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SCIENTIFIC SESSIONS

TOPIC : PREVENTION OF LIFE STYLE DISEASES

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Respected Padmabushan Rev. Fr. Gabriel, who is our great acharya and guru. Throughout his life he is a Karmayogi, through that karma he has worshipped god, we are proud of him. Then respected Fr. George Pius (Director of Amala Cancer Hospital), Mr. T. V. Antony ex-chief Secretary, Govt. of Tamil Nadu, Fr. Deljo Puthoor (Assoc. Director of Amala Ayurvedic Hospital & Research Centre), Dr. Kesavan - Chief Physician of Amala Ayurveda Hospital - Now I will start with the topic "Prevention of life style diseases". It is a simple and common topic that had been burning from 1940 onwards.

There was an era, an era which we called vedic era when they were not bothered about diseases. Then came the era of communicable diseases where many people died and that era lasted till the end of 19th century. After this era, came the era of degenerative diseases. Now, I am just recollecting a phrase from the gospel of Mathews "Let your lights so shine before men so that they will see your good work & glorify your Lord who is in heaven". So that should be our ultimate aim. You will be imbibing knowledge from here & you will get certain points like how to handle the patients how to tackle their diseases. And now what is meant by life style disease and what is the definition? There are several definitions; one is ; it is considered to be a disease of longevity. Then another definition, it is a disease of civilization or we can say a disease of industrialization. Some people opine if as the disease of 20th century. But from Ayurvedic point of view as well as various vedic points of view, I can make a definition in relationship of people with the environment. We are going away from nature by destructing the environment. The new generation dont know what they are doing. He is going away from his wisdom. In Ayurveda, we call this as Prajnaparadham - A mistake that he is doing on his own wisdom and that is responsible for destruction of whole environment. He has conquered the animal kingdom. He thinks that he can become victorious by destructing all plants & trees. This is our present situation. There are about 40,000 international papers, which help to tackle various disease like HTN, coronary diseases & obesity.

From all these, I selected only few papers and they are life style intervention in all cases of coronary diseases those which can give rise to sudden death and cardiac failure. In that papers they explained about yoga, exercises along with food regulation and in that way they produce certain results. In villages, we have plenty of fresh air, plenty of plants, unpolluted

and pure water and the people who live in villages do regular exercise by walking etc and they used to take fresh vegetables. Those people eventually migrated to cities and confined to one room with junk foods and no exercise. But you should remember that there are 3 centres in the world, one in paragon range near to Kashmir, another in coccachian range in Russia and another in Hantus. These are the 3 places where people live for more than 120 years. If you go there, you can see mountains, trees, plants and unpolluted river. And the people in that area were lean people & not obese because they walk in morning & evening and take only vegetables & mainly flesh of birds. All the Americans who have gone there found that they were lean and lived upto 123-130 yrs. The only problem was to prove the age because there was no records of date of birth etc. But still they found it through X-rays.

Recent edition of British Medical Journal showed how the salt reduction can bring down hypertension. Usually we takes 5-6 gms of NaCl per day. By the reduction of salt you can control hypertension. I belonged to Kochi Maharaja, we had a Kochi Maharaja Kerala Varma. In 1965, his BP was 230/120 mm Hg. The Medicines at those days was not safe for long duration. That medicines was creating depression, water retention & so many complications. Maharaja of Kochi had to be in the particular type of diet for 21 days without salt. After 21 days, his BP was 120/80 mm Hg. This shows the importance of salt.

Life style diseases can become more popular & everybody can contribute something to it because of its increased publicity. We have to do something a bit different because we are having a heritage Ayurveda. Through that one we can give our contribution and in that way we have to define about health.

According to Veda, when the flower blooms, when the gentle breeze rustles the tender leaves of trees & plants, when the birds twitter. Then I submerge into a mental tranquility which makes me feel that I am only a part of external beauty of nature. That is called as health. That is a feeling that I am a part of nature. I am one among them and I enjoy that feeling. This is the definition of health in vedas.

Now-a-days, it is very cheap to examine health by going to a big hospital for complete check-up . After analysing the reports he feels that he has good health. This is the present concept.

Now I will go to a particular term Rhythm in Rig Veda. What is Rhythm? Rhythm is defined as the delicate balance and the natural harmony which exist between galaxies and constellations, between plants & satellites, between nature of all forms of life. All these together makes universe. So in Universe which ever is kept really in balance of harmony that particular force is known as Rhythm.

There everything in Universe is maintained by the particular force which is keeping the natural force that is the one. The three type of medicines from heaven are pure air, pure

light and pure water. again the three type of medicines form air are curative, maintenance & preventive aspect. So this Rhythm is responsible for maintaining the entire environment.

In Vagbhata's Astanga hrudaya, there is a reference regarding Ahara.

? What is real ahara? He has given a list, well balanced diet which contains plenty of carbohydrates, proteins, fat, vitamins and fruit items. That is the list of Nithya ahara Vihara sevi.

Along with the ahara, one should do regular exercise. We are getting the life style diseases because of our own prajnapadha.

There is a wonderful description by susruta in that he has described in gulmadikara and their avarana doshas leading to heart attack with IVF.

This is from atharva veda. This sloka shows the importance of exercising in front of rising sun (surya namaskara). Drinking the pure water which is coming from himavan and doing exercises in front of rising sun prevents heart attack.

Now-a-days, there are two important diseases - cancer and heart attack. In advanced countries these two diseases reached the peak level and now it is coming down because people follow what the doctor says. But in developing countries, it has never come down because people dont follow the doctor's advice. India will be the number one country by 2020 in the incidence of diabetes.

This is a wonderful description given by charaka

मनदोत्साहमतिस्थूलमतिस्निग्धं महाशनम।

मृत्युः प्रमेहरूपेण क्षिप्रमादाय गच्छति॥

(च.नि 4/51)

Mandholsaha - inert

Athisthoola - overweight

Athisnigdha - fat accumulation

Mahasana - Continuously taking food.

& Prameha take him away from the world. If all these are getting corrected in life, then there will be no diabetes but nobody does it.

In 1961 there was only 6% and now it is 16% to 19%. Recently a study in Amritha shows 19% diabetes in Ernakulam. So I am concluding key topic. Everybody should take one decision to modify their life style and bring awareness. Otherwise there will be a rapid increase in the rate of diabetes and obesity. When we take the coronary disease cases, 82% will be due to diabetes. So diabetes is the silent killer and it is the number one villian in India. So if we are not taking any stern decision to control our life style, we have to face disasters due to HTN, hypercholestremia, stroke, heart attack etc.



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PREVENTION OF LIFE STYLE DISEASE

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Today we are here to discuss a very important subject of contemporary importance namely "Prevention of life style Diseases". In the classical Ayurvedic literature an elaborate description of various means for the prevention of diseases is given.

Ayurveda the ancient science of life has been able to throw ample light on the maintenance of a healthy and good life. Ayurveda provides a philosophy of life in the background of maintaining a good and healthy living. The chief objects of this science are the preservation of health and prevention of disease. According to Indian system of medicine human body is a combination of three essential factors ie, TRIDOSHAS - Vatha, Pitta & Kapha. These factors are responsible for maintaining the integrity of human body. If these are in a state of equilibrium a man will never suffer from any disease.

For maintaining the healthy state, proper usage of three factors are essential. They are Achara or Observation of established usage or customs, Ahara or the proper usage of diet & Vihara which includes recreation and several physical and mental activities. Under the head Achara comes the Dinacharya or daily routines including non suppression of natural urges, abstinence of sinful acts namely HIMSA (Torture), STHEYA (Sealing), ANYATHAKAMAM (Unlawful sex), PAISONYAM (Abusive speech), PARUSHYAM (Use of harsh words), ANARTHAVACHANAM (Speaking untruth), SAMBINNA ALAPAM (Speech causing enemy), VYAPADAM (Intention of harming), ABHIDYA (Jealousy), DRIKVIPARYAM (Misunderstanding) etc. are all included. The health status of an individual

a community or nation is determined by the interplay and integration of two ecological universes ie the internal environment of man himself and external environment which surrounds him.

Rithucharya is the mode of living for each and every season. The chief elements of meteorological environment are atmospheric. Pressure, air temperature, humidity, rainfall, movements of clouds direction and speed of wind and character of weather. The “Doshic” fluctuation caused by seasonal variations have got considerable significance in the prevention of seasonal diseases. For example, rainy season influences VATHA, summer season helps the increase of PITTA, while KAPHA increases during autumn. Therefore there should be proper prescription for the right diet to be adopted for each season. This has been well described in Ayurvedic classics.

Purificatory measures are also suggested for each season for maintaining the equilibrium of the three doshas. For example, Medicated enema or vasthi karma is advocated for VATHA in VARSHA RITHU (Rainy season), Virechana Karma or purgation using special drugs for PITTA in SARATH RITHU & Vamana karma for KAPHA in VASANTHA RITHU.

Virudahara or in compatible diets forms another important cause for various illness. It is described that these incompatible foods will interact and produces toxic substances which are very much harmful to the human body. A lot of them are described in ASHTANGA SAMGRAHA in the 9th Chapter of SUTRASTHANA. The usage of milk with fish, curd with chicken, horsegram with milk, daily usage of curds are a few examples. A person who indulges with virudahara frequently is liable to be affected with various skin disorders, abscess, degenerative diseases of the brain, various bleeding disorders tumour etc. It is described as follows in ASHTANGA SAMGRAHA.

വിസ്ഫോടശോഫമദവിദ്രധിഗുല്മയക്ഷ്മ
തേജോബലസ്ഥിതിമതീന്ദ്രിയചിത്തനാശാൻ
കുശ്ലാർത്ഥം വിരുദ്ധമശനം ജാരമസ്രപിത്തം
അഷ്ടൗഗദാംശ്ച മഹതോവിഷവചുക്ത്യം”

Proper sleeping and sexual habits are also forms an important part in the prevention of diseases. The details of this are also described in the Ayurvedic classics.

From this it has become clear that for the prevention of diseases physical, mental, social and spiritual factors play a very important role. World Health Organization define health with three important dimension - the physical, mental and social health. During the last decade a fourth dimension or the spiritual health is being added to the concept of total health. This multi dimensional approach in health care leads to the new concept of Holistic Medicine.

The modern stress, strains and demands of life have caused an alarming increase in the joints and muscle pains. Some of these pains are so excruciating, with radiation of the pain to limbs, and that make the life of patients very miserable. In many of such cases investigation are usually within normal limits but clinically there is a spasm in the muscles. Today there is sufficient and extensive evidence in the medical literature of the harmful effects of stress and worries, causing Cervical Spondylitis, low back pain. Arthritis and bone and muscle pains. Irritation and worries saturate the body cells with toxins which is responsible for this pain and discomfort. We marvel at the versatility of the human brain, the defensive mechanism of the body and its capability to avert the damage we so often inflict upon our body tissues. The brain cells produce a substance which is very much like morphin in its structure and helps the person to withstand pain. This is produced much more in those who have no stress and whose mind are at peace. The brain cells also generate a bio-chemical exlixir which immensely enhances the feeling of well being and the quality of life. That is why when a person is in a state of tranquility he generates and consolidates the vital life forces of his personality which make him happy and joyful and this state is best possible through YOGA. It is therefore essential that a person must be taught yoga and pranayams which provide greater tolerance, calmness, self confidence and tranquility. Yoga and Pranayama not only generate the vital life forces in the body but also saturate the body cell with oxygen which is much needed for the congested organs and the nerve tissue to relax.

May I conclude with the words of “VAGBHATA” (su.ch.4). He, who indulges daily in healthy foods and activities, who discriminates (the good and bad of everything and then acts wisely), who is not attached (too much), to the objects of the senses, who develops the habit of charity, of considering all as equal (requiring kindness), of truthfulness, of pardoning and keeping company of good persons only, becomes free from all diseases.

“നിത്യം ഹിതാഹാരവിഹാരസേവീ സമീക്ഷ്യകാരി
വിഷയേഷസക്തഃ,
ദാതാസമഃ സത്യപരഃ ക്ഷമാവാൻ,
ആപ്തോപസേവീ ച ഭവത്യരോഗഃ”



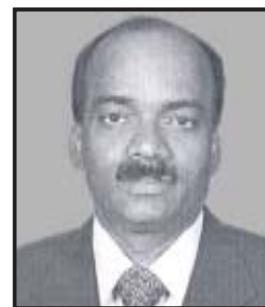
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LIFE STYLE DISEASES

There has been tremendous growth in all walks of life in our society during the last few years. The growth rates are even more compared to some developed countries. The life style of people have changed significantly to adjust for the rapid change and to keep in pace with others at the cost of exercise, relaxation, homefood and sleep. The disorders like atherosclerotic heart disease, stroke, hypertension, diabetes mellitus, obesity, disease associated with smoking and drug abuse are associated with life style changes. Life style diseases are different from other disease because they are potentially preventable and can be lowered with changes in diet, life style and environment. The disease pattern changed over a period of time to evolve new man made disorders and this change can be seen in epidemiological transition.

Age of Pestilence and famine.

During this period it was malnutrition and associated disease were the main cause of death. Infectious disease, high infant mortality, low life expectancy were the picture at that time. Death from cardiovascular disease (CVD) was less than 10% and was mainly due to rheumatic heart disease (RHD) and cardiomyopathy.

Age of Receding pandemics

As a result of rapid social changes with the emergence of public health infra structure and improvement in nutrition there was significant decline in infant mortality. Death from CVD ranged from 10-35 % and was due to RHD, systemic hypertension (HTN) and stroke.

Age of Degenerative and man made disease

Urbanization and industrialization resulted in high intake of fat, proteins and low physical activity. Systemic hypertension and CAD emerged as main cardiovascular diseases. Among death from cardiovascular diseases 35 -65 % was due to CAHD (coronary artery heart diseases) and stroke.

Age of declining degenerative disease

Cancer and CAD are the main cause of death. Better treatment and prevention helped in reducing the mortality. CAHD stroke and CCF accounts for 50% cardiovascular death.

Atherosclerosis

Indians are at high risk for coronary artery disease due to many reasons. One sixth of world's population is in India, with more than 60 % residing in villages and half of them are vegetarians. In spite of this 50% of cardiovascular death is due to coronary artery disease. The high risk for CAD is due to metabolic problems and genetic predisposition. Indians have more premature disease, triple vessel disease and the disease affects young people. In comparison to western countries the age at which the first attack happens is much low in Indians. Indians in 30 -39 yrs have 10 times greater risk of developing heart attack compared to western counter part and hence suffers great the loss of productive years due to early death. There is high prevalence of metabolic and dietary risk factors in school age. What is the reason for this epidemic? Steady increase in affluence, urbanization, sedentary life style, more calories and fat and stress are the man made reasons. Apart from that the focus of attention is on other health problems like maternal health, infant mortality and infectious diseases. There is no primary prevention program either in state or national level.

Life style

What is life style? It is the way of living of a group or an individual. It varies from man to man, state to state and country to country due to many factors like religious practice, nature of occupation, socioeconomic status and the climatic situation.

Coronary artery heart disease.

Coronary artery heart disease is a multifactorial disease. There are various risk factors which if present can lead to the formation of atherosclerosis. Of course age, gender and genetic composition are non modifiable risk factors. Let us look how life style predisposes to the development of atherosclerotic plaques and cardiovascular events.

Smoking

Any form of tobacco consumption is associated with high risk of CAD. Cigarette smoking affects the entire cardiovascular system. It affects the endothelial function, induces vasospasm, increases the oxidative stress and reduces HDL (high density lipoprotein) cholesterol. Sympathetic stimulation leads to tachycardia, increase in blood pressure, platelet activation and arrhythmias. Cessation of smoking increases the life expectancy and the benefit is higher in younger patients. Quit smoking reduce the CAD risk by 50% in first year. The risk of former smokers approaches never smokers by 5-15 yrs.

Recommendations: Complete cessation of smoking

Obesity

As a result of rapid industrialization, extra calories and protein together with sedentary life style the average weight in our community is now increasing. All over the world this is

becoming a health problem and it begins in childhood or in early adolescence. Obesity is associated with hypertension, elevated lipid level, diabetes mellitus, metabolic syndrome and this in turn act as coronary artery risk factor.

Obesity and overweight can be assessed very easily in any clinical or home visit or community health setup. The body weight in kilograms divided by height in meter square gives BMI (Body Mass Index)

$$\text{BMI} = \frac{\text{Weight in Kg}}{\text{Height in M}^2}$$

What is normal body mass index? It should ideally less than 25.

Body mass index (BMI)

Normal	Less than 25
Overweight	More than 25 – 29.9
Obesity	
I	30-34.9
II	35-39.9
III	>40 morbid obesity

Example:

Weight of the individual 80 Kilograms and the height is 160 cms

$$\text{BMI} = 80 / 1.6 \times 1.6 = 31.25$$

Another way of calculating the obesity is to calculate the waist hip ratio. This is especially important in the type of obesity prevalent in our community (truncal obesity). The normal ratio for women and men are 0.85 and 0.95 respectively

Recommendation

Match intake of energy (calories) to overall energy needs. Limit food with high calories and low nutritional values. Maintain a level of physical activity that achieve fitness and balances the energy expenditure. Observational evidence shows that fruits, vegetables, whole grain, fibers legumes, fish and fish oil reduce cardiovascular risk

Diabetes mellitus

The exact reason for the rapid increase in the number of diabetic population in India is not very clear but lots of environmental factors are postulated. How do environmental factors influence this clinical condition?

Physical inactivity (least active subjects have 3 times greater prevalence of DM). Low birth weight and lack of breast feeding in infancy (at least for 2 months is associated with 50% reduction of diabetes in young). Insulin insensitivity in response to high fat diet is responsible for diabetes mellitus. Obesity is associated with insulin insensitivity, hypertriglyceridemia and hypertension.

Diabetes mellitus is now known as coronary equivalent because of the close association of these conditions. Diabetes mellitus is an independent risk factor for CAD. One percentage increase in HbA_{1c} is associated with 12% increase in risk for heart failure (UKPDS). Progression of atherosclerosis, accumulation of interstitial collagen and activation PKC leads to cardiomyopathy recommendations.

Fasting blood sugar in diabetics should be below 110 mg/dl and the postprandial below 160 mg/dl. Regular screening for the development of diabetes after the age 30 helps to prevent complications associated with metabolic problem. To prevent the development of diabetes mellitus avoid overweight and physical inactivity.

Systemic hypertension

One of the conventional risk factors for the development of coronary artery disease and stroke. Systemic hypertension cause endothelial damage and predisposes to atherosclerosis.

Many environmental factors are responsible for the development of systemic hypertension. One of the earliest factors responsible for the development of hypertension is the fetal malnutrition. This probably affects the number and structure of nephrons. Stress either physical or mental induces sympathetic system stimulation which in turn leads to hypertension. High salt diet increases the sodium and water content and increases the blood pressure. Smoking as we discussed earlier induce vasospasm and sympathetic stimulation leads to hypertension. Excess alcohol and caffeine induce hypertension through various mechanisms. Physical inactivity is one of the key factors responsible for overweight, metabolic syndrome and hypertension. Over weight stimulates renin angiotensin system and retention of salt and water.

Recommendations

To keep the blood pressure below 120/80 mm of Hg in hypertensives. Development of hypertension can be prevented by low salt diet, weight reduction and by regular exercise. DASH (Dietary Approaches to Stop Hypertension) trail shows that inclusion of fruits and vegetable in diet at least 3 portions per day help in maintaining cardiovascular health.

Lipids and Life style

Physical inactivity, obesity and diabetes mellitus are associated with increased levels of lipids. Atherosclerosis initiation and progression is closely linked to the elevated lipids and can be controlled by dietary intervention and exercise.

Physical activity

Lack of physical activity leads to many life style disorders like atherosclerosis, diabetes mellitus and systemic hypertension. Exercise helps in reducing the blood glucose level and insulin insensitivity. Moderate exercise according to the age and physical condition reduces blood pressure and induces vasodilatation thus take away the after load of the heart. Weight gain can be avoided by spending extra calories during routine exercise.

Recommendations: Moderate physical activity for about 30 minute on most of the days.

Over all we need to change the life style in such way to have optimal weight by a balanced energy intake and expenditure along with moderate physical activity. Physical activity doesn't mean exercise in gymnasium, running over a treadmill or going to swimming pool everyday. Moderate physical activity can be achieved by just avoiding the vehicle for short distance travel, engaging in house hold activities like washing, cleaning and gardening. Home made food helps in many ways to live healthy compared to fast food and item cooked outside. First of all we have to spend some energy for cooking our food. Secondly the fat and protein content can be adjusted to our requirements. The most important advantage is that to certain extent we can avoid toxic high doses of food preservative and additives.

Fruits and vegetables of three or more servings per day reduce the cardio vascular risk significantly. Green leafy vegetables, food rich in carotenoides and vitamin C are responsible for this risk reduction. Whole grain and legumes are also important in maintaining the fibre content of the diet. Fibre rich food reduces the total cholesterol and improves the HDL cholesterol.

Nuts are cardiac friendly as it contains fibres, mineral and flavinoids. Walnut and almond are rich in poly unsaturated fatty acids.

Fish apart from its high quality protein content provides important fatty acids ecosapentenoic acid and docosahexinoic acid which are cardioprotective. These fatty acids enrich the membrane lipoproteins and act as anti platelet and anti-inflammatory.

Alcohol in moderate amount is associated with lower risk for coronary artery diseases due its beneficial effects on HDL cholesterol apart from its anti platelet and anti inflammatory effects. In spite of these beneficial effects one should not start drinking in order to reduce CAD risk as alcohol consumption can lead to addiction, hepatotoxicity and hypertriglyceridemia. Not only that we have more beneficial dietary intervention and therapeutic options for CAD risk reduction.

Depression, social isolation and lack of social support are all linked with CAD. Work related stress, Type personalities etc are still needs more data to link with CAD risk. However relaxation techniques, yoga and spirituality shown to fasten the recovery from cardiovascular events.

Dr. Christina Doctare MD

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PREVENTION OF LIFE STYLE DISEASES - ASTHMA

Today I am going to share with you about the topic “Prevention of life style diseases - Asthma”. Ofcourse, its my personal experience and I got cure from Asthma because of pure Ayurvedic treatment in Amala.

Before going to the topic, I would like to tell my personal experience. According to my experience, the spirituality in India and sweden is totally different. The people in sweden are more materialistic and they approach spirituality in different aspect. So the people in sweden are feeling more emptiness inside and they seem to be unhappy if a person is not having inner spiritual support, that person can't support themselves in a difficult time. Allopathic Medicines can't help in this condition because of its limitations.

I was suffering from chronic asthma and I was taking all possible allopathic treatments. But that treatment didn't help me. According to my experience, my chronic asthma and tinnitus was due to PTSD (Post Traumatic Stress Disorder). When I came to know about Amala Ayurveda Hospital, I got confused whether Ayurveda can help in this chronic cases. My first visit to Amala was in 2003. I got relief from my Asthma and tinnitus. I told about amala to the people in sweden and they become interested to come here in India for Ayurvedic treatment. After my first visit almost 150 swedish patients have come here to get cured in Amala. When they came back to sweden, they contacted me and thanked me for giving them this opportunity of Amala.

The holistic approach in Ayurveda was a new topic for me in the beginning. But now I can feel the importance of holistic approach in Ayurveda. As myself I am a allopathic doctor, I would like to point out one matter. That we have to humble enough to accept the deep wisdom of Ayurveda.

Asthma is a chronic condition involving the respiratory system in which the airway occasionally constricts becomes inflamed and is lined with excessive amounts of mucus, often in response to one or more triggers. These episodes may be triggered by the such things as exposure to an environmental stimulant such as cold air, warm air, perfume, moist air, exercise or exertion, emotional stress. This airway narrowing causes symptoms such as wheezing, shortness of breath, chest tightness and coughing.

The symptoms of Asthma which can range from mild to life threatening, it can usually be controlled with a combination of drugs and environmental changes. The public attention in the developed world has recently focused on Asthma because of its rapidly increasing prevalance, affecting upto 1 in 4 urban children.

Signs of an asthmatic episode include wheezing, prolonged expiration, a rapid heart rate (tachy cardia) rhonchous lung sounds (audible through a stethoscope) the presence of paradoxical pulse (a pulse that is weaker during inhalation and stronger during exhalation) and over inflation of chest.

Causes of Asthma:-

Asthma is caused by a complex interaction of genetic and environmental factors that researchers do not fully understand yet. These factors can also influence how severe a person's asthma is and how well they respond to medications. As with other complex diseases, many genetic and environmental factors that have been suggested as causes of asthma, but not all of them have been replicated. The hygiene hypothesis is a theory about the cause of asthma and other allergic disease and is supported by epidemiological data for asthma.

The researchers in columbia university reporting in Nov 15th issue of American journal of Respiratory and critical care medicines, found that those who suffered the most from PTSD were more than twice as likely to have Asthma.

One of the things that is very clearly delimited by this study is that there truly is an association. This association has been seen with other anxiety disorders before and there were some hints with PTSD. the challenge now is to findout whether this is a cause and effect relationship.

Previous studies have indicated a more general link between anxiety disorders and Asthma, but this study focused specifically on PTSD, a disorder that involves nightmares flash back and panic attacks linked to triggers that develop after exposure to contact or other extremely disturbing events.

No one knows what the mechanism are behind the association. it's possible that some sort of traumatic stress could trigger both PTSD & Asthma, or one condition could contribute to other.

According to the study authors, understanding the association better may help PTSD prevention efforts by suggesting ways to modify environmental risk factors.

CLINICAL EVALUATION

- 1) Name - Dr. Christina Doctare
- 2) Age -
- 3) Presenting complaints - Bronchial asthma
 - Cough
 - Tinnitus
 - Pain & Swelling on both knee joints
- 4) General examination - wt - 86 Kgs.
 - BP - 130/90 mm Hg.
 - Sleep - disturbed Motion - once
 - Appetite - Normal
- 5) Investigations - RA factors - -ve
 - FBS - 65
 - Total Cholestrol - 161
- 6) Admitted on 30.12.2003

Treatment given

- 7) Diet - Pure vegetarian diet excluding pickle & curd
- 8) Internal Medications
 - a) Maharasnadi kwatha
 - Yogaraja gulgulu - (1) Bd

- b) Dasamoola Katutraya Kwatha } Bd $\begin{cases} 6 \text{ am} \\ 5 \text{ pm} \end{cases}$
Swasanandam gulika (1)
- c) Plugit - (1) } $\begin{cases} 10 \text{ am} \\ 3 \text{ pm} \end{cases}$
Bontone - (1)
- d) Dasamoola rasayanam - } 10 gm - Bd
- e) Kanakasavam } 25 ml - Bd.
Dasamoolaristam
- f) Narayana T } Oil massage
Sahacharadi T
Karpuradi T

External medications

- a) Oil massage x 14 days
b) Nasyam with Ksheerabala (101) 8 drops x 7 days
c) Dhanya kizhi x 21 days
d) Udwarthanam x 21 days
with Kolakulathadi choornam

Discharged on 01.03.2004

Observation - Body wt reduced
- Asthma & tinnitus cured

Followup

- Continue above medicines for 3 months
- Adviced pure vegetarian diet.

CONCLUSION

My dream is that we should have an integrated approach towards healing people. In acute phases, we do need the allopathic treatment. We have to launch an integrated research approach towards medicines with the help of Allopathy & Ayurveda. Allopathic medicines have more side effects. so we have to give preference to Ayurveda. I will cherish all the memories and I would like to congratulate you all for celebrating the 25 years of Amala Ayurvedic Hospital.

Dr. M. Kesavan M. S. A. M.
Chief Physician & Research Officer
Amala Ayurvedic Hospital & Research Centre
Thrissur



RESEARCH ACTIVITIES AND ITS IMPORTANT FINDINGS AT AMALA AYURVEDA RESEARCH CENTRE

This centre was established on 27.02.1982 as a grant-in-Aid Research unit under CCRAS, Govt. of India.

TITLE OF THE FIRST PROJECT: LEUKEMIA AND ALLIED DISEASES

DURATION : 3 years

No. of patients studied : 54

DRUGS SELECTED FOR RESEARCH:

1. Varanadi kw 60 ml }
kanchanara guggulu - (1) } Bd - before meals
2. Rasasinduram 500 mg (1) - with beetel leaf juice and Honey - Bd
3. Gomutraharitaki lehyam - 10 gm - bd
4. Khadirarishtam - 25 ml - Bd - after meals.

SUPPORTIVE TREATMENTS

The 'LEPANA' having the proprties of 'Shophakara' and 'Vrunaropana' is used in malignant tumours and ulcers in accordance with concerned Doshas. The application of oil was done on painful sites.

ANALGESICS:

The analgesics such as proxivon etc were allowed to continue for patients with severe pain.

SODHANA THERAPY

Inorder to eliminate the vitiated Doshas and restore the normal bowel movements the procedures such as "Virechanam," "Kashayabasti", "Taila basti" were administrated as per the need.

DIET: *Vegetarian diet.*

- Use of salt, sour and pungent were reduced.

GROUP: 2 TITLE OF PROJECT : - CANCER RESEARCH

- *Duration - 3 years*
- *No.of patients studied - 59*

DRUGS SELECTED FOR RESEARCH

1. *Gulgulutikta kw - 60 ml* }
Kanchanara guggulu - 1 } *Bd*
 2. *Rasasinduram 500 mg Bd with honey and beetel leaf juice.*
- The diet and supportive therapies were done as described in group 1.*

GROUP: 3 TITLE OF PROJECT : HEAD AND NECK CANCER

- *Duration - 1 year*
- *No. of patients studied - 30*

DRUGS SELECTED FOR RESEARCH

1. *Cap. Solamarin 500 mg Bd - Solanum trilobatum*
 2. *Cap. Plumbagin 500 mg Bd - Plumbago zeylanica*
 3. *Cap. Echetine Chloride - 500 mg - Bd - Alstonia Scholaris.*
- These medicines were supplied in the form of capsules from captain sreenimoorthi drug Research Institute, Madras.*
- Diet and supportive therapies were as above.*

OBSERVATIONS FROM EXPERIMENTAL ANALYSIS.

1. *All types of cancer patients were included in research study.*
2. *It was observed that the research medicines reduced the side effects of the Radiation and chemotherapy in cancer patients.*
3. *The recurrence of malignancy was observed to be comparatively less in case of research patients.*
4. *The research medicines were proved to increase immunity.*
5. *Those patients who were taking the research medicines stopped analgesics either partially or completely.*
6. *There was no recurrence of the disease in 5 % of the patients who underwent radiation, surgery and chemotherapy.*
7. *The research medicines were proved to increase Hb%, decrease ESR and sustain the normal level of WBC.*

SINGLE CASE STUDY

1. *EMBRYONAL SARCOMA*

Age: 1 year old female child

Presenting complaints : 4 x 3 inch protrusion on the lumbar spine area, paraplegia, weight loss, Highly constipated.

Previous treatment : Chemotherapy from RCC, Thiruvananthapuram.

- *Result: - Not responding to C. T*
- *Medicines : - As first group of Medicines*

■ **OBSERVATION:**

Medicines started to respond within two months of treatment. After 3 months regression of tumour noticed. Body weight improved. After 1 year, following therapies were started.

1. Oil massage - 7 days
2. Navarakizhi - 21 days
3. Oil enema by Gulgulutikka Gritam was given continuously for 21 days. The above line of treatments were followed every year continuously for 6 years. Now the patient is walking without support, but limbing on walkiing. She completed her B Sc, B Ed successfully. Three month back she got married.

2. **OLFACTORY NEUROBLASTOMA**

- Age - 50 years male
- Presenting complaints: Breathing difficulties, dryness of nose, cold, occassionally head ache, dryness of mouth, General weakness.
- Previous treatment: Surgery, Radiation from Tata Cancer Hospital, Bombay.
- Result : They predicted 6 months life guarantee. He was the Law Secretary, Medical College, Calicut.
- Medicines : As first group of medicines and Brammarasayanam 10 gm Bd, Punarnavadi oil for head.
- Observation : All symptoms cured within 6 months of treatment. He had a follow up of 6 years. It was observed that he did not have any recurrence of this main disease.

3. **ACUTE LYMPHOBLASTIC LYMPHOMA LEUCOPENIA INFECTIVE HEPATITIS.**

- Age : 27 (Female)
- Presenting Complaints : Anorexia, Vomiting, General weakness, pain in right hypochondriac region, lack of appetite, anaemia, fever, stomach belching, yellowish colour of urine, eye, skin and itching.
- Previous treatment: CT from RCC, Thiruvananthapuram, developed jaundice - stopped C.T.

Investigation before treatment

Blood	-	Hb - 12.5 %		
	-	TC - 1700		
	-	S. Bilirubin	}	T - 37
				D - 25
				I.D - 12
	-	Hbs Ag - positive.		

Medicines

1. Erandakalkam 30 gm Bd with milk for 7 days.
2. 8th day Virecharam ie Avipathi Choornam 10 gm with hot water.

Diet: Salt free diet.

Observation 9th day: Urine colour changed from red to yellow. Anorexia reduced. Appetite improved, itching subsided.

From 10th day onwards started the following medicines:

1. Drakshadi kw - 60 ml - Bd
2. Draksharistam } 25 ml - Bd
Lohasavam }
3. Aswagandha Choornam 5 gm } Bd with milk
Navayasa ch. tab (1) }
4. Sudharsana ch. tab (1) Bd
5. Vasa swarasam 30 ml - morning - empty stomach.

Salt free diet.

INVESTIGATION AND OBSERVATION AT OUR CENTRE

1. Considerable changes to the disease was observed after 10 days of treatment.
2. Within 2 months of medications, serum bilirubin values attained normal level. The symptoms such as fever, vomiting and general weakness were relieved. The appetite become normal.
3. There was gradual disappearance of the side effects of chemotherapy such as blackish discolouration and falling of hair.
4. Within 6 months of treatment, patient regained complete health.
5. There was no signs of recurrence of the disease during 10 years of follow up period.
6. The patients had not undergone any other treatment such as CT after our medication. The patient is still alive.

CASE No. 4 : HEPATOCELLULAR CARCINOMA (Hbs Ag +ve)

Age : 62 years (Male)

Presenting Complaints : - Weight loss, General weakness, pain at Rt. hypochondrium, Lack of appetite.

Previous treatment: Rt. hepatic artery and abnormal branches of artery embolised (3 sitting of chemoembolisation) from kovai Medical Centre.

Blood report before treatment - S. Billirubin { T - 1.2
D - 0.3

- SGOT - 43
- SGPT - 26
- Alk phosphatase - 200 U/L
- Alpha feto protein - 5770 nanogram/dl
- Hb - 13.3.%

Body wt - 68 kg.

Treatment from our centre:-

1. Varanadi kw - 60 ml } Bd
Kanchanara guggulu - 1 }
2. Aswagandha Choornam - 5 gm } Bd with milk
Navayasa ch. tab (1) }
3. Chandraprabhavati - (1) Bd with milk
4. Rasasinduram 250 mg Bd with Honey and Beetel leaf juice
5. Dhan. T - Ext. application
6. Kakamachi patram 10 leaf daily in the morning.

Investigations after treatment.

- Hb - 13.3.%
- S. Bilirubin { T - 1.2
D - 0.3
- SGOT - 24
- SGPT - 17
- Alk phosphatase - 185
- Alfa feto protein - 41.5 10/ml

Body wt - 77 kg

CT Scan report : Follow up CT Scan shows retraction of lipidoil nodular area seen with no increase in size.

Observation: Remarkable changes noticed in Alfa feto protien and body wt. No. development of disease observed in follow up study of 5 years.

II. RESEARCH ON HIV / AIDS:

Our centre started Research on HIV/AIDS Since December 1992 with selected Ayurvedic formulations in Collaboration with Amala Modern Research wing. 900 patients were studied till date. These patients were again classified into three groups. In the first group all the 900 patients were included. In second group 45 Aids symptoms patients were selected. In the third group 25 Aids patients were selected. More specific modern immunological parameters were applied in their study.

MEDICATION:

The patients were given three types of medications which were formulated in our centre which are coded as NCV(1) ACII and SGIII. For third group of patients instead of SG III a rasa preparation known as Rasagandhi Mezuku capsule was administered.

Initially all the three herbal preparations were given to patients with ARC. Once the patients got stabilized, AC II was given.

CONCLUSION

- 1) *900 HIV infected patients were treated for the last 13 years.*
- 2) *The selected drugs were found to increase body weight, stimulate immunity and increase appetite in HIV patients.*
- 3) *Drugs were found to be more effective in non symptomatic patients or those who showed early symptoms of ARC. But the drugs were found to be ineffective in full blown AIDS patients.*
- 4) *In the third group of 25 patients body weight was increased in 20 patients after 1 year of medication.*
- 5) *CD₄++ Lymphocyte count was increased in 15 out of 25 patients.*
- 6) *Total viral load was decreased in 20 out of 25 patients.*
- 7) *Viral load was reached to undetectable range in 6 patients ie. <20.*
- 8) *Medication did not produce any toxicity as it didnot produce any significant change in hepatic function, renal function and haematology.*
- 9) *There was no seroconversion to HIV negativity in any patients.*

Dr. K. Muralidharan DAM

Superintendent
Ayurvedic Hospital & Research Centre
Vaidyaratnam PS Varier's Aryavaidyasala
Kottakkal



DM is the most popular among lifestyle diseases. Around 40 million of world population suffer from this disease with an amazing number of undiagnosed cases. India stands first with 30 million patients and holds the defamatory status of the Diabetic Capital. Advances in the field of medicine has raised the life expectancy adding to the adult population. But the emerging scenario is of a desparate population crippled in the most active period of life. Our tendency to blindly adopt the western culture, our changing environment at home, workplaces, schools etc has gradually paved way for the entry of lifestyle disorders into our society. In this context, it would be worthy to hold a discussion on Diabetes Mellitus.

→ **Times of India Reports**

“Today’s generation of children may be the first in modern history to have shorter life span than their parents”

*Dr. Vishal Bali, CEO
Wackard group of hosp.*

Statistics :- Health Check :- (25-35 age group)

	in %
◆ High cardiac risk	67.08
◆ High blood pressure	30.94
◆ Diabetes	16.92
◆ High blood cholestrol →	47.12
◆ Psychosomatic Stress	10.89
◆ Head aches	26.38
◆ Respiratory disorders	10.89
◆ Digestive ailments	24.12
◆ Joint disease	32.16
◆ Immune disorders	13.88

(Courtesy - Times of India)

Frightening news

- 12 year old undergoes bypass surgery
- 25 year old suffer heart attack

Life style - the prime cause

“70% of all illness is lifestyle related and 50% of our medical cost is incurred in treating them”.

Life style refer to patterns in which people live, spend time and money.

DM - Global Scenario:-

“DM affects one in 20 adults worldwide and 333 million cases are projected worldwide by 2025”. (BMJ - Jan 2007)

Evergrowing diabetic population:-

Global scenario (20-77 years, in the year 2003 and 2025)

<u>2003</u>		<u>2025</u>	
Country	Pts in million	Country	Pts in million
India	35.5	India	73.5
China	23.8	China	46.1
USA	16.0	USA	23.1
Russia	09.7	Pakistan	11.6
Japan	6.7	Russia	10.7
Germany	6.3	Brazil	10.7
Pakistan	6.2	Mexico	9.0
Brazil	5.7	Egypt	7.8
Mexico	4.4	Japan	7.1
Egypt	3.9	Germany	7.1

India - diabetic capital

India with 40.9 million diabetic subjects has the largest number of diabetic subjects in the world and hence the difamatory distinction of ‘The diabetic capital’.

There are about 36 million known cases of DM in India alone. It is estimated that for each diagnosed case of DM, three more undiagnosed cases of DM exist.

Prevention & Control

Two strategies currently exist for reducing onset of DM.

- Life style interventions.
- Drugs

Life style intervention - the better choice:-

Programme Research Group study found, that life style interventions delivered over 2.8 years reduced the incidence of DM by 58% and 31% reduction with drugs.

(BMJ - Jan. 2007)

Prevalence of DM in rural indians remain low (2.4%) and in urban areas it has raised to 12%.

Diabetes - pathogenesis

How does DM occur:-

- insulin secretion (deficiency)
- ↓ Response of peripheral tissues to insulin (inefficiency)
- ↑ Rise in blood glucose level (hyperglycaemia)
- ◆ Glycogenolysis - glycogen stored in the liver is broken down.
- ◆ Gluconeogenesis - Protein broken down into amino acids which are then converted to glucose in the liver.

→ **Two major types of DM**

Type - I:- It is believed that genetic, environmental factors and possibly viruses are involved in the development of Type - I DM. Body's defence system misinterprets the insulin producing cells of pancreas as foreign invaders and starts destroying them. (auto-immune response)

Type - II - This type of DM develops due to reduced insulin secretion or resistance to the action of insulin - Insulin resistance. In insulin resistance, the body does not respond to insulin, thus pancreas goes on producing more and more insulin. As a result, glucose builds up in the blood but the body cannot make efficient use of it as a source of fuel.

What are the problem due to high insulin levels?

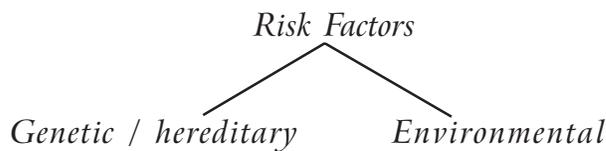
High insulin level increases -

- 1) The conversion of dietary calories into fat, as it stimulates the secretion of an enzyme which increases the intake of fat from the blood stream into the body fat.
- 2) The cholesterol levels - insulin stimulates the liver to produce more cholesterol.
- 3) The proliferation and growth of arterial smooth. This narrows arteries leading to high blood pressure and ischaemia.
- 4) The activity of the sympathetic nervous system leading to a situation similar to increased stress levels.
- 5) The deposition of fat in the upper body increasing the visceral or central obesity.

Visceral Obesity:-

Body fat distribution, especially visceral adipose tissue accumulation has been found to be a major correlate of a cluster of diabetogenic, prothrombotic and proinflammatory metabolic abnormalities referred to as metabolic syndrome.

Due to its anatomic location and peculiar metabolic, hyperlipolytic activity, the expanded, visceral adipose deposit is a key correlate of the altered cardiometabolic risk profile observed among the individuals with a high risk abdominal obesity phenotype.



- Genetic loads the gun and environment pulls the trigger.

Family history -	Mother affected	-	2.3%
	Father affected	-	5 - 10%
	Both parents affected	-	30%

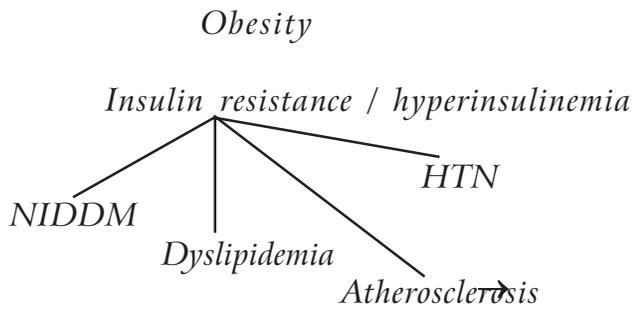
Certain races :-

- ◆ The risk of diabetes is greater in certain races such as asian.
- ◆ Indians are genetically predisposed to heart diseases, HTN & DM.

- ◆ Obesity - 20% or more than optimum body.
- ◆ Central / visceral obesity:-
 - More wt around abdomen than on hips and thighs.
- ◆ High blood pressure - More than 135/85 mm Hg.
- ◆ Increasing age - risk of developing DM increases progressively with age.
- ◆ Certain drugs - eg:- steroids
- ◆ Alcohol
- ◆ Smoking
- ◆ Gestational diabetes
- ◆ Viruses

Some more causes:-

- 1) **Cow's milk** :- Babies fed on cow's milk in early life (up to 3-4 months of age) have more chances of developing type I DM in later life.
- 2) **Free radicals** :- Agents that increase free radical production (smoking, air pollution, faulty diet etc.) cause destruction of pancreatic cells.
- 3) **Obesity** - The combination of insulin resistance and hyperinsulinaemia can lead to a catabolic cascade which results in other disturbances.



Ayurveda

*The concept of life style related diseases (Ever sick persons)
“The eversick class comprises the priests,
King’s officers, the merchants and prostitutes”.*

“सदैव ते ह्यागतवेगनिग्रहं समाचरन्ते न च कालभोजनम् ।
अकालनिर्हरविहारसेविनो भवन्ति ये अन्ये अपि सदा आतुराश्च ते ॥”

(य. सि.२२/३०)

DM - Etiology

Susruta Classifies diseases according to

Nidana — Sahajam
Apathyanimittajam

*Adibalapravritam
Janmabalapravritam
Dosabalapravritam
Sanghabalapravritam
Kalabalapravritam
Daivalapravritam
Bvabhavabalapravritam
(DM is a multifactorial disease)*

Specific causes - summarized from classical texts.

- 1) *Genetically determined factors.*
- 2) *Heredity*
- 3) *High calorie food.*
- 4) *Highly refined food*
- 5) *X've consumptions of animal fat.*
- 6) *Irregular dietary schedule.*
- 7) *Sedentary life style.*
- 8) *Lack of exercise.*
- 9) *Lack of personal hygiene.*
- 10) *Erratic sleep patterns (especially day time sleep)*
- 11) *Suppression of urge for micturition*
- 12) *Emotional instability*
- 13) *Alcohol*
- 14) *Smoking*
- 15) *Stressful life*
- 16) *Avoidance of purificatory treatments (when it is medically indicated).*
- 17) *Illicit sex*
- 18) *Obesogenic environment conducive to dysmetabolic consequences.*
- 19) *Secondary to systemic disease (eg: kaphaja arsas)*

Pathogenesis:-

Ayurvedic view - Salient features:-

- 1) *Glucocentric (Kaphadusti)*
- 2) *Medhocentric (Medhodusti)*
- 3) *Glucolipocentric (Kaphamedhodusti)*
- 4) *Multi-centric (Sannipatika dusti - multiple system involvement)*

The role of Kapha - medho dusti in pathogenesis of DM has been unanimously accepted by all ayurvedic scholars.

Functional role of kidneys in diabetogenesis is a salient concept of Ayurveda.

Consensus - Ayurveda & Western Science reach a consensus on Kapha - medho dusti in diabetogenesis.

Example of a normal spun blood sample and a lipaemic sample from a diabetic pt with serum TG concentration 150 m/l. In the latter serum is densely lipaemic and is topped by a layer of chylomicrons.

(Courtesy of Dr. Andrews Iverren)

Medodusti :-

Alteration of lipids in DM

- * *DM affects virtually all lipids and lipoproteins.*
- * *Dyslipidaemia is a consistent finding in all people with DM.*

	DM Type 1	DM Type 2
<i>Lipoproteins</i>	<i>VLDL</i>	<i>↑ VLDL / HDL</i>
	<i>↑ N/↑ HDL</i>	<i>↑ LDL</i>
<i>Lipids</i>	<i>↑ TG</i>	<i>↑ TG</i>
	<i>↑ Cholestrol</i>	<i>↑ Cholestrol</i>
<i>Defect</i>	<i>↓ TG Clearance</i>	<i>↓ TG Clearance</i>
	<i>↓ Lipoprotein lipase</i>	<i>↑ TG product</i>
	<i>↓ LDL receptor activity</i>	<i>↑ Lipoprotein glycation</i>

Diabetes has a multifactorial pathogenesis and broad spectrum of clinico pathological consequences.

LIFE STYLE - CURRENT TRENDS

1) Diet:-

Since the late 90's there has been a change for the worse in the average urban indians food profile.

- *48.14% consuming high fat diet.*
- *The % of people eating out frequently is now 29.66%.*
- *28.10% urban indians indulge in high salted diet.*
- *53.23% of youth is non-vegetarian.*
- *30.79% does not consume fresh fruits or vegetables.*

(Wellness division, Apollo hospital, Hyderabad)

2) Alcohol:-

People choose to drink alcohol for all sorts of reason, from toasting the happy couple to drowning sorrows and numbing pain.

The average age at which people start drinking has come down from 28 in the 1980s to 20 today and kids as young as 15 are addicted. Very often their parents are the last to know.

3) Exercise:-

→ Just an hour's walk a day decreases:-

- *Chances of heart diseases by 30-40%.*
- *Risk of stroke by 25-30%*
- *Chances of breast cancer by 20%.*
- *Risk of DM by 50%*

55.57% probably do not and probably have never exercised.

It is healthy to walk 10,000 steps daily. Average indians may do with just 4000 steps.

(Wellness divison, Apollo hospital, Hyderabad)

4) **Cholestrol, Obesity:-**

*25-35 years age group does show high levels of cholestrol & TG.
64.67% people are obese.*

5) **Sexual life -**

Lack of time and inclination to have sex.

Since the last decade, couple seems to meet more in the board room than in the bed room. Regular sex becomes a casuality and results in voluntary infertility.

(Dr. firuza Parikh, Dept. of reproductive & genetics, Jaslok Hosp. Mumbai)

6) **Anxiety:-**

"In the last decade the number of pts (who are over 20) who come to me because of anxiety disorders has doubled. Most of them do not have a buffer zone - a support system and adequate relaxaton.

(Dr. Vikas Mohan Sharma. Psychiatrist, Delhi)

7) **Chronic Stress at work:-**

Prolonged exposure to work stress affects the autonomic nervous system and neuro endocrine activity, directly contributing to the development of metabolic syndrome. Stress has direct effect on fat accumulations, body wt & metabolism. It has been demonstrated that neuropeptide Y (NPY) a molecule the body releases when stressed, can unlock Y2 receptors in the body fat cells, stimulating the cells to grow in size and number.

8) **Sleep:-**

Day time sleep makes kids dull

(Study report - Fukishma universit, Japan)

*Study compared children who attended all day preschool where 90 minutes naps compulsory, with *** children of the same age, who slept only when they requiried it.*

Obligatory nap - Makes the children

- Moody in the morning

- Poor in academic performance, planning and organizational skills.

Because of the lasting influence of obligatory sleep on their "Sleep and wake cycles, children continued to be less intelligent when they move on to higher classes and stop napping.

Lifestyle managmeent seems no longer a luxury, but a necessity.

Moderation is the key word.

"The tragedy of life is not death, but we let die inside of us while we live".

(normal cousins)

D - Diet

R - Relaxation

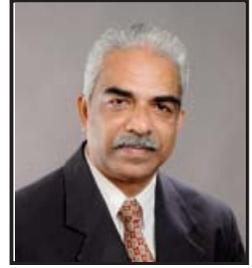
E - Exercise

A - Attitude

M - Medicine

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ROLE OF LIFESTYLE IN THE CAUSATION OF ARTHRITIS

Paper presented in the international seminar on 'PREVENTION OF LIFE STYLE DISEASES' under the Amala Ayurvedic Hospital & Research Centre, Thrissur on 4th August 2007.

CONCEPT OF HEALTH AND DISEASE

According to Ayurveda, health is defined as a state of equipoise of functions in the system, integrity of the tissue principles, proper metabolic functions and pleasant state of mind, senses and spiritual well being. This is a balanced state of Vaata, Pitta and Kapha (3 humors-Tridosha). Disease is a state of imbalance of Vaata, Pitta and Kapha.

CAUSES OF DISEASE

In Ayurveda the pathological process is related to the following 3 factors where in the Doshas get vitiated in a phased manner to produce a disease

- *Kaala (Seasonal changes)*
- *Artha (Improper interaction of senses with environment i.e. over use, under use, misuse and abuse of senses)*
- *Karma (Exertion of body, mind and words)*

Life style diseases result from noncompliance with the principles of prevention of diseases relating to the above 3 factors which are closely related to diet regimens and routines as prescribed in classical teachings.

SIGNIFICANCE OF DAILY AND SEASONAL REGIMENS

These factors are largely related to lifestyle management. ie healthy living. Advice on Hita (advantageous), Ahita (Harmful or disadvantageous), Sukha (Happy), Dukha (Unhappy or miserable) etc. This prevents the chances of imbalance of Doshas (Vaata, Pita & Kapha) and helps one stay in the state of balance, prevent diseases and improve immunity of the body. Making healthy life styles choices takes some of the pain and frustration out of living with chronic ailments. Socio economic status of the people are also significant in this regard. In fact although statistics tend to show that we are managing to keep the sick alive slightly longer, total span or longevity is virtually the same as it was a century ago. Despite various health management many of the diseases in the world are fast growing to an alarming proportion.

WORLD'S FASTEST GROWING DISEASES (FORBES)

<i>Oesophageal diseases</i>	-	(479%)
<i>High Cholesterol</i>	-	(212%)
<i>Hemorrhoids</i>	-	(174%)
<i>Anxiety disorders</i>	-	(134%)
<i>Breast Cancer</i>	-	(126%)
<i>Non specific chest pain</i>	-	(124%)
<i>Arthritis</i>	-	(119%)
<i>Viral infections</i>	-	(113%)
<i>Connective tissue diseases</i>	-	(097%)
<i>Asthma</i>	-	(083%)

CAUSES FOR LIFE STYLE DISEASES

The recent studies show that many of the illnesses are caused by other than infections from micro organisms. It is a fact that the way of life can influence health. Ayurveda states that our system is made of food and disease as well. Currently there is great prevalence of life style diseases which get precipitated by reaction to food, environment, regimens and routines. The onset of LSD is insidious and years to develop and once encountered do not tend themselves easily to cure and is the result of exposure over many years to unhealthy diet regimens and routines. The following could be the reasons in general for such diseases.

- *Stress related environment*
- *Sedentary Living Style*
- *Improper daily regimen*
- *Improper personal habits*
- *Environment factors*

These factors in general lead to joint diseases

STRESS RELATED ENVIRONMENT

These are human experiences in daily life. It assumes medical significance on disproportionate situations. Stress is caused by hectic work schedule pressure at work place and physical and mental health problems. The studies show that stress is a sort of pain and releases fatty acids which accumulates in vessels which produce various disease processes in the system. Immune system also becomes vulnerable. Stress and hormonal imbalance can increase pain level in disease conditions.

SEDENTARY LIFE STYLE

In a lifestyle that does not involve any physical activities at home and work area gains weight and calorie utilization becomes low. It adds trauma to weight bearing joints. Excess

weight puts significant stress on each joint even with the simplest of activities. Hormone leptin may play an important role in the development of arthritis.

This leads to Joint diseases, Obesity, Diabetes, Heart & Vascular diseases, Hypertension, increased Cholesterol level, Vertebral problems and Spondylosis.

IMPROPER DAILY REGIMENS

Ayurveda proposes daily regimens in view of prevention of diseases to large extents. It is a fact that the current mechanistic ways of life cannot cope up with the traditional teachings of yore and as a result mushrooming of various new illnesses become very popular in the society. The percentage of living in morbidity is increasing compared to the past. The following factors could be the reasons for many diseases especially joint diseases.

- Change of Daily Rhythm
- Lack of positive outlook
- Lack of righteous attitude
- Lack of proper sleep & diet habits

This also leads to insomnia, anxiety, digestive disorders, neurological ailments & immunological problems & Cardiovascular diseases.

IMPROPER PERSONNEL HABITS

The socio economic status is miserably related to the habits of alcoholism, smoking and drug addictions etc. The survey shows that the consumption of alcohol is increasing in our society creating chaos in families and produce chronic ailments with severe sufferings in individuals. In fact the noncompliance of daily regimens as prescribed in Ayurveda can cause such conditions.

This leads to joint diseases (arthritis) liver diseases, heart problems, cancer, anxiety, tension, hyperacidity.

ENVIRONMENTAL FACTORS

It is a fact that the environment in which we live is highly polluted by various reasons as Pollution - Air, Water & Earth, Climatic Conditions, weather changes, Aeroallergens. These can potentially involve in the actiology of diseases including arthritis.

ARTHRITIS

This disease could be analogous with Vaata raktha in Ayurveda. The symptoms of arthritis could also be related to Aamavaata and Sandhivaata. Arthritis is an inflammation of one or more joints caused by the wear and tear injury or any infection. It comes from two Greek words, 'Arthron' meaning joints and 'itis' meaning inflammation. It affects almost half of the population of the world and 1% of the population of India.

THE COMMON CAUSES OF ARTHRITIS

- *Obesity and overweight*
- *Preceding age*
- *Heredity and genetic factors*
- *Hormonal changes*
- *Weather changes*
- *Excessive acid in the body*
- *Nutrient deficiencies*
- *Infections*
- *Repetitive stress injury*

ETIOLOGICAL FACTORS RELATED TO DIET IN AYURVEDA

- *Diet causing Vidaha (AH. Nidana-16), Eg:- Flat been (Amara), Drumstick (Sigru), Citrus fruit (Jambeera), Grinded sugarcane juice (Chara-6), Salt & Oils.*
- *Incompatible diet (AH. Nidana-16), (Chara Chi-29) (Virudha Aahara)*
- *Diet causing vitiation of blood (AH. Nidana-16). Eg:- Diet causing Vidaha, Snigdha ushna diet*
- *Diet with excess salt, sour, pungent (Citrus fruits) (Chara Chi-29)*
- *Diet which are of excess snigdha and ushna (Beef, Chicken) (Chara Chi-29) Diets causing Ajeerna (Indigestion) (Chara Chi-29)*
- *Aquatic meat (Chara Chi-29) Eg: - Fish, Prawns, Shell meat*
- *Excessive use of Kullatha (Horse gram), Masha (Black gram), Shakam (Leafy vegetables) (Charaka Chi-29)*
- *Dadhi (Curd), Eksu (Sugarcane), Aasavam (Fermented liquids)*
- *Athyashanam (Over eating)*
- *Lectins, the carbohydrate that binds the proteins present in most plants could be another cause for arthritis.*
- *It is known to be toxic and inflammatory and are not readily destroyed by enzymes or cooking.*
- *They are able to get past the gutwall and deposit themselves in distant organs.*

IMPROPER FOOD HABITS

Ayurveda proposes prohibited food habits which can produce severe/fatal illnesses. Typical poisoning effect in the system is developed.

- *Adhyasanam : Intake of bulk quantity of food soon after a meal and before the digestion of previous meals.*
- *Vishamasanam : Untimely intake of food either large quantity or frequently.*
- *Samasanam: Intake of unwholesome and wholesome food together.*

Often knowing or unknowingly we follow these habits, and it can lead to various disease in

a later period of time. More over the following situations are generally created which are much prevalent in the society nowadays. These diet habits can lead to the following conditions.

- Cause vitiation of blood system and Varieties of disorders like skin allergies.
- Persistent fevers, swelling of eye, spleen, blood, liver disease and impotence.

INCOMPATIBLE FOOD COMBINATIONS

The classical texts in Ayurveda lucidly explain the complications of Virudha aahara (Incompatible food combinations). Like the improper food habits mentioned above, these also can lead to various diseases. It can also vitiate the blood system and could be a cause of Vaata raktha (Arthritis).

Milk is incompatible with;
Fish, Meat, Curd, Sour fruits, Horse gram

Honey is incompatible with;
Ghee (in equal proportions), Heating or cooking with

Brinjal is incompatible with;
Yogurt, Milk

Yogurt is incompatible with;
Milk, Sour Fruits, Melons, Hot drinks, Chicken meat, Fish.

Eggs are incompatible with; Yogurt, Cheese
Lemon is incompatible with; Yogurt, Milk

AETIOLOGICAL FACTORS RELATED TO VIHARA

- Indulgence in day sleep (Charaka Chi-29)
- Keeping awake with out sleep (Charaka Chi-29)
- Exposure to cold breeze (Charaka Chi-29)
- Sedentary habits (Charaka Chi-29)
- Ambukreeda (Water games, swimming) (Charaka Chi-29)
- Travels causing jerks in body (Charaka Chi-29)

Like a reverse reaction, keeping awake without sleep produces stress and vice versa

OTHER AETIOLOGICAL FACTORS

- Abhigatam (Trauma) (AH. Nidana-16)
- Improper sexual indulgence (AH. Nidana-16)

- *Suppression of natural urges (Chraka Chi-29)*
- *Not resorting to purificatory therapies (AH. Nidana-16)*
- *Excess fasting (Chraka Chi-29)*
- *Krodha (Short tempered nature) (Chraka Chi-29)*
- *Smoking habits*

THE FOODS THAT EXACERBATE ARTHRITIS (FLARE UPS)

- *Caffeine and Alcohol*
- *Red meat (Meat in general triggers arthritic pain)*
- *Dairy products*
- *Processed foods*
- *Sugar and salt*
- *Vegetables of night shade group (Tomatoes, Peppers, Potato, Egg plant etc.)*
- *Preservatives and additives*
- *Chocolates*
- *Citrus fruits*

OTHER CAUSES

- *Sulphites (Preservatives)*
- *Artificial sweeteners*
- *Insecticides*
- *Volatile organic compounds*

LIFESTYLE IN THE CAUSATION OF ARTHRITIS; A SUMMARY

- *Ayurveda states the significance of diet regimens and routines the causation of a disease.*
- *The etiological factors of this disease are much related to diet regimens and routines.*
- *This contributes to the pathology of this illness.*
- *The genesis signifies the involvement of Raktha and Vaata in which Vaata assumes obstructed movement by the aggravated blood and get localized in joints. .*
- *Agni and Vaayu become complimentary in this process.*

WORLD ARTHRITIS DAY 12TH October

THE THEME OF THE YEAR

- *Small things that matter for people with arthritis those everyday challenges around the home when traveling, shopping or school, college or in the work place.*
- *We need to recognize the growing number of people with multiple chronic conditions and help them by modifying life styles to maintain the health and quality of their lives.*

Sr. Austin MD (Ay)
Research Officer & Consulting Physician
Amala Ayurvedic Hospital & Research Centre
Thrissur



PREVENTION OF LIFE STYLE DISEASE

Introduction

Obesity is bad news for both body and mind. Not only does it make a person feel tired and uncomfortable, it can bear down joints and put extra stress on other parts of the body. The number of people who are obese is rising. About 1.2 billion people in the world are overweight and at least 300 million of them are obese, even though obesity is one of the 10 most preventable health risks, according to the World Health Organization.

OBESITY (STHOULYA)

According to Ayurveda the following are the eight types of undesirable persons

<i>Athideerkha</i>	-	<i>Too tall</i>
<i>Athihirswa</i>	-	<i>Too short</i>
<i>Athiloma</i>	-	<i>too hairy</i>
<i>Aloma</i>	-	<i>hairless</i>
<i>Athikrishna</i>	-	<i>too black</i>
<i>Athigaura</i>	-	<i>too fair</i>
<i>Athistoola</i>	-	<i>obese</i>
<i>Athikrisa</i>	-	<i>too emaciated</i>

Ref; Charaka.samhita.sutra.21

In these eight persons obese and emaciated are the worst personalities.

In these two types emaciated one are less harmful compared with obese one. When subjected to disease, degree of suffering in the case of obese persons is far greater than emaciated ones.

Definition

A person is said to be very obese when he has lack of enthusiasm to (in physical activity) disproportional to the growth of his body, and his movement of the shoulders, abdomen and breasts.

*“Ayathopachayaotsaho chala spikodara sthana
Athisthoolah smritho yogam thathranam maruthapaham”*

Ashtanga.Sangraha. Sutra-24

CAUSATIVE FACTORS

1. PHYSICAL CAUSE

2. MENTAL CAUSE

3. GENETIC (HEREDITARY) CAUSE

1. Physical cause

Diet

Intake of too much ghee, milk, sweet preparations, meat & cold things, rice, oils, untimely foods.

Exercise

Lack of exercise

Day sleep

Absence from sexual intercourse

2. Mental cause

Lack of mental exercise (Lack of mental worries).

Uninterrupted cheerfulness

Absence of worry

3. Genetic (hereditary) cause

*“Thadadisthoulya athisampooranath guru madhura
Sheetha snigdhatiyogath avyayamath avyavayath
Divaswapnath harsha nithyathwat achinthanath
Beeja swabhavath cha upachayathe”*

Ref; Charaka.samhita.sutra.21

“Avyayama divaswapna sleshmaharasevina

Maduroannarasa prayaha snehanmedaah pravardhayeth”

Ref; Madava. Nidana : 34

Ashtanga.Hrudaya.Sutra 14

Susrutha samhita.sutra .15

Pathogenesis

Due to the obstruction of the channels by the fat, the movement of vata dosha is restricted in the koshta (Alimentary tracts) resulting in the stimulation of the digestive power and absorption of food. So the patient digests food quickly and become a voracious eater.

Ref; Charaka.samhita.sutra.21

Madava Nidana 34

Ashtanga.Sangraha.Sutra 24

Susrutha samhita.sutra .15

Samprapti Gadaka

<i>Dosha</i>	:	<i>Kapha pradhana tridosha</i>
<i>Dushya</i>	:	<i>Ahara rasa and meda</i>
<i>Srothas</i>	:	<i>Rasa, Meda</i>
<i>Adhishtana</i>	:	<i>Nithamba, Udara, Sthana</i>
<i>Srothodhushti</i>	:	<i>Sanga</i>

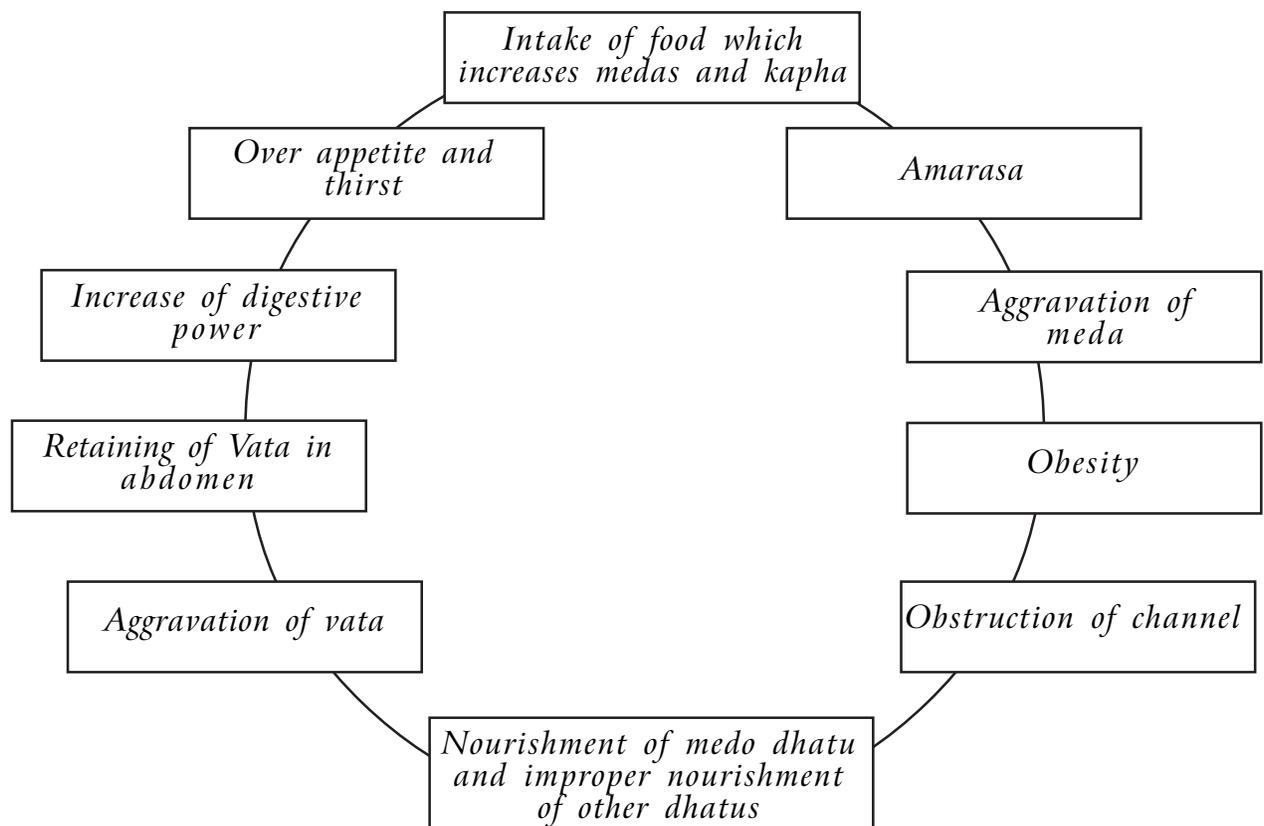
Relation of Ama with Obesity

In take of food which are hard to digest or which are more in quantity will lead to production of large quantity of essence of food (Rasa) which is in the Ama state (inadequately digested). This Ama getting mixed with Kapha residing in the Dhatus and make Dhatus weak and cause obesity.

The fat getting digested in the alimentary tract and causing obstruction in the channels of Rasa, hinders it from going to the other Dhatus and make for increase of Medo Dhatu (Fat) only. The remaining portion of Rasa Dhatu is in very little in quantity and not enough to nourish the other Dhatus.

Ref: *Ashtanga.Sangraha.Sutra 24.*

The vicious cycle of obesity in Ayurveda (Pathogenesis)



Symptoms

- ◆ *Difficulty to breath*
- ◆ *Giddiness*
- ◆ *Perspiration has a disagreeable smell*
- ◆ *More appetite*
- ◆ *Short lifespan*
- ◆ *Sexual debility*
- ◆ *Fever*
- ◆ *Enlargement of abdomen*
- ◆ *Fistula*
- ◆ *Diabetes*
- ◆ *Loss of movements of thigh*
- ◆ *Abscess*
- ◆ *Nodules*

Ref: *Ashtanga.Sangraha.Sutra. 24.*
Madava Nidana. 34.
Susrutha samhita.sutra .15

Eight complications of Obesity

1. **Ayushohrasana:-** *Short life span*
(*In case of obesity only fat not other tissues are getting metabolized.*)
2. **Javoparodha:-** *Slow in movements*
(*Bodily movement is impaired due to looseness, tenderness and heaviness of medho dhatu(Fat).*)
3. **Krichra Vyavayatha :-** *Sexual debility*
(*Sexual debility due to the small quantity of semen and also due to the obstruction to the channel of semen by medas).*
4. **Daurbalya :-** *General debility*
(*General debility due to inequilibrium of dhatus).*
5. **Daurgandhya:-** *Foul smell*
(*Bad smell is caused by the inherent defect, nature of fat tissue and also due to excessive sweating).*
6. **Atisweda:-** *Over sweating*
(*As the food is associated with kapha and it is fluid and heavy, during physical exercise, it comes out us excessive sweat).*
7. **Atikshuth:-** *More hunger*
8. **Atipipasa:-** *More thirst*
(*Because of the strong digestive power and the presence of vayu in excessive quantity, there is excessive hunger and thirst).*

According to Charaka when there is disproportionate increase of fat leads to vitiation of vata dosha which in turn results in dreadful diseases and even may cause death also.

“Medasyatheeva samvrudhe sahasyevaniladayah
Vikaran darunan kruthwa nashayathyashu jeevitham “

Ref; Charaka.samhita.sutra.21

Prognosis of obesity

Obesity is very difficult to cure because of following reasons, by nourishing therapy they grow more obese and at the same time they cannot withstand langhana (fasting) therapy because of strong digestive power.

Ref; Susrutha samhita.sutra .15

Chikitsa

(Line of treatments)

For the obese person, foods which are difficult to digest (heavy food) and which make the person thin should be prescribed.

“Guru chatharpanam cheshtam stoolanam karshanam prathi”

“Vataknannapanani sleshma medo harani cha Rookshoshna vasthyastheekshna rooksha api udwarthanani cha”

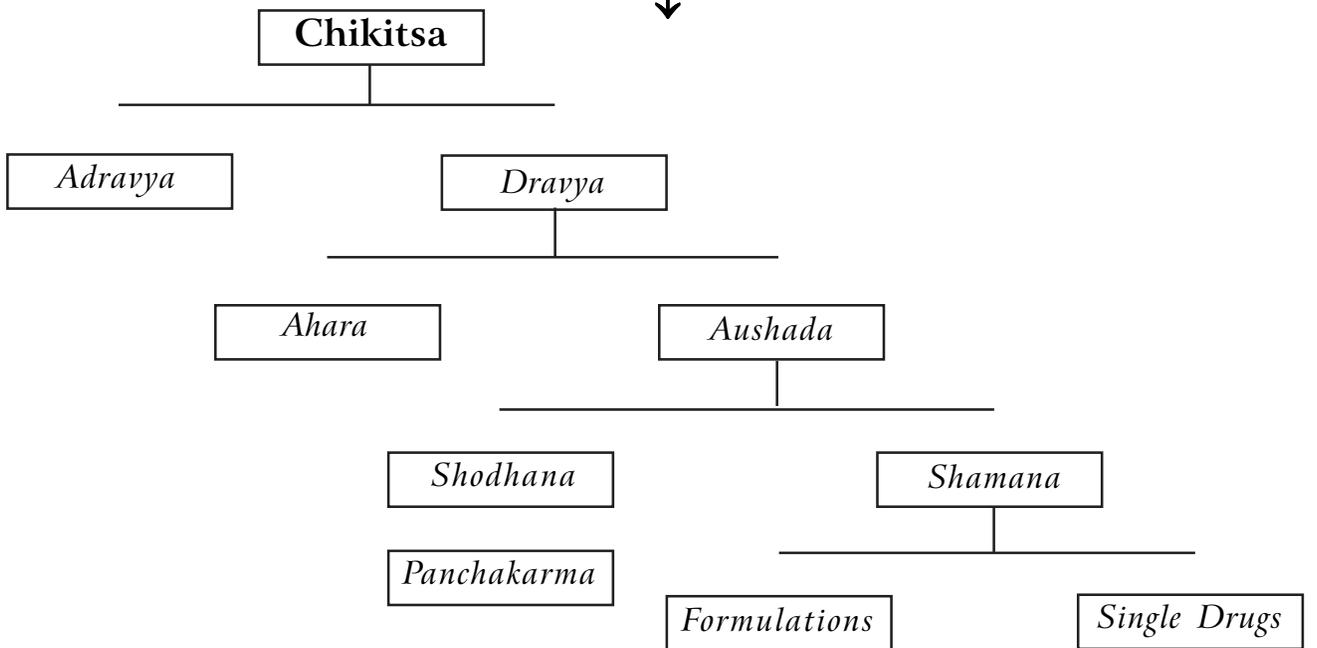
Ref; Charaka.samhita.sutra.21

Ashtanga.Hrudaya.Sutra 14

Ashtanga.Sangraha.Sutra. 24.

Susrutha samhita.sutra .15

According to Ashtanga Hrudaya, those treatments which reduce meda, kapha and vayu are desirable. In obesity daily langhana is also indicated by the same text.



Dravya Chikitsa

Ahara

For the purpose of taking food, the stomach capacity should be divided in to three parts. One part of it should be filled up with solid food, the second part with liquid and the third part should be left for vata, pitta and kapha. The obese persons should take half the quantity of food than as mentioned above.

Ref: Charaka samhita vimana.2

Kulatha	(Horse gram)
Yava	(Maize)
Mudga	(Green gram)
Syamaka	(Panicum frumentaceum) Cultivated Millet.
Shigru	(Moringa olifera)
Hingu	(Asafoetida)
Kodrava	(Punctured paspalum)
Thakra	(Butter Milk)

Oushadha

Single Drugs

Triphala

Guduchi (Tinospora cordifoliya)

Abhaya (Terminalia chebula)

Guggulu (Commifora mukul)

Silajathu (Bitumen)

(Along with fresh juice of Agni mantha)

(Go-mutram)

Loharaja

Pure Gingely oil 15ml to 30ml in divided doses.

Honey Water

Ref; Charaka.samhita.sutra.21

Bhaishajya Ratnavali

– sthoulyadhikara

Ashtanga.Sangraha.Sutra.24

Ashtanga.Hrudaya.Sutra 14

Susrutha samhita.sutra .15

Formulations

❖ Vyoshadi sakthu

Ref; Charaka.samhita.sutra.21

Bhaishajya Ratnavali - sthoulyadhikara

Chakra dutta - sthoulyadhikara

❖ Vidangadi Choornam

It is prepared out of Vidanga, Nagara, Kshara, and fine powder of Loha, Barley and Amalaka along with honey, cure disorders of profound obesity.

Ref:- Ashtanga.Sangraha.Sutra. 24.

- ❖ *Decoction prepared out of Madana, Triphala, Musta, Saptaha, Arista, Vatsa, Patha, Aragwada helps to reduce obesity.*

This drugs can be apply as paste or the medicated water prepared out of this , can be used for taking bath to reduce obesity.

Ref:- Ashtanga.Sangraha.Sutra. 24.

- ❖ **Amruthadi guggulu**

Ref:- Bhaishajya Ratnavali - sthoulyadhikara

Chakra dutta - sthoulyadhikara

- ❖ **Navaka guggulu**

Ref:- Bhaishajya Ratnavali - sthoulyadhikara

Chakra dutta - sthoulyadhikara

- ❖ **Triphaladyam Thailam**

Ref:- Bhaishajya Ratnavali - sthoulyadhikara

Chakra dutta - sthoulyadhikara

- ❖ **Loharasayanam**

Ref:- Bhaishajya Ratnavali – sthoulyadhikara

- ❖ **Ayaskrithi**

- Ashtanga Hrudaya

- ❖ **Thrayooshanadyam lehyam**

Ref:- Bhaishajya Ratnavali - sthoulyadhikara

- ❖ *Decoction of Khadira and Asana with Triphala choornam and honey is good for obesity*

Ref:Yogamrutham - Sthoolachikitsa

- ❖ *Decoction prepared out of Khadira with peya of Mudga and Laja is beneficial in case of obesity.*

Ref:Yogamrutham - Sthoolachikitsa

- ❖ *It is asked to take Sesamum oil in morning,as a treatment for obesity.*

Ref:Yogamrutham - Sthoolachikitsa

- ❖ *Asana kwatha along with honey,also told to give to the patients of obesity.*

Ref:Yogamrutham – Sthoolachikitsa

- ❖ **Varaasanadi kwatham**

Kwatha prepared out of Vara, Asana, Agnipathra,Haridra should be taken along with honey is said to be good for cases of obesity.

Ref: Sahasrayogam - sthoulyadhikara

- ❖ Udwarthana using extract of *Tamarind* leaves with fried *Haridra*.
Ref: *Chakra dutta - sthoulyadhikara*
- ❖ **Varanadi Kashaya**
Ref: *Ashtanga.Hrudaya.Sutra 14*
- ❖ **Shaddaranam Kashaya**
Ref: *Susrutha samhita. Sutra*

Those drugs which are having the properties of “Teekshna” (pungent), “Rooksha” (rough), also hot in potency can be prescribed in the treatment of obesity.

Rasaushadhi

1. *Shila sindhoora* 1 – 2 rathi with honey
2. *Shudha Manashila*
3. *Shudha Parada*
4. *Shudha Gandhaka*
5. *Arogya Vardhini rasa* 1 – 4 rathi
6. *Agnithundi Vati*
7. *Vidangadi Loha* 1 – 2 masha
8. *Chandraprabha Vati* 2 – 4 tablets / Day
9. *Lakshmivilasa rasa* 1 Gram / Day
10. *Mahayogaraja Guggulu* 2 – 4 tablets / Day

Adravya Chikitsa

❖ **Vyayama – Regular exercise**

Persons who are strong and who indulge in fatty food(daily);in cold seasons and spring season should do the exercise to half of their strength only; while others and in other seasons should do the exercise mildly.

Note: Half the capacity of the person is understood by the appearance of perspiration on his forehead, nose , axilla, joints of the limbs and feeling of dryness of the mouth.

*Ref; Ashtanga Hrudaya Sutra.2
Astanga Sangraha Sutra.2*

Regular exercise for about 30-60 minutes daily.Exercises include walking, swimming and stretching.

Yoga therapy

According to Yogic science Soorya Namaskara is having a important role in the treatment of obesity. The following Asanas also are beneficial for the same.

- *Dhanurasana*
- *Urdhwamatsyendrasana*
- *Ushtrasana*
- *Shavasana*
- *Bhujangasana*

Pathya and Apathya

Pathya

- *Obese people are advised to take water before food. This will diminish the digestive fire that in turn can reduce the quantity of food.*
- *Purana shaali*
- *Green gram*
- *Butter milk*
- *Horse gram*
- *Goose berry*
- *Maize*
- *Kodrava*
- *Vegetables having bitter taste*
- *Honey*
- *Fruits like apple, orange, papaya, guava*
- *Lekhana vasthi*

Apathya

- *Shaali*
- *Wheat*
- *Milk*
- *Sugarcane products*
- *Black gram*
- *Internal and external application of oil*
- *Fish*
- *Meat*
- *Sugar products*
- *Heavy food*
- *Fruits like banana, mango, chikku, jack fruit,*
- *Grapes and dates.*
- *Bath using cold water*
- *Rasayana therapy*
- *Exposure to cold*
- *Day sleep*
- *Wearing garlands (perfumed)*

Ref:- Bhaishajya Ratnavali - sthoulyadhikara

Now a days the sedentary life style by the over use of television and computer causing obesity in adults and even in children also.

Obesity - modern view

Definition

Obesity is defined as an excessively high amount of body fat(or adipose tissue) in relation to lean body mass.

What is Body mass index? (BMI).

In recent years, body mass index (BMI) has become the medical standard used to measure over weight and obesity.

BMI uses a mathematical formula based on a person's height and weight.

BMI equals weight in kilograms divided by height in meters squared.

$$\text{BMI} = \text{Wt} / (\text{Ht in m})^2$$

Difference between overweight and obesity

A BMI of 25 to 29.9 indicates a person is overweight. A person with a BMI of 30 or higher is considered obese.

Below is a table identifying the risk of associated disease according to BMI.

<i>18.5 or less</i>	<i>Underweight</i>	<i>N/A</i>	<i>N/A</i>
<i>18.5-24.9</i>	<i>Normal</i>	<i>N/A</i>	<i>N/A</i>
<i>25.0-29.9</i>	<i>Overweight</i>	<i>Increased Risk</i>	<i>High Risk</i>
<i>30.0-34.9</i>	<i>Obese</i>	<i>High Risk</i>	<i>Very high risk</i>
<i>35.0-39.9</i>	<i>Obese</i>	<i>Very high risk</i>	<i>Very high risk</i>
<i>40 or Greater</i>	<i>Extremely obese</i>	<i>Extremely high risk</i>	<i>Externaly High risk</i>

Table Courtesy of the National Institutions of Health

Waist size in obesity

BMI category Waist less than or equal to 40 in.(men)or 35in.(women) Waist greater than 40 in.(men) or 35in (women)

Causes of obesity

- *Genetic*
- *Environmental*
- *Psychological*
- *Certain illness*
 - *Hypothyroidism*
 - *Cushing's syndrome*
 - *Depression*
 - *Certain neurological problems*
- *Drugs – Steroids and some antidepressants*

Obesity and other diseases

Certain diseases are liked with obesity

- ◆ *Cancer*
- ◆ *Gallbladder disease and gallstones*
- ◆ *Liver disease*
- ◆ *Osteoarthritis*
- ◆ *Gout*
- ◆ *Pulmonary problems*
- ◆ *Reproductive problems like menstrual irregularities and infertility.*
- ◆ *Psychological problems like depression*
- ◆ *Heart diseases like congestive heart failure*
- ◆ *Hypertension*
- ◆ *Non insulin dependent diabetes.*

Practical Points that has to be noted to control obesity

1. *Restrict the over use of television, computer and video games*
2. *Daily exercise*
3. *Restriction of food(avoid fatty and heavy foods)*
4. *Avoid artificial juices, cold drinks, ice cream, pizza etc*
5. *Avoid fast food*
6. *Avoid fried things*
7. *Restrict the over use of rice and rhizomes like potato*
8. *Food restriction should be done gradually.*
9. *Avoid day sleep*
10. *Do purgation therapy once in a month*
11. *More fibre diet.*

Clinical evaluation

Case No.1

Name: Bulbul Dammam

Presenting complaints

- ◆ *Over weight*
- ◆ *Palpitation*
- ◆ *pain on major joints*
- ◆ *History of hypertension*

General Examinations

<i>Weight</i>	-	<i>110 Kg</i>	<i>Sleep</i>	-	<i>disturbed</i>
<i>Height</i>	-	<i>1.5m</i>	<i>Appetite</i>	-	<i>more</i>
<i>BMI</i>	-	<i>48.9</i>	<i>Motion</i>	-	<i>once</i>

Clinical reports

<i>Cholesterol (Total)</i>	-	210 mg/dl
<i>Triglycerides</i>	-	140 mg/dl
<i>HDL Cholesterol</i>	-	38 mg/dl
<i>LDL Cholesterol</i>	-	44 mg/dl

Admitted on 24-03-07

Diet

Ashgod (*Benincasa hispida*) juice one glass empty stomach Honey Water frequent use
Salad with Cucumber, tomato, Carrot, Onion(Noon)
Rice with vegetables along with horse gram soup

Treatment given

Internal Medication

1. <i>Maharasnadi Kwatha</i>	15ml b d
2. <i>Balaristam</i>	25ml b d
3. <i>Liposem</i>	1 b d
4. <i>Sallaki</i>	1 b d
5. <i>Sedol</i>	2 Hs

External Medication

1. *Oil Massage with Narayana tailam + Baluka swedam* - 7 days
2. *Udwarthanam with Kulatha choornam* - 11 days

Discharged on 11-04-2007

Observation

Body weight reduced about 8 kgs

Clinical reports

<i>Cholesterol (Total)</i>	-	140 mg/dl
<i>Triglycerides</i>	-	80 mg/dl
<i>HDL Cholesterol</i>	-	46 mg/dl
<i>LDL Cholesterol</i>	-	78 mg/dl

Diet

Advised vegetarian diet

Follow up - continue the above medicines for three months.

Case No.2

Name: Hans Sterner

Presenting complaints

- ◆ *Over weight*
- ◆ *Palpitation*
- ◆ *History of hypertension*
- ◆ *History of diabetes mellitus*

General Examinations

Weight	-	116 Kg	Appetite	-	Good
Height	-	1.65m	Sleep	-	8 hours
BMI	-	42.6	Motion	-	2 times
			BP	-	180/112mm of Hg

Clinical reports

FBS	100mg/dl
Total Protein	5.6 g/dl
Albumin	3 g/dl
Globulin	2.6 g/dl
A/G	1:1:1
Bilirubin	1.4mg/dl
SGOT	38 U/L
SGPT	28 U/L
Alkaline Phosphatase	72 U/L
Total cholesterol	92mg/dl
HDL	32mg/dl
LDL	56mg/dl
Urea	32mg/dl
Creatinine	1mg/dl

Admitted on 07-03-05

Diet

Ashgod (*Benincasa hispida*) juice one glass empty stomach

Honey Water frequent use

Salad with Cucumber, tomato, Carrot, Onion(Noon)

Rice with vegetables along with horse gram soup

Treatment given

Internal Medication

1. Shaddharanam kashayam 15ml b d
2. Liposem 1 b d

External Medication

1. Kashaya vasti using Sahacharadi mezhu - 8 days
2. Udwarthanam with kulatha(Horse gram) choornam - 28 days

Observation

Body weight reduced about 18 kgs

Clinical reports

<i>FBS</i>	<i>96 mg/dl</i>
<i>Total Protein</i>	<i>5.4 g/dl</i>
<i>Albumin</i>	<i>3.1 g/dl</i>
<i>Globulin</i>	<i>2.5 g/dl</i>
<i>A/G</i>	<i>1:1:1</i>
<i>Bilirubin</i>	<i>1 mg/dl</i>
<i>SGOT</i>	<i>35 U/L</i>
<i>SGPT</i>	<i>30 U/L</i>
<i>Alkaline Phosphatase</i>	<i>60 U/L</i>
<i>Total cholesterol</i>	<i>88mg/dl</i>
<i>HDL</i>	<i>30mg/dl</i>
<i>LDL</i>	<i>54mg/dl</i>
<i>Urea</i>	<i>30mg/dl</i>
<i>Creatinine</i>	<i>1mg/dl</i>

Discharged on 18-04-05

Diet

Advised vegetarian diet

Follow up medicines - continue the above medicines for 3 months

Case No.3

Name : Ander Weden

Presenting complaints

- ♦ *Over weight*
- ♦ *Palpitation*
- ♦ *History of hypertension since 2 months*
- ♦ *History of diabetes mellitus*

General Examination

<i>Weight</i>	-	<i>143 Kg</i>	<i>Appetite</i>	-	<i>Good</i>
<i>Height</i>	-	<i>1.8m</i>	<i>Motion</i>	-	<i>2 times</i>
<i>BMI</i>	-	<i>44.13</i>	<i>Sleep</i>	-	<i>7 hours</i>
			<i>BP</i>	-	<i>160/100 mm of Hg</i>

Clinical reports

<i>Cholesterol (Total)</i>	-	<i>290 mg/dl</i>
<i>Triglycerides</i>	-	<i>210 mg/dl</i>
<i>HDL Cholesterol</i>	-	<i>48 mg/dl</i>
<i>LDL Cholesterol</i>	-	<i>200 mg/dl</i>

Admitted on 05-02-07

Diet

Ashgod (*Benincasa hispida*) juice one glass empty stomach

Honey Water frequent use

Salad with Cucumber, tomato, Carrot, Onion(Noon)

Rice with vegetables along with horse gram soup

Treatment given

Internal Medication

- | | | |
|--------------------------|----------|--|
| 1. Shaddharanam kashayam | 15ml b d | <i>The patients is taking 36 units of insulin bed time and also anti diabetic tablets.</i> |
| 2. Liposem | 1 b d | |
| 3. Diabecon | 2 tds | |

External Medication

1. *Kashaya vasti using Sahacharadi mezhu -Yoga vasthi*
2. *Udwarthanam with kulatha(Horse gram)choornam -28days*

Discharged on 01-04-07

Observation

Body weight reduced about 16 kgs

Insulin stopped during the treatment

Clinical reports

<i>Cholesterol (Total)</i>	-	<i>170 mg/dl</i>
<i>Triglycerides</i>	-	<i>140 mg/dl</i>
<i>HDL Cholesterol</i>	-	<i>43 mg/dl</i>
<i>LDL Cholesterol</i>	-	<i>99 mg/dl</i>

Diet

Advised vegetarian diet

Follow up medicines - continue the above medicines for 3 months

Case No.4

Name : Manfred Flieser

Presenting complaints

- ♦ *Over weight*
- ♦ *Palpitation*
- ♦ *piles*

General Examination

Weight	-	139 Kg	Appetite	-	Good
Height	-	1.8m	Motion	-	constipated
BMI	-	42.9	Sleep	-	7 hours
			BP	-	140/90 mm of Hg

Clinical reports

Cholesterol (Total)	-	286 mg/dl
Triglycerides	-	180 mg/dl
HDL Cholesterol	-	50 mg/dl
LDL Cholesterol	-	200 mg/dl

Admitted on 23-12-04

Diet

Ashgod (*Benincasa hispida*) juice one glass empty stomach

Honey Water frequent use

Salad with Cucumber, tomato, Carrot, Onion(Noon)

Rice with vegetables along with horse gram soup

Treatment given

Internal Medication

1. Shaddharanam kashayam 15ml b d
2. Liposem 1 b d
3. Arshonyt 1 b d
4. Triphala choorna 5 gm with hot water bds

External Medication

1. Kashaya vasti using Sahacharadi mezhu -Yoga vasthi
 2. Udwarthanam with kulatha(Horse gram)choornam -28days
- Discharged on 19-02-05

Observation

Body weight reduced about 33 kgs

Clinical reports

Cholesterol (Total)	-	160 mg/dl
Triglycerides	-	84 mg/dl
HDL Cholesterol	-	46 mg/dl
LDL Cholesterol	-	97 mg/dl

External Medication

1. *Kashaya vasti using Sahacharadi mezhu -Yoga vasthi*
2. *Udwarthanam with kulatha(Horse gram)choornam -28days*

Discharged on 17-02-07

Observation

Body weight reduced about 14 kgs

Clinical reports

<i>Cholesterol (Total)</i>	-	<i>166 mg/dl</i>
<i>Triglycerides</i>	-	<i>132 mg/dl</i>
<i>HDL Cholesterol</i>	-	<i>48 mg/dl</i>
<i>LDL Cholesterol</i>	-	<i>92 mg/dl</i>

Diet

Advised vegetarian diet

Follow up medicines - continue the above medicines for 3 months

Conclusion

- ◆ **Shadharanam Kashaya, Liposem are found to be effective in obesity**
- ◆ **Diet is having an important role in obesity**
- ◆ **Udwarthana with kulatha choorna is very effective in obesity**
- ◆ **Exercise is said to be essential in the management of obesity.**

All obese persons are not having lipid profile raised, those who are having a raised level of lipid profile is having reduction in their lipid levels.



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**LIFE STYLE DISEASES – FOOD AS A CAUSE
AND MEDICINE**

Man with his unique intelligence and adaptation skill has conquered almost everything under the sky which is needed for his smooth and easy life. As a part of this continuing expedition he designed and developed a life style which has given him ample freedom of activities in this current mechanized modern life. During the course of this life so many byproducts developed which started affecting him in a negative manner. He started ignoring the byproducts as he was more focused on the main products. But as time progressed he started feeling so many health issues affecting his personal and social life. Now he suffers from different systemic ailments which directly or indirectly affect his personal and professional life. Ayurvedic medical science has a strong platform of basic principles which enable the living beings to lead a creative and productive life. This is the right time to explore and practice those principles for the betterment of human life especially in the field of life style diseases.

Ayurveda defines life as the harmonious combination of body, mind and soul. Life is in constant struggle with the external environment. Many internal and external factors influence the physical, mental and spiritual well being of man. Tensed and highly competitive life imparts huge amount of stress to the human life. Result is the manifestation of various diseases which takes away the human creativity. Cardio vascular anomalies, Diabetes mellitus, Cancer, Acid peptic diseases are the top rankers in the list of life style diseases. Ayurveda highlights the importance of a balanced life style in the maintenance of the positive health of an individual. Let us discuss the basic steps to be taken to prevent and cure the above mentioned life style diseases through Ayurveda.

Food – The basic factor

According to Vedic sciences, body as well as the diseases is the product of the food consumed. One should follow certain basic principles regarding food intake to keep away the diseases. As Indian philosophy proclaims, the personality of an individual significantly depends upon his food culture. Physical and mental faculties are nourished by the food taken. The mental and emotional features of a person have strong relation with his food. Sathwika, Rajasika and Thamasika food types are mentioned in ancient Indian literature. They represent the three grades of food which are normally taken by the people. Sathwika type of food is the ideal one which keeps the body and mind in the balanced state providing

all nutrition. Sathwika type of food targets the basic need of the body. It doesn't give much importance to the junk foods. Rajasika type of food will satisfy the body and mind by pleasing the sense organs also. They are mainly more taste oriented with all attractions. The current fast food and junk food come under this category. The Thamasika food is not good for the health as it won't give the necessary nutrients to body and mind. Contaminated and adulterated food articles fall in this group. Foods prepared by using artificial flavours, colours and preservative are extremely harmful to the different body tissues. While the first type of food items preserve the physical and mental health, the remaining two causes various health issues. The above mentioned ancient notion on food varieties has very much relevance in this mechanical era. So the nature of food highly influences the health status of a person.

Food as a cause

Ayurveda emphasizes the role of unwholesome diets - Virudha aharas - in the aetiopathogenesis of a variety of diseases. The Virudha Aharas deranges the metabolic power- Agni- of the body. The malfunctioning of digestive fire will lead to a wide spectrum of diseases. Along with the vitiation of Agni, the basic humors mentioned in Ayurveda- Vatha, Pitha and Kapha will also get deranged by the unwholesome diet. The metabolic diseases are the direct byproduct of such pathogenesis.

The increased consumption of heavy and oily food will result in the delayed digestion and absorption and thus will lead to over nourishment disorders. Atherosclerosis which forms the basic pathology of a good number of diseases is due to the Kapha predominant dosha vitiation. The Hyperlipidemia and related pathologies are due to Kapha- Medo vitiation in the body. Kapha –Medo vitiation will lead to diseases like Diabetes mellitus, Coronary artery diseases, Hypertension, Stroke etc. Ayurveda describes these diseases under the banner of Santharppanodha vyadhis- ie the diseases which are caused by over nourishment. The excessive intake of food articles containing saturated fat is discouraged in Ayurveda.

The hot and Spicy food articles will lead to Acid Peptic diseases in long term use. The consumption of Vidahi foods – food articles taking more time for their digestion and leading to acidity- is the most relevant causative factor for APD. The fast food culture which has become the icon of the modern society is the main culprit as far as gastric diseases are concerned. The proper functioning of Agni and Pitha dosha will be impaired by these food articles. The gastric mucosa will lose its natural resistance and will gradually become more sensitive to Acid - Pepsin mixture. Ayurvedic science explains this pathology under the spectrum of Amlapitha disease which has a high prevalence rate in the current urban life. Amlapitha if not properly managed will lead to peptic ulcer and even gastric carcinoma. The Helicobacter pylori will colonize in the stomach if it is more acidic. The usage of hot and spicy food should be minimized to fight against Gastro Oesophagal reflex diseases.

Not only the nature of food, but also the quantity and timing of food are important to have a healthy life. Untimely food will produce or trigger certain diseases. Ayurveda insists timely food in the required quantity for different age groups. Certain food combinations will

lead to toxin formations and digestive errors. Such food combinations if taken for a long time will lead to Allergic skin diseases and Gastro intestinal problems. The use of fish and meat with curd, acidic fruits and milk etc are some of the examples. In short to have a healthy life, one should take those food articles which will preserve the biological fire. Once the biological fire is impaired it will lead to various systemic pathologies along with vitiated doshas. The food items which may obstruct the channels of nourishment and circulation should be avoided at any cost. Oily food, fried food, meat, bakery food stuffs etc are the main precipitating factors in Kapha-Medo related life style diseases. The quantity, quality, nature, combinations and timing of food are highly important in fighting against life style diseases.

Food as a medicine

Ayurveda enlists a good number of food items which are recommended for daily use. Such food articles have certain basic qualities as far as human physiology is concerned. They provide the basic nutrients in the required quantity to maintain the equilibrium of three doshas. The dosha level equilibrium helps to keep the body systems intact.

In obesity related diseases, the food articles which are light and easily digestible are to be consumed. The Aharas which are sweet in taste with oily properties are to be avoided. Medicated intake of garlic is found to be extremely useful in Hyperlipidemia and Coronary artery diseases. Atherosclerosis can be effectively treated with garlic. So many researches have shown the unparallel efficacy of garlic in these conditions. Ayurvedic science explains the Rasayana prayoga- Rejuvenation therapy – with garlic. The Rasayana therapy should be done with due care and precautions. Having the Srothosodhaka – Cleansing the metabolic channels - garlic has got a wide spectrum of pharmacodynamics. Usage of green leafy vegetables like Sigru, Punarnava etc has got good anti hypertensive effect.

Administration of Yava, Thrinadhanyas etc will significantly help to attain a good diabetic control. Medicated water prepared with Jambu and Asana are prescribed as drinking water for DM. Such diabetic drinks will make blood purification along with glucose control. It should be kept in mind that DM patients are more prone to develop Vascular and dermatological pathologies. In diseases like APD, fruits like Dadima and Amalaki are recommended. Medicated buttermilk is widely used by physicians for the management of certain diseases like piles, ascitis and some Malabsorption conditions.

Different medicated porridges are usually given to patients suffering with digestive disorders. These preparations enhance the function of Agni. In Kerala administration of seasonal medicated porridge- Karkkidaka Kanji – is a common practice. It is our duty to develop such seasonal food preparations which are to be cost effective also. More over in Ayurvedic hospitals specific diet should be practiced for specific ailments. Then only we can spread the message of – food as a medicine. Since Ayurveda is not a mere medical science, but a life science, every one who come across this treatment should be aware of different medicated food preparations. The slogan – ‘DIET AS DRUG’ – should be popularized across the globe to fight against life style diseases in safer and cheaper way.

ANNALS OF AMALA

Year	Events
1973 April 13	Sri. V. V. Giri, President of India laid the foundation stone for Amala Cancer Hospital
1976 Aug. 16	CMI Congregation headed by Fr. Gabriel took the trusteeship of Kerala Cancer Society for building the hospital
1981-Oct. 16	Sri. B. Sankaranand (Hon'ble Central Minister for health) laid the foundation stone for Amala Ayurveda Hospital
1982	Govt. of India sanctioned a grant-in-aid research unit under CCRAS for cancer & allied diseases
1983-March 19	Sr. K. Karunakaran, Chief Minister of Kerala inaugurated Ayurveda Hospital
1984	Developed a Herbal Garden with about 500 species of Medicinal plants
1987	Started a preparation unit
1988	Foundation stone laid for Arurveda Bhavan
1989	Inaugurated Ayurveda Bhavan
1990	Additional floor constructed for Main hospital
1992	Started Research on AIDS
1994	Ayurvedic Research Centre started in Germany for 1 year
2004	A Herbarium was started in Ayurveda Hospital under the name of Fr. Gabriel, founder director of Amala
2005 Aug. 29	ISO 9001:2000 Cetification
2005 Sept. 08	GMP Cetification
2007	Foundation stone laid for Silver Jubilee Memorial building
2008	Dept. of Science & Technology has sanctioned the project named as "Cultivation of Medical plants" in Ayurveda hospital.

SEMINARS

YEAR	DATE	TOPIC
1988	April 24	Pangu
1990	March 10	Cancer
1991	March 16	Epilepsy
1992	Jan 11	Jaundice
1993	March 13	Gridharasi
1994	March 12	Arsoroga
1999	March 17	HIV / AIDS
2000	March	Multiple Sclerosis
2001	Feb 10	Holistic approach in the practice of medicine
2002	Sept 21	Use of traditional medicine on HIV / AIDS
2004	Feb 14	Viswachi
2007	Aug 4	Prevention of life Style disease

Dr. C. I. Jolly

Scientific Advisor,

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Thrissur.



CARDIOVASCULAR DISEASE AND HERBS

Cardiovascular disease refers to the classes of diseases that involve the heart or blood vessels(arteries and veins). While the term technically refers to any disease that affects the cardiovascular system, it is usually used to refer to those related to atherosclerosis(arterial disease). In practice, cardiovascular disease is treated by cardiologists, thoracic surgeons, vascular surgeons, neurologists and interventional radiologists, depending on the organ system that is being treated.

Most Western countries face high and increasing rates of cardiovascular disease. Each year, heart disease kills more Americans than cancer. Diseases of the heart alone caused 30% of all deaths, with other diseases of the cardiovascular system causing death and disability. Up until the year 2005, it was the number I(One) cause of death and disability in the United states and in most European countries. In India now a days cardiovascular disease are being observed in a large scale.

Some biomarkers are thought to offer a more detailed risk of cardiovascular disease.

- *Higher fibrinogen and PAI-1 blood concentrations*
- *Elevated homocysteine, or even upper half of normal*
- *Elevated blood levels of asymmetric dimethylarginine*
- *High inflammations as measured by C-reactive protein*
- *Elevated blood levels of B-type natriuretic peptide (BNP)*

Attempts to prevent cardiovascular disease are more effective when they remove and prevent causes, and they often take the form of modifying risk factors. Smoking cessation is one of the most effective and easily modifiable changes. Regular cardiovascular exercise (aerobic exercise) complements the healthful eating habits. According to the American Heart Association, build up of plaque on heart diseases (Atherosclerosis). One possible way to decrease risk of cardiovascular disease is keep your total cholesterol below 150. In the Framingham Heart Study, those with total cholesterol below 150 only very rarely got coronary heart disease.

A magnesium deficiency or lower levels of magnesium, can contribute to heart and a healthy diet that contains adequate magnesium may prevent heart diseases. Magnesium can

be used to enhance long term treatment. Excess calcium can cause a magnesium deficiency and magnesium can reduce excess calcium.

Food for Cardiovascular Health

Research has shown that a diet that includes dark chocolate, almonds, fish, wine, fruits, vegetables, and garlic can increase life expectancy and decrease your risk for cardiovascular disease. Eating oily fish at least twice a week may help reduce the risk of sudden death and arrhythmias. Olive oil is said to have benefits. Studies of individual heart cells showed that fatty acids blocked excessive sodium and calcium currents in the heart, which could otherwise cause dangerous, unpredictable changes in its rhythm.

Cardiovascular disease and Salt

There is evidence from one large unblinded randomized controlled trial of more than 3000 patients that reducing the amount of sodium in the diet reduced the risk of cardiovascular events by more the 25%. This reaffirms evidence from the intersect study published in 1988. that high levels of dietary salt are harmful.

Awareness

Atherosclerosis is a process that develops over decades and is often silent until an acute event (heart attacks) develops in later life. The process of atherosclerosis evolves over decades, and begins as early as childhood. This is externally important considering that 1 in 3 people will die from complications attributable to atherosclerosis. In order to stem the tide of cardiovascular disease, primary prevention is needed.

Treatment

Treatment of cardiovascular disease depends on the specific form of the disease in each patient, but effective treatment always includes preventive lifestyle changes discussed above. Medications, such as blood pressure reducing medications, aspirin and the statin cholesterol-lowering drugs may be helpful. In some circumstances, surgery or angioplasty may be warranted to reopen, repair, or reduce damaged blood vessels.

Types of Cardiovascular Diseases

Angina

Arrhythmia

Atherosclerosis

Cardiomyopathy

Cerebrovascular Accident (Stroke)

Congenital heart disease

Congestive Heart failure

Myocarditis

Valve Disease

Coronary Artery Disease

Diastolic dysfunction

High blood Pressure

Hypertrophic cardiomyopathy

Myocardial infraction(Heart attack)

Research

The causes, prevention, and / or treatment of all forms of cardiovascular disease are active fields of biomedical research, with hundreds of scientific studies being published on a weekly basis.

A fairly recent emphasis is in the link between low-grade inflammation that hallmarks atherosclerosis and its possible interventions. C-reactive protein. (CRP) is an inflammatory marker that may be present in increases levels in the blood in patients at risk for cardiovascular disease.

Puskaramula for Cardiovascular Disease

What is Puskaramula?

*Botanically, puskaramula is known as *Inula racemosa* and belongs to the family *Asteraceae*, *Compositae*. Puskaramula is one of the herbs mentioned in all Ayurvedic scriptures. It possesses various synonyms like *kasari* an enemy of cough, *sulahara*-pain killer, *svasari*-an enemy of breathlessness, *kasmira*- grown abundantly in Kashmir, *sughandhika*- fragrant etc. The great sage Caraka has categorized it as *hikka nigradhana*-stops hiccup and *svasahara-hana*-stops hiccup and *svsahara* alleviates the breathlessness, asthma.*

Where it is found?

The plant grows in temperate and alpine Western Himalayas from 1300 to 4500 meters elevation. The plant is a stout herb growing 0.33-2meters in height. The stem grooved, rough and very hairy. The leaves are elliptical, large, 3-6cm long and 2-3cm broad, and have long petioles. The fruits, slender achene's, 0-4cm long, bearded with 0.75cm long pappus hairs. The flowers are yellow, many in heads, 0.5-1 cm in diameter. The fresh root is brown and becomes greyish on drying. The fresh root is brown and becomes greyish on drying. The fresh roots resemble in aroma of camphor

What are its cultivation Details?

Succeeds in a sunny position in ordinary garden soil. Requires a moist well-drained soil in sun or partial shade. Grows well in heavy clay soils. A vigorous plant, it can be naturalized in the wild garden or other informal positions. Plants take some years to become fully established.

What does it contain?

On extraction of the plant with hexane and isolation the compounds obtained are dihydroisoalantolactone, isoalantolactone and alantolactone. From the roots, sitosterols, octadecanoic acid and D- mannitol have been isolated also. Two biologically active new sesquiterpene lactones, inunal and isoalloalantolactone are isolated.

What are the properties?

It is bitter and pungent in taste, pungent in the post digestive effect and has hot potency. It alleviates kapha and vata doshas. It possesses light, unctuous and sharp attributes. It is one of the best herbs used in pleurisy.

How is it useful Medicinally?

*The herb can be used both internally, as well as externally. The roots of puskaramula are used for the medicinal purpose. Externally, the paste of its roots is used effectively, in dressing the wounds and ulcers as the herb possesses antiseptic properties. It alleviates the pain along with the oedema. The essential oil of the roots of puskaramula show antibacterial and antifungal activity and is moderately effective against *S.aureus*, *Ps aeruginosa*, *B.subtilis* and mildly against *E.coli* and *B.anthraxis*. The paste of its root is specially recommended, to be applied on the chest in pleurisy and inflammatory conditions of pleura, to mitigate the pain. In hoarseness of the voice, the roots are chewed and the juice is gulped.*

Internally, puskaramula is useful to boost the appetite and to digest and undigested toxic metabolites. Hence it is beneficial in anorexia(loss of appetite) and dyspepsia(indigestion). It also alleviates the flatulence and abdominal pain Puskaramula is the highly praised panacea for cough hiccup and bronchial asthma. It reconciles the pulmonary functions by abolishing the bronchospasm, relieving the mucous and hence, the obstruction in bronchial asthma. It also effectively curbs the frequency of paroxysms of bronchospasms, when the root powder is licked with honey. Puskaramula works well in pleurisy, even tubercular, by ameliorating the infection, fever, pain and the cough. It imparts a stimulant action on the heart and reduces the breathlessness due to cardiac asthma. Being a diaphoretic in action. It destroys ama, it reopens the channels and exerts anti-inflammatory property; and it is externally beneficial in rheumatic joints. It is an efficacious adjunct in the treatment of obesity, to reduce the

excessive body fats. In anaemias and general debility, it is salutary as a general tonic. Puskaramula restrains the itching sensation and oozing in the skin disease and thus facilitates the wound healing. It is pacifying to the brain and helps in strengthening it in mental debility. The herb also accords a stimulant action to genital system in both the sexes. In males it works well as an aphrodisiac and in females, it augments the quantity of menstrual bleeding. Thus, it can be used both, in amenorrhoea as well as dysmenorrhoea. It possesses a mild diuretic property, hence is used with benefit in dysuria

Classical Ayurvedic Preparations: Puskaramuladi choorna, Puskaramula asava, Puskaradi choorna.

How is it useful in Heart Ailments?

Inula racemosa root powder was investigated in patients with proven ischemic heart disease. The powder prevented ST-segment depression and T-wave inversion as observed in the post-exercise electrocardiogram. The petroleum ether extract of roots lowered plasma insulin and glucose levels within 75 min of oral administration to albino rats and it scientifically counteracted adrenaline-induced hyperglycemia in rats. The extract further showed negative inotropic and negative chronotropic effects on frog heart. All these findings indicated that one of the constituents of *insula racemosa* may have adrenergic beta-blocking activity.



Dr. DHANYA K. ANTO

Junior Physician



WHAT IS AYURVEDA

Ayurveda, the traditional medicine of India, is in uninterrupted practice since pre-historic ages. Utilization of the traditional systems of medicine for promotive, preventive and curative health services is being seriously considered in many parts of the world. WHO, in one of their resolutions, has emphasised the utilization of these healers by the under developed and developing countries. Ayurveda lays more emphasis on the promotion of positive health for prevention of diseases. In the process of disease manifestation several organs are involved. The disease takes its origin from a particular place moves through a particular channel. After all it gets manifested in a particular region. Therefore the treatment always aims at correcting from root like a plant. Above all ayurveda not only deals with human beings but also it includes the science of plants (Vrikshayurveda) as well as animals (Mrugayurveda).

The word 'Ayurveda' is composed of 2 Sanskrit terms, viz 'Ayus' meaning life and 'Veda' meaning the knowledge and taken together, it means the science of life Caraka - Father of Ayurved defined it as

“हिताहितं सुखं दुःखं आयुस्तस्य हिताहितम्
मानं तच्च यत्रोक्तं आर्युवेद स उच्यते।”

In Ayurvedic point of view the entire material world-both animate and inanimate is created from Panchmahaboothas. In human body these panchamahaboothas are explained in terms of basic principles i.e. dosha, dhatu and mala. In drugs they represented as their properties (rasa, guna etc.) The dashas (Vata, Pitta, Kapha) govern the physico-chemical and physiological activities of the body; while dhatus which are 7 in number [(1) rasa or chyle including lymph (2) raktha (3) Muscle tissue or mamsa (4) Medas or adipose tissue (5) Asthi or skeletal system (6) majj or bone marrow (7) Sukra reproductive units] enter into the formation of the basic structure of body cells. The malas (Sveda, moothra, Sakrit) are substances which are partly utilized in the body and partly excreted in a modified form after performing their physiological functions. In short the discordance of these bodily elements is called disease and their concordance is said to be normal health. As drugs have panchabouthic structure (1. Pruthwi - solid things 2. Ambu - water 3. Agni - fire 4. Vayu - air 5. Akasa - space). We use these drugs in the treatment of vitiated dosha-dhatumala condition of our panchabouthika body. so our treatment schedule is unique in its all aspects.

All systems of medicine, whether traditional or modern, should act as complementary and supplementary to each other for alleviating the miseries and giving solace to the suffering humanity.

