CHAPTER I

INTRODUCTION

In ancient times people lived in the Natural Environment which forced them to work hard for their livelihood. They had to struggle and fight for their existence. As a consequence they developed the ability for hunting, fishing, crop raising and fighting. They also developed skills like running, throwing, jumping, climbing, swimming etcetera. As a result they possessed fitness qualities like Strength, Speed, Endurance, Agility, Flexibility, Co-ordination, etc. But the modern world is the outcome of many scientific instruments and machineries have helped to live our daily life with ease and comfort.

Since the modern man developed mostly upon modern out fits for his daily routine, involving mainly his mental powers to live an easy going life, there has been a fall and deterioration in his Physical Health and capacities. Modern man need not toil like his forefather for his daily life. So he has become less vigorous and lethargic. Every individual should develop his strength and endurance for a happy and effective living. In order to get proper strength and endurance one has to involve in physical activities.

Health and physical fitness have a vital role in the life of man from time immemorial. The progress of the nation lies in the hands of the people, who are healthy and physically fit. Physical activity is essential for the development of whole some personality of the child which would depend upon the opportunities provided for whole some development of the mental, physical, social and spiritual aspects.

Hence a well-organized and properly administered physical education program for school children is essential.

Man's physical activity and movement is as old as human existence. It played numerous roles from struggle for existence to struggle for excellence. In this playing, fundamental motor skills developed into various movements' patterns at times involving basic living skills, sometime forming skills for excelling the sporting performance; but at every stage of human history physical activities provided an exciting out let for human expression often creative in nature. Physical activity throughout the ages has been acclaimed for health and recreation. It provided fun and enjoyment, provided youthful exuberance and provided the elderly care.

HEALTH

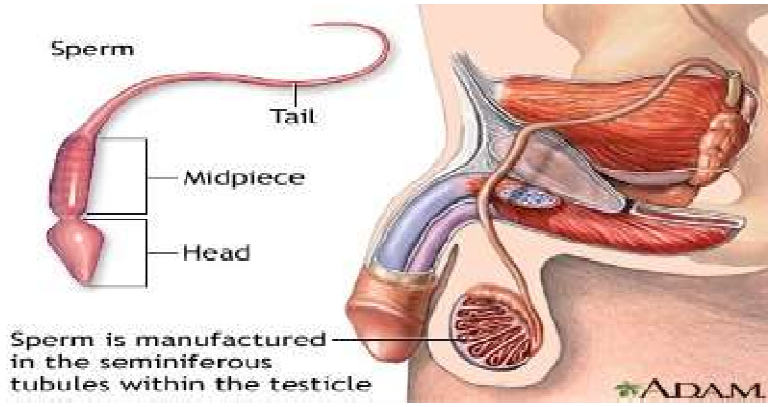
Health is the level of functional or metabolic efficiency of a living organism. In humans it is the ability of individuals or communities to adapt and self-manage when facing physical, mental or social challenges. This definition has been subject to controversy, in particular as lacking operational value and because of the problem created by use of the word "complete" Other definitions have been proposed, among which a recent definition that correlates health and personal satisfaction. Classification systems such as the WHO Family of International Classifications, including the International Classification of Functioning, Disability and Health (ICF) and the International Classification of Diseases (ICD), are commonly used to define and measure the components of health.

INFERTILITY

Male infertility is due to low sperm production, abnormal sperm function or blockages that prevent the delivery of sperm. Illnesses, injuries, chronic health problems, lifestyle choices and other factors can play a role in causing male infertility. The subject infertility is of much concern to millions of people all over the world, approximately 60% of childless marriages believed to be due to infertility on the part of the men. seminal analysis is a relatively simple procedure which will indicate a lowered sperm count in a spermatic fluid ,as well as the presence of abnormal or immobile sperm forms This is because of unhealthy life style, food ,bad habits,alchoholism,working in a night shifts are affecting more to infertility, infertility sometimes it is due to faults arising in the chromosomal mechanism or sex determination as early as conception ,in other cases it may be due to later developmental errors in sexual differentiation of the embryo and fetus up to the time of birth and after birth in the ongoing sexual development. Problem of infertility also due to lot of other reasons they are medical, environmental, health and other causes. Infertility is the inability of a person, animal or plant to reproduce by natural means. (Web MD 2013)

MORPHOLOGY OF SPERM PRODUCTION

Figure 1

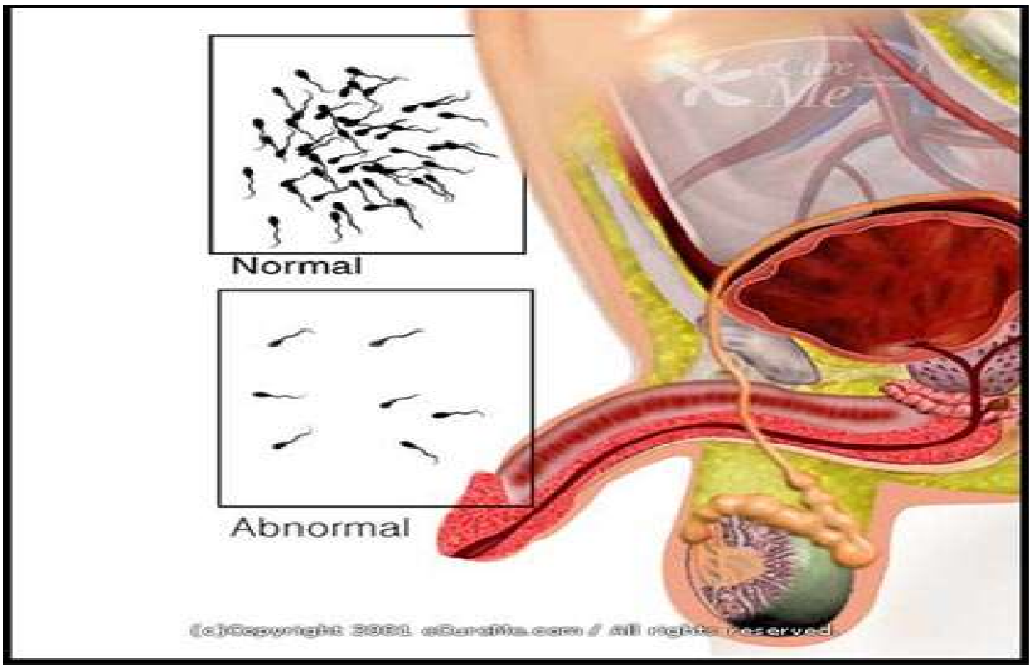


HOW DOES THE MALE REPRODUCTIVE SYSTEM WORK

The male reproductive tract is made up of the testes, a system of ducts (tubes) and other glands opening into the ducts. The testes (testis: singular) are a pair of egg shaped glands that situated in the scrotum next to the base of the penis on the outside of the body. Each normal testis is 15 to 35ml in volume in adult men. The testes are needed for the male reproductive system to function normally. The testes have two related but separate roles:

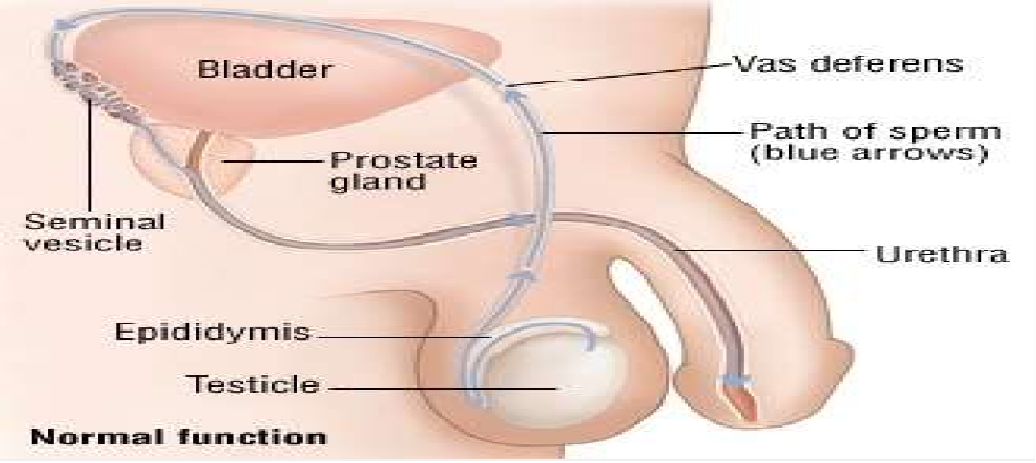
- production of sperm
- production of the male sex hormone, testosterone.

Figure 2



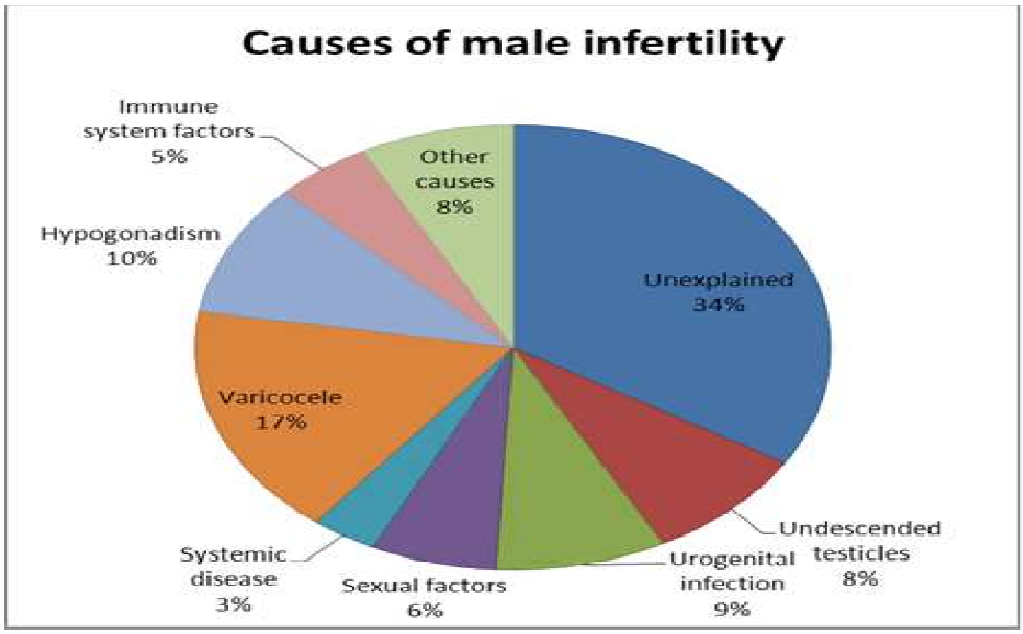
NORMAL FUNCTION OF MALE REPRODUCTIVE SYSTEM

Figure 3



CAUSES OF MALE INFERTILITY

Figure 4



CAUSES MALE INFERTILITY

Male infertility can be caused by problems that affect sperm production or the sperm transport process. With the results of medical tests, the doctor may be able to find a cause of the problem.

SPERM PRODUCTION PROBLEMS

The most common cause of male infertility is due to a problem in the sperm production process in the testes. Low numbers of sperm are made and/or the sperm that are made do not work properly. About two thirds of men with andropause have sperm production problems the problems are

- Chromosomal or genetic causes
- Undescended testes (failure of the testes to descend at birth)
- Infections
- Torsion (twisting of the testis in scrotum)
- Heat
- Varicocele (varicose veins of the testes)
- Medicines and chemicals
- Radiation damage
- Unknown cause

BLOCKAGE OF SPERM TRANSPORT

Blockages (often referred to as obstructions) in the tubes leading sperm away from the testes to the penis can cause a complete lack of sperm in the ejaculated semen. This is the second most common cause of male infertility and affects about one in every five men with andropause , including men who have had a vasectomy but now wish to have more children.

Blockage of sperm transport due to

- Infections
- Prostate related problems
- Absence of vas deferens
- Vasectomy

SPERM ANTIBODIES

In some men, substances in the semen and/or blood called sperm antibodies can develop which can reduce sperm movement and block egg binding (where the sperm attaches to the egg) as is needed for fertilisation.About one in every 16 men with andropause has sperm antibodies.

- Vasectomy
- Injury or infection in the epididymis
- Unknown cause

SEXUAL PROBLEMS

Difficulties with sexual intercourse, such as erection or ejaculation problems, can also stop couples from becoming pregnant. Sexual problems are not a common cause of infertility.

- Retrograde and premature ejaculation
- Failure of ejaculation
- Infrequent intercourse
- Spinal cord injury
- Prostate surgery
- Damage to nerves
- Some medicines

HORMONAL PROBLEMS

Sometimes the pituitary gland does not send the right hormonal messages to the testes. This can cause both low testosterone levels and a failure of the testes to produce sperm. Hormonal causes are uncommon, and affect less than one in 100 men

with andropause. Unfortunately, medical scientists do not yet understand all the details of sperm production and the fertilization process. As a result, for many men with a sperm production problem, the cause cannot be identified.

Hormonal problems are

- Pituitary tumours
- Congenital lack of LH/FSH
  (pituitary problem from birth)
- Anabolic (androgenic) steroid abuse

GENETIC PROBLEMS AFFECT SPERM PRODUCTION

Some changes to chromosomes or gene mutations cause abnormal sperm production or blockages to sperm flow that lead to male infertility.

The most common genetic causes of infertility are chromosomal conditions that affect sperm production. These include:

Y chromosome deletions

Klinefelter syndrome

Down syndrome.

Infertility due to mutations in single genes are less common. Congenital absence of the vas deferens, where there is a blockage to sperm flow, is caused by mutations in the cystic fibrosis gene.It is likely that other genetic disorders will be found in the future that will help explain other sperm production problems that currently have no known cause. .(Andrology Australia.2015)

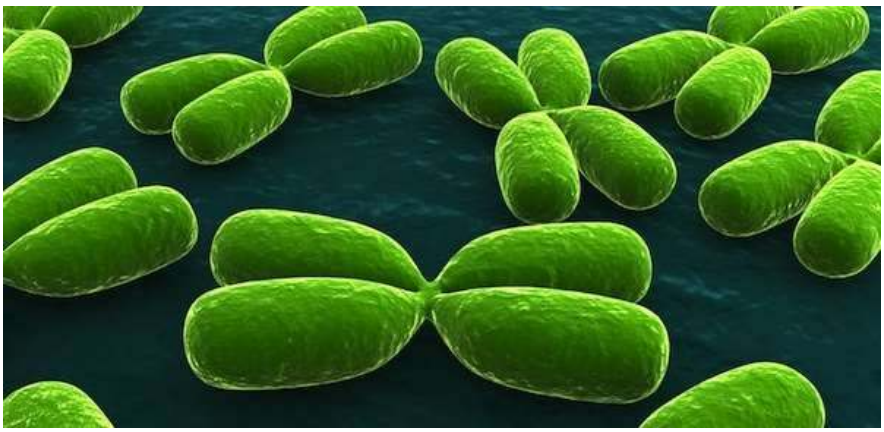
SYMPTOMS OF MALE INFERTILITY

In most cases, there are no obvious signs of an infertility problem. Intercourse, erections and ejaculation will usually happen without difficulty. The quantity and appearance of the ejaculated semen generally appears normal to the naked eye. .(Andrology Australia.2015)

WHAT ARE CHROMOSOMES INVOLVES

Chromosomes are found in each cell in the human body. They carry the genetic material (genes) that determines all human characteristics, including hair colour, eye colour, height and sex. Each cell in the human body normally has 23 pairs of chromosomes (a total of 46). Chromosomes are made up of long strands of a chemical substance called deoxyribonucleic acid (DNA) Of the 23 pairs of chromosomes, one pair is called the sex chromosomes because they determine a person's sex. The sex chromosomes in a female are called XX and in a male are called XY. One sex chromosome is inherited from the mother and one from the father. Mothers always pass on an X chromosome, but fathers can pass on an X or a Y chromosome to their children.The number and structure of chromosomes can be checked with a blood test called a karyotype.

Figure 5



WHAT ARE GENES INVOLVES

Genes are made up of DNA and are located at specific places on the chromosomes. Genes determine our physical characteristics and influence some behavioral characteristics, such as intelligence. Sometimes genes contain variations in the DNA that causes the gene to not work properly. These gene variations, called mutations, can lead to a range of physical and health conditions and/or intellectual disabilities. .(Andrology Australia.2015)

SEMEN ANALYSIS

Semen analysis is the laboratory testing of freshly ejaculated semen. Under a microscope, the number, shape and movement of sperm are measured. A semen analysis is a vital part of diagnosing male infertility.(Andrology Australia.2015)

WHEN IS SEMEN ANALYSIS DONE

When a couple is having medical investigations for infertility, testing of the male partner will usually include semen analysis. It is also used to confirm a successful vasectomy.

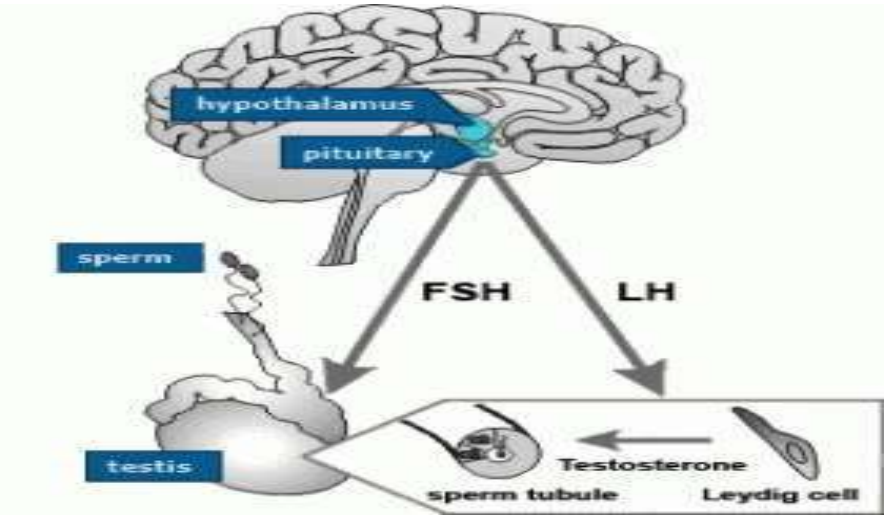
TESTOSTERONE

Testosterone is the most important androgen (male sex hormone) in men and it is needed for normal reproductive and sexual function. Testosterone is important for the physical changes that happen during male puberty, such as development of the penis and testes, and for the features typical of adult men such as facial and body hair. Testosterone also acts on cells in the testes to make sperm. Testosterone is also important for overall good health. It helps the growth of bones and muscles, and it affects mood, libido (sex drive) and certain aspects of mental ability. .(Andrology Australia.2015)

TESTOSTERONE PRODUCTION CONTROL MECHANISM

The pituitary gland and the hypothalamus, located at the base of the brain, control the production of male hormones and sperm. Luteinizing hormone (LH) and follicle stimulating hormone (FSH) are the two important messenger hormones made by the pituitary gland that act on the testes. LH is needed for the Leydig cells in the testes to make testosterone. .(Andrology Australia.2015)

Figure 6



TESTOSTERONE DEFICIENCY

Androgen, or testosterone, deficiency is when the body is not able to make enough testosterone for the body to function normally. Although not a life-threatening problem, androgen deficiency can affect your quality of life.Androgen deficiency affects about one in 200 men under 60 years of age. It is usually caused by a genetic disorder or damage to the testes or, in rare cases, a lack of hormones made by the brain.It is thought that about one in 10 older men may have low testosterone levels but exact numbers are not known. It is likely that androgen deficiency is under-diagnosed and that many men are missing out on the benefits of treatment. .(Andrology Australia.2015)

AGEING AND TESTOSTERONE LEVELS

Testosterone levels in men are highest between the ages of 20 and 30 years. As men age progress there is a small, gradual drop in testosterone levels; they may drop by up to one third between 30 and 80 years of age. Some men will have a greater drop in testosterone levels at this age. This is more likely when men are obese or have other chronic (long-term) medical problems. .(Andrology Australia.2015)

SYMPTOMS OF TESTOSTERONE DEFICIENCY

Low energy levels, mood swings, irritability, poor concentration, reduced muscle strength and low sex drive may be symptoms of androgen deficiency (low testosterone). Symptoms often overlap with those of other illnesses. The symptoms of androgen deficiency are different depending on the age when testosterone levels are below the normal range.(Andrology Australia.2015)

THE MOST EFFECTIVE MALE FERTILITY NUTRIENTS

A multitude of studies has shown that highly dosed nutrients have potentially significant impact on overall sperm quality.

L-arginine The amino acid has been proven to increase sperm count and motility

L-carnitine Another amino acid has been found to significantly improve sperm concentration (count) and motility over a relatively short period of only 8 weeks

Vitamin D has been shown to improve sperm count, motility and morphology

Vitamin B9, better known as **folic acid** has been shown to increase count, motility and morphology.

Zinc improves the immune system and significantly improves sperm count in combination with folic acid(Men Fertility.org)

Selenium in combination with **vitamin E** has been found to improve motility(Wickipedia.2014)

ANDROPAUSE

Testosterone is the hormone responsible for deep voices, muscle mass, and facial and body hair patterns found in males. As men get older, the level of testosterone in the body and production of sperm gradually becomes lower, and they experience physical and psychological symptoms as a result of these low levels. This is part of the natural aging process and it is estimated that testosterone decreases about 10% every decade after men reach the age of 30.

Andropause is a condition that is associated with the decrease in the male hormone testosterone. It is unlike menopause in that the decrease in testosterone and the development of symptoms is more gradual than what occurs in women. Approximately 30% of men in their 50s will experience symptoms of andropause caused by low testosterone levels. A person experiencing andropause may have a number of symptoms related to the condition and could be at risk of other serious health conditions such as osteoporosis without proper treatment.

CAUSES

The decrease in testosterone is an important factor in men suspected of having andropause. However, as men age, not only does the body start making less testosterone, but also the levels of another hormone called *sex hormone binding globulin* (SHBG), which pulls usable testosterone from the blood, begins to increase.

SHBG binds some of the available testosterone circulating in the blood. The testosterone that is not bound to the SHBG hormone is called *bioavailable* testosterone, meaning it is available for use by the body.

Men who experience symptoms associated with andropause have lowered amounts of bioavailable testosterone in their blood. Therefore, tissues in the body that are stimulated by testosterone receive a lower amount of it, which may cause various physical and possibly mental changes in a person such as mood swings or fatigue.

SYMPTOMS AND COMPLICATIONS

Although symptoms may vary from person to person, common symptoms of men going through andropause include:

- low sex drive
- difficulties getting erections or erections that are not as strong as usual
- lack of energy
- depression
- irritability and mood swings
- loss of strength or muscle mass
- increased body fat
- hot flashes

Complications associated with andropause include an increased risk of cardiovascular problems and osteoporosis (brittle bones).

TREATMENT AND PREVENTION

Replacing testosterone in the blood is the most common treatment for men going through andropause. This treatment may provide relief from the symptoms and help improve the quality of life in many cases. Lifestyle changes such as increased exercise, stress reduction, and good nutrition also help. Your doctor will help you decide if testosterone treatment is right in your situation, as treatment does have risks.

Testosterone is available in a variety of different preparations including skin patches, capsules, gels, and injections. Your doctor will help determine which treatment is best for you and will often consider your lifestyle when making this decision. Follow-up visits with your doctor will be important after the initial treatment begins. At follow-up visits, your doctor will check your response to the treatment and make adjustments, if necessary.

Skin patches: People who wear a patch containing testosterone receive the hormone through the skin. The patch allows a slow, steady release of testosterone into the blood stream. It is applied once a day to a dry area of skin on the back, abdomen, upper arms, or thighs.

Testosterone gel: This treatment is also applied directly to the skin, usually on the arms. Because the gel may transfer to other individuals through skin contact, a person must take care to wash the gel from the hands after each application. Capsules: Taken twice daily after meals, this is yet another option for testosterone replacement. Men with liver disease, poor liver function, serious heart or kidney disease, or too much calcium in their blood should avoid testosterone capsules. Testosterone injections: This treatment involves injections of testosterone (testosterone cypionate* and testosterone enanthate) in the muscle every 2 to 4 weeks.

They may cause mood swings due to changes in testosterone levels. Men with severe heart disease, severe kidney disease, or too much calcium in their blood should avoid testosterone cypionate. Men with severe kidney disease should not take testosterone enanthate. Testosterone should not be taken by any man with prostate or breast cancer. If you have heart disease, are taking some medications such as blood thinners, have an enlarged prostate, or have kidney or liver disease, you will need to discuss with your doctor whether or not testosterone therapy is right for you.

Andropause symptoms are typically mistaken for signs of aging and left untreated. However, adequate levels of testosterone are vital to a man's health and wellbeing. In fact, in 2015, a number of studies confirmed that men who fail to treat low levels of testosterone are at greater risk of disease. At the 2015 American Association of Clinical Endocrinologists conference, a panel of experts released a position statement citing testosterone therapy as a low risk, high reward treatment option. At the conference, the panel reviewed the mounting clinical evidence showing that low testosterone levels play a role in common co-morbidities, such as obesity and type 2 diabetes, among men in all age groups and that testosterone therapy is a viable solution.

These statements later received further backing when the results of large, long-term Veteran Affairs Database study that analyzed data collected on more than 83,000 male veterans with low testosterone levels was published. The findings, released in August 2015, showed that men who restored testosterone to normal levels with testosterone therapy were at a reduced risk of heart attack or stroke. In comparison, men who failed to receive treatment for low experienced a 56 percent increase in all-cause mortality. On the heels of the VA Database study, the results of a meta-analysis including more than 59 trials and 5,000 male subjects was published. The research

uncovered the benefits of testosterone therapy for improving body composition and glucose metabolism in men with low testosterone, including notable beneficial effects in subjects suffering from obesity and metabolic disorders.

EFFECTIVE TREATMENT FOR ANDROPAUSE

Testosterone therapy has reached new heights of safety and effectiveness over the years as advances in science have uncovered more accurate forms of testing hormone levels and administering testosterone. Testosterone therapy is available in a variety of delivery methods including creams, gels, injections, and pellets. Pellet therapy has become the most sought-after delivery method of bioidentical testosterone replacement therapy, as it mimics the natural secretion process of endogenous testosterone. Testosterone pellet therapy delivers a steady dose of hormone over the course of three to four months, eliminating daily dosing hassles and reducing the risk of side effects.

The safety and effectiveness of any therapy is largely dependent on the care provided with the treatment plan. The lead researcher of the VA Database study pointed out, “Patients who failed to achieve the therapeutic range after testosterone replacement therapy did not see a reduction in [heart attack] or stroke and had significantly less benefit on mortality.“ A statement that underlines the importance of seeking expertise when considering testosterone therapy, including choosing expert practitioners that use sensitive lab testing and specialize in hormone therapy.

The practitioners of the BodyLogicMD network are the most highly-trained physicians in the nation specializing in bio identical hormone replacement therapy. Each practitioner spends at least an hour with each patient reviewing symptoms, lab results, medical history, and lifestyle factors to develop a tailored, comprehensive

treatment plan. All plans are carefully monitored with routine follow-up appointments to ensure hormone levels are on target and each patient is progressing toward optimal health.

YOGA

Adopting a regular yoga practice can improve the quality of sperm if one has issues with sperm count or motility. Practicing yoga is also proven to be excellent for prostate health, warding off prostate disorders, and reducing the size of prostate if it has got enlarged. Adopting a regular yoga practice can reduce stress and anxiety levels also, which can improve the overall health of reproductive organs, as it has proven that having less stress in life can improve sex-life and helps to treat mild erectile dysfunction (ED). Yoga basically acts as mind-body complementary medicine of male reproductive health by improving health in various ways It not only acts on endocrine axes to improve reproductive functions in male, but also, helps to improve reproductive health by improving reproductive behavior, mood, and also by reducing anxiety and stress. which are also credited with the early movements..(NFJ Yoga 2013).

COMMON OBJECTIVES OF YOGA

Health and physical fitness are not static. They are always changing. they follow ‘the law of use and disuse’. Health and physical fitness can be maintained only by carefully selected physical activities which are called ‘exercise’. the utility of the particular exercise programme can be evaluated only in terms of the effects that are obtained in promoting a particular factor or factors of physical fitness. Through constant practice of yoga, one can overcome all difficulties and eradicate all weakness. Pain can be transmitted into bliss, sorrow into joys, and failure into success

and sickness into perfect health. Determination, patience and persistence lead one to goal (Ananda, 1982) .

ASANA

In the practice of Yoga, Asana denotes the art of sitting still and also any posture in English as yogic posture or yogic positions only while a posture used in yoga is called a yogasana. Modern usage includes lying on the back and a variety of other positions. In yoga asana refers both to the place in which a defines asana as but does not reference standing postures or kriyas. Beginners generally find it surprisingly difficult to sit still for the one hour (as practised in meditation methods such as

PRANAYAMA

Patanjali in his text of Yoga Sutras mentioned pranayama as means of attaining higher states of awareness, he mentions the holding of breath as important practice of reaching Samadhi. Hatha Yoga also talks about 8 types of pranayama which will make the body and mind healthy.

MEDITATION

Meditation is a practice in which an individual trains the mind or induces a mode of consciousness, either to realize some benefit or for the mind to simply acknowledge its content without becoming identified with that content, or as an end in it. The term meditation refers to a broad variety of practices that includes techniques designed to promote relaxation, build internal energy or life force and develop compassion, love, patience, generosity and forgiveness. A particularly ambitious form of meditation aims at effortlessly sustained single-pointed concentration meant to enable its practitioner to enjoy an indestructible sense of well-being while engaging in

any life activity. The word meditation carries different meanings in different contexts. Meditation has been practiced since antiquity as a component of numerous religious traditions and beliefs. Meditation often involves an internal effort to self-regulate the mind in some way. Meditation is often used to clear the mind and ease many health concerns, such as high blood pressure depression, and anxiety.

YOGA BENEFITS MALE REPRODUCTIVE SYSTEM

Much evidence that suggests yoga practice helps to regulate the male reproductive system. It reported that, practiced regularly, yoga has proven both to help celibate men control sexual urges and to aide wannabe fathers conceive. The authors also say that yoga serves to tone and bring equilibrium to the sex glands in the teen years, relieving physical pain brought on by hormonal imbalance during sexual development. The report refers to kundalini and moola bandha as yoga practices particularly beneficial to relieve spermatorrhea involuntary and frequent ejaculation -- and to control testosterone secretion.

YOGA PRACTICE IMPACT ON REPRODUCTIVE HEALTH OF MEN

Adopting a regular yoga practice can improve the quality of sperm if one has issues with sperm count or motility. Practicing yoga is also proven to be excellent for prostate health, warding off prostate disorders, and reducing the size of prostate if it has got enlarged. Adopting a regular yoga practice can reduce stress and anxiety levels also, which can improve the overall health of reproductive organs, as it has proven that having less stress in life can improve sex-life and helps to treat mild erectile dysfunction (ED).Many people in the U.S. today claim to practice yoga for its health benefits without consciously adopting Hindu religious perspectives as stress

and stress-induced disorders are fast growing epidemics and bane of “modern” society. The holistic science of yoga has proven to be the best method for prevention as well as management of stress and stress-induced disorders by immediately down regulating effect on both the HPA axis response to stress. It was also found that brief yoga-based relaxation training normalizes the function of autonomic nervous system by deviating both sympathetic and parasympathetic indices toward more “normal” middle region of the reference values.

Regarding reproductive health, Kundalini Yoga is considered the ultimate yoga by which virility and sexual energy are not suppressed. Sexual energy, which is considered the most potent form of biochemical energy in the body, is the one form of energy that can be used for rejuvenating the entire physical apparatus.Yoga can also heal any sexual dysfunction, and thereby increase sexual potency and refine sexual energy, so it can be utilized for spiritual transformation. In men, practicing moola bandha has been associated with relieving spermatthorrea, preventing inguinal hernia, and controlling testosterone secretion. moola bandha stretches the muscles of the pelvic floor, increases circulation in that area, balances, stimulates, and rejuvenates the area through techniques that increase awareness and circulation. As a result, exercises that utilize moola bandha may be helpful in aiding people who lack sexual vitality and have poor sexual functioning. In numerous sex therapy centers, the practice of moola bandha is used to enhance awareness of genital arousal sensations, and in this way, may be a helpful adjunct for improving sexual desire and arousal. For Indian men who practice brahmacharya, certain yoga poses are thought to control (or reduce) erection and desire. For instance, there is a central pose known as siddhasana in which the practitioner's legs are crossed while seated during which a celibate man can pinch his penis and scrotum with his heels to control his desire. In this age, the

major problems men suffer from is ED and loss of sexual attractions toward female partner, may be as a result of increased stress and anxiety and other physiological problems including hormonal imbalance which again attributable to their age. Anything that increases anxiety or stress may contribute to ED by interfering with the relaxation fundamental to erection. Yoga is deeply relaxing. Something that damages the arteries or interferes with penile blood flow may also contribute to ED. No wonder that risk factors include: High blood pressure, high cholesterol, heart disease, and diabetes, all of which damage the arteries and reduce blood flow around the body, including into the penis. Obesity and a sedentary lifestyle also increase risk of ED. They are closely linked to the risk factors just mentioned. All these conditions also become more prevalent as men age. .(Andrology Australia.2015)

THERAPEUTIC WAYS OF YOGA ACTION ON MALE REPRODUCTIVE HEALTH

Yoga basically acts as mind-body complementary medicine of male reproductive health by improving health in various ways It not only acts on endocrine axes to improve reproductive functions in male, but also, helps to improve reproductive health by improving reproductive behavior, mood, and also by reducing anxiety and stress. .(Andrology Australia.2015)

YOGA IN IMPROVEMENT OF REPRODUCTIVE FUNCTIONS

There are reports that shows practice of yoga modulates neuro endocrine axis which results in beneficial changes in the practitioners. Schmidt et al found a reduction in urinary excretion of catecholamine's and aldosterone, a decrease in serum testosterone and luteinizing hormone levels and an increase in cortisol excretion, indicating optimal changes in hormones.. The field of

psychoneuroimmunology has defined the role of stress in reducing effectiveness of the immune system Kapalabhati is an excellent practice for moving energy into the pelvis.

YOGA IN SUBDUING STRESS AND ANXIETY

Stress, however, is known to raise the likelihood of infertility, and yoga is very effective at reducing stress. Patients suffering from problems in reproductive functions, experience anxiety and depression rates and even patients without fertility problems can find trying to have a baby a mysterious process ultimately beyond our control-an anxiety-inducing experience. The links between stress and infertility are complex and not fully understood, but cortisol, the so called stress hormone, can interfere with normal reproductive functions.

YOGA IN IMPROVING MOOD AND FUNCTIONING

In a German study published in 2005, women who described themselves as "emotionally distressed" are treated with 90-minute yoga classes a week for 3 months. At the end of 3 months, women in the yoga group reported improvements in perceived stress, depression, anxiety, energy, fatigue, and well-being. Depression scores improved by 50%, anxiety scores 30%, and overall well-being scores by 65%. Initial complaints of headaches, back pain, and poor sleep quality also resolved much more often in the yoga group than in the control group. tension, anxiety, depression, anger, hostility, and fatigue dropped significantly. Further controlled trials of yoga practice have demonstrated improvements in mood and quality of life for elderly people caring for patients. **(I**nt J Yoga. 2013 Jul-Dec; 6(2): 87–95).

DIET

Diet can help to not only prevent infertility and also prevent damage to sperm, but can also help to promote sperm health. Nutrients such as zinc, selenium and vitamin C (plus many others) co enzyme (Q 10, betacarotone, vitamin E have been shown to help increase sperm health, motility and mobility. a poor diet rich in fats and low in nutrients and hydration can cause low libido and hormonal issues for men. This can make it hard for couples to conceive and also cause sperm to be of less than optimal health.(Natural Fertility Info 2014)

TYPES OF YOGIC DIET

There are three types of yoga diet viz. **Rajasik, Tamasik and Sattavik** as per yoga diet philosophy.

Rajasik food comprises of a variety of dishes on the pattern of food served to Indian kings. This type of food includes various types of foods like fried, roasted, curried, highly seasoned along with various types of desserts, wine and drinks. Food of this type are not recommended for yoga practitioners as these foods acts as body stimulants and excite passions, making the mind restless and uncontrollable. These foods result in obesity and generate a typical feeling of heaviness in the stomach for a long time after eating a meal.

Tamasik food includes dishes prepared with too many spices, excessive use of salt, pepper, chilies, artificial colours and additives. These types of foods have very less nutrition value for either mind or body. They make body dull, lazy and drowsy. These foods stimulate emotions of anger and greed. Tamasik foods include alcohol,

tobacco, onions, garlic and fermented foods such as vinegar. This type of food is undesirable and not recommended for yoga practitioners.

This type of food is cooked with least amount of spices and without much seasoning. The food is fresh, attractive, nutritive and is cooked in a simple way. This type of food is desirable and highly recommended for yoga practitioners.

According to yoga principles, no food whether vegetarian or non vegetarian is by itself Rajasik, Tamasik or Sattavik. The classification of a food depends on type of preparation also. It is not necessary that all non-vegetarian food is Tamasik and vegetarian food is Sattavik. Though all foods are classified into three types of yoga diet, but any food item can be cooked as Sattavik, Tamasik or Rajasik depending upon the choice of ingredients and method of preparation.

Importance Of Method Of Eating Food

Food eaten in a hurry or in foul mood will not be as nourishing compared to food eaten slowly with a peaceful mind.

Yoga and diet are two pillars of a successful yoga practice

Yoga is so much more than a workout. Yoga is about toning and stretching exercises that are great for the entire body; it is about pranayama breathing techniques; meditation; and correct diet for the body. In fact yogic diet is one of the five main principles of yoga. Eating healthy and according to the principles of yoga, will make you feel healthy and clean, and look after your complete well being. Sages believed in a philosophy, which is that energy has three basic qualities –

Guna – this energy maintains equilibrium

Sattva means purity; Rajas means passion

Tamas means darkness

Food and diet can be categorized into three groups:

Sattvic Food: The following are the characteristics of Sattvic diet.

It is the purest form of food.

This is the best food for yoga practitioners.

It brings peace to the mind and is nourishing for the body.

Sattvic food is great for overall fitness and for a balanced energy flow.

Sattvic food includes cereals, honey, herbs, sprouts, seeds, nuts, legumes, butter, milk, fresh fruits and vegetables, fresh juices, and whole meal bread.

Rajasic Food: The following are the characteristics of Rajasic diet.

This food is salty, dry, sour, hot and bitter.

It is not good for the mind-body balance.

It tends to excite and over-stimulate the body, and makes the mind restless.

Rajasic food includes chocolate, salt, eggs, fish, tea and coffee, sharp spices.

Tamasic Food: The following are the characteristics of Tamasic diet.

This food is not good for the body or the mind.

It brings in a sense of inertia, clouds the power of reasoning, and sucks out the energy.

It destroys the body's resistance to diseases.

It also invokes feelings of anger, jealousy and greed in people.

TABLE SHOWING SATTVIC, RAJASIC AND TAMASIC ARTICLES OF DIET

SATTVIC		**RAJASIC**	**TAMASIC**
Cow's milk, Cream, Cheese,Butter, Curd, Ghee, Sweet fruits, Apples, Bananas, Grapes, Papaya, Pomegranates, Mangoes, Oranges, Pears, Pineapples, Guavas, Figs, Vegetables, Coconut, Brinjals, Potatoes, Cabbages, Spinach, Tomatoes.	Cucumber, Pumpkin, Cauliflower, Lady's finger, Peaches, Almonds, Pistachios, Raisins, Wheat, Red rice, Unpolished rice, Barley, Oat-meal, Dried peas, Dates, Sugar-candy, Green gram, Bengal gram, Green pulse, Groundnut, Cereals, Dried ginger, Myrobalan, Lemon, Honey, Charu.	Fish, Eggs, Meat, Salt, Chillies, Chutney, Asafoetida, Pickles, Tamarind, Mustard, Sour things, Hot things, Tea, Coffee, Cocoa, Ovaltine, White sugar, Carrots, Turnips, Spices.	Beef, Pork, Wine, Onions,Garlic, Tobacco, Rotten things, Stale things, Unclean things, Twice cooked things, All intoxicants, All liquors, All drugs.

PHYSICAL& PHYSIOLOGICAL VARIABLES

FLEXIBILITY

The ability in the all joints of range of movement when for doing the routine work again and again in naturally. Thus yielding passive physical stretch.

BLOOD PRESSURE

The Systolic and Diastolic blood pressure is nothing but the amount of pressure in your arteries. If the rate of BP reaches to as high and low as 140/90, then systolic and diastolic blood pressure is present. How to manage the hypertension, to manage the lifestyle its like yogic lifestyle to follow that principles.

BODY MASS INDEX

The weight of the body is calculated in individual's total body weight in kilograms by Individuals height in mt2. The Body mass index only identify the obesity and over weight. The Body mass index of thirty percentage is clinically confirmed as obesity.

BODY MASS INDEX CALCULATION

The metric BMI formula accepts weight measurements in kilograms and height measurements in either cm's or meter.

$$\text{Imperial BMI Formula} = \text{BMI } (kg/m^2) = \frac{\text{Weight in kilograms}}{\text{Height in meters}^2}$$

1 meter = 100 cms; meters^2 = meters x meters

RESPIRATORY RATE

The total no. of breaths/ min and Scientifically level of C02 controls the respiration rate in human body and to a much lesser extent oxygen. Since C02 levels reflect both acid-base balance as well as levels of metabolic activity there are two possibilities for lowering respiration rates. First reason would be ingestion of basic compounds, like Na0H. Think of it as a kind of poisoning. The second reason would be a decrease in metabolism rates as occurs in thyroid disorders. It is possible to lower CO2 levels by hyperventilation enough to remove all the drive to breathe then pass out from lack of oxygen.

PSYCHOLOGICAL VARIABLES

ANXIETY

Anxiety is described as the mental state that results from a difficult challenge for which the subject has insufficient coping skills.

Anxiety is considered to be a normal reaction to stress. It may help a person to deal with a difficult situation by prompting one to cope with it. When anxiety becomes excessive, it may fall under the classification of an anxiety disorder. The intensity and reasoning behind anxiety determines whether it is considered a normal or abnormal reaction. (**Bouras, n. and Holt, G. 2007).**

Patients with anxiety often suffer from sleep problems. Early insomnia is often characterized by anxious or ruminative thought about things that worry us. Specific causes of anxieties often differ from person to person. For some people it's the taxes, for others it's a family dispute. For others still, it's about politics at the water cooler. Whatever the specific cause, anxiety that causes insomnia often has a ruminative

quality. Specifically, we find our minds gravitating toward the topic that causes us anxiety. Although it causes us distress, we still find our minds wrapped around the knowing subject, even if we have not resolved anything nor become wiser for it. Although often distressing as a topic, we nevertheless return to the subject in a stereotyped, circular manner. (**Dr. Kleiner 2007).**

STRESS

Stress is the a change in various attitude and sedentary life style and unnecessary thinking and Repetitation of thinking to give these various health issues in our routine life and future.

SELF CONFIDENCE

Self confidence has always been the core of self development; the building block on which goal setting, motivation, problem solving, communication, willpower and other aspects of self help stem from. No confidence puts us at a major disadvantage in life.

The word confidence originates from the Latin “confidere”, meaning to trust. Trusting and believing in ourselves, having faith in our ability in whatever situation we need to perform.

At the heart of building self confidence and becoming more confident is this conundrum of uncertainty, our inability to control the world around us. Whilst there are many other techniques and ideas that we will cover in this blog, the first and most important is to accept this lack of control. Self confidence can build by not letting the feelings generated by uncertainty take over. Human have built in system to protect us from danger – "fight or flight" – that creates what we identify as anxiety symptoms

when threatened. Tolerate that feeling of anxiety; recognize that uncertainty is a challenge rather than a threat. Once you start to do that, then you're on the way to building confidence and generally being more confident.

Self confidence is the belief in oneself; to feel good and perform the best. However, this is easier said than done. Many people suffer from lack of confidence, which further affects their productivity and happiness; it comes in between them and the life they want to lead. If you fall in this bracket, you might want to give yoga a shot. (Patricia 2008)

Developing self-awareness, and channeling it into self-confidence, is not a complicated formula. The hard part is to continue doing this mental exercise more than one day and to make a habit of training yourself to be mindful as often as possible. You could practice pranayama for self-awareness any time of the day, but people are so task- oriented, these days, that accomplishing goals gives them self-confidence almost instantly. (Paul Jerard 2010).

STATEMENT OF THE PROBLEM

The purpose of study was the effect of yogic practices with and without diet modifications on selected risk factors among men with andropause.

HYPOTHESIS

1. It was hypothesized that there would be (significant improvement) in yogic practices (with and without diet groups) than the control group on selected risk factors among Men with andropause.

2. It was hypothesized that there would be (significant improvement) between yogic practices (with and without diet groups) on selected risk factors among Men with andropause.

SIGNIFICANCE OF THE STUDY

1. This study would give an exact idea, about Flexibility, Systolic blood pressure, Body mass index, Respiratory Rate is the most important factor in the development of men with andropause.

2. This study would pave the way and explore the level of their physical, physiological and psychological and give additional knowledge to manage this problem.

3. This study will give more attention towards the yogic training with diet and without diet modification for men with andropause.

4. This study useful for the future research and hospitals of men with andropause.

DELIMITATION

1. The study was only Men with andropause only.

2. The Men with andropause were age from 50 to 55 years and the place was Chennai only.

3. Totally 45 Men with andropause, in which fifteen for (no – training - control group), fifteen for (group - I - experimental group - 1 (yogic training with diet)) fifteen for (group – II - experimental group - 2 (yogic training not with diet)) were taken for the study.

4. The Men with andropause were under practice with (yogic training with and without diet) as well as only.

5. The Dependent variables such as (Physiological variable - Flexibility, Systolic blood pressure, Body mass index, Respiratory Rate, Psychological variable - stress, self confidence and anxiety) only.

6. The duration of the study would be for 16 weeks only and weekly 5days except Saturday and Sunday the time 6 am to 7am.

LIMITATION

1. It not consider of the subjects such as wind, weather, environment atmosphere, humidity in the air etc during testing period s would not be controlled.

2. The subjects living conditions, life style, diet, personal, habits, family, heredity, emotional status, motivational factors, Would not taken into consideration for this study.

3. The subject's routine work would not be stopped and also it was not controlling and also this study was noted as a limitation.

1. 41. DEFINITION AND MEANING OF TERMS

YOGA

Yoga is a complete process of perfection of an individual by developing consciousness to its fullfillness**. (Vethathiri Maharishi. 1991)**

DIET

Diet is defined as a person's regularly consumed food and drink or it can mean regulating food intake to loose or gain weight.

ANDROPAUSE

Andropause is a caused by low testosterone level condition and decrease in the male hormone testosterone.

FLEXIBILITY

Flexibility is the ability to carry out the range of motion. thus yielding passive physical stretch.

SYSTOLIC BLOOD PRESSURE

The systolic and diastolic blood pressures is called at its highest and lowest pumping the blood when the heart beats.

BMI (Body Mass Index)

The body mass index (BMI) to measure the body weight of individual's mass and height.

RESPIRATORY RATE

The respiratory rate is scientifically level of Co2 controls the respiration rate in human body and to a much lesser extent oxygen. Since Co2 levels reflect both acid-base balance as well as levels of metabolic activity there are two possibilities for lowering respiration rates. (G J Tortora & N P Anagnostakos, 1990).

PSYCHOLOGICAL VARIABLE - STRESS

Stress is the feeling of being under too much mental or emotional pressure. Pressure turns into stress when you feel unable to cope. People have different ways of reacting to stress, so a situation that feels stressful to one person may be motivating to someone else.(NHSUK 2014)

ANXIETY

Anxiety is considered to be a normal reaction to stress. It may help a person to deal with a difficult situation by prompting one to cope with it. When anxiety becomes excessive, it may fall under the classification of an anxiety disorder. .(Medical News Today,2013)

1.41.10. SELF CONFIDENCE

Self confidence has always been the core of self development; the building block on which goal setting, motivation, problem solving, communication, willpower and other aspects of self help stem from. No confidence puts us at a major disadvantage in life.