CHAPTER-I

INTRODUCTION

In 21st century stupendous developments have been found in the Science and Technology, research in Space, Defense, Atomic energy, Computer, Internet service and many other areas. Through Internet invention we may collect required information within a fraction of a second from any part of the universe. Due to this advanced scientific technological invention the body movements of the human being have been restricted and also the sedentary habit has been created, which have made physical exercise necessary for the maintenance of health. To be of benefit, physical exercise must be adapted to the capacity of the individual who practices it.

Each and every one has to follow good health practices in his/her routine life. Minor health disorder is common to all, but in case of major health problems like blood-pressure, acidity, diabetes and asthmatic patients are swallowing some conventional medicine regularly prescribing by the doctors. But such; practices do not completely eliminate the health disorder; on the other hand, it may lead to several other health problems.

The structure of human body and its varied parts perform different functions just like administrative system of a country. If any system out of them does not function properly it causes ill health. The main reason of ill health is accumulation of waste products in the body beating wrong type of food, lack of exercises and assimilation with various diseases.

The functioning of the human body is very complex and it involves mechanical laws as well as psychological principles. How effectively and efficiently the body performs depend mostly upon its mechanical aspects as they are directly related to performance of activities of an individual.

The educational institutions are the temple of learning, where two factors are involved: the teacher and taught. The duty of the teacher is to teach and that of the taught to learn. To facilitate the teaching learning process, there should be harmony and co-operation between the teacher and learner. (Kamlesh M.L. And Sangral M.S.)

The teacher is usually the first authority figure out side of the family to whom the child must relate. This authority figure remains with the child through all of his schooling. It is common for many children to approach the teacher when problems arise, because they feel that this teacher will understand. The teacher should attempt to help the student with his
problem while making him conscious of his obligations to the school, his home and his fellow classmates and helping him to understand that rules are not made either for or against him as an individual but for the school or society as a whole.

Teaching may be defined as those interactions of the teacher and or learner that make learning more successful. Although it is possible for learning to occur without a teacher's involvement, it is generally accepted that teachers facilitate the acquisition of knowledge, skills and attitudes. A teacher's ability to communicate effectively with learners, structure the learning environment to maximize learning opportunities, assist learners in the analysis of skill and accurately evaluate learners performance and provide necessary feedback directly influences the amount of learning that occurs. In an effort to improve the learning process researcher have attempted to identify characteristics that are commonly possessed by effective teachers. They have divided the skills comprising the teaching process into several broad areas: these are organization, communication motivation and human relations skills. These salient characteristics reflect effective teaching regardless of the skills to be learned the age of the students or the setting in which the teaching occurs. Organizational skills are very important in establishing the learning environment and facilitating student involvement in activities the manner in which the teacher structures instruction is of major importance. To be effective the teacher must ensure that the lesson to be presented relates to the stated objectives meets the needs of the individual learners and is presented in a logical systematic manner. Effective teachers minimize transition time that is the time to move from place to place and management time that is time used for managerial tasks such as taking attendance through efficient and thorough planning. Lessons are planned to ensure that students receive maximum opportunities to practice relevant skills and experience success. Actively supervising and monitoring student performance and providing students with appropriate feedback are characteristics of successful teachers. Effective teachers make a concerted effort to closely observe and monitor student’s performance. Skilled teachers bring each lesson to an end by summarizing what has been accomplished and by providing students with an assessment of progress toward the stated objectives.

Communication skills needed by the teacher include verbal and nonverbal expressive skills, written competencies and the ability to use the various media. Effective verbal communication skills are essential in the teaching process the ability to speak clearly and project one's voice in a pleasing manner is essential. Another attitude of a successful teacher is the ability to give clear precise directions and explanations and use terminology and
vocabulary that is appropriate to the activity and the level of the learners. The ability of the
teacher to use questions to elicit student input to promote student involvement and to clarify
student understanding of the material being presented enhances the effectiveness of the
learning process. Effective teachers are also aware of the influence of their nonverbal
behavior on the student’s and learning process. Use of eye contact, smiles and pats on the
back are some of the methods of communicating with students in nonverbal behaviors. Then
effective teachers model the kinds of behaviors they wish their students to exhibit, such as
interest in and enjoyment of the activity and respect for other person’s opinions and needs.
Written communication skills are essential especially in the planning and evaluation phase of
teaching. Those teachers who possess effective written communication skills are able to
express themselves clearly. The ability to communicate with supervisors, participants, and
interested others will help to establish a more successful program. Expertise in the use of
various instructional media techniques is a quality of effective teachers. Use of transparencies
slides movie projectors and videotape equipment are skills that should be mastered early in
one’s career. Appropriate use of media can enhance and accelerate student learning.

The ability to motivate students to perform to their potential is the goal of every
teacher. Skillful teachers will use a variety of teaching techniques to stimulate interest in
participation and will seek creative techniques to involve students in the learning process.
They also use appropriate reinforcement techniques to maintain student involvement and
promote a high level of student effort. These may include checklists contracts award systems
and verbal and nonverbal feedback. Successful teachers continually update their lessons in an
effort to meet student’s needs and to make the material presented relevant and challenging to
the students.

Effective teachers possess superior human relations skills. They listen to students and
accept students as individuals treating them as such. They strive to instill in each student a
sense of self-worth. Effective teachers show concern for the wellbeing of each student in their
classes and endeavor to provide students with opportunities that will enhance their self-
confidence. The ability to establish and maintain rapport with students and staff and readiness
to acknowledge one own mistakes are also characteristics that many successful teachers
possess. A sense of humor is a welcome attribute as well. In summary, effective teachers
possess the ability to relate well with a variety of people, determine their needs and provide
an organized and meaningful program. Although many of these skills appear to be innate to
certain individuals, all of them can be developed and or improved by individuals who desire
to become more effective teachers. This holds true whether one is teaching in the school or the non school setting.

The teaching profession faces new challenges now and in the immediate future. So the teachers should prepare themselves and keep them fit physically, mentally, socially, emotionally for specialized role in effective contribution to education. But the teachers those who are suffering from diabetes fail to fulfill the expected role as teacher.

Our body needs energy to perform any kind of activity. Our body transforms supplementary foods and its contains e.g. glucose etc. into the force to remain dynamic and active. Carbohydrates are transformed into glucose. As the ratio of glucose increase in the body, pancreas, exocrine gland located behind the stomach, releases insulin to convert glucose in the form of power and stores remaining glucose in liver and muscles cells. So, the amount of glucose remains balance.

Medical science has established that when the liver, pancreas, spleen of human body fails to act properly, insulin deficiency along with imbalanced secretion of other hormones is seen. Continuous substance of such a situation leads towards diabetes, namely MELLITUS and INSEPIDAS. Diabetes is a polygenic disease characterized by abnormally high glucose levels in the blood. Normally whatever we eat is transformed into glucose which increases blood glucose level. In turn it orders pancreas to reveal insulin which assists in controlling and utilizing and storing glucose in the liver and muscle cells. Everyone needs insulin. Without insulin glucose cannot be used by the cells.

Leading cause of death in adults is because of having a stroke or heart attack which derives from the Diabetes Mellitus. It is also become the root cause of Blindness of adult in United States. It is a major cause of kidney failure and is responsible for the majority of non-traumatic limb amputations. Diabetes basically comes in two forms, the most common form is known as Adult Onset diabetes and the Non-insulin Dependent Diabetes and other form is known as Juvenile. Insulin is a hormone produced in the pancreas which allows cells in the body to burn sugar for fuel. The body does not produce enough insulin or is resistant to the presence of insulin which of diabetes results in both the forms in high blood sugar levels.

As the name implies people with IDDM the presence of insulin. As the name implies people with IDDM need insulin shots for treatment but those with NIDDM can usually control their disease through oral medication and diet. Complications of the disease are divided into those affecting small blood vessels and those affecting large blood vessels. The
small or macro vascular, complications are those that involve the retina of the eye, nerves and the kidney failure. The large or macro vascular complications are those associated with atherosclerosis such as heart attacks, strokes and gangrene.

Insulin is made when IDDM involves the destruction of the cells in the pancreas. NIDDM is a problem of insulin resistance. The pancreas makes insulin when the body cells ignore and become resistant to its higher levels than it required. Especially with NIDDM Family history is a factor in both forms of the disease and people over forty are more chances get NIDDM. There are more possibility of the disease at greatest risk to Blacks, Hispanics and Native Americans. Women having temporarily diabetes during their pregnancy known as gestational diabetes are at a greater risk of developing permanent diabetes later in their lives.

Poor physical fitness associated with insulin resistance and can lead to the onset of diabetes IN addition smoking and obesity also increase the risk of developing diabetes. Clearly these are areas of personal control. You need to make healthy decisions about your health. You can lower your risk of this major killer by not smoking, by participating in regular exercise and by maintaining a healthy weight, you do not have do gain weight as you get older. Most age related weight gain is attributed to decreased activity without a reduction in consumption. Weight control is not rocket science the more you eat the more you must move if you don't want to gain.

Symptoms of diabetes result from excessive sugar levels in the blood. In an attempt to lower your sugar levels, your kidneys put sugar into your urine. The sugar is like a sponge and carries fluid out of the body in the form of urine. The sugar is like a sponge and carries fluid out of the body in the form of urine. Consequently you are always thirsty and urinate frequently. Your body can't effectively utilize the sugar as fuel so you are hungry and eat more than usual but still lose weight additionally you may experience blurred or other changes in your vision and become more susceptible to simple infections. However a significant number of people with NIDDM have no symptoms. It is possible to have diabetes for many years and not be diagnosed until a complication arises. Consequently if you are at risk for the disease by being overweight, over forty and sedentary ask your doctor to test you for diabetes. This is especially true if the disease runs in your family. There are currently no recommendations for or against routine screening for diabetes although it is recommended for those at risk. Thus it is up to you to request testing. There are many ways to test for diabetes. Before a doctor makes a definitive diagnosis, you should have an abnormal test on more than
one occasion. To get the most meaningful results, you should eat normally for three days and then fast overnight prior to the test. An oral glucose tolerance test relates with an abnormal fasting blood sugar level. A drink containing glucose a sugar is given to you in this test in which your blood is drawn at set intervals to see how quickly your body metabolizes the sugar. Once the diagnosis of diabetes has been made, it is up to you to take control of the disease. You need to achieve good blood sugar control. You need to achieve marking health level of sugar controlling. Controlled blood sugar level has been shown to slow the onset of micro vascular complications of the disease. Control is accomplished by taking medication as directed and following a diabetic diet. Sometimes insulin is needed, even in NIDDM, to get control. It is better for your long term health to take insulin shots to get control than to be only partially controlled with oral medication. Other things that will help are a regular exercise program and weight loss if you are heavy. Exercise increases insulin sensitivity and weight loss lowers your insulin needs. Many people with NIDDM manage their disease without medication just by losing weight and watching what they eat. They make the effort and gain control of their health.

Medical care standards for Diabetes – 2013

American Diabetes Association:

Diabetes is a chronic, polygenic disease which requires continuous medical treatment and care. Self-management education for a going patient is essential for preventing acute complications and for reducing further risks. Diabetes care is complex one therefore it needs to have multi-tasking risk reduction treatment. These standards included screening, diagnostic, therapeutic treatments.

American Diabetes Association intended to provide various components of diabetes care, tools etc. To evaluate the quality of care for the Patients like co-morbidities, individual given preferences to modification of goals which are desirable targets for most of the patients. Lilted section specifically marks children with diabetes, pregnant women, and also pre-diabetic patients. These standards do not need to evaluate or judge the patient.
**DIABETES CARE:**

**Initial Evaluation:** Initial Evaluation should classify the diabetes that detect the complications and risk control factor in patient and provide continuous care. Laboratory tests should be necessarily performed to evaluate patient’s medical condition. Optimal management of the patient will be ensured by the health care team.

**Management:**

Diabetic patients should receive medical care and treatment from the learned and trained team of medical personalities. Diabetic patients should perform active role in their care taken by the collaborative team approach. Management should plan as an alliance among the patient and family as well as medical personalities. Many strategies and Techniques should be implemented to provide adequate education and development of problem solving. For implementing the management plan it is necessary to take account of treatment plan and patient performances. Plans have to recognize self-management education in diabetes patients. It must support for integral caring components. Patient’s age, conditions, duties or works, physical fitness and activity, etc. should be considered while developing the plan.

**Glycemic Control: Assessment:**

There are two different primary techniques available to plan effectiveness of the management on glycemic control:

a) Self-Blood Glucose Monitoring :

b) Glycohemoglobin test OR AIC :

**Self-Monitoring of Blood Glucose:**

Patients should pump insulin at least before their meals and before exercise whenever they suspect low blood glucose. As a part of broader educational content, it guides patient for self-management to use less insulin injections. When prescribing this method ensure that patients receive ongoing instructions regarding, The techniques as well as their regular use of this mode. Regular use in glucose monitoring Intensive insulin regimens can be a useful tool for lowering AIC in selected age group of the patient. Evidences for lowering AIC in children, teens and younger’s are less strong.
a) Glycohemoglobin Test OR AIC :

AIC is a blood test which provides information about patients average levels of blood glucose. Patient should perform this test at least twice a year or quarterly on those patients who do not meet glycemic goals or whose therapy has been changed. For more timely treatment changes point-of care testing must be used.

**Glycemic Goals in Adults:**

Lowering AIC less then 7% has been shown to reduce micro-vascular complications of diabetes. It is implemented after the diagnosis of diabetes then it relates with long-term reduction in micro-vascular disease. The AIC amount is less than 7% in many adults. Providers may suggest more goals like 6.5% AIC for selected age-group patients. Some patients may include those short duration of diabetes, long life expectancy and no significant CVD. AIC amount is less than 8% may be exact for the patients with servers’ hypoglycemia including insulin.

**Pharmacological and Other Approaches to Treatment**

**Insulin for Type 1:** The patients with type1 diabetes should be treated with MDI injections which are expected to have three or four injections per day of prandial or basal insulin. They must be educated for matching the dose to crab loading, premeal blood glucose, etc. Insulin analogs must be used to reduce hypoglycemia risk. Screen the patients for other diseases e.g. vitamin B12 deficiency, thyroid etc.

1) **Pharmacological for Type 2:**

Metformin is the recommended pharmacological agent for Type2 diabetes. Insulin therapy is used for those patients who are newly diagnosed of Type 2 diabetes. Patients should be considered with or without additional agents. At higher level if insulin therapy is not working properly, use another oral agent like glucagon peptide-1(GLP1). Those particular agents should be guided on patients centric approach. Effects, side effects, efficacy, gaining or losing weight, co-morbidities, cost, hypoglycemic risks etc. are included considerations in type 2 diabetes. Glucagon like peptide-1(GLP1), insulin therapy is suggested for many patients.
Self-Management Education and Support:

People with diabetes should receive Self-Management education and support according to national standards. Effective self-management is the key outcome of Diabetes self-management education (DSME) and should be utilized as part of care. It must address psychological issues. They should be taken care on various psychological issues and for people with pre-diabetes. By education and support they can maintain their behavior which can prevent or delay diabetes.

Physical Exercises:

Most important, exercise can help you control your weight; it also makes insulin more effective in lowering your blood glucose level and aiding the entry of glucose into the cells. It can also increase the efficiency of your lungs and heart, help reduce hypertension, help you handle stress by relieving physical tension and reduce the cholesterol level in your bloodstream. While exercise can be of great value to both insulin dependent diabetics and non-insulin dependent diabetics, there are some differences in the ways exercise affects each group of people.

If you are insulin dependent diabetic then you should understand how exercise is helpful to your body it can avoid hypoglycemia and hyperglycemia. If you do not plan your daily schedule of exercise then you should strictly follow exercise than a non-insulin dependent diabetic. Generally, you just plan to eat your meals and take insulin at the same time each day, and schedule your exercise routine with regularity.

Exercise increases demands for glucose within body because working muscles use more energy than relaxed muscles. This energy comes from the glucose which is circulating in your blood. In this way with the help of exercise your blood sugar level is lower. If you take insulin injections, you may do exercise because exercise can increase the rate of absorption of insulin in your body. Researchers have found that when insulin is injected into an exercising limb, such as your leg, as you are walking or running it is absorbed faster. The fast absorption may cause the injected insulin to act too quickly in your body. Therefore, you have to plan your exercise hour as per your physician will suggest.

In many cases, insulin is beneficial it may decrease the amount if insulin you have to take. If you are insulin taker than you should carefully balance the insulin with your food and exercise. If you are overweight than your doctor may suggest you to decrease the insulin doses rather than increase your food consumption. With the help of exercise you will burn
more calories and avoid extra food, so you should be able to reduce your weight. your exercise duration cannot be expected it is easier to increase your food intake before exercising.

Best time to exercise is 15 minutes to two hours after a meal. Because at that time your blood sugar is higher. If you think about extra food than try to eat before 15 minutes of exercise. After finishing exercise you may notice signs of hypoglycemia; at that time you may require food. And also you extend period of exercise you may need some extra food. Especially during all day activities, like hiking or a long bicycle ride, you can easily carry high energy snacks. Sugar cubes, hard candies, and orange juice until your blood sugar returns to it is not near mealtime, it may be advisable to eat some carbohydrates to maintain your blood glucose level. In determining time period for exercise you may consider the action of your insulin peaks. Insulin may peak anywhere from about 2 to 12 hours after the injection, it is depend on the kind you inject. The combination of exercise and high insulin level could reduce your blood sugar too much, causing hypoglycemia.

Adult patients might be advised to perform at least 2–3 hours physical exercises per week. But they have to take care of not performing more than two consecutive days. It is advisable to adult patients to perform at least 2–3 hours physical exercises per week. But it is essential to take care of not performing more than two consecutive days. patients with Type 2 diabetic patients should perform resistance training at least twice a week. An improvement in blood glucose control has been shown because of regular physical activity/exercise. It also reduces risk factors regarding cardiovascular. It can also helpful in weight loss and can improve healthy living. Well planned exercise also prevent high risk in Type 2 diabetes patients. At least 8 weeks’ time duration have been shown to lower A1C with an average of 0.66% in people with type 2 without any significant change in Body Mass index.

**Frequency and type of exercise**

Physical activity guideline for U.S. citizens is announced according to U.S department of Health and Human services that adults over eighteen years have to perform at least 2-3 hours moderate intensity physical exercise per week or of 75 min/week vigorous aerobic-activity. Adults must perform muscle-strengthening activities for more than two days per week including all major muscles. They must perform muscle-strengthening activities two days per week. Guidelines are suggested to those adults who are above 65 years or with disabilities. Because of DPP life style people with prediabetes had a beneficial effect on
glycemia of moderate intensity exercise including 2-3 hours per week. That is why people with diabetes have to follow them as per guidelines.

Regular exercise improves insulin level in old age group with type 2 diabetes. The A1C value lower in adults with type 2 people have also proved by resistance training. In the absence of contraindication patients with type 2 should be encouraged for resistance exercise at least twice a week to large muscle group people.

Physical trainer and Health Care Team will advise you about two types of exercise, aerobic and anaerobic. In aerobic exercise oxygen help you to create energy for your muscles. In this exercise efficiency of your heart, muscles, lungs, and blood vessels increases. Examples of aerobic exercise are walking and bicycling, swimming and running. Racquetball, paced calisthenics and tennis are other good examples of more active aerobic exercise are racquetball, paced calisthenics and tennis. Anaerobic exercise is exercise in which your muscles derive energy without the help of oxygen. Without oxygen your muscles can achieve great energy which is not immediately depend on available oxygen but will soon go into oxygen debt. Additionally, chemical by products of the substances broken down for energy can pool up in your muscles and cause fatigue. A good example of anaerobic exercise is running for a bus, when you exert yourself and breathe when you climb aboard. What happen when you used oxygen at faster rate than you took it in, resulting in oxygen debt.

For your cardiovascular system, you will probably want to concentrate on aerobic exercise. In aerobic exercise can decrease your resting and exercise heart rate, which means that your heart works less hard to do its job. However, you must exercise at least three times per week, or every other day. In fact, the weekend athlete can achieve good effect to strain a muscle or incur some injury, if you have been regularly exercising aerobically than you suddenly decrease your exercise schedule for three times a week, you will lose whatever benefits you have gained. Exercise must be a regular activity which definitely gets benefit.

How hard it is to push yourself in aerobic conditioning. Some physicians say you must perform at 70-85 percent of your maximum heart rate In order to achieve cardiovascular conditioning. There are two ways to find your maximum heart rate; one is simply to push yourself to the limit and record your pulse until it goes no higher. Your doctor may suggest that you do just this under supervision of course in an exercise stress test if you are middle aged. An electrocardiogram will show the tester how you are reacting to the stress an
electrocardiogram will show the tester how you are reacting to the stress. It means for you
then subtract your age from 220 are referred for maximum heart rate. If you are 40 years old,
your maximum heart rate would be would be 220-40=180. If you exceed 85 percent of this
maximal heart rate you may actually harm yourself. The exercise is probably not effective in
developing cardiovascular fitness, if you exercise at much less than 70 percent of this
maximal heart.

**Evaluation of the diabetic patient before recommending an exercise program:**

Prior guidelines have suggested that patients should be assessed with multiple
cardiovascular factors for coronary artery disease approving any exercise programmer.
Which stand in term as CAD ! The area of screening asymptomatic diabetic patients for CAD
remains unclear as per the discussions. Routine exercise is not necessary as per the recent
ADA consensus . High risk patients should start with low intensity exercises with the period
of time should increase the duration and the period of exercise.

Certain types of exercises are predisposing for uncontrolled hypertension, autonomic
neuropathy, and peripheral neuropathy as per the physicians’ assessment for patients’
condition To perform this kind of activity patients’ age and previous exercises should be
considered.

**Non –optimal Glycemic Control Exercises:**

**Hyperglycemia:**

It is observed that people with Type – 1 diabetes are deprived of insulin for twelve to
forty – eight hours. If your blood glucose level is higher then check your urine for ketones;
and do not exercise if you have ketones because it raises your blood glucose level go even
higher.

**Hypoglycemia:**

There is not enough sugar (glucose) in their body to be used as fuel with the people
diabetes hypoglycemia or low blood sugar. To maintain this one has to take proper
medication dose or has to alter carbohydrate consumption. It is rare in diabetic persons. In
this case no preventive measures for hypoglycemia are advised.
Exercise in the presence of specific long-term complications of diabetes:

Retinopathy:

A leading cause of blindness is diabetic retinopathy. On the other side most of the patients remains as they are. It is divided into two categories- 1<sup>st</sup> Simple and 2<sup>nd</sup> is proliferative. The earliest sign of retinal change is an increased capillary permeability that is evidenced by leakage of dye into the vitreous humor after fluoresce in injection. Occlusion of retinal capillaries follows, with subsequent formation of secular and fusiform aneurysms. Arteriovenous shunts also occur. The vascular lesions are accompanied by proliferation of lining endothelial cells and a loss of the pericytes that surround and support the vessels. Hemorrhages into the inner retina areas are dot shaped, while bleeding into the more superficial nerve fiber layer causes flame-shaped, blot, or linear lesions. Preretinal hemorrhages characteristically have a boat shaped appearance. Exudates are of two types. Cotton wool spots can be shown by angiography to be microinfarcts-nonperfused areas surrounded by a ring of dilated capillaries. A sudden increase in the number of cotton wool spots represents an ominous prognostic sign and may herald the appearance of rapidly advancing retinopathy. Hard elucidates are more common than cotton wool spots and probably represent leakage of protein and lipids from damaged capillaries. Retinal edema due to the previously mentioned increase in vascular permeability is most often seen in the posterior pole of the eye, often in association with hard exudates. If the edema is in the muscular region visual acuity may be seriously and permanentlgh impaired. Macular edema should be suspected when loss of visual acuity is not corrected by glasses, especially if posterior pole exudates are seen. Edema is difficult to recognize without slit lamp examination or stereoscopic fungal photographs. Consultation with a retinal surgeon should be sought early, since vision may be spared by laser therapy of the muscular edema. The fundamental characteristics of proliferative retinopathy are new vessel formation and scaring. The stimulus for neovascularization may be retinal hypoxia secondary to capillary or arteriolar occlusion. Two serious complications of proliferative retinopathy are vitreal hemorrhage and retinal detachment. Either may cause a sudden loss of vision in one eye. Treatment of diabetes retinopathy is photocoagulation. Such treatment decreases the incidence of hemorrhage and scarring and is always indicated when new vessel formation occurs. Photocoagulation is also useful in treatment of micro aneurysms, hemorrhages and muscular edema even if the proliferative stage has not begun. Pan retinal photocoagulation is
often used to diminish retinal demands for oxygen in the hope that the stimulus for neovascularization will be decreased. In this technique, several thousand lesions are produced over a 2 week period. Complications of photo coagulation are within the acceptable range. Some loss of peripheral vision is inevitable with extensive burns. Pars Plana Vitrectomy is another surgical technique which is utilized for the treatment of non resolving virtual hemorrhage and retinal detachment. Postoperative complications are more frequent than with photocoagulation and include retinal tears retinal detachment, cataracts, recurrent vitreal hemorrhage glaucoma infection and loss of the eye.

Diabetic retinopathy and its frequency appears to differ with the age of onset as well as the duration of the disease. The complications are deliberately developed by about 85% of the patients but some of them never develop lesions even after 30 years of the disease. Retinopathy develops very early, in older patients. Within five years, half of the patients with proliferative disease advances to blindness which is more common in insulin treated patients. Because of triggering retinal detachment or vitreous hemorrhage various vigorous aerobic or resistance exercises may be contraindicated in its presence.

**Peripheral Neuropathy:**

It is a result of nerve damage often causes weakness, numbers and pain. It increases risk of skin breakdown and infection; people generally describe the pain of peripheral neuropathy as burning. It is advised to perform non-weight bearing exercises. However, Studies have shown that in many cases this kind of symptoms improve with time.

**Autonomic Neuropathy:**

Nerve disorder affects involuntary body functions including heart-rate and also affects every part of nervous system. The autonomic nerves become damage which can be a complication of a number of disease and conditions. Polynuropathy is its most common picture. Usually, numbness, parenthesis, and pain are its symptoms. Involvement of proprioceptive fibers leads to abnormalities of gain and development of typical chariot joints particularly in the feet. Loss of arch with multiple fractures of tarsal bones is a common finding by x ray. One physical examination absent stretch reflexes and loss of vibratory sense are early signs. Diabetic neuropathy also may cause delay in return of the ankle reflex identical to that seen in hypothyroidism. It is a sudden drop of the third fourth or sixth cranial nerves. Also other single nerves including laryngeal reported to be involved.
Mononeurapathy is characterized by a high degree of reversibility. Sensory syndrome means Radiculopathy in which pain occurs over the distribution of spinal nerves. In chest wall or abdomen usually lesion is limited like mononeuropathy. Also, autonomic neuropathy may present is varies forms. The gastrointestinal is a major target and There may be esophageal dysfunction in swallowing delayed gastric emptying constipation which is a major target for the gastrointestinal. It is nocturnal. Cardio respiratory arrest and sudden death, thought to be due solve to autonomic neuropathy, have been reported. Bladder dysfunction affects a large number of women and men and can have serious impact on one’s daily life. It is particularly distressing and often leads to the necessity of chronic catheter drainage. It may be caused by inappropriate muscular activity in the muscles of the bladder wall. These muscles are known as pelvic muscles. Pre-mature ejaculation and impotence are additional manifestations usually ours in men which is happened due to failure of nitric oxide generation in the penile musculature or in sphincters. Deficiency of vasoactive intestinal polypeptide may also be involved. Clues to autonomic neuropathy can be obtained by clinical tests such as measuring response of the heart rate to the Valsalva maneuver or standing. In both tests the subjects has an electrocardiograph running for assessment of heart rate. In the former the subjects blows against an aneroid or mercury manometer to 40 mm Hg pressure for 15. The test is performed their times with a rest period of 1 min in between. Normally the heart rate speeds during Valsalva such that the ratio of the longest interval between beats after release to the shortest interval during the test is greater than 1.2. In autonomic neuropathy involving the parasympathetic system the ratio is less than 1.1. Similarly the ratio at the thirtieth beat after standing relative to that at the fifteenth beat should be greater than 1.0. It is less than 1.0 in autonomic neuropathy. Diabetic amyotrophy is one of the forms of neuropathy. Nerophy and weakness in the upper leg and pelvic girdle resemble primary disease. It may be accompanied with Anorexia and depression. By losing weight some patient may think it to have paraneuroplastic neuropathy.

Autonomic neuropathy is a serious and common complication of diabetes. It can increase the risk of cardiovascular mortality and its association with multiple symptoms. Due to impaired papillary reaction and unpredictable crab loading from gastro paresis predisposes to hypoglycemia. decreased cardiac responsiveness to exercise, postural hypertension, impaired thermoregulation, impaired night vision which is also strongly relates to CVD in diabetic patients. Before starting physical exercise these patients should undergo cardiac investigation.
Albuminuria and Nephropathy:

Urinary protein excretion can be acutely increased by physical exercise. It is characterized as an early predictor for progression of diabetic nephropathy. Yet there is no evidence to rectify that intensive exercises increase the rate of progression of diabetic kidney disease anywhere. It is viewed as a measure of the severity and determinant for diabetic renal disease progression. There is no need of specific exercise for the people with diabetic kidney disease.

Psychosocial Care and Appraisal:

Patients’ psychological and social situation’s assessment is reasonable to inculcate here as an progressive part of the management. Screening of psychosocial follow-ups may involves attitudes about illness, results of medical management, affects, living qualities, resources e.g. – financial, emotional, etc. and psychiatric history. It is also advised when to screen. If there is depression, distress, anxiety, disorders etc. the screening must be done.

Treatment Goals do not meet:

Many patients with diabetic problems do not meet the desired goals of the treatment for variety of reasons. It strongly need to rethink over the issues like income, health literacy, diabetes distress, depression, demands etc which become an inevitable part of human life which should be assessed. Other strategies and techniques may be used. This may include DSME and DSMS, co-management of team efforts, insurance coverage with the help of medical social worker or may be a change in pharmacological treatment. There are some traits which can be proved useful as contact with patient, referral to physician etc.

Inter current Illness:

There are ample things like stress, illness, trauma, and surgery frequently causes glycemic control which leads to diabetic ketoacidosis (DKA) or non-ketotic hyperosmolar state. Sometime it also causes life threatening conditions and require immediate medication to prevent complexities or death. Any state which leads to deterioration in glycemic control necessitates more frequent monitoring of blood glucose and urine ketones. It needs or requires temporary adjustment in treatment programme. Immediate interaction with physician is necessary in case of ketosis, vomiting, alteration in level of consciousness. The patients who are treated with non-insulin therapies temporarily require insulin. They must be assured
for adequate intake of fluid and calories. The person should be hospitalized in case of infection or dehydration and it is an essential for the hospitalized patient to treat by the expertise.

**Hypoglycemia:**

It may be caused by untimely meal or unexpected exercises. Daytime forms of hypoglycemia are usually recognized by autonomic symptoms e.g. seating nervousness, hunger, thirst which may produce no symptoms or may cause night sweats, headache, or unpleasant dreams etc. In one of the studies of insulin dependent diabetic children monitored throughout 24 h. 18 % had asymptomatic nocturnal hypoglycemia. Central nervous system symptoms ensue: confusion, abnormal behavior, loss of consciousness or convulsions if hypoglycemia is not aborted by counter regulatory hormone response or by ingestion of carbohydrate. Blood glucose concentrations fall cessation of insulin release and mobilization of counter regulatory hormones these two mechanisms are provided by protection against hypoglycemia. To increase hepatic glucose production and decrease glucose utilization in non hepatic tissues is the latter act. Epinephrine and nor epinephrine released from the adrenal medulla and the sympathetic nervous system serve as the major backup while Glycogen is the primary counter regulatory hormone provided decagon is available Catecholamine’s are not required for maintenance of the blood glucose level. Glycogen is the primary counter regulatory hormone despite they become critical in the absence of glucagon. Cortical and growth hormone do not function acutely but it comes into play with prolonged fasting or sustained hypoglycemia. Diabetic subject with type 1 insulin-dependent disease loses the capacity and to increase glucagon release in response to hypoglycemi as well. Thus Protection is dependent on epinephrine. Since the initial signals of hypoglycemia unawareness many patients unfortunately also lose the capacity to release epinephrine and nor epinephrine in response to hypoglycemia. This syndrome was originally thought due solely to autonomic neuropathy in patients with long standing diabetes. Undoubtedly, it is now recognized that the syndrome may be caused by low blood glucose in the absence of neuropathy, even if a single episode of afternoon hypoglycemia having discernible effects the next day. Though Hypoglycemia does not prevent epinephrine release but lowers the level of glucose required to trigger response. Potentially dangerous hypoglycemia is unrecognized, and the defense against hypoglycemia is impaired at the end.
After every encounter about symptomatic and asymptomatic hypoglycemia is asked by the patients having hypoglycemia. The preferred glucose level for conscious patient is nearly 20g except this any form of carbohydrate that contains glucose can be applied. If hypoglycemia is continue even after the SMBG treatment then the medication should be repeated. Once it returns to the normal phase then the person can freely consume meal, snacks to prevent its recurrence. At high significance risk Glycogen should be prescribed to the persons with diabetes. Family members have to take care of its management and administration. Only health care professionals are not responsible to handle the issues. To raise their glycemic targets to avoid further triggers for next several weeks in future these tips are given to the patients who have insulin-treated If low cognition appears then the ongoing assessment of its function must be suggested by the physicians and caretakers.

**Bariatric Surgery:**

This kind of surgery supposed to apply on those persons that cause weight loss by restricting the amount of food the stomach can hold. Patients with Type 2 are the considerations of its application. But it is only when there is difficulty in controlling lifestyle who have undergone through the surgery should have life-long support and proper medication. Small trials have shown glycemic benefits of bariatric surgery but it is noticeable that generally it is not recommended to the patients with BMI <35 Kg/m2. This must be studied for long-term benefits, cost effectiveness in well designed format to ensure optimal medical and lifestyle therapy.

**Immunization:**

It is recommended to provide Influenza vaccine annually to all diabetic patients who are greater than six months of age It is also suggested to administer pneumococcal polysaccharide vaccines to patients greater than two years of age. For all patients, one time vaccination is recommended .There are some indications that causes repetition in vaccination such as chronic diseases nephritic syndrome etc. deceases, nephritic syndrome etc. It is also stated to administer patients with hepatitis B vaccination who are aged 19-59 years.

**Autonomic Neuropathy Treatment.**

Gastric paresis symptoms may improve with diet and supplementary changes and with prokinetic changes. Intraurethral prostaglandins, vaccine devices, penile prostheses may be used for erectile dysfunction treatment. Related interventions regarding other
manifestations of autonomic neuropathy are visualized in ADA statement. The suggested DPN treatments do not change the nature of the disease but can bring forth the quality of life in patients.

**Caring of feet:**

Regarding ulcers amputations all diabetic patients should undergo an annual comprehensive feet tests. Naturally, it consists inspection, pulse reading, testing of protective sense, etc. patients must be guided for the proper foot care utilities. Multidisciplinary approach is recommended for the patients who have prior ulcer or amputation. It is also advised to refer patients who smoke, who have lost sensing, for ongoing preventive care. Prior information for claudication for Screening for arterial disease should include. Obtaining an ankle bronchial index is considered in case of arterial disease Patients with claudication used to referred for further vascular assessment.

**Common Co morbid Phases:-**

It is commonly appreciated morbidities of obesity hypertension, dyslibidemia consider assessment and treatment for patients with high risk factors and treatment for patients with signs and symptoms.

**Hearing Impairment:-**

Hearing impairment usually find in diabetes patients with high or low frequency due to, may be, vascular disease or neuropathy. According to a survey hearing impairment appeared twice as great in people with diabetes compared with those who haven’t. It was significantly associated with prior records of neuropathy in controlling demographics factors regarding age sex, race etc. Also, it was associated with poor health status having low cholesterol level.

**Obstructive Sleep Apnea:-**

Rate of abstractive sleep apnea regarding risk factors appeared higher in patients with obesity. With type 2 the prevalence may be up to 23-24%. This treatment improves blood pressure control and also the quality of life. It has mixed evidences for a treatment effect on glycomic control.
Fatly liver disease:

Uncertain hepatic elevation is strongly related with higher body mass index. It has various phases such as waist circumference, fasting insulin, lower cholesterol etc. In women transaminase elevations are significantly associated with Type 2 and hypertension. It is found that diabetes significantly associated with nonalcoholic chronic liver disease and with hepatic cellular carcinoma in one of the analysis. Interventions that really improve metabolic abnormalities in patients are also beneficial.

Low Testosterone level in Men:

In comparison with the persons who don’t have diabetes the persons with have low testosterone. It is also appeared that the obesities are the significant confounder. As far the treatment of symptomatic person the issue is controversial. There are mixed evidences for effects of the replacement of testosterone. Screening and treatment of men without systems is not important as per the guidelines.

Periodontal disease:

These kind of diseases are more severe but not prevalent in patients with diabetes. Various studies have suggested neuropath glycemic control but also most studies have confounded it. Periodontal diseases treatment improves glycemic control and has mix evidences while comprehensive assessment and treatment remains as they are.

Cancer:

Type 2 diabetes is associated with the decease cancer. It may be of liver, colon endometrium, breast, and bladder. It may also happen due to hyperinsulenia. Patients with diabetes should be encouraged to undergo various screenings of cancer to reduce risks.

Features:

Fracturing hip risk is highly increased in patients with type1 in both sexes. This type in associated with osteoporosis. Type2 diabetes is associated with osteoporosis and in it an increased risk of hip feature is seen with higher bone mineral density. Vertebral fractures are common in patients with type 2 but not occur with bone mineral density as per study.. Fracture risk is higher in diabetic patients compared to the persons without. It is appropriate with exception to asses fracture history in older patients with diabetes. Also, it is appropriate
to recommend bone mineral testing regarding patients’ age and sex. It appears reasonable to consider pharmacy therapy and also standard primary or secondary prevention strategies for high risk patients.

**Cognitive impairment:**

Diabetes, said to have is related with increased risk of cognitive decline and with dementia. Due to one of the study a community dwelling people over the age of 60 have significant increased risk of dementia, Alzheimer compared to those with normal glucose level. As per the another study, there is no significant difference in cognitive outcomes between intensive and standard glycemic control.

**DIABETES CARE IN SPECIFIC POPULATION**

A) **Children and Adolescents**

Children with diabetes or prediabetes, as it is necessary for all children should be encouraged for at least half an hour physical activity

1. **Type1 Diabetes**

All phases of type1 diabetes have been diagnosed in individuals who are less than eighteen years. It is found that probable care should be taken in case of children and adolescents children with diabetes who differ from adults in many respects such as insulin sensitivity to sexual maturity in implementing an optimal diabetic regimen an attention on such issues such as family dynamics, development stages, psychology etc. are all essential factors. Although a care of children adolescent with type 1, is more based on clinical trials evidences and an opinion of expertise. Relevant experimental data is also crucial factor.

Multidisciplinary team of specialist who is trained in caring the children with pediatric diabetes should provide caring and meditational guidelines or treatments for improvement. They also have to provide education or awareness of the child and family too in both the respects which is sensitive to the challenges. There should be significant provision of educational nutritional behavioral and emotional needs at the time of diagnosis regularly to avoid the coming risk factors. It is expected to have emotional, social, psychological maturity and to balance adult supervision and self-care.
a) Glycemic Control

It is crucial to have the consideration of age in setting glycemic goals in children and adolescent. It is considerable to having the risk regarding hypoglycemia in case of current standards for diabetes management which poses to lower glucose level as safely as possible. Glycemic goals should be modified. Most of the children of less than six to seven years of age a form of hypoglycemic awareness including immaturity and relative inability to recognize hypoglycemic symptoms. The children below 5 years may be at risk for permanent cognitive impairment. DCCT has demonstrated that were normalization of blood glucose level is more difficult in adolescent than adults. Children who are reaching ADA blood glucose levels or targets have increased frequency of use of basal bolus regimens and insulin pumps from infancy to adolescence. It is related with those children who perform targets with parents who participate jointly in diabetes related tasks.

b) Screening and management of chronic complications:

Screening and management chronic complication in children and adolescents with type 1 diabetes can be visualized as given below:

I) Nephropathy:

If the patient has had diabetes at least for five years and once the patient is of 10 years Annual screening of micro albuminuria with random spat urine sample is considered. An ACE inhibitor when elevated albumin ratio is confirmed on two additional specimens there is a consideration of treatment.

II) Hypertension:

Blood pressure should be measured usually in routine visits and children found to have high normal blood pressure. Dietary exercises are aimed to control weight for initial treatment for high-normal blood pressure. If even after the routine of three- six months the target blood pressure do not reach at its level they pharmacological treatment should be measured appropriately. The initial treatment of hypertension is considered with the diagnosis. Appropriate reproductive counseling due to its teratogenic effects which is considered by ACE inhibitors. The goal of the treatment is to measure blood pressure <130/80 or below the 90th % whichever in lower as per the age’s, sex, height. It is essential to confirmed on three separate days to seek accuracy.
III) Dyslipidemia:

Children greater than two years of age exactly after the diagnosis is necessary for obtaining a fasting lipid profile. If there is family history of hypercholesterolemia before the age of 55 years and if family background is of no concern then the first lipid screening at puberty should be considered. The children who are diagnosed at or after puberty consider obtaining lipid profile. If there is abnormality in lipids for both age groups then annual monitoring is essential. If the accepted risk in cholesterol values level then repeating lipid profile after every five years is reasonable.

It this respect initial there, may consists of optimingation of glucose control guising dietary to decrease the amount of saturated fat after the age of ten years of the child who has LDL cholesterol 7/60 mg/dl or LDL cholesterol 7/30 mg/dl in addition of a stain in it will be reasonable. Goal of this therapy is to lower LDL cholesterol value <100 mg/dL. Patients have high risk of early sub-clinical and CVD who have diagnosed with type1 in childhood. Children having lack in intervention data, AHA categorizes with type 1 is highest risk of cardiovascular style and pharmacological treatment. The initial therapy should be with steps to AHA which restricts saturated fat up to 7% of total calories and restricts dietary calories up to 200 mg/day which steps to AHA This is randomizes data of clinical trials in children with seven months of age and safe diet for normal growth and development.

No satin theory has been established for children but short-term safety in adults in lowering LDL cholesterol levels, and improving endothelial function has shown in recent studies. Under the age of ten no stain is approved .This also not to use on children with type1.

IV) Retinopathy:

Once the child is > or equal to 10 year of age the very first ophthalmologic examination should be performed. Annual routine checkup is l recommended after the initial tests, on the suggestion of an eye care physician less frequent tests may be acceptable. Retinopathy commony occurs after puberty and 5-10 years of diabetes duration. It has been reported in prepubertal Childs with diabetes of a least 2 years expertise in diabetes retinopathy should refer patients to understand the risk in pediatric population.
V) Celiac Disease:

Celiac disease considers screening in children by measuring tissue transglutaminase with total serum IgA levels after the diagnosis of diabetes. In children symptoms like growth failure, gaining weight, losing weight, diarrhea flatulence, stomach ache, and frequent hypoglycemia are found. For confirming disease Endoscopy or biopsy is possible to a gastroenterologist for evaluation. Those who confirmed celiac diseases should survive on gluten free diet for managing diabetes and clean disease with an experienced dietitian.

Celiac disease is an immune – mediated disorder. Symptoms of celiac disease are diarrhea, weight loss or poor weight. Gain growth failure stomach ache occurs in type1 with increased frequency. Chronic fatigue, malnutrition gastrointestinal problems, hypoglycemia, erratic blood glucose etc. are also symptoms of celiac disease. Celiac disease in antibody positive children includes screening after small biopsy and measuring serum levels of tissue transglutaminase. European guidelines are given for celiac disease in children that Biopsy might not be necessary in symptomatic children but asymptomatic children should go through biopsies. Another study suggested that antibody positive but biopsy negative children were similar benefits from gluten-free diet to those who were biopsy-positive and biopsy negative children. After diagnosis by biopsy Children with type1 should follow careful diet even though it is difficult. Hypoglycemia reduces in symptomatic children with gluten free diets.

VI) Hypothyroidism:

Soon after the diagnosis of Thyroid peroxides in children with Type1 for and thymoglobulin measuring thyroid stimulating hormone (TSH) concentration metabolite control has been established soon after the diagnosis of TSH. If it appears normal then recheck it after every 1-2 years if there is any kind of symptoms such as thyromegly thyroce dysfunction etc.

Autoimmune thyroid disease is the most common disorder which is associated with diabetes. It nearly occurs is 17-30% of patients with type 1. Children have. about one quarter of thyroid auto antibodies which is predictive of thyroid dysfunction generally hypothyroidism and less commonly hyperthyroidism. Hypothyroidism may be related with high risk of symptomatic hypoglycemia where hyperthyroidism alters glucose metabolism.
C. Self-management

The medical dietary programmer is completely depends upon family or individual to implement it. Important component in diabetes management involvement is family. Health care professionals must be a capable evaluating educational, emotional behavioral and psychosocial factor which plays important role in implementation of treatment plan and work. It has importance of overcoming barriers.

d) School and day – care:

Close communication with school or personal care is essential for maximum diabetes management, safety etc. as the children spent maximum day-time in school

e) Transition from pediatric to Adult care:

Health care providers and families should recognize teens, as they are emerging into adulthood, vulnerability they also have to recognize there development from beginning to early adolescence. The teens who emerging into adulthood have supported by Pediatricians and health care providers to assist them in providing links to resources

In childhood and adolescence intense care and close supervision is necessary through diabetes management. This is shifted from parents and adults. The teen enters into the next stage of development this shift from pediatrics to adult health care providers which appear very abrupt. This stage is consider as a crucial period for young people having diabetes. During this time they have to become responsible persons regarding their diabetes and should starts to take care on own behalf, self-management and should assign medical appointments as well as cover with health insurance. In this period deterioration in glycemic control, severe acute complications and many issues like psycho, social emotional issues are important

For seamless transition of all youth form pediatric to adult health care should be given early and ongoing attention to comprehensive strategies. Comprehensive discussions regarding challenges during this time span is appeared in ADA position.

Type 2 Diabetes:

This kind to diabetes is increasing in adolescent. It is generally appears in people with ethnic minority. Destination in children between type 1 and type 2 can be difficult because
presence of auto antigens and ketosis. In such distinctions diagnosis is crucial because treatment dietary plan, educational approach will different.

Type 2 has significant incidence of co – morbidities. During the diagnosis process various tests such as blood pressure measurement, eye examination, fasting lipid profile are recommended. Therefore screening Guidelines are similar to those with type 1diabetes for the treatment of hypertension, dyslipidemia, retinopathy micoralbuminuria. Additional problems e.g. polytheistic ovarian disease and various morbidities need to be addressed. On this subject guidance is given on the prevention in young ones by ADA consensus statement.

**Monogenic syndromes:**

**Monogenic syndromes** are a small fraction of children with diabetes. true genetic diagnosis is a new enabling Commercial genetic testing which increase similarity in frequency. Therefore diagnosis of this kind of diabetes is necessary.

This kind of diabetes should be considered in this manner given below

Children those who have strong family history of diabetes, and mild fasting hyperglycemia should be diagnosed diabetes within the first six months of life. Especially if young and in children without signs of insulin resistance or of obesity. Diagnosis and management of monogenic forms of diabetes discusses by an international consensus documents in further manner.

**Preconception care:**

In individual patients AIC level should be maintained as possible as to normal before attempting the conception. Women who are going to pregnancy should be treated for diabetes tests such as neuropathy, retinopathy etc. This kinds of tests, medications by woman on own behalf should be evaluated prior the conception. In diabetes treatment drugs are commonly used but there are some complications. Risks and benefits of the advised medication should be considered in pregnancy. The major cases of mortality in infants in major congenital malformation. With increasing maternal glycaemia the risk of malformation increases continuously observation shows that it occurs during the first six – eight weeks of gestation as per the A1C concentrations. However a pregnancy appears limited whereas in A1C concentration it appears above the normal range.
Clinical trials of preconception care have demonstrated striking reductions in rates of malformations compared with infants of diabetic women who did not participate in it. These programmers are designed and launched to train patients for self-management and care. Unfortunately unplanned pregnancies occurs in about two third of women with diabetes. It is appeared that the women have lower rate of major congenital malformations than the women who participated in preconception care but did not joined the programmer. The process of participation in this care was self-basis, therefore it is the lacking limitation up it. There are no contraceptive methods that are specifically contraindicated in women with diabetes. Because unexpected failure of contraception may leads to serious complications. Therefore, to prevent excess spontaneous congenital malformations, diabetes education must begin before conception.

Contemplation pregnancy in women with diabetes should be frequently seen by the expertise. This can be test accomplished by a multidisciplinary term that includes a diabetologist, internist, etc. Also an obstruction, nurse, dietitian and social worker, and other specialists. Women with diabetes must become an active member of the team to achieve her goal of healthy pregnancy calling upon the other members for specific guidance.

The basic purpose of guidelines is to define the elements of preconception care commonly used in treatment programme. This programme should be sufficient to minimize congenital malformations. The desired goal of this phase is to lower A1C test value. The general good up glycemic management in the preconception during the first trimester should be to obtain the lowest A1C value. The evaluation should focused on assessment of metabolic control and detection of complications potential risks must be weighed carefully to established safety in preconception care

**Older Adults:**

Older adults should receive similar care which developed for younger’s. Glycemic may be relaxed in adults but hyperglycemic complications have to be avoided in each patient. In older patients cardiovascular risk factors and other hypertension factors should be treated. Lipid aspirin therapy may help them with in life expectancy. Each older patient must be individually applied screaming but that special attention should be given to older patient’s severe complication that would lead to impairment. The population above the age of 60 years have at least 20 -25% of diabetes, may this number grow rapidly, therefore it is an important
issue regarding health care for the aging population. premature death rate of older adults is higher and they have greater risk for geriatric syndromes.

According to a report care of older adults with diabetes is complicated. Some adults developed diabetes in earlier years so they may have severe complication related to their clinical and heterogeneity. Some have chronic conditions and cognitive functioning and co-morbidity. Therefore, this heterogeneity must be taken into consideration.

Some studies demonstrate that it has vicious benefits up lipid control, glycemic, blood pressure etc. Many patients with diabetes care wanted to treat by using therapeutic interventions and expected to live long enough

Advance complications like, co-morbidities are reasonable to set less intensive goals for the patients. There are fewer chances for the help of patient to reduce the risk of microvascular complications. Despite of the patients with poorly controlled diabetes may subject to dust complications.

In older individuals controlling hyperglycemia may be important because it helps in reductions of morbidity and mortality causing cardiovascular risk factors. There are some evidences that prove clinical trials of treating hypertension but these are vice-versa less evidences for lipid lowering therapy

For prescribing and monitoring pharmacological therapy special care is required in respect of adult patients. Older patients tend to be on several medications; so the need to have the adequate care, cost may be a significant factor. Heart failure may be taken place; therefore metformin may be contraindicated. There are various modes of medication and all of it has different effects. For allowing any of it medications or insulin use requires good visual and motor skills and ability

Screening as we have seen earlier should be individualized in adult patients for diabetes complications. Particular attention should be given to those complications. Also functional status should be evaluated in respect of those complications.

Cystic fibrosis Related Diabetes

In patients with cystic fibrosis (CF) is the most common morbidity. Features of type 1 and type 2 are a distinct clinical entity. screening CFRD is not recommended for se of A1C . It caused due to insufficiency of insulin and has a negative impact on pulmonary function.
Patients should be treated with insulin to reach glycemic goals. For more complications annual screening and monitoring should be done. Although the standard screening test is hemoglobin A1 but additional diagnosis with worse nutritional status causes greater mortality failure. As a screening tool Continuous glucose monitoring is not recommended because intermittent hyperglycemia is not required insulin resistance. This is associated with infection and may play a role to achieve determined function by using β-cells.

**DIABETES CARE IN SPECIFIC SETTING**

**A. Diabetes care in the Hospitals**

Diabetes of the patients should be detected clearly for the records. Information should have clear occurrences to all other members of the health care team.

**Goals for Blood Glucose Level**

**For Critical Patients:**

For the treatment of hyperglycemia Insulin therapy should be initiated. People who have diabetes should be testing their blood glucose level very regularly to determine how your diabetes management programme is doing to keep your blood glucose level as possible as normal. A glucose level of about 140-180 mg is recommended once the insulin therapy is started. To achieve the desired glucose level ill patients require an intravenous insulin protocol.

**Non-Critical Patients:**

There are now clear evidences for specific blood glucose goals. Random blood glucose level generally appears in patients if they are treated with insulin and this target can safely be achieved. In stable patients more stringent targets are suitable less stringent goals may be suitable with severe co-morbidity. Subcutaneous insulin with basal, nutritional and correction components are preferred to achieve and maintained glucose control in non-critically ill patients. In high risk of hyperglycemia Glucose monitoring initiates and includes high-dose glucocorticoid therapy. Hospitals or the concerning authority have to adopt and implement hypoglycemia management protocol.
Here, consideration of patients for obtaining A1C with diabetes. Patients with undiagnosed disease have risk factors.

Patients with hypoglycemia have a prior diagnosis should follow appropriate plan prepared by the physician during the time of discharge. Hypoglycemia represents undiagnosed diabetes, previously known diabetes, and hospital related hypoglycemic factors which causes fasting blood glucose. Until the conditions interfering with A1C utility have not appear the distinguishing difficulty between the second and third categories in undiagnosed patients may overcome by measuring A1C during hospitalization. However, diabetic patients need education in nutrition, checking glucose level at home and early signs and symptoms of hypoglycemia.

Therapies may be effective for improving symptoms in patients with fasting hypoglycemia. Frequently meals are preferred, especially at night; with complex carbohydrates observational evidences linking hypoglycemia are substantial intensive treatment has improved hospital outcomes. Whatever we can see or admire heterogeneous care in terms of population and proportion of patient.

Intensive glycemic control has compared the effect on a number of critically ill patients who required mechanical ventilation to standard glycemic control. In comparison with intensive and conventional group three months mortality was significantly higher. Severe hypoglycemia was commonly found in intensively treated group but the reason is unknown for the increased mortality in highly controlled group. All of the patients have blood glucose management that’s why study does not disprove glycemic control.

**Diabetes and Employment**

Person having diabetes whether insulin treated noninsulin eligible for the employment having qualification. Decisions regarding employment should not be based upon the effects of diabetes. Some questions are raised sometimes by employers of individuals with diabetes in given job. A person with diabetes should be individually assessed to determine, When such questions legitimately rose whether or not that person can effectively perform the particular job in question.
Diabetes and Driving

It is said that, according to a study 23.1% of the U.S. population is having diabetes. They seek for license to drive personally or professionally. It is essential for many drivers’ license to work, and take care of family securing public and private facilities services, and performing many other functions interacting with friends, attending classes, and many more. In many respect in people generally automobile is the only medium of transportation. There has been considerable diabetes. In determining drivers’ ability and eligibility for license diabetes may be a relevant factor. Such issues addresses in light of current scientific and medical evidences.

Due to hypoglycemia data suggests that people of diabetes with insulin have an increase risk of motor accidents. Sometimes it is for road safety including motor vehicles administrators associate all diabetes with unsafe driving in fact most of the people with diabetes safely operate vehicles without taking risk of injury to themselves or other.

Diabetes Management in Correctional Institutions:

People having diabetes must receive care. This care has to meet national standards. According to the estimation nearly 70-90 thousand inmates have diabetes. Some policies and procedures regarding the management of diabetes have written by Correlation intuition for awareness of diabetes education and practices.

Emotional Factors and Diabetes

It is not easy to cope up with diabetes as drinking water. This will be a challenge to you and for your family. So many feeling may enter into the acceptance of the diagnosis. Therefore, it is important to discuss diabetic issues with the person you love most. Encouraging this discussion is a part of coping strategy. The effect of emotional stress appears on the secretion of hormones. Sometimes Situations that you meet calmly may turmoil you. However, the stress cannot always be avoided easily. Expertise and health care team will thoroughly discuss your dealing with emotional components. They have adequate experience in helping patients with diabetes which able to cope up with emotional responses for your illness.

Your body changes most of the food into glucose when you digest food. A hormone called insulin allows this glucose to enter all the cells of your body and used as energy.
Mishandling of your diet causes various problems such as rejection of insulin conscious overeating, suffering of depression etc. As your acquainted with your health care team you will begin to feel freer and happy to share details regarding your diabetes. They will definitely help you to find ways and techniques to approach everyday problems. After this it seems as the part of day to day life.

Expertise or the team might have so many constructive ideas. They encourage participation in a family therapy session. In fact by doing this they will learn about you and your family problems regarding diabetes to cope up with mechanisms to fight with diabetes. They may suggest possible tricks and techniques for emergency cares to reinforce support and provide a working model for adjustment to life.
STRATEGIES FOR IMPROVING DIABETES CARE:

Over the last decade, experts in primary care setting practices and steady improvements in numerous patients with diabetes. According to them care should be aligned with components that ensure productive interactions. National data showed that average AIC levels have declined from 7.82% in 1999-2000 to 7.18% in 2004, based upon information collected in National wealth and Nutrition examination survey. Treatment should meet patient’s needs.

Evidences suggest that progression in risk factor may be slower than the expectations. But certain patient take particular challenges to reach goal of taking care and hardships even after adjusting for patient centric factors that indicate further improvements.

Various interventions have been implemented. While these improvements are significant, data continue to suggest that there are areas for improvements in diabetes care. Medication, technologies have had an important role in improving the management of diabetes. Over the years, researchers have implemented numerous intervention, they often fragmented and lack clinical information abilities. Optional care of patients is required for an effective framework.

Monitoring Control of Diabetes:-

You need to regularly check your blood glucose to maintain your blood glucose levels. Your health care team with the information required to determine the best management strategy You will read that information provide to you .Maintaining good blood glucose level is the best defense to diabetic patient which reduces the chances of developing complications from diabetes. It is mostly depends upon a balanced diet, exercises, emotional factor, insulin doses, etc. may be recommended you by your physician. Changes in Blood glucose level can alert you and your health professionals. As per the recommendation of your physician you have to check your own blood glucose level as often as you can. Though, careful monitoring can determine any need for adjustment. The benefits of self-monitoring may vary from person to person. Also, your physician will explain how the merits of various tests relate to you and your condition. It is all depend upon the situation your doctor or a diabetes educator can help you for choosing the meter best for you. Blood glucose meters are usually sold in a kit which gives you all the equipment whatever you need.
Your physician also will acquaint you with the available products that may really help you to test your blood for glucose level. They will also explain you the techniques that will be very easier to follow. Your equipment may have a memory which keeps records of your tests and it is useful to keep a record in a diary and to take this with your diabetes health care team. Metering devices are often more expansive. Still the largest part of the expenses in long range is in the cost of test strips. Your physician and health care team will advise you and ways to purchase your testing strips.

Also, there are several urine tests are available for monitoring glucose level with urines specimen. Physician, according to the situation, will help you to select the best and will advise you on how many times a day to test your urine. If you are insulin – dependent then your doctor will ask you to test before each meal and at bedtime. Blood glucose levels are measured in millions per liter of blood (mol/L). The normal range of blood glucose level is 4-6 mol/L. The ranges will depend upon individual. While it is important to keep your blood glucose level close to normal or non-diabetic state as possible to prevent complication, it is equally important to check range of blood glucose levels right and safe for you according to your doctor.

The major question arises before everyone is how can you determine whether to use blood or urine tests for yourself monitoring at home? Your physicians will carefully advise you the techniques and tendencies about the merits and demerits of both methods. Generally many physicians and experts believe that blood tests provide a more rigid and accurate picture of blood glucose level than urine tests. This is because urine is retained in the Bladder for hours before it is tested, while blood is constantly circulating into the body. Therefore, blood test can provide you a more immediate reading of your glucose level. These tests can enable you to make careful adjustments to maintain good blood glucose level. In case of pregnant women, it is very important factor if they have frequently occurring insulin reactions, kidney disease etc. Blood testing is recommended for all age groups even to the in font (new born babies).

It is important to keep in mind that blood glucose results often trigger strong feelings. Blood glucose numbers can leave you upset. So, it is easy to use numbers to judge you and to avoid confusion, frustration, anger etc. For the adjustment of insulin dosage. Most diabetologists measure hemoglobin to check the accuracy. They usually measure hemoglobin A to asses’ long-term control over diabetes. It is a fast moving minor hemoglobin component is present in normal
person but increase in the presence of hyperglycemia. It is consists of globins containing two pairs of polypeptide chains, alpha (α) and beta (β). A minor fraction of normal adult hemoglobin consists of H6 A2 which contains α – and delta (δ) chains. Non enzymatic glycation of the amino acids – valine and lysine it is due to enhanced electrophoresis mobility.

1) Glucose which usually found in aldehyde configuration condenses with a free amino group to form a Schiff base. It forms hemoglobin which is also known as ketoamine. Aldmines is form reversibly therefore, pre-A is labile while formation of detomine is stable. Pre-A level alters rapidly with the changes is glucose concentrations. They are measured in chromatographic methods to determine hemoglobin – A. To asses true HBA it is necessary to remove pre A. Many laboratories recommend high performance liquid chromatography to make the possible measurement. Llabile pre-A fraction does not measure the calorimetric method utilizing thioborbituric acid. The percent of glaciated hemoglobin provides an estimate for controlling diabetes of about preceding three months after properly assaying. Normal values must be obtained for each late test less than 6%. Where as poorly controlled patients may have the levels of 10-12%.

With measurement of glycated hemoglobin it is an adjective assessment for metabolic control and the accuracy which is provided by the discrepancies between reported plasma glucose values and hemoglobin – A., it is reported that the accuracy is not exact. Measuring glycated albumin can be used to monitor diabetic control over a week or two due to its short life; but is rarely used clinically.

Yogasana:
Age of anxiety and stress has been called modern age. Everywhere people can see anxious, unhappy, bewildered suffering from stress diseases and most of them are unable to face a satisfactory adjustment to the problem of life, missing their best potential. That’s why stress is ruling all over the world. Physical, mental and emotional levels are disturbed by stress in the form of various diseases. One’s mind of people finds it very difficult to cope up with the fast changing world. Speed of the outer world and the inability of the inner mind creates stress. Stress is a necessary in purposeful life but which has the ability to help the mind moderate stress. There is growing evidence that in illness and health stress plays an important role so yoga is a wonderful tool for calming the mind and promoting psychosomatic health. It is an effective vaccine against mental stress and psychosomatic diseases. Our body and mind are interrelated and constantly influence one another. This fact was recognized thousands of years ago by Risis who designed yoga techniques o influence body as well as mind.

An ancient myth buried in oblivion is not Yoga. It is the foremost valuable inheritance of this. “It’s the essential want of these days and tomorrow.” Yoga is that the science of right living and in and of itself is meant to be incorporated in standard of living. It is the physical, mental, emotional, psychic and non secular aspects of the person. Unity or unity means that yoga and it's derived from the Indic word yuj, which implies to affix or connation is delineated in non secular terms because the union of the individual consciousness with the universal consciousness. Yoga means that equalization and harmonizing the body, mind and emotions. Asana, pranayama, mudra, bandha, shatkarma and meditation should be achieved through apply.

On the outmost side of the temperament the science of yoga begins to figure. The figure could be a start line. Once imbalance is fully fledged, the organs muscles and nerves now not perform in harmony: rather they act con to every different. The system would possibly become irregular Associate in Nursing the system become inefficient to such an extent that a malady can manifest. Yoga brings the various body functions into good co-ordination so they work for the great of body. From the body, yoga works on mental, emotional and physical levels. As a results of stress and lack of interactions of everyday living many folks suffer from phobias and neuroses. Yoga cannot cure life, however it provides a technique for dealing with it.

Yoga as Associate in Nursing Integration and harmony between thought, feeling and deed
or integration between head, heart and hand” explained by Hindu Sivananda Saraswati of Rishikesh. Through yoga, awareness develops of the interrelationship between the emotional, mental and physical levels, and disturbance in anybody will effects the others. There square measure several branches of yoga: raja, hatha jnana, karma, bhakti, mantra, kundalini and laya however a number of tests justify them thoroughly. Every individual penalized that yoga suited to his her temperament and want. Yoga had become the fore most standard within the second half of the 20th century. But the thought of yoga is broadening additional folks take it up and unfold this data. Within the ancient texts, yoga consists of the shskarmas, cleansing practices solely. These days yoga usually accepts the practices of attitude pranayama gesture and bandha likewise.

Ten thousand years ago yoga was developed and become a part and parcel of the tartaric civilization that existed in Republic of India and every one components of the planet. In archaeological excavations created within the Indus depression at Harappa and Mohenjo-Daro, currently in trendy Palistan, several statues are found portrayal deities resembling and playacting varied asanas and active meditation. consistent with legendary tradition these ruins were once the home place of individuals UN agency lived within the pre religious text age before the Aryan civilization begin to flourish within the Indus landmass. Yoga mudras gently shape and tone the body, improve posture and intend flexibility. These mudras or exercises have a proponed effect on improving circulation. Blood vessels elastic and has result in lowering blood pressure. To increases muscle strength you can add more stringent and vigorous yoga mudras to your routine to see the added benefits of some oceanic conditions which results in positive effect for the digestion, endocrine etc.

**Trantra**

Trantra may be a combination of 2 words Tanoti and trayati that mean enlargement and liberation severally. It’s the science of increasing the consciousness and liberating the energy. Thanks to attain freedom from the bondage of the globe still living in it are referred to as Tantra. In plain is to grasp the restrictions and capacities of the body and mind is that the beginning. Next step is prescribes techniques for the expansions of consciousness area unit transcended and
skill reality. Yoga arose at the start of human civilization once grouping 1st accomplished their non-secular potential and commenced to evolve techniques to develop it. Ancient sages developed Hinduism science slowly everywhere the globe. The essence of yoga has explained by completely different symbols analogies and languages. Some traditions believe that grouping may have the chance to understand divine nature of yoga as a result of yoga was a divine gift discovered to the traditional sages. Yoga techniques were unbroken secret and were new written down or explored to public in ancient time. By word of mouth they were passes from teacher or guru to follower. During this method which means and aim of yoga was a clearly perceive. Yogis and sages were able to guide sincere aspirants on the right path, removing any confusion, misunderstandings and excessive intellectual contemplation through personal expertise.

In the sixth century before Christ, Buddha’s influence brought the ideals of meditation, ethics and morality. Yoga was unnoticed to the fore and therefore the propaedeutic practices but, Indians presently accomplished the restrictions of this read. The yogi Matsyendranath educated that before meditation, the body and its components got to purify. The Hinduism cause matsyendrasana was named once him and book on yoga was written by his chief follower Gorakhnath within the native non-standard speech and in Hindi. Indian tradition needed original text that written in Indo-Aryan. Your time their writings clothed in symbolism. That’s why those qualified teaching would be ready to are aware of it by outstanding authorities on yoga. He reduced the stress on Hindu deity and niyama, thereby eliminating a good obstacle intimate with by several beginners. Within the yoga once the mind has become stable and balanced, pradipika. Swtmarama starts with the body, shortly yamas

The relevancy of yoga today:

These days within the twenty first century yoga may be a great deal a part of religious heritage whereas yoga’s highest goal is religious path, yogistic practices provide direct edges to everybody in spite of their religious aims. Most significant accomplishment of yoga is physical and mental cleansing and strengthening. in step with medical scientists, yoga medical care is eminent as a
result of created balance within the nervous and endocrine systems that directly influences on different systems and organs of the body. In twentieth century most of the folks in nerve-racking society was merely maintain their health with yoga. Physical discomfort occur at the workplace sitting during a chair, crooked over a table do take away by posture. In an age of mobile phones, and twenty four hour searching, relaxation techniques facilitate to extend the effectiveness of eve. yoga offer a true tool to combat social unease within the twenty first century on the far side the wants of people. At a time once the globe rejecting past values while not having the ability to ascertain new ones, yoga provides a goals for folks to seek out their own approach of connecting with their real selves. Through this association it's attainable for folks to manifest harmony within the current life. In this respect yoga is way from physical exercises. It establishes a brand new perception of what are real, what's necessary, and the approach to become established during a way of life. This accepts in inner and outer realities. This expertise of life that can't be understood intellectually however it'll become living information through observe and skill. However, the new era has begun.

Patanjalis yoga sutra offers a definition of yogasana: “Sthiram sukham aasanam” which means position that is comfy and steady. During this context asanas are developing by observe the flexibility to take a seat well in one position for an extended amount of your time, ability necessary for meditation. Raja yoga equates yogasana to the stable sitting position. The Hatha yogis found bound specific body positions asanas, open the energy channels and psychic centers’. They found that developing management of the body through these practices enabled them to manage the mind and energy. Yogasanas became necessary for the exploration of the body, breath, mind. For this reason, posture observes comes 1st in yoga texts like yoga Pradipika

In the Hinduism scriptures there have been originally 84000 asanas that represent the 8400000 incarnations. Before attaining liberation each individual should tolerate the cycle of birth and death. These asanas the best variety of life diagrammatic to the foremost advanced. yogis changed and reduced the quantity of attitude to the few hundred best-known these days. solely the eighty four helpful attitude area unit mentioned well. Through their follow, the karmic process is feasible and by pass several organic process stages in one period.
Yogasana sand Prana:
Prana, important energy that corresponds to ki or chi in Chinese drugs unfold within the whole body, that pattern is termed nadi. Nadis square measure to blame for maintaining cellular activity altogether individual. Stiffness of the body is because of blocked prana and saturated toxins. Once prana begins to flow, the toxins square measure off from the system. Because the body becomes bend, postures that appeared not possible become simple to perform, and steadiness and style of movement develop. Once asanas, mudras and pranayamas occur impromptu the quantum of prana is augmented to an excellent degree, the body moves into sure postures by itself.

Mudras and Prana:
The Sanskrit language word gesture means “Gesture” angle. Mudras may be represented as psychic, emotional, pious and aesthetic gestures. With mudras yogis have practiced energy flow, supposed to link individual pranic force with universal or cosmic force. The Kularnava Tantra traces the word gesture, which means delight or pleasure and dravay the causative kind of drug, which implies to draw forth gesture. Mudras are a mix of physical movements that alter mood angle and perception that deepen awareness and concentration. In whole body combination of position, pranayama, bandha and visual image techniques or it should be an easy hand position involve in gesture.

The yoga pradipika Associate in Nursing
Different yogistic texts think about gesture to be a yoganga a freelance branch of yoga. Mudras ar introduced in yoga once some mastery has been earned in position, pranayama and bandha. Mudras are represented in varied texts from past to this so as to preserve them for future. However, such references were ne'er given in careful or techniques weren't clearly described. Sensible instruction from a guru was continually necessary before trying them. Mudras ar higher practices that result in arousal of the pranas, chakras and kundalini and which might bestow major siddhis, psychic powers on the professional person. The attitudes and postures adopted throughout gesture establish a right away link between annamaya kosha, and also the soma manomaya kosha, the mental body and pranamaya kosha, the energy body. At the start professional person are allows to develop awareness of prana within the body. Finally it
establishes pranic balance inside the koshas and allows the redirection of delicate energy to the higher chakras, causing higher states of consciousness.

Energy within the sort of lightweight or sound waves are pleased a mirror or a drop face as Mudras manipulate prana in abundant identical manner. The nadis and chakras perpetually radiate prana and dissipate into the external world that escapes from the body. The observance of mudras, creates the barrier samong the body and the energy is redirected among. The prana being radiated through the eyes is mirrored back by closing the eyes with the fingers in shanmukhi gesture. The observance of vajroli gesture and redirection of Hindu deity nadi to the brain the sexual energy is emitted. Through the observe of gesture the dissipation of prana is in remission because the Trantric literature mentioned earlier and therefore the mind becomes introspective causation as per pratyahara sense withdrawal, and kharana concentration. For rousing kundalini prana, mudras square measure vital techniques owing to their ability. They’re incorporated extensively in kriya and kundalini yoga practices for this a reason.

A Scientific scrutinize mudras:

Mudras give a method to access in scientific terms and influence primal spontaneous habit patterns and also the unconscious reflexes that originate within the primitive areas of the brain patterns of the brain around the brain stem that establish a refined non intellectual reference to these areas. Every gesture incorporates a corresponding completely different impact on the body, mind and prana sets up a distinct link. The aim behind it's to form mounted repetitive postures and gestures that establish a additional refined consciousness and additionally snap the professional out of spontaneous habit pattern.

Yogasanas and Kundalini:

The waking up of kundalini shaktiand the organic process energy in man is that the final purpose of yoga. Observe of asana stimulates the chakras and distributing the generated energy of kundalini everywhere the body also. Close to regarding thirty 5 asana square measure specifically engaged to the present tpurpose: chakrasana for manipura chakra, sarvangasana for vishuddhi, sirhasana for sahasrara etc.and the alternative asanas regulate and purify the nadi, facilitating the physical phenomenon of prana throughout the body. to make balance between the interacting activities and processes of the pranic and mental forces is
the most object of yoga. Because it has been achieved the impulses generated provides a decision of waking up to sushumna nadi, the central pathway within the sin, the kundalini energy ascends through it to sahasrara chakra that illumining the upper centers of human consciousness.

**Yogasanas and the Body Mind connection:**

Though there's an inclination to assume and act as robust they're, the mind and body aren't separate entities. The gross type of the mind is that the body and also the delicate type of the body is that the mind as they're mutually beneficial to every others. The follow of position integrates and harmonizes to every different ; and also the body and also the mind harbor tensions or knots each. Each mental tie and association features a corresponding physical, muscular knot and contrariwise and to unleash these knots is that the aim of position. Through the body to the mind Asanas unleash mental tensions by coping with them on the physical level, acting somato-psychically e.g. Emotional tensions and suppressions will limit and block the sleek functioning of the lungs, diaphragm and respiratory method that contributory toenfeebling diseases within the type of metabolic process disorders.

Tightness of the neck as cervical rub or and the face as hurting square measure such samples of muscular knots that will occur anyplace within the body. The set of asanas combined with pranayama, shatkarmas, meditation and yoga nidra if it's well chosen, is handiest in eliminating these knots, obedience them from each the mental and physical levels that is resulted within the unharnessed of dormant energy and clearly the body becomes packed with vitality and strength and therefore the mind becomes light-weight artistic joyful and balanced. The body in associate optimum condition associated promotes health even in an unhealthy body which may be maintained with regular observe of attitude. The dormant energy potential is free and knowledgeable as enhanced confidence altogether areas of life through consistent asana practice.

**Yogasana and Exercise:**

Yogasanas don't seem to be exercises, however the techniques that place the organic structure in positions that cultivate awareness, relaxation, concentration and meditation despite they need usually been thought of as a kind of exercise. The event of excellent physical
health by stretching, massaging and stimulating the pranic channels and internal organs is that part of this method and position is complementary to exercise. It's necessary to understand that exercise imposes a helpful stress on the body before understood the distinction while not that the muscles waste, the bones become weak, the capability to soak up atomic number 8 decreases and hypoglycaemic agent unfitness will occur and therefore the ability atomic number 8 decreases. Hypoglycaemic agent unfitness will occur and therefore the ability to fulfill the physical demands of sudden activity is lost.

Undoubtedly there are varied ways of position and exercise which have an effect on body mechanisms. Respiration and metabolic rates abate the consumption of atomic number 8 and therefore the temperature drop once yogasanas are performed. The breath and metabolism speed up atomic number 8 consumption rises and therefore the body gets hot throughout exercise. Yoga postures tend to arrest destructive metabolism whereas exercise promotes it and additionally thereto asanas are designed to own specific effects on the glands and internal organs that alter chemical science activity within the system a nerve sum.

**Yoga of Physical Duality:**

The visible duality of any human is that of the left and right side. When we look into a mirror we observe that the left eye and right eye are not equal- one eye is smaller.

Then there is the mouth line it slants down towards one side. In similar fashion the rest of the body has a distinct difference between the left and right side one side is always weaker or smaller. Yogis balance these differences in such a way that the weaker side is strengthened to match the stronger side. With constant practice the yogi attains an equal balance of the two sides’ yoga of the whole body.

**Yoga of Intellectual Duality:**

Everything that thought perceives has a duality about it male and female night and day right and wrong, left and right time and space black and white beginning and end so on. Because of dual perception thought always compares defines and debates; which leads to more dualities such as tolerance and intolerance love and hate kindness and cruelty, etc. The net effect of these complex dualities is that thought is never at peace nor does it stand still. But thought does not have to limit itself to these dualities when it has an inherent capacity to transcend the boundaries of the physical and knowledge. Thought can perceive more than the eye can see reach beyond
time and space and from beyond the limits of tolerance alight itself with selfless conscious. Having realized that to attain uninterrupted peace thought must be stilled. The yogi comprehends that the reason for meditation is to stop thought. The yogi learns that with meditation thought will be released detached from conflict of duality.

With these realizations the yogi has crossed a milestone on the road to evolution. The yogi’s next phase of evolution is with sense of awareness, because conscious has only awareness after being emptied of thought. The limitations of thought and conflict having been transcended the yogi enters the limitless expanse of awareness. The levels of tolerance and understanding the yogi has attained are like new skills, a new sensitivity which evolve into a new dimension in which thought is aligned with awareness instead of attitude.

**Dynamic and Static Yogasanas:**

Energetic movements of the body area unit created by dynamic practices and supposed to extend flexibility, improve circulation, and tone the muscles and joints. It conjointly releases energy blocks and take away stagnant waste from totally different components of the body. of these asanas strengthen the lungs and improve the biological process and emission systems. For beginners dynamic practices are quite helpful. The pawanmuktasana series, Surya namaskara, Chandra namaskara, dynamic paschimottanasana and dynamic halasana of these area unit enclosed by them. Knowledgeable practitioners perform static practices of intermediate and advanced asanas, they need a lot of refined and powerful result on the pranic and mental bodies and therefore the body typically remaining in one position for a couple of minutes performed with very little or no movement. of these asanas area unit supposed to softly massage the interior organs, glands and muscles that relax the nerves throughout the body they’re particularly involved with transportation utmost tranquility to the mind and making ready the professional person for the upper practices of yoga uplift them like meditation. Out of them some area unit helpful for causing the state of sense withdrawal, pratyahara.

**Yogasana and Nervous System:**

Hath yoga or Bahirangayoga prescribes five practices for body culture (kaya sadhana) as stepping stones to Raja yoga. These make the body invulnerable to disease, decay and health, and bestow on the yogi a perfect body by control over his nervous system and mind.
(1) Yama or abstention in thought word and deed to practice non-violence (ahimsa) truth (satya) honesty and non-stealing (asteya) self-study according to yoga metaphysics and dedication to god.

(2) Niyama or observance of purity of mind, speech and body contentment or serenity of mind, asterism, self-study according to yoga metaphysics and dedication to god. The Yajnavalkya smite and the strongly condemn excessive penance and self-mortification as a means to Brahman realization whereas mandala Upanishad advocates contentment truth and performance of prescribed duties sufficient for securing enlightenment.

(3) Asanas which means either that where on a man sits that is a seat or the manner in which he sits that is a posture, The hath yoga pradipika speaks of only 15 asanas, whereas gerund samhita selects only 32, which are most useful. To most of the modern sadhakas, however asanas are the main constituent of yoga; but to a real yogi they are a mere means for conditioning the body and mind for higher reaches of yoga the Raja yoga. Thus asanas are merely suited for maintenance of posture for arduous nature o mental exercises and have no other significance. Even yoga sutras and leave it to the sadhaka to make the choice of a posture which should be stable and comfortable.

(4) Pranayama or breath control by breathing exercises is essential to prepare the mind for further stages, since normal breathing variations disturb the concentration. Patanjali gives the theoretical basis of four types of pranayama according to the nature of pause between the inhalation and exhalation and Veda Vyasa and later authors provide the technical details of them. The Hath yoga ptadipika, however, classifies those under eight categories and directs the practitioner to go through the exercises with utmost ease and comfort, without any violent jerks or under feeling of suffocation. During the earlier stages of pranayama the yogi perspires which cleanses various channels in the body he then experiences tremors throughout the body and finally pranayama purifies the nerve circuit enabling prana in good form to pierce the subhuman and to enter thought it.

(5) Pratyahara which literally means “gathering towards oneself or checking outgoing powers of mind.” It involves withdrawal of senses from their objects in conformity with the restrictions imposed by the mind. The gheranda Samhita in a similar vein elaborate on it and define pratyahara as the withdrawal of mind from horror and approbation, from what is good to
hear and what is not good from what is odorous and malodorous from sweet sour and bitter, from any form of sound smell or taste by which the mind is to bring it back from the self control. Thus sustained practice of pratyahara reduces or eliminates all sensory input and controls the motor outputs and attention towards the external environment. It is considered as the first step towards the Raja yoga as a link between the physical and mental spheres of man.

(6) Dharana is concentration on any region of the physical body or some objects or idea intimately associated with the supernatural, the divine or the numinous.

(7) Dhyana is deeper concentration persisting for a longer period of time and is a continuum or a resultant of intense dharana. Vijnanabhikshu states, “When after achieving dharana on some point, one’s mind has succeeded for a sufficient time in holding itself before itself under the form of the object of meditation without any interruption caused by the intrusion of any other function, one attains dhyana”.

Yoga of self and selfless being:

After yoga of intellect the yogis awareness discovers that their sense of self has dissolved. Without a self the yogi is selfless, hence detached from all forms of duality. Even while carrying on with their life and matters of living, the yogi’s awareness of being selfless remains uninterrupted. To all purposes the yogi is detached from society but paradoxically to the uninitiated they seem much more involved because of the depth of kindness and understanding they’ve evolved into which is a natural offshoot of being a selfless human. In whatever manner the yogi relates to fellow humans there’s a selfless feature about it, because of which even the most reticent humans are drawn to the yogi’s imperceptible strength and balance. Whatever is happening around them the yogi’s focus on evolving with sense of awareness remains uninterrupted and their conscious is flooded with a series of realizations.

Thought is the only feature in the universe that can be stopped from moving. Selfless being is the only entity that doesn’t move there’s no body to move with. Meditation is the bridge that connects self with selfless being. The realizations that pour into the yogi’s conscious are endless and many are indefinable. The yogi has no sense of self satisfaction achievement despite understanding features of reality that are not suspected to exist. The moment when the chains of driven thought that had trapped conscious were broken is an event like the big bang, after which conscious expands in waves, in all directions. Conscious perceives a reality so faint that the yogi
hesitates for a fraction. In that stillness a flood of unformed but sensed thoughts flash through conscious at high speed and lead to dead stop stillness again the word selfless has formed in thought. Remaining in meditation the yogi contemplates on all that the word implies. Then there’s an exhilarating rush in the conscious, when it realizes selfless being. The yogi searches for an image of this selfless being which is a natural consequence of being human. Equations take shape in conscious. If sense of self has vanished the mind and body do not have vacated it which leads to the consequent equation the yogis evolved image is the image of being selfless. Stunned by this realization the yogi’s equilibrium falters again. Regaining poise with face yoga the yogi resumes meditation when another equation pierces conscious with clarity brighter than sunlight being selfless and selfless being mean the same thing. Hence one’s evolved image is the image of selfless being.

**Psychic Physiology of Yoga:**

Chakras unit associated with the key nerve plexuses and endocrine glands at intervals the body on a physical level. Many asanas have a specific power and having a useful result on one or further of these glands or plexuses. e.g. sarvangaasana exerts a powerful pressure on the ductless gland within the throat region that is related to vishuddhi chakras. an honest massage and its functioning is greatly improved in concern with the thyroid by vishuddhi chakra. Whereas performing arts the position, if the concentration is directed to the present chakra the helpful effects are going to be increased.

**Chakra:**

Within the Hinduism context a stronger translation is vortex or whirlpool, tho’ the word chakra virtually suggests that wheel or circle. The circulation of prana per meant the whole human structure is controlled by pranic energy at specific areas in to body vortices the chakras. The patterns of behavior, thought or emotional reactions, even the unconscious in our existence activates or reveal by every chakra as a switch. In the general public these psychic centers lie dormant and inactive that relate to specific areas of the strains. whereas performing arts Hinduism practices and its concentration on the chakras stimulates the flow of energy through it helps to activate them. The dormant square measure as within the brain and therefore the corresponding schools within the psychic and mental bodies square measure woke up s enable one to expertise planes of consciousness that are ordinarily inaccessible.
foremost Chakras square measure set on the pathway of sushumna Associate in Nursing energy channel that seven in range flow through the centre of the funiculars. Origin of Sushumna is at the region and terminates at the highest of the pinnacle. The chakras square measure associated to a network of psychic channels. they're known as nadis, that correspond to the nerves, however square measure a lot of delicate in nature. The chakras square measure represented symbolically as lotus flowers having a specific range of petals and color. Symbolically the lotus has the 3 stages the aspirant should undergo in religious life: mental object, aspiration and illumination that represents religious growth from all-time low state of awareness to the best state of consciousness.

The petals of the lotus represent the various manifestations of motivation connected with the chakras inscribed with the bija mantras or seed sounds of the Indic alphabet, , and therefore the nadis or psychic channels leading into and out of them. The geometrical image of chakra may be a yantra associated component and its bija mantra and at intervals the yantra there presides the supernatural being UN agency represents explicit aspects of consciousness. The supernatural being represents a specific aspects of consciousness at the side of the corresponding vahana or vehicle is Associate in Nursing animal kind, representing the centre’s alternative psychic aspects.

Mooladhara

The region within the human body and at the cervix within the physical body situates at very cheap of the chakras. The planet mool suggests that root and adhara suggests that place therefore it's referred to as the foundation centre. Mooladhara chakra is related to the sense of smell and the arsehole that is symbolized by a redness lotus with four petals and its centre could be a yellow sq. the yantra of prithvi tattwathe planet component and therefore the bija mantra lam. At the centre of the sq. could be a red triangle, the image of Sakti or inventive energy with its apex inform downward. inside the Triangle is that the smoky coloured swayambhu linga, symbolising the celestial body body. A red serpent symbolizes the dormant kundalini, is twisted 3 and a 0.5 times round the linga. Hence, the red triangle is supported by associate elephant with seven trunks that symbolizes the soundness and commonality of the planet. The seat or lodging place of primal energy kundalini Sakti is Mooladhara. Kundalini is that the serpent twisted in sound slumber around swayambhu linga that is that the supply of all
energy i.e. sexual, emotional, mental, psychic or non secular in humanity and therefore the universe. Energy takes on numerous qualities and attributes reckoning on the psychic centre through that it manifests. To awaken the dormant kundalini through self purification and concentration of mind and to guide it up through the chakras to sahasrara is that the aim of yoga wherever as pure energy or Sakti it unites with pure consciousness shiva. The red inverted triangle or the yellow sq. symbols of energy and solidity to reinforce inner stability and balance for concentration on mooladhara chakra.

**SwadhisthanaChakra:**

For swadhisthana chakra roughly 2 fingers dimension on top of mooladhara chakra within the spine is that the concentration purpose. One’s own abode is that the literal means that{that suggests that} of the word swadhisthana and also the Sanskrit word saw means self then means habitation place. This chakra is symbolized by a crimson lotus with six petals. And in its centre is part and also the bija mantra vam. The crescent moon yantra and also the bija mantra square measure riding on a crocodilian reptile, symbolising the underlying movement of the karmas. Swadhisthana chakra is bothered with seeking pleasure and security and its association is with the tongue and sex organ organs. the stress is on overcoming worry, and on enjoyment on gratifying sensations and sexual interaction in swadhisthana. It may manifest as overwhelming needs or cravings once swadhisthana becomes active. Swadhisthana is that the seat of the individual and collective unconscious on a deeper level Swadhisthana is that the storage of all samskaras, past mental impressions hold on within the sort of archetypes and also the centre of humankinds’ most primitive and deep nonmoving instincts. The nature is transcended by purifying this centre. Visualize an enormous; deep ocean with dark waves below an evening sky is critical for concentration on this centre. The tides of the ocean replicate the ebb and flow of awareness.

**ManipuraChakra:**

Manipura chakra is set within the spine behind the navel. Here the word mani suggests that gem and pura suggests that town. Hence, manipura suggests that town of jewels that is lustrous sort of a jewel and bright with vitality and energy being the fireplace centre. This manipura chakra is pictured as a bright yellow lotus with 10 petals during which the lotus may be a fiery red triangle and also the yantra of Hindu deity attwa, the fireplace part and also the bija mantra ram. The ram is that the animal World Health Organization is the vehicle for
manipura and also the image of positiveness and energy. This chakra is that the centre of self assertion dynamism and dominance that related to vision and also the feet, ambitiously and also the well and talent to rule. On the contrary, this could be expressed in despotism and in seeing things and folks simply as a method to realize and to satisfy personal power or wants it's the plexus celiac us is that the centre in the main involved with the important method of digestion and food metabolism; that additionally governs the functioning of the stomachic glands, the duct gland gall bladder so on. It produces the secretes enzymes acids and juices necessary for the digestion and absorption of nutrients. These activities and also the natural drive to seek out food and nurture oneself are controlled by .Manipura chakra that is that the psychic centre.

Manipura is additionally connected the adrenal glands set on top of the kidneys that secrete endocrine into the blood throughout an emergency scenario it's the nice impact on dashing up all the physiological processes and creating the mind sharp ,alert the guts beat quicker, the respiration rate a lot of fast and plenty of a lot of things. Then the body itself is ready for a a lot of intense level of activity than traditional that is usually known as either the fight or flight reaction. People that suffer from sluggishness and depression or malfunctions of the system a alimentation, like polygenic disease or indigestion; they ought to focus on manipura chakra and check out to feel energy diverging from this region. They must focus on this centre and visualize the blazing sun or a ball of fireside and having an expertise of the nice energy within the sort of lightweight diverging from this region and distributive the entire body.

**Anahata Chakra:**

Anahata chakra is located within the spine behind the bone level with the center ‘Unstuck’ is that the virtually which means of this word ‘anahata’ The hanging along of 2 objects, that sets up vibrations or send waves manufacture all sound within the manifested universe. The primeval sound that issued on the far side this material world is that the supply of all sound that is understood as associate ad had zero, the unstuck sound. This sound manifests wherever the center centre is which can be perceived by the yogi asana indoor unborn and timeless vibration the heart beat of the universe.

**Therapeutic Importance of Yoga in Ayurveda:**

Ayurveda is a complete life science. It is holistic in nature for there is a syntheses of
therapy, physiology, philosophy and Dharmasastra. Owing to the same origination of all the philosophies, Ayurveda has been influenced by yoga and similarly yoga has been heavily influenced by ayurveda too. Mharsi Caraka’s deep entreating analysis of yoga and related topics proves the yogic influence on Ayurveda.

Ayurveda is so called because it helps in longevity or it causes the attainment of life. That is the reason why Ayurveda regards maintenance of health as the primary issue for its analysis. The term cikitsa can primarily be taken to mean maintenance of health and secondarily to mean removal of diseases. If, the connotation of the term cikitsa is limited only to the removal of diseases that will amount to delimiting the scope of the term. No doubt Ayurveda deals with removal of diseases and also prescribes numerous Aushadhis but in spite of all these it seems proper to hold that the maintenance of health is the primary aim of Ayurveda. All these characteristics and functions of Ayurveda make it evident that it is not only a therapeutic scientific practice but it helps in longevity, too. Maharishi patanjali, the founder of yoga analyses not only the theoretical aspects of yoga but he values the practical aspects, too. It is when one puts into practice its theoretical aspects that one can be successful in yoga. Therefore to inspire for action for the sake of nivrtti is the characteristic of yoga.

The purpose of Ayurveda is two hold, acquisition and maintenance of health. Ayurveda for healthy persons prescribes daily and seasonal diets the observances of which help in maintaining vata pitta kapha in their balanced conditions. Further these observances keep the gastric fire balanced, the activities of dhatus and maleas in even conditions. It is due to all these they should the senses and mind are kept in a healthy condition. According to Mahabharata, mental consists in the equilibrium of sattva, rajas, and tamas. And it is evident that the equilibrium of the three guans depends on the above mentioned three dos as, three dhatus and three maleas. It is as the result of these observances happiness and longevity is attained. Longevity is the best means for the attainment of the four purusharthas. Finally, it is longevity which is the summed bonus of Ayurveda.

For the practice of yoga health is of utmost value for the body alone is the most useful means in the attainment of Kaivalyadha. It is for this reason only that yoga considers the issue of physical and mental health as of utmost importance. Accordingly, it prescribes that satkriyas yama niyamas, asana pranayama etc. which are known as external means of yoga. These
practices are not only helpful to maintain health, but also in removing the diseases of the body thus making the sadhaka healthy and fit for his sadhana. It is for these reasons that Ayurveda had adopted yoga.

**General notes for the practitioner:**

Before going any more the subsequent follow notes ought to be totally beneath stood. Despite the actual fact that anybody will follow asanas, they become additional efficacious and then it's additional useful for them once performed within the correct manner when perfect preparation.

**Breathing:**

Unless specific directions are unit given to the contrary continually breathe through the nose. Coordinate the breath with the posture follow. Awareness:

Posture follow is the purpose to the follow of posture and to all or any yoga practices awareness is crucial. To influence, integrate and harmonize all the amount of being, physical, pranic, mental, emotional, psychic and religious. Asanas area unit simply involved with the physical level as a result of they cope with the movement of various components of the body; however they need profound effects at each level of being if they're combined with awareness. During this context awareness could also be understood as consciously while not sensations within the body. Through out the follow, the physical movement, the posture itself, breathes management and synchronization, movement of prana, concentration on a vicinity of the body or feelings that will arise. The acceptance of any thought or feeling that comes uninvited to the mind is involved within the thought of awareness. So as to receive optimum advantages from the practices awareness is crucial.

**Right or Left Side:**

Most right bimanual folks can realize it easier to begin Associate in Nursing posture on the correct aspect, that is additional developed owing to habitual patterns of behavior is one in every of the samples of the need for continual awareness. It's higher to guide with the left aspect and promote its development once the posture is learned.

**Relaxation:**

At any purpose throughout posture follow Shavasana are
often performed. It's particularly once feeling physically or mentally tired. Shivasana ought to be practiced on completion of the posture program. Sequence:

posture ought to be done when finishing shatkarma and followed by pranayama; later pratyahara and dharana result in meditation.

Counter pose:

it's necessary that the program is structured so backward bends area unit followed by forward bends and vice versa; no matter is practiced on one aspect of the body is recurrent on the opposite aspect notably once active the center and advanced cluster of asanas. To bring the body back to a balanced state this idea of counter cause is quite necessary. Sure asanas delineate during this book, specific counter poses area unit counseled.

Place of Practice:

it's essential to possess a well oxygenated, calm and quiet space for follow. Asanas ought to be practiced outdoors, however the environment ought to be lovely, pleasant because the garden with trees and lovely flowers. Bound restrictions ought to be place whereas playacting Asanas; e.g. don't follow during a sturdy wind within the cold in air i.e. dirty smoky or Associate in Nursing unpleasant smell. Don't follow within the locality of furnishings, a fireplace or something that stops free fall to the bottom. Whereas play acting asanas like sirshasana, many accidents occur as a result of folks fall against Associate in Nursing object, don't follow beneath an electrical fan unless it's very hot.

Emptying the bowels:

The bladder and intestines ought to well be empty before commencing the posture program. If constipated drink 2 or 3 glasses of heat, slightly preserved water and follow the asanas given within the chapter on shankhaprakshalana, particularly tadasana, tiryaka tadasana, kati chakrasana, tiryaka bhujangasana and unararakshan posture. This could relieve the constipation. If not active pawan muktasana half 2 ought to facilitate. Before doing asanas select only once daily to travel to the rest room and don’t strain; try and relax the full body. The bowels can mechanically evacuate at the set time a day and try and avoid exploitation laxative medication.

Empty Stomach:

whereas doing asanas your the abdomen ought to be empty and that
they shouldn't be followed till a minimum of 3 or four hours when food it ought to be ensured that early morning practice is suggested with empty abdomen.

Diet:
There are not any specific dietary rules for posture practitioners, though it's higher to eat natural food and moderately. Though within the higher stages of follow it's counseled, yoga doesn't mention that a eater diet is crucial despite the popular belief. it's suggested to fill the abdomen with food, one quarter with water and leave the remaining quarter empty at meal times. To maintaining the diet; eat solely to satisfy hunger and not such a lot that a sense of heaviness or laziness happens. One principle to follow, eat to measure instead of live to eat. Heavy, oily and spicy food ought to be avoided, particularly once asanas area unit practiced with a religious aim i.e. food that causes acidity or gas within the system a alimentation.

No Straining:
Whereas doing asanas ne'er exert undue force, when many weeks of normal follow, they beginners are shocked to search out that their muscles area unit supplier and stiff initially.

Contra-Indications:
Folks with broken bones or UN agency area unit laid low with acute infections or aching, or chronic ailments ought to consult a competent yoga teacher or doctor before commencing asanas and also the folks those that have diseases like abdomen lesion, TB, viscus issues or herniation and people recuperating from operation even have to consult a competent yoga teacher or doctor before playacting asanas. The contra-indications given within the introductions to every section, and people given for individual asanas vigorously observe true.

Inverted Asana:
Folks with heart issues, high pressure, in duration of the arteries, glaucoma, a lively ear infection ought to refrain from inverted postures; at constant time, those folks with any malady of the brain additionally ought to refrain from inverted postures. The folks with cervical issues shouldn't follow postures wherever the neck is weight bearing. the overall cautions given within the section for Inverted posture apply for any posture wherever the top is below the trunk of the body.

Termination of asana:
The posture ought to be terminated forthwith if there's excessive pain in any a part of the body.
and look for medical recommendation if necessary. If discomfort is felt don't keep in Associate in Nursing posture.

**Importance of Yogic Cultural Concepts:**

The interpersonal relationships in our social life, various Yogic cultural concepts guide us in shaping our personal life as well as in culturing ourselves in relation.

**Vasudeva Kutumbakarm:**

The whole world is one family, is an excellent concept which helps one to understand the so called narrow, fanatical divisions on the basis of class, creed, religion and geographical distribution which are all manmade obstructions towards ones. We can then look upon all as his own and can bond with everyone faces any barrier.

**Panca Kosa:**

How all our actions, emotions and even thoughts can influence our surroundings can be understood with the concept of our five sheaths or bodies/. No man is an island and the concepts of nara or psychic disassociation aware us of why things happen to us and others in our daily life.

**Caturvidha Purusartha:**

How we can set legitimate goals in this life and work towards attaining them in the right way can be told us by the four legitimate goals of our life which follow our dharma to attain artha dama and finally the attainment to the real goal of our life moksa.

**Catur Asrama:**

To know how, what and when to perform the various activities in our life is known by concept of the four different stages in life. The period from birth till 27 years and is the period for study concserving the creative impulse and channeling it towards elevating spiritual pursuits is called Brahmacharya. The next period is Grahastha, which is of responsibility spanning the period from 27- 54 years in which we learn to care about others in the family and the social network, fulfilling our dharma towards both the young and the old.

**Niskama Karma:**

Lord Krsna in the Bhagavad Gita preached us about the Selfless action and the performance of our duty without any motive are qualities. One should perform his duty for the
sake of the duty itself and not with any other motive helps the man to develop detachment which is a quality vital for a good life.

Director of the International Centre for yoga education and analysis at Ananda Asrama in Pondicherry, Yogacarini Minaksi Hindu deity Bhavanani imparts the ism that Yoga includes a step by step methodology of culturing that produces effects in the slightest degree levels of existence. She elaborates with utmost yearn that social behavior is initial optimized through associate degree understanding and management of the lower nature and development and sweetening of the upper attribute. The body is then reinforced, disciplined refined hyper sensitised lightened energized and created biddable to the upper can through attitude. The body mind emotions spirit time is intense and management led through pranyama victimisation breath control as a technique to achieve controlled growth of the important cosmic energy that is flowed with Universal pranic energy. The mind that is restless and so refined, clean centered and reinforced through concentration. The seventh or meditation the mind with the thing of contemplation is feasible if these six steps are completely understood and practiced. Samadhi, or the enstatic feeling of Union, in distinguish ability with the Universe derived from intense meditation the right state of integration or harmonious health.

Buddhists, Jews, Christians, Muslims, Hindus and Atheists alike might be used and practiced Yoga which is a practical aid and its techniques and also not have an impact of religion. Yoga is a symbol of religious integrity which is observed their own thoughts scientifically and objectively the traditional Yogi studied several obstacles to bring the mind underneath aware management. The sage of Patanjali compiled his findings within the Yoga sutras, a text that describes the inner workings of the mind and additionally provides and eight stepped blue print for dominant the restless mind and enjoying lasting peace. Yoga is viewed as a physical, mental and non secular discipline that confers a sound body and a sound mind for several folks. Apply of yoga will facilitate an individual to attain his or her full potential and increase his non secular consciousness. One in all the mental aims of yoga is that the ability to keep up psychological features management and respiration techniques and posture. It’s particularly within the areas of attention memory and arousal management. Yoga helps clear the mind associated this might have an impact on the power to attend to relevant stimuli and recall data afterward is an usual claim. Health enhancing effects will come through yoga practices which might be a great deal of youth’s structured physical activity and in addition,
society often supports the involvement of youth in yoga practices as it is perceived as a good thing.

The fact which can’t be denied that it was planned to subject such patients to undertake selected yoga exercises with a view to see whether the maladies of the type II diabetes could be controlled or removed without conventional therapeutic treatment with medicines. Teachers to perform their responsibilities as a teacher more effectively and efficiently in case of Type II diabetic patient for the positive result.

1.1 STATEMENT OF THE PROBLEM:

At the time of observation the practice teaching of our students in the secondary schools of Amravati district, Maharashtra it was observed that some of the secondary school teachers of the locality were not participating in any other co-curricular activity of their school except their allotted classes, even they were less interested in their assignment for teaching. They preferred to remain inactive in the staff room and some time they used to go back to their residence with the plea that they are not feeling well with the permission of headmaster/headmistress before school ours completed. After discussion with them it was revealed that they were suffering from diabetes and they themselves had got an idea that they were to stay away from any type of physical activities because of their maladies. Sometimes they were being exempted by their Headmaster/Headmistress in taking part in co-curricular activities of the institutions and even from taking classes.

This situation compelled the physical education teacher to think as to what could be done for them in order to ensure their fruitful participation in effective teaching and in taking part in co-curricular activities this led him to investigate and to find out the case history of such teachers suffering from Type II diabetes (Mellitus). It was found that some of them have acquired it from heredity, food habits, environmental conditions etc. Ayurveda holds that the sole causes of diseases are improper food habits and improper conduct due to which the diseases take hold of the body and mind. Thus the main causes of pain are the various vikaras of the body. Since all the diseases cause pain and thus have similar effect that is pain they have been addressed by one name disease. Broadly speaking, diseases can be sago to be of two types- physical and mental. Both are inter dependent. Pain in one brings pain in the other too.
After consultation with the patient's doctor, the patients were selected for an experiment, because the physical education teacher was of opinion that if such patient teachers would be subjected to selected yoga exercises, they might be relieved of the disease and in course of time they might take part in all sorts of co-curricular activities of the institution as an effective teacher like other normal teachers without customary therapeutic treatment with medicine. With this view in mind, the present researcher stated the problem for present study as under: “Effect of Selected Yogic Exercises on Teaching Effectiveness of Diabetic Teachers Working in the Secondary School of Amravati.”

1.2 PURPOSES OF THE STUDY:

1. The study was conducted to find out what extent functional improvement could be achieved through yoga exercises in order to rehabilitate the Mellitus Type II diabetic patient teachers.

2. The study was also conducted to examine any improvement of teaching effectiveness through the practices of yoga exercises.

3. The study was also conducted to estimate the effect of yoga exercise on organic disorders of the Mellitus Type II diabetic patient teachers.

1.3 OBJECTIVES OF THE STUDY:

The following objectives were laid down for the study.

1. To select the Mellitus Type II diabetic patients teachers of the Secondary Schools.

2. To categorize the diabetic Mellitus patient teachers into two specific groups.

3. To estimate their organic disorders.

4. To compare the organic disorders of the patient teachers with the normal teachers.

5. To compare the organic disorders of Experimental and Control group.

6. To estimate the quality of Teaching Effectiveness of the patient teachers with the normal teachers.

7. To find out the effectiveness of Yoga Exercises on the organic disorders.

8. To find out the effects of yoga exercises an effective teaching.
DELIMITATIONS OF THE STUDY:

Area:
The Experiment was confined to the Secondary School Teacher of Urban area of Amravati District, in Maharashtra.

Age:
The age range of the subjects varied from 35-58 Years.

Sex:
The subjects were both male and female teachers.

Residence:
The subjects were sorted out from nearest residential urban area teachers of Amravati district of Maharashtra.

Selection of Subjects:
Among the diabetic teachers only the teachers those who were suffering from diabetes Mellitus Type II and residing nearby place, were selected for the experiment.

Selection of Yoga Exercises:
Selection of yoga exercises were made with an eye to those which have, according to the yoga authorities, beneficial effects on Type II diabetes.

Test Parameters:

The Test Parameters were as under-A

(a) Amount of Sugar in Blood.
(b) Amount of Sugar in Urine.

The Test Parameters were as under-B

(a) Regularity.
(b) Interest in Teaching.
(c) Participation in co-curricular activities.
(d) Cooperative Attitude.
(e) Professional Attitude.
(f) Teacher Pupil relationship.

1:5 LIMITATIONS OF THE STUDY:

There was no control of food habits and lifestyle of the subjects.

1. No motivational techniques were used to collect data which might have affected the results.

2. The subjects were belonging to different environment and religion of Amravati district.

3. The authenticity of data depended upon the laboratory test by the doctors in case of organic disorders.

4. The authenticity of data depended upon the honesty of the Headmasters/Headmistress and students in case of Teaching Effectiveness.

5. The subjects of the experiment were free and the experimenter's only tool was his persuasive capacity to motivate them to undergo the prescribed yoga exercises as desired. Under the circumstances it goes without saying that the result of tests for evaluating the prescribed yoga exercises were to some extents depend upon the seriousness, sincerity and devotion to their own words of honor for co-operation in all matters involved in this experiment. The reliability of the test had to be viewed within the limitation.

1:6 SIGNIFICANCE OF THE STUDY:

This study was significant in the following manner.

(1) The idea behind this study was to ascertain in a scientific way the result relating to the therapeutic value of Yoga exercises on diabetes.

(2) It was hoped that the result of this experiment might be a blessing to the Mellitus Type II diabetic patient teachers.

(3) It was also expected that they might depend confidently on the practices of yoga exercises in preference to medicine in order to get rid of the disease.
(4) It was also expected that they could live life of almost normal teacher without having recourse of periodic expensive hospital treatment.

(5) It was also hoped that the result of this experiment might help the doctors to appreciate the value of certain well-prescribed Yoga exercises for the diabetic patients.

(6) It was expected that the teachers suffering from diabetes Mellitus Type II be enlightened from the findings of the study in such a manner that there are alternative and effective systems of curing the disease like diabetes Mellitus Type II without customary therapeutic treatment with medicine, here lies the significant of the study.

1:7 HYPOTHESES OF THE STUDY:

The following Null hypotheses were laid down for the study.

**HO.1:** The selected yoga exercises would have no positive therapeutic effect on sugar in blood, sugar in urine, W.B.C. (Leukocytes) count, and R.B.C. (Erythrocytes) count and body weight.

**HO.2:** The selected yoga exercises would have no positive therapeutic effect on regularity, interest in teaching, participation in co-curricular activity, co-operative attitude, Professional attitude and teacher-pupil relationship.

1:8 DEFINITIONS OF THE TERMS:

**Blood Sugar:**

When the quantity and quality of insulin produced by the pancreas are inadequate or is not working properly, glucose comes from liver being accumulated with blood and rise in the blood sugar level.

**Yoga:**

Yoga is an historical art of living a philosophy and more precisely it is a science aiming to develop sharp balance in between the body and the mind through the entire universe.

Yoga is a science. It is applied psychology. Not only is it the means to achieve the purpose of life, but it enables one to do anything one wants, even in this world, with great energy and with great benefit to other people.
Asana:

Asana or the physical postures are movements of the physical body which are relaxing and refreshing; they give physical, psychological and physiological benefits and bring body, mind and spirit into harmony and equilibrium thus helping both the young and the old.

Teacher:

Teacher is a person who stimulates learning in the students by organizing and guiding certain experiences of the individual under his leadership.

Teaching:

Teaching as “Stimulation, guidance, direction and encouragement of learning.”

Teaching Effectiveness:

Teaching effectiveness as an “Act of Faith” on the part of students and teachers to do their best.

Interest:

Interest refers to the force that motivates us and impels us to attend to a person or a thing that might cause the effective experience which is being stimulated by the activity. In short, it can be the result of active participation in the activity.

Regularity:

According to Thomas Fuller “Regularity in the hours of rising and retiring, in exercise, adaptation of dress to the variations of climate, simple and nutritious ailment and temperance in all things are necessary branches of the regimen of health.

Attitude:

In the words of Anastasia “An attitude is often defined as a tendency to react favorably or unfavorably towards a designated class of stimuli, such as a national or a racial group, a custom or an institution”
Co-curricular Activities:

The present day school expects from their teachers that, apart from imparting knowledge of subjects in the class-rooms, they should also organize and conduct extracurricular activities. When activities like games, sports, scouting, drama, debate educational tours hobby clubs etc are co-ordinate with curriculum and the regular functions of a school, it becomes imperative for the teacher to be always anxious to take part in them to be able to give proper lead to the children.

Professional dedication:

The teacher should be fully committed to his subject and profession. It is only this sense of commitment which would serve as a stimulus for good work. If he lacks the sense of dedication, he would be hindering his own and his pupil's development. “A good teacher's first attribute is that he would be a teacher and nothing else and he should be trained as a teacher.” Thus a teacher should take to his work with his whole heart.

Teaching as a relationship:

Teaching is a relationship which is established between three focal points in education, the teacher, the child and the subject. Teaching is the process by which the teacher brings the child and the subject together.