and these are:

- a) Contractility muscle's ability to contract when stimulated
- b) Elasticity muscle's ability to return to its original shape after contraction or extension
- c) Excitability muscle's ability to receive and respond to stimuli
- d) Extensibility muscle's ability to stretch or extend without being damaged.

In identifying the functions of muscle, Tortora and Grabowski (2001) succinctly state the following five points:



- 1. Producing Body Movement: the body movements such as walking, running, writing etc rely on the integrated functioning of bones, joints and skeletal muscles.
- 2. Stabilizing Body Position: skeletal muscle' contractions stabilize joints and help maintain body position such as standing and sitting.
- 3. Regulating Organ Volume: temporary storage of food in the stomach or urine in the urinary bladder is possible because sustained contraction of smooth muscle sphincters close off the outlet of these organs.
- 4. Moving Substances within the Body: that cardiac muscle contractions pump blood through the body's blood vessel; skeletal muscle contractions aid the return of blood to the heart; smooth muscle contractions move food and other substances through the gastrointestinal tract; push gametes (sperm and occytes) through the reproductive system, and propel urine through the urinary system.
- 5. Producing Heat: As muscle contracts, it produces heat which aid maintenance of normal body temperature. Involuntary contraction of skeletal muscle, known as shivering, helps warm the body by greatly increasing the rate of heat production.

Muscle in the body, either directly or indirectly, performs enormous functions in the body and as such has to be active. The basic principle of muscle



is related to 'use and disuse'. Muscle has to be used in order to be alive and when disused it goes atrophy. In view of the fact that muscle keeps our body alive, Mr. Vice Chancellor sir, we cannot afford to allow our muscles go atrophy rather we should constantly use them by engaging them regularly in physical activities.

Bones and Joints

The collectivism of bones in the body constitutes the skeleton which gives the body its frame and or shape. The various lengths of bones in the body determine the height of individuals. Bones are hard and they are like rigid bars but contain living substances that keep each of them functional as long as a man is alive. Bone is a structure that may exist if not destroyed after many years after death; in some cases, bone can be used to trace history of human existence in a given area. Anthony and Thibodeau (1979) identify five functions of bone and skeletal system as follows:

- *i.* Support:- it serves as structural framework for the body by supporting soft tissues and providing attachment points for most skeletal muscles
- *ii. Movement*:- when skeletal muscles attached to bones contract, they pull on bones and together bones and muscles produce movement. This function is significant in human movement/Physical Education.
- *iii. Protection:-* The skeleton protects the most important internal organs such as brain, spinal cord, heart from injury.



- *iv.* Storage and Release of Minerals:- Bone tissue stores calcium on a large scale as well as phosphorus. On demand, bone releases minerals into the blood for distribution to other parts of the body and to maintain mineral balance.
- v. Blood Cell Production:- within certain bones in the body such as hip, ribs, breastbone and vertebrae red bone marrow produces red blood cells, white blood cells and platelets.

In the human body, all bones are classified based on their shapes and locations into five main types – long, bones of the limbs, short, bones of the wrist and ankle, flat, bones of the chest, back and cranial bone, irregular, bones of vertebral column and some facial bone, sesamoid, bones of the patellae. The most possible injury to the bone is the various types of fracture but in adult or at old age, osteoporosis and various types of rheumatism and arthritis are experienced. However, bone that is well built around its total mass and well strengthened suffers less from bone injuries and diseases.

Movement of parts or the whole of the body is only possible by availability of various joints in the body. Bones that the muscles pull on are too rigid to bend but fortunately there are points where one bone ends and another connect with it through certain structures. This point where bones meet is the joint and it is when a muscle pulls a bone around a joint that it causes movement to occur around that joint. A typical feeling of importance of a joint is difficulty and pain encountered in an attempt to



move a part close to a joint that has been injured or damaged. However, not all joints in the body permit movement a few permit slight movements and a few others do not permit any movement at all rather they only link bones to provide protection for the tissues they cover in the body. Joints that allow varieties of movement of the body part or whole are hip, knee, ankle, wrist, elbow, shoulder and neck. These joints also experience common injuries such as dislocation, and sprain once a while. As individuals advance in age, degenerative changes occurring particularly in the mav start osteoarthritis vertebral column as well as pressure on nerve root. From early age of growth and development, sufficient level of flexibility should be attained by individual. This is what can guarantee easy movement for a long time in life.

WELLNESS

a living condition in which Wellness is an individual engages in activities and behaviours that enhance quality of life and facilitate the realisation of personal potentials. It is a condition that allows an individual to carry out a physical activity with sufficient energy and strength in a positive state of health condition. Brook (2001) explains wellness to be a lifelong process that at any given time produces a positive state of personal wellbeing, of feeling good about one's physical, psychological and social functioning. It also includes the control or minimization of both internal and external risk factors for both diseases and negative health conditions. Wellness is a way of life in which there is proper integration of body, mind and spirit. Mary



and Dons (1997) describe wellness as a way of living each day that includes choices and decisions based on health attitude. Furthermore Adegboyega and Olanipekun (2010) explain that high level of wellness involves giving good care to physical self, using mind constructively, expressing emotion effectively and being creatively involved with people around oneself.

Health has been broadly defined by the World Health Organisation (WHO) as a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity (WHO 1947). What is more challenging about this definition is about transforming it into the functionality of every individual. Wellness is a practical demonstration of a healthy individual (Okuneye 2011) Wuest and Bucher (1999) express wellness as a state of optimal health and wellbeing. Health as a key component of life moves along a continuum. The health continuum, according to Anspaugh, Hamrick and Rosato (2003), is from optimal health to premature death.

The individual's position on the continuum, according to Anspaugh, Hamrick and Rosato(2003), is always subject to change and is affected by many factors such as physical health, activity level, nutritional patterns, personal demands, career goals, and effectiveness in managing stress. The direction individual moves on the continuum and the place occupied at any time are determined by the activities pursued and attitudes toward these activities. It is only wise and preferred to embrace wellness in order to enjoy



close to optimal health. Wellness is cost effective because only self-effort is required.

Componentsof Wellness

Physical fitness is the major component of wellness. Indeed, the concept of wellness starts with physical fitness and later other components that work in tandem would emerge. These according to Anspaugh, Hamrick and Rosato (2003)include spiritual, social, emotional, environmental occupational intellectual. and These components are interrelated and health. they frequently affect one another.

Social component:- this covers ability to interact with people freely. Interaction with known people and others with whom one is not familiar promotes interpersonal relationships which enhance participation in group physical activity for the benefit of a healthy living.

Spiritual component:- This has to do with belief or religion. An individual enjoys a certain level of satisfaction and recognition when identified with a particular religion and it allows an individual to be assessed in line with such religion on values, morals and ethics. Religion has no hindrance to physical activity.

Emotional Component:- This has to do with the mood an individual bears most of the time. It is the feeling an individual has about himself and others to interact with. It is about ability to manage provocation, stress and adjust/adapt to changes in environment. Emotional stability promotes mental health and assists in good physical performance.



Intellectual Component:- It is ability to acquire knowledge or information and effectively utilize it. Intellectual component also covers ability to take wise decision when faced with a variety of situations that occur throughout life. Interpreting information and health instruction or skills acquired correctly and utilizing them will sufficiently promote wellness. Knowing when to stop or adjust intensity of activity by an individual calls for an effective utilization of intellectual wellness.

Environmental Component:- This is about keeping the environment safe for living. Every individual has to be part of health measures that improve standard of living in the community as well as observe laws and warnings that safeguard the physical environment. Engaging in physical activity would only be inviting and interesting if the environment is safe and conducive.

Occupational Component:- This is the ability of an individual to develop positive attitudes towards work or career opportunity and this will enhance good interaction with other workers thereby achieving satisfaction at work. A satisfied worker would be able to develop a workable physical activity programme which should be part of living/life activity.

Physical Component:-This is the major component and it is all about physical fitness of individuals. Hoeger and Hoeger (2002) argue that for wellness as a way of life; an individual must be physically fit and should demonstrate or show no signs of disease and he also must have no risk factors for disease. The concept of physical fitness



is not new; it is as old as the onset of campaign for healthy living. Its meaning is clear yet little variations exist from how it is perceived by various authors. Physical fitness is a condition in which an individual has ability to carry out normal and unusual physical activity of daily life without being fatigued and still have energy for leisure activities (Okuneye 1999).

The report of the Surgeon General for US Department of Health and Human Services: Physical activity and health in 1996 states that physical fitness is the ability to carry out daily tasks, with vigour and without undue fatigue, and with sufficient energy to engage in leisure time pursuits, to meet unforeseen emergencies, and the vitality to perform at one's fullest capacity, (American College of Sports Medicine, 2000).

As observed by Emiola (2008) most people in our society of today manage to sail through their daily tasks, in most cases with a minimum enthusiasm and efficiency, but after work, they are so exhausted that they can do nothing else but eat, read a few pages of newspapers and watch television. Should an emergency arise, they are physically unprepared to meet any crises situation without placing great risks on their lives and those of their families.

OUR ACTIONS TOWARDS OUR BODY

Our actions with regard to what we eat, drink, how we use parts or organs of the body impact directly on the body as a whole. Some of these actions actually lead to abuses.



Parts of the body commonly abused

Eye: This is one of the special senses in the body. It is for sight and balance. It is actively functional from the moment we are awake until when we sleep. The eye functions without stress when there is brightness. People abuse the eye by reading and writing under poor lighting, which could be due to decoration. inadequate facilities or sheer carelessness. Some people read while in moving vehicles, straining muscles of the eye with divided concentration by looking at the direction of traffic and the materials being read. Some people while walking in the sun would be typing messages on their mobile phones. These and similar actions speed up the gradual loss of the efficiency and functionality of the eye.

The print media contributes to abuse of the eye in that most of the dailies are printed in small font except the headlines. Newspapers are for adults whose eyes have lost some elasticity and sharpness therefore bigger font not less than 14 or 16 would be ideal, after all a lot of information is just being repeated by the various media organisations.

Skin: (Cutaneous membrane) covers the outer surface of the body; it functions as one of the special senses of the body – sense of feeling. The skin separates the body's internal environment from its external environment. Through the skin, the body's homeostasis is maintained in whatever environment man finds himself. The skin is abused when we stay in an air-conditioned room or a car for a long time, not because we need to but because we have the facility at our disposal. It is even more discomforting to observe that in a hot



and humid weather such as ours, some of us put on several layers of clothing up to the neck with tie, either for fashion or for corporate appearance. More often than not, we ignore weather forecast which is a veritable hint on adjustment we should be prepared to make to maintain our body's homeostasis. Common among some women is regular application of chemicals in the name of cream, which gradually destroys melanin pigment in their skin.

Limbs: Limbs in the body by location are designated upper limbs and lower limbs. The upper limbs are for manipulative skills, to handle/grip, push, carry, strike or drag items while lower limbs bear body weight and are used for walking, running and other locomotors movements. We abuse the limbs when we assume body positions wrongly or move carelessly. A lot of us do not stand or sit correctly; rather, we do any of these with the body sagging. The knowledge of Ergonomics to both manufacturer and individuals in this direction is abysmally low. Carrying or lifting object is more often done with upper limbs and this is wrong because people do not know that the weight needed to carry heavy object is in the lower limb and as such they bend at the hip instead at the knee to carry.

A lot of people walk and distort the shape of the body. Running is the worst of it. People seldom run but walk more often. Walking is learnt under gross locomotor and fine locomotor movements. Gross locomotors movement is learnt naturally and finetuned with acquisition of fine locomotors movement. A lot of people are deprived of the



knowledge of fine locomotors movement due to neglect of practical Physical and Health Education lessons at basic education (Okuneye and Usman, 2004, Moses 2012). Walking graciously is beautiful and it instils physical confidence in man. Left for me, the beauty of a man or woman is in walking. Proper maintenance and usage of the limbs would guarantee normal gait of an individual till and throughout the old age.

Internal Organs:Internal organs that make some systems such as respiration, digestion, nervous and circulation function effectively are grossly abused by deliberate action of some individuals under disguise of catching fun, show off or lifestyle.

Those who take cigarette or inhale smoke do abuse and put pressure on their lungs. Those who take hard drugs and alcohol (moderate or heavy) also abuse and put pressure on their nerves, hearts. Those who rush or skip meals particularly breakfast, abuse and put pressure on digestive organs. Those who refuse to answer call of nature at the slightest signal until it becomes unbearable abuse and put pressure on their excretory organs.

Overuse of the whole body in term of work without rest can be divided into two categories. Some people stay on a particular job during the day for several hours without break, such people continue to see the job as yet to be finished or that it will soon be. The second category, stay on the job for all days of the week, of the month and almost of the year. They do not intrinsically observe any vacation even when officially granted by their employers. People who overuse their body



continue to work until the body frees itself by becoming weak and the limbs refuse to move.

ACTIONS TOWARDS WELLNESS

Our actions towards wellness manifest more in our ways of life, the diet we take and the activities we engage in, all of which bear consequences on the quality of our life. The body's physiological demands of today's society are relatively easy, little activity is experienced, Okuneye (2002) reported that since the beginning of advancement in technology and sloth resulting from industrial revolution in the 19th century, the need for men to be physically active in order to earn a living has Powered vehicles and continued to decrease. various machines are used to reduce the labour for travelling, cleaning. required lifting. construction and maintenance work. Also. advances in information and communication technology have added to reduction in daily expenditure of occupational tasks of the people.

The ways many people spend their leisure time affect their wellness. Television viewing has greatly affected people's leisure time. It has been (Neilson, 1990) documented that watching television has been a major part-time for many people, especially children, adolescents and young adults. Studies have also revealed direct. association between amount of television viewing and obesity in children (Dietz and Gortmakers, 1985; Tucker 1986; Shanuon, Peacock and Brown, 1991) and adults (Tuber, 1990; 1986). Television



viewing may increase obesity by decreasing the time spent on physical activity while it may promote an increased intake of calories and reducing metabolic rate (Klesges, Shelton and Klesges 1993).

Poor habit formation towards physical activity has great impacts on action towards wellness. The current trend with physical education as a school subject is grossly affecting physical activity behaviour of school children.

Physical education is not adequately taught in schools particularly the practical aspect. Children are no longer formerly exposed to entrenched values of physical activity. Okuneye (2006) reports that physical education is not receiving adequate educational attention. In another study, (Okuneye, 2008) it was discovered that more female teachers who hardly teach practical lessons dominate teaching positions in primary and secondary schools.

The implication of this is that children are left unguided to search for physical activity whether suitable or unsuitable. It is only when children are properly exposed to physical education classes in their school years that they will master fine motor skills, that they will be familiar with pool of activities from which they can select the most appealing ones for lifetime participation and more importantly establish in them, ideal physical activity habit from childhood Livingstone (1994), Meredityh and Droyer (1991) argue that habits and attitudes toward physical activity developed during childhood continued through adolescence into adulthood.



Emiola (2008) states that the provision of sports education in our primary and secondary schools through well organised and well taught physical education programme is the earnest way of giving our citizens the lifetime sports skills they can fall back on in their adulthood and old age.

The impact of little drop in energy on daily work and leisure time may appear minimal when considered for days or weeks but when considered for months or years, these little reductions in energy expenditure could significantly lead to sedentary living. Mr. VC sir, it may be deceitful to ascribe this trend to only developed nations, the situation is clearly manifesting in metropolis and cities of developing nations, Nigeria in particular.

From various studies on physical activities among people in the metropolis (Okuneye, 1997, 2002, Okuneye and Dansu, 2003, Okuneye and Dansu 2005, Okuneye 2006, Okuneye, Idowu and Dansu 2011) it has been established that there is high level of awareness and good knowledge of health benefits of physical activity yet less than ten percent (10%) of the population regularly engage in physical fitness activities.

Major constraints to regular participation, according to the findings, are job demand to satisfy employer, poor habit of engaging in exercise, spending too much time on the road due to traffic problem at peak hours, lack of facilities and equipment both at workplace and residential estates/places. However, when a similar study was conducted in an academic environment (University Campus) where facilities and equipment are



available even under a conducive environment, the result was not better. The issue of facilities and equipment as constraints was no longer prominent, the question of inadequate or lack of publicity came to the fore. Invariably, poor habit has an overbearing effect on lack of regular participation in physical activity.

Other actions towards wellness have to do with our diet. Diet is an area of our life in which we have almost total control as adults. Even from primary school age, pupils start procuring food items on their own (Ajiduah and Okuneye, 1994). Whatever we eat affects our energy level, well-being and overall health, "*it is commonly said that we are the product of what we eat*". The two major places from where food is prepared and eaten are the home and restaurant, though for some of us, food is eaten on the road (inside vehicle). It is easier to keep to a menu (food plan) and eaten pleasantly when food is prepared at home than in the restaurant.

Our knowledge about food nutrients as required by the body, the source and selection as well as quantity of each of such nutrients is essential in diet. People are not so familiar with food "group pyramid" which is a general guide on what should be selected from food group to be eaten each day. The belief that food is just to provide energy, that the body can accept any type of food and drink at anytime and at any place has led to such actions as:

- > eating more outside home
- being in a hurry while eating



- eating at random; no specific time but when convenient due to the claim of being busy
- eating more of processed/fast food. Malkmus in Omotoso (2012) says fast foods are quick and convenient but are toxic to the body
- taking a lot of sweetened/sugary food
- eating sometimes as a show off
- eating junks or from packs, cans and jars as what are readily available when so hungry
- taking stimulants inform of caffeine to stay awake, Malkmus in Omotoso (2012) correctly says that taking caffeine is ingesting slow poison to the body
- taking alcohol and tobacco products while with friends or alone
- > eating same type of food persistently
- eating food high in saturated fat and cholesterol
- > eating so much meat, and dairy products
- > taking so much carbonated water
- > eating in an environment out of one's control
- taking fruits occasionally only when one comes across it.

These actions, Mr. VC sir, work against our wellness though in a gradual manner.

CONSEQUENCES OF ACTIONS TOWARDS OUR BODY AND WELLNESS



The actions highlighted so far weaken our body and make us uncomfortable when we carry out certain normal daily activities. The overall consequence hinges on our movement which is the basic function for which human body is designed. The effects of these actions gradually accumulate from the feeling of weak limbs, pains around the joints to the level when reluctance to carry out certain regular activities become so pronounced leading to hypokinetic diseases.

HYPOKINETIC DISEASES: are diseases related to lack of physical activity and they usually become chronic. They are obesity, diabetes, cancer, stroke, heart attack and hypertension. Other diseases that may result from these actions are atherosclerosis, osteoporosis, cirrhosis of the liver and chronic low back pain. Apart from obesity which attracts comments as to how one looks like, people are unaware of most of the diseases until the point when they cause major complications and in the worst cases, death.

Among these diseases Mr. VC sir, obesity, high blood pressure and diabetes deserve further discussion.

Obesity: this has to do with excess weight in terms of fat in the body. Caterson and Gill (2002) define obesity as an excessive accumulation of fat in adipose tissue to the extent that heath may be impaired. The easiest modality for measuring weight is direct measurement which is done by standing on the weight scale. Araoye (2005) posits that any Nigerian whose weight is more than 80kg should be regarded as overweight; in this I agree with him. One other common modality for



assessing obesity is the Body Mass Index (BMI) which is the ratio of weight in kilogramme to the square of height in metres.

BMI (Kg/H ²)	Comment		
< 16	Severe underweight		
16 – 16.9	Moderate underweight		
17 – 18.4	Mid underweight		
18.5 – 24.9	Normal range		
25 – 29.9	Pre – obesity		
30 - 34.9	Moderate obesity		
35 - 39.9	Severe obesity		
<u>></u> 40	Morbid obesity		

TABLE 1: BMI and Medical Stigmata

Body weight is an important watch-dog of wellness: some people believe that increasing weight is a sign of divine blessing or sign of being wealthy. On the contrary, it is a sign of careless indulgence in affluence. Araoye (2005) categorically states that an individual increasing in weight is acquiring a group of diseases one of which is hypertension. Overweight is a risk factor in many diseases like heart attack, stroke and diabetes. Overweight or obesity causes depression and low self-esteem. Emiola (2008) states that because the body is carrying excess weight when overweight or obese, the joints of the body are affected, manifesting as upper back and low back pains as well as arthritis of the ankles, knees and hip joints and other skin ailments. Overweight or obesity alters the shape of the body with the upper part appearing bigger specifically protruding stomach (pot belly) or protruding glutus (buttock).



High Blood Pressure: This is commonly referred to as hypertension. The World Health Organisation (WHO, 1956) defines normal blood pressure and adopted through the human race to range from 90mmHg to 140mmHg for systole and 60mmHg to 90mmHg for diastole. Much later, World Health Organisation (WHO, 1999) developed a spectrum on normal Blood Pressure and High Blood Pressure as guidelines for physicians who engage in the management of high blood pressure. The guideline is in the table below and we should all pay attention to it so that we would know when we actually need physicians.

TABLE 2: Classification of Blood Pressure inAdults

Normal BP	Systolic BP	Diastolic BP	Recommendations
Optimal	<120	<80	Keep it up
Normal	<130	<85	Check every 2 years
High normal	130 – 139	85 – 89	Check yearly
High Bloo	d Pressure		
Grade I	140 – 159	90 – 99	Confirm within 2 months
Grade 2	160 – 179	100 – 109	Start treatment within a month
Grade 3	<u>></u> 180	<u>></u> 110	For therapy urgently

Source: Araoye, 2005



High blood pressure is characterised by some complications and the most serious ones are heart failure, stroke, renal failure and sudden death. Falase (2009) emphasises that when high blood pressure occurs, there is high risk of damage to the heart, brain, kidney as well as other organs of the body and specifically, it is the commonest cause of heart diseases in Nigeria.

Mr. VC sir, the people who are most at risk of high blood pressure are people who abuse their bodies by taking so much alcohol, salt, hard drug, and those who are overweight.

Epidemiologically, there is no discrimination concerning race or geographical demarcation of individual, sex and age in the occurrence of high blood pressure. The factor of age further reflects on prevalence of occurrence of high blood pressure as a disease. Okuneye and Adewale (2004) report that a remarkable increase starts being noticeable on a large scale as from age 15 - 16 years group while Akinkugbe (1972) reports that the prevalence of high blood pressure increases steadily with age, being 14.4% in the age group 45-49 years to 45% in those above 70 years. Araoye (2005) reports that high blood pressure afflicts high jobbers more than busy bodies, affects staff senior and chief executives more than junior staff and that the prevalence was highest at both extreme of the Unfortunately, socio-economic status. the prevalence is increasing among the categories highlighted above.

Diabetes: Diabetes Mellitus is a disease that causes a disruption of normal metabolism. In a



person with diabetes, the process where by pancreas secretes insulin which stimulates cells to take up glucose to produce energy is disrupted causing a built up of glucose in the blood stream. It is characterized by the presence of sugar in the urine and high blood sugar level. There are two types of Diabetes Mellitus. Type 1 diabetes is the one in which the pancreas produces little or no insulin, so daily closes are required hence it is called insulin - dependent Diabetes Mellitus (IDDM), it is more serious but occurs in fewer population and usually strikes before the age of 30years. Type 2 diabetes (more common) develop slowly and usually diagnosed in people over 40 years and about half of the people afflicted are unaware of their conditions.

In Type 2 diabetes, the pancreas does not produce enough insulin, or the cells do not respond to the hormone or both. This type is described as Non-Insulin Dependent Diabetes Mellitus (NIDDN). Fahey, Insel and Roth (2001) indicate major factors in the development of diabetes to be age, obesity, physical inactivity, lifestyle and partly family history. Excess body fat reduces cell sensitivity to insulin and it is a major risk factor for Type 2 diabetes.

Wilmore and Costill (1999) identify coronary heart diseases, hypertension, renal disorders and eye disorders, including blindness as some of the health problems associated with diabetes.

The concern really is the continuous steady increase in the case of diabetes among Nigerians. **The Guardian** Editorial (December 9, 2012) reports that six million Nigerians (3.3% of the population)



who may be living with diabetes is high and that the disease is expected to account for 52% of deaths by 2015 is scary. The paper further opines that the reported rising cases of people living with diabetes and death resulting from the management of the disease deserve national concern. It therefore requires concerted efforts to ameliorate the problem from various approaches. Prevention as an approach is now more viable than before and should be embraced.

POSITIVE ACTIONS REQUIRED ON OUR BODY AND WELLNESS

My message in this Inaugural Lecture, Mr. VC sir, which is based on accumulated experience garnered from my research works, is that to a large extent, the perpetual antidotes to the occurrence of hypokinetic and chronic diseases lie in our ability to avoid the abuse of our body and prioritize our wellness. Results of various studies have proved that hypokinetic or chronic disease hardly strive n individuals who habitually engage in exercise.

In nearly all discussions relating to these diseases, ideal weight and regular exercise are identified as solutions, Okuneye (1988), Okuneye and Ajiduah (1995), Okuneye (1996), Okuneye (2002); Okuneye and Adewale (2004), Okuneye, Dansu and Idowu (2007) and Musa, Okuneye and Arejo (2007) establish the positive impact of regular exercise on body weight, blood pressure, endurance, strength and flexibility of the body, heart functions and other organs in the body. Falase (2009) expresses



it clearly that to keep body weight within limit and avoid excessive deposition of fat in our coronary arteries, we must be engaging in daily or weekly exercises if our job is sedendary among other measures. Emiola (2008) concludes that exercise is the most inexpensive therapy for the prevention and rehabilitation of most diseases, especially the hypokinetic and non-communicable diseases.

Araove (2005) when concluding on maintaining normal weight as one of the measures of non-drug management hypertension of that states individuals should engage in routine physical exercise such as distance running, jogging or cycling that incurs sweating. Onifade (2003) lays credence to the inevitability of exercise when he quoted the words of Dr. Paul Dudley White who attended to the then USA President Eisenhower when he had a heart failure that "I believe that the physiologic effect of regular exercise throughout one's life will probably in time be proved as one of best antidotes against alarming the the the epidemic development of coronary of thrombosis and high blood pressure". The opinion of a prominent national daily newspaper, equally alludes to efficacy of exercise on one of the The Guardian Editorial hypokinetic diseases. (December. 9, 2012) emphasises the counsel of physicians concerning diabetes which includes the need to participate in regular physical activity, maintain a healthy weight among others as worth the attention of Nigerians.

From the foregoing, distinguished ladies and gentlemen, regular participation in physical activity is the most workable option not only for



prevention and rehabilitation of hypokinetic diseases but also for the delay in encountering some inevitable degenerative diseases. Engaging in regular physical activity requires some level of determination and encouragement as well as certain guidelines.

The first approach is to ensure that we assume correct posture at all times while standing, sitting or bending (or even sleeping). This guarantees us maintenance of normal gait for a very long time. We must always walk straight with body parts properly aligning. We select activities that are interesting to us. Unfortunately, a lot of us are constrained to select activities from sports that also serve the purpose of recreation such as tennis, table tennis, badminton, squash racket, to mention a few, because of lack of required basic skills; rather, the few who are inclined select from only walking, jogging, cycling and exercising on machines (Okuneye 2006).

I wish to emphasize here that dubbed exercises usually played on the radio and relayed on the television are not ideal for us. The best purpose they could serve is motivation. Exercise is individual based, the dosage required is different from one individual to the other and as such it must be prescribed. Exercise must actually be handled by a team of personnel which includes Exercise Physician – he screens participants, Exercise Director – prescribes exercise, Exercise Leader – executes the prescribed exercise and Exercise Technician – prepares graded exercise stations (Awopelu, 2000 and Okuneye 2002). If an individual wants to resume or start to exercise on



regular basis he or she must choose to take part in a supervised exercise programme that has all elements of stages to be carried out by exercise personnel. Improper approach to exercise could lead to injury, discouragement and drop out. People need to stay long on exercise and develop long life habit of regular participation in exercise so that preventive and qualitative life purposes of engaging in exercise would manifest.

Furthermore on **wellness**, ladies and gentlemen, we require more positive approach to our actions. **Socially,** we need to have very good relationship with our family members with at least one person to confide in, have friends who give support and few we can talk to regularly, get involved in workplace/community activities, we should engage in activities that contribute to the environment and we should show interest as well respect views, opinion and accomplishment of others.

On **diet**, we should be conscious of a number of servings of bread, cereal, rice/yam, fruits, vegetable, dairy product consumed each day; we should eat only when hungry; we should always read labels on (tin) food items; we should avoid drinking alcohol, smoking, use of tobacco products and mood altering substances. These efforts on diet will save us from chasing/shopping for all kinds of flushers now in town.

With regards to the **spiritual** and emotional aspect of wellness, we should realise our values, beliefs and convictions; we should practice daily the spiritual life we identify with; we should tolerate values and beliefs of others; we should feel positive about ourselves and perform to the best of our



ability, we should try to cope with life's ups and downs in a healthy manner, and we should find it easy to laugh and not be deceitful with it.

For the **intellectual** aspect of wellness, we should believe in education as worthwhile, we should be aware of current issues on health, politics and social matters and should exhibit the ability to apply to real life situations what is known and we seek advice or information when in doubt.

As for **stress control**, we should prepare or plan ahead what is to be done and set realistic goals on short or long term basis and schedule enough time for our activities. We need to express feelings of anger when appropriate and take decision with minimum worry and certainly not when under pressure, we should be calm and patient.

In **occupational** aspect of wellness, we should be aware of our personal skills, strengths, and weaknesses in our occupational choice. We should possess good work ethics and appreciate occupation as source of personal growth and fulfilment. We need continuous education as well as extra effort to acquire more skills on the job and we should realise that one day, we would retire or be retired.

In wellness, the **environment** in which we operate requires that we avoid littering or disposing wastes indiscriminately or illegally, conserve energy (turn off light and electricity appliances), make safety gadgets available including smoke detector, ensure that dangerous items and poisonous products are kept out of reach of children and ensure we keep hygiene rules.



MY CONTRIBUTIONS

My research efforts in this profession have made significant impacts in two major areas:

- i. Physical Education; and
- ii. Physical Fitness and Wellness

Physical Education:

an experienced teacher and examiner As of Physical Education, I was bugged down by the yawning gap in the composition of senior secondary school examination in Physical Education. T carried out a study to establish what could be responsible for my observation and in 2001, I presented one of the studies carried out on the issue at the 16th Annual Congress of the Nigerian Academy of Education. In the paper I reported that the study was motivated by an apparent omission of practical assessment of skills acquisition of students by existing examination bodies such as West Africa Examination Council (WAEC) and National Examination Council (NECO). The paper attracted much attention from the Academy. Physical Education is practice-oriented in teaching and learning. Nixon and Vendien (1985) aptly describe Physical Education as a discrete academic discipline with unique knowledge involving general movements and sport. Evaluation in Physical Education goes beyond scholastic work. It extends to skills and health benefit (Okuneye, 2002).

Recently, practical aspect of Physical Education has attracted attention at the primary school, Teacher Grade II College and tertiary Institution levels, but the same could not be said about



Physical Education since it became an examinable subject in Senior Secondary School Certificate. Physical Education is taught theoretically with much neglect of practical classes. The subject was being examined in the area where it should be practical as theory of practice. Okuneye (2005) concludes that non-existence of practical examination as part of Physical Education senior Secondary School Certificate Examination is a major factor causing the neglect of practical teaching of the subject in secondary schools.

This view I held tenaciously and fortunately when I Chairman, Science became the Teachers Association of Nigeria - Physical and Health Education (STAN-PHE) Panel, members shared my view and together we kept on emphasizing the need for practical examination. Mr. Vice Chancellor sir, I am proud to confirm to this audience that the Federal Government/Ministry of Education reasoned with us and directed that practical examination should be part of Senior Secondary Certificate Examination Physical School in Education with effect from 2008. The National Examination Council has complied and WAEC is about to complete the process of complying. With this I am optimistic that teaching and learning Physical Education in Secondary Schools will significantly improve for the benefit of all.

Still on Physical Education, I have observed that handling the subject in Primary Schools particularly in a metropolitan setting like Lagos is working against its progress as an essential subject for all round development of a growing child. Okuneye (1997) states that primary school is the



only social institution where greater number of children could be reached with immense benefits of Physical Education to physical, mental and socioemotional health as antidotes to unproductive citizenship.

The Federal Government of Nigeria for long had recognised the place of physical education in the overall education of children and thus reflects such in the National Policy statements on Education (FRN, 1981). The concern on pupils not being sufficiently exposed to physical education programme motivated me in 1997 to appraise the situation in schools within Lagos metropolis.

Mr. Vice Chancellor sir, my findings revealed that Physical Education is not regularly taught in the class while practical classes are almost neglected; most teachers in primary school are women who strive to remain radiant the whole day and as such not ready to change into and out of sports dresses; consequently, practical classes suffer great set back. Teachers in primary school do not possess sufficient requisite skills to teach and evaluate Physical Education. Teachers usually complained about lack of space, inadequate facilities and However, these complaints were equipment. countered with the fact that space is still available for pupils to vigorously engage in physical activity during recess or break time and that facilities and equipment required for Physical Education at primary school are simple and not as complex as those for other sports and events for competition. Studies on Physical Education in schools after more than a decade revealed similar trend with greater consequences on movement pattern and



lifestyle of youths. (Okuneye and Dansu 2007; Okuneye, Dansu and Abraham 2007; Okuneye, Idowu and Dansu, 2011).

Physical Fitness and Wellness:

The degree of influence of jogging on certain physiological parameters in the body (heart and oxygen consumption) was carried out in a group of male adults with the desire to know how much and at what frequency would jogging have impact on the heart (Ajiduah and Okuneye, 1995). The study reveals significant reduction in heart rate which is an indication of improved heart efficiency as well as increased maximal oxygen consumption which is an indication of improved cardiac fitness in adults who covered a distance of 4.8 kilometres three times a week continually for twelve weeks.

The findings of this study became a reference point in exercise prescription particularly for adult males such that once they chose to engage in jogging for fitness they have to set out to continue to jog a particular distance three times a week for not less than twelve weeks before they will start to feel the impact of the exercise on their cardiovascular endurance. Interestingly, after three months, those who were involved did not want to stop as they were already getting used to the exercise.

One other study of interest is on exercise and a group of special people. The study appraised exercise awareness and habits among persons living with HIV/AIDS (PLWHAs) in Lagos before and after testing positive; (Okuneye and Idowu, 2006). At the time of this study, endemic situation was



very high and all efforts were on approach to effective management of the disease. Literature and research findings sufficiently establish benefits of exercise to PLWHAs with regard to improved aerobic power, improved minute ventilation, lower heart rates at rest, stable or improved CD4+ cell counts, which accounts for immunostimulatory effect of exercise. Therapeutic benefits, positive effect on immune system, improved strength and psychological status are all recorded in favour of exercise on PLWHAs.

It really interest us to find out that PLWHAs who attend voluntary counselling and Testing Centre are aware of benefits of exercise and that they would readily and willingly participate in exercise if prescribed by them. The PLWHAs further appreciate the values of exercise and improved their habits to it after testing positive because they participate together without discrimination.

We were able to establish through the study that exercise programme is an effective means of management of PLWHAs.

Our works on the test of the glycaemic digestibility rate indices of three common Nigerian foods, namely, eba, lafun and fufu with an attempt to recommend the pattern by which they should be eaten in order to facilitate optimum performance in aerobic activities attracted demand for reprint from a lot of professionals across the world. The study entitled, *"in vitro* studies of glycaemic index of certain food items and their effect on aerobic performance" (Okuneye, Amusa, Anyamaghobi, Agbonjinmi and Toriola, 2003)was based on the premise that glycaemic index would suggest the



quantity of dietary carbohydrate which may influence the metabolic response in optimal performance of aerobic activities.

The method used was in vitro, which contain the use of laboratory dialysis tubing to digest the food and extrapolate for glucose level concentration at the Biochemistry laboratory of Lagos State University.

Findings from the study debunk the assumption that carbohydrate foods from one root tuber (cassava) would produce the same glycaemic and digestibility rate indices as there were differences in the values obtained on eba, lafun and fufu all of which are products of cassava. Findings also show that the calculated glycaemic indices of the foods are higher than the glucose standard. There is variation in the glycaemic responses of the three foods. Lafun has a high glycaemic index while eba has a moderate glycaemic index. Fufu has a low digestibility rate index. The study concludes that eba should be ingested some time before aerobic performance exercise while lafun should be eaten after performance for muscle glycogen resynthesis and fufu should not be ingested at all as it could cause congested bowel habit.

RECOMMENDATIONS

In this inaugural lecture, Mr. Vice Chancellor sir, I wish to recommend the following:



From now on, every individual present here should value his or her body more than hitherto with regards to what goes into the body, how it is exposed and how it is used.

Henceforth, we should ignore all distractions and destroy all barriers/impediments and start to exercise in order to keep fit, live actively, carry ideal weight for our height and stay healthy.

Government should promote and encourage active life among people by creating conducive environment for people to regularly participate in physical activity. Two clear approaches are: Firstly, the National Assembly is to have a second look at the National Health Bill. Beyond statement on healthy living there should be clear statements on practical approach to preventive medicine. Secondly, both at the Federal and State level, it should be legislated that every housing estate should leave ample space for recreational facility. Unless facilities are close to people, they will not be enthusiastic about engaging in exercises.

Physical and Health Education in basic education should be given more attention. There should be legislation that space for play and practical physical education is a condition for the establishment of privately owned schools. One storey building nursery/primary schools would not provide an all-round educational development for the children. Education is not only about speaking English or other foreign languages.

The current government of Lagos State should be commended for grassroots sports development but the programme is not school based. Effective monitoring of teaching of Physical and Health



Education as well as implementation of intramural and extramural sports programme should be enhanced.

Never again shall any Governor cancel Physical Education as a school subject in this country or any agency of Federal or State government remove or step down the status of physical education in basic education syllabus. Such an action is a disservice to human development.

In Lagos State University, there are two avenues open to members of the community to conveniently participate in exercise regularly – Sports Centre and Department of Physical and Health Education.

I wish to appeal to the Vice Chancellor to approve the proposal for upgrading that of Physical and Health Education which is Exercise Physiology Laboratory to Human Movement Centre. This is because people need to attend the centre also for therapy beyond ordinary exercise.

More campaign is required at community, state and national levels to step up awareness on needs benefits of regular physical and activity to wellbeing. Efforts of some state governors, local chairmen companies government and and conducting establishments in monthly or occasional keep fit programmes should be emulated by leaders in all segments of our society and it should be done more frequently.

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Mr. Vice Chancellor sir, distinguished ladies and gentlemen, our wealth cannot guarantee our wellness; rather in our body and our wellness lie our wealth. We should therefore live an active life and ultimately treasure our body.



I sincerely thank you for listening.

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