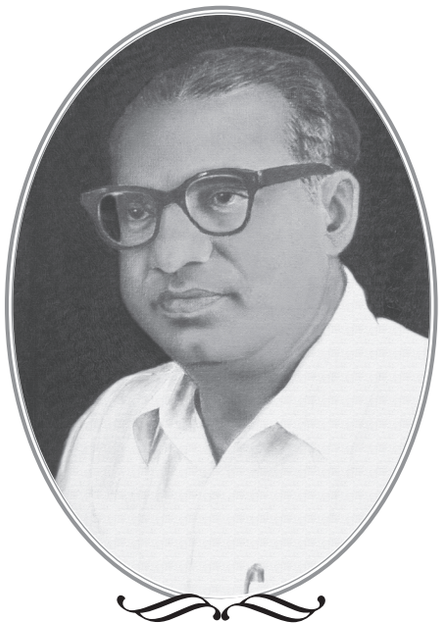
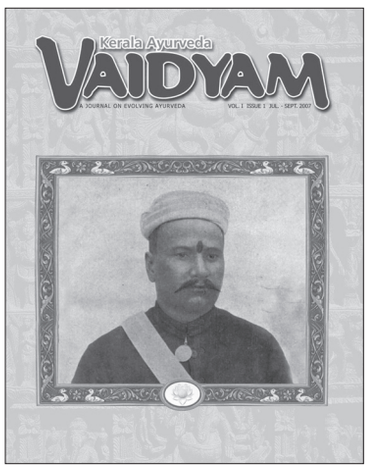
Kerala Ayurveda
VAIDYAM
A JOURNAL ON EVOLVING AYURVEDA
Vol-I. Issue 1. Jul.-Sept. 2007



Aayurvedaacharya Vaidyan
K G K Panicker
Founder of Kerala Ayurveda Limited



The Cover

The cover depicts the photograph of Late Vaidyaratna Pandit Ram Prasad Sharma, former Royal physician of Patiala. He was also running the Ayurveda College there. He was born in Samvat 1939. He has written Hindi commentaries to Caraka samhitaa and has edited Ashtaanga Hrdaya with Sarvaanga Sundari, Ayurveda Rasayana and Padaartha Candrika Sanskrit commentaries and provided critical notes in Hindi. He has also authored Aayurveda Sootram, an independent book. He has recovered many classical works on Ayurveda. He was awarded with Vaidyaratnam award in 1923. He was president of All India Physicians Congress at Karachi in 1930. He is the father of the world famous ayurvedic scholar Pandit Shiv Sharma who has rightly inherited his scientific aptitude and literary flare. The photograph was taken from a book belonging to the Kerala Ayurveda Achieves viz. Ashtaanga Hrdaya edited by him and published by Sri Venkateswara Steam Press Bombay in 1928,

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Kerala Ayurveda VAIDYAM A JOURNAL ON EVOLVING AYURVEDA

Higher education in Ayurveda

Much is usually debated on undergraduate education in Ayurveda. Higher education in Ayurveda, a more vital field, is not much discussed even by Ayurvedic educationalists. This is mostly because higher education forms only a small segment of Ayurvedic education. But we should recognize that this segment is crucial and it is the perfection in this sector that decides the perfection at lower levels. It is high time that we enter into serious discussions of the higher education in Ayurveda.

To us Ayurvedic education is never complete by acquiring a basic degree in Ayurveda. It is just the beginning. It is like the foundation of a building under construction. No one will think that the foundation is all. However strong and beautiful, a foundation cannot be the building. Sure, on a strong and viable foundation you can always build a beautiful building to suit your requirements. But construction and finishing of a superstructure is equally important as laying the foundation.

Hence it is very urgent now to contemplate on the present status of our postgraduate, Doctoral and Postdoctoral studies and sort out their strengths and weaknesses so that we can positively rectify the defects and try to better the field.

The demand for postgraduates is ever increasing due to the emergence of new Ayurveda Colleges. A postgraduate qualification is an essentiality to enter into the teaching cadre. For want of sufficient postgraduates, teaching institutions are compelled to employ graduates as teachers. Not only colleges in the self-financing sector, but also colleges in aided and governmental sector are employing graduates as teachers. The CCIM is strictly against this watering down. But in spite of the stringent steps taken by the council, non-availability of postgraduates in concerned subjects as well as allied subjects have prompted colleges to employ graduates as teachers.

Why there is a short supply of postgraduates? The lack of sufficient seats in the postgraduate sector is the main cause. Another serious thing is that the bulk of postgraduates are consumed by other services due to various attractions. This is evidenced by the example of recent recruitments to the cadre of Medical Officers by Government of Kerala. Almost all students of PG courses were selected as Medical Officers. It may be a good thing for medical services.But the main purpose of PG studies is not served. For three years to come the colleges in Kerala (except perhaps the Government sector) will not get PG hands from Kerala. Naturally these colleges will have to satisfy with PG qualified teachers from other states. When the medium of instruction is English, this may not produce problems to the students. But the college hospitals will be very badly affected, as there will be a language barrier with the patients and doctors. Effective communication will require interpretation at least for three years. Similarly the field of Ayurvedic research also is affected badly by the drain of PG holders to the field of ordinary practice.

It is also noteworthy that many of the postgraduates from non-clinical and para-clinical disciplines also are moving to private practice or getting job as ordinary medical officers. In the medical cadres of the Government service, specialization is not much counted especially when it is a non/para-clinical subject. So specialists in pharmacy are employed in clinics and not in pharmacies. This shift of specialization arena creates non-availability of specialists in required quarters.

(contd. on page 4)

Men in infertility

Dr. Gopinathan K.K.

The incidence of Men with infertility varies from 50 – 70% in literature and clinical practice in referral centers. This is important because most of the Gynecologists either just ignore or confine to few medicines to improve semen quality in treating the male partner. A detailed systematic analysis of both the partners including male will help to solve the infertility problem better.

Tackling the male problem must start with a detail medical and surgical history. This must highlight primarily about sexual problems. For this, a detailed counseling of couples separately and together is essential. Also personal habits like smoking and drinking must be looked in detail. Previous diseases and treatment for Diabetes, Epilepsy, Psychiatric problems and history of trauma or surgery to urogenital organs must be evaluated.

Also the occupation of the patient, exposure to chemical or heat, mental or physical strain must be evaluated.

Next comes the detailed clinical examination to rule out the surgically correctable conditions like phymosis, paraphymosis, varicocele, hydrocele and hernia. Also look for size and consistency of testis, epididymis, presence and nature of vas.

The first and prime investigation in male must be semen analysis. The importance of semen analysis is that it is authority based and with a bad sample you cannot label a male infertile or vice versa. S.A. must be done of masturbated sample collected in suitable surroundings with abstinence of 2 – 3 days. Analysis must be done in a lab following WHO standards after staining the sample giving more importance to motility and morphology rather than count.

The importance of S. FSH estimation in OAT is that if FSH value is <3, it denotes Hypogonadotrophic Hypogonadism and there is a role for hormonal treatment with HMG and HCG. If FSH is >8, it is better to go for ART as testicular function is compromised.

In severe OAT and Azoospermia always rule out genetic disorders by doing Karyotyping and PCR for Y deletion as in these conditions there is no medical or surgical treatment and proper counseling must be done before ART.

The importance of PCT (Post Coital Test) is that even though in RCOG guidelines for infertility there is no role for PCT, normal PCT helps to exclude sexual problem, cervical or vaginal hostility, antisperm antibody and to look more into female causes.

Azoospermia in repeated samples must be correlated with size of testes and FSH values. In obstructive azoospermia size of testis may be normal, FSH will be normal, epididymis may be distended. Microsurgical procedures may be tried in expert hands for ejaculatory duct or epididymal obstruction. But these cases are ideal of ICSI (Intracytoplasmic sperm Injection) as the sperms are usually genetically and structurally normal. In non-obstructive azoospermia testis may be small or soft, with FSH values high or upper limit of normal. Usually sperms can be retrieved by testicular biopsy in 30% cases and ICSI can be done. Very rarely Hypogonadotrophic Hypogonadism can present with FSH value <3 IU and hormonal treatment can be tried.

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Surgery for Varicocele is the most commonly done operation for male infertility and there are conflicting reports about its success. In large varicocele with moderate OAT (oligoastheno teratozoospermia) with normal Testicular size and FSH, sub inguinal microscopic surgery can be tried with reasonably good success.

IUI (Intrauterine Insemination) is being done widely now. Few important points of the procedure which caries a success rate of 10% per cycle is that it is not useful if count is less than 1 million/ml. The principle of IUI is that it removes dead necrotic tissues and Antisperm Antibody. The concentrated good quality sperms are deposited nearer to the site of fertilization during ovulation, bypassing the vaginal hostility. Before IUI evaluation of the female is mandatory and unless IUI is done in a meticulous way can lead to pelvic infection.

With systematic approach and analysis of each male patient in cases of infertility and with recent advances in the field ART like ICSI most of the Men in Infertility can be made Men with Fertility.

(contd. from page 2)

This means that the very purpose of postgraduate education is not attained due to current trends. The purpose of postgraduate studies in Ayurveda is mainly to strengthen Ayurvedic education and research. If postgraduates hesitate to serve the purpose, then the whole exercise of postgraduate studies is a waste of time, energy and money as the critics of postgraduate studies accuse.

In the past, academically qualified doctors worked as apprentices with senior practitioners for some years before setting up their own practice. This was a type of informal postgraduate study. This practice is persistent in the profession of law where novices get enrolled as juniors to established and reputed advocates. In Ayurveda too it is again coming up. This evidences that graduate studies do not generate perfection and confidence in outgoing graduates. Postgraduate studies should be able to generate this perfection and confidence though both perfection and extreme confidence are always a bit ahead of any veteran medical practitioner. We say that practice makes men perfect. But perfection is a concept that always moves ahead of the pursuer. It is some sort of a mirage or myth.

The quality of postgraduate education is also worthy of consideration. Many students join postgraduate courses with very high expectations. They get easily disappointed when they face the realities. Guidance from teachers is usually minimal. Research facilities in the institutions are insufficient even in standing government institutions with reputation. Most of the projects dreamt by the scholars are unrealistic and the means for executing them are limited. The period available for research is not more than twenty months and scholars cannot take up long-term projects. At the lapse of time in initial formalities the scholars panic when the examinations approach fast and frantically cook up the results of the research that is only half way. This tendency has almost totally damaged PG research.

The syllabus of postgraduate studies is more or less a mere repetition of that for UG studies. Just verify the syllabus of Ayurvedic history for the first year. It will substantiate the point. But the syllabus could be implemented at a higher plane. This requires original thinking, imagination and hard work both from the part of the student and the teacher. We have severe shortage of such faculties. Another important thing is that there are no special textbooks for PG studies of Ayurveda. We are just depending on our classics. This is a serious drawback. When the student is repeatedly study-

(contd. on page 8)

Taste in a haste

Dr. C. R. Agnives

In any fast modern society haste is the mantra of success and all those who want to get things done urge you to be faster. Going slow is considered as a severe sin. Laziness is described as a lower dose of absolute inertia and death. Though there is the proverb "slow and steady win the race," faster and still faster is the rule of the day. Only in fairy tales tortoises win the race, that too only when the rabbit is sleeping. You should be fast enough to be the early bird. First come first served is the priority in a poor world with limited supplies. We are all chasing time and time management is the great art of life. People say that time is money. We all know that money is the last thing we can afford to waste and hence we cannot waste time even at the cost of our life. Consequently we are unable to find time for attending us. So we have no time to waste for food too. Naturally we go for fast food. Fast food is served fast and devoured fast. It is taste in haste.

Tastes differ from person to person. What is tasty to the wife is disagreeable to the husband. Tastes differ also in substances. The sweetness of sugar and honey are much different. This provides us the choice of tastes and exercising the correct choice according to your taste is the key of your success and satisfaction. After all, life is a matter of choice. What we choose is what we are.

Taste is not only a matter of gustatory experience. The term 'taste' has come to stay in its different connotations with us. Hence when somebody says that it is a car that suits your taste, the car becomes a cake, sweet meat or mere meat whichever you relish the most. Taste is a term that denotes the innate aptitude and preference in man. So, taste for music is more an auditory and phonetic affair. Taste for painting is a faculty for visualization. The taste buds have nothing to do with these cases than membranous labyrinth, vocal cords and rods and cones.

Man is bonded to taste. Taste binds man to objects. In Sanskrit the term for property or attribute is Guna. Guna literally means a string. Strings are meant for binding or tying. Men are attached and attracted towards objects by their properties as though bound and pulled with a string or rope. So 'good taste' is a preference for things and experiences approved by the society and 'bad taste' is an affinity towards those disapproved by the society.

Man wants to repeat fond experiences of objects. When somebody cannot do away with a fond experience and wants to be with the object, irrespective of the sense faculty involved, we say that he or she is attached to the object. Attachment is excessive desire. In other words it is addiction. When a person is attracted towards another person, usually of the opposite sex we say that the person is in love. The term for lust also is Raaga and as it is lingering we call it Anuraaga. When in lust you are lost, lost in something else or somebody else. You do not see anything other than what you long for and that is why it is said that love is blind.

The Sanskrit term for attachment is Raaga. Raaga is considered as a Roga (disease) in Ayurveda. It is a grave disease and is the mother of all diseases. It produces terminal symptoms such as anxiety (autsukya), confusion (moha) and restlessness (arati). As per one definition it is the coloring of pure mind with mental pollutants.

Though the term Raaga has a visual edge as it means 'coloring' it is applicable to other faculties too as in the case of taste. In music Raaga is a specific mode or tune that binds your mind so that you will want to listen to it oft and again. Going to subtler levels of analysis in music, there is the taste of Raaga noted as the Raaga Rasa that forms the essence of the tune. The Sanskrit term Rasa also means essence

and taste. It has other meanings such as mercury, poison, chemical, interest and aesthetic experience.

Rasa as essence or an essential component denoting taste is not unique to music. Take any art or literary form. Indian aesthetics seeks the taste or Rasa in it. In fact it is the first and foremost theory in Indian poetics and was postulated By Bharata Muni in his illustrious Naatya Saastra. This book, though of dramatics, is also considered as the basement of Indian literature. Later, revered authorities searching the 'soul of poetry' postulated various other theories of poetics. Nevertheless the definition that "Tasty statement (sentence) is poetry" *(Vaakyam rassatmakam kaavyam)* forms the core of all such postulations. So taste has come to stay.

According to Indian Philosophy, taste is the special property of the element 'water'. It is true that when your mouth is dry, you cannot properly appreciate taste. This is the connection with taste and liquidity. Taste is also sequential in the element 'earth'. Very dry or dehydrated things too are unfit for human consumption as food. They will make problems of deglutition and digestion. We soak them in watery, semisolid, moist or oily substances for eating. So man lives not only with dry bread. He needs some jam or butter to make the bread tasty and agreeable. Hence there is sense in confirming water as the base of the sense of taste. (Note that unctuousness or oily nature is also an attribute of the element water.) Good food is invariably juicy and people try to extract the juice and avoid the roughage from food substances even though roughage has its own merit.

According to Ayurveda there are six tastes namely sweet, sour, salty, bitter, acrid and astringent. Western science does not admit acrid and astringent as tastes as there are no taste buds to appreciate them. Ayurveda does not consider this as an exclusion criterion as the science is more experience based. We can appreciate acrid and astringent tastes and distinguish them from other tastes. Hence they are also considered as tastes. Another logic presented is that there are six seasons and each season is marked with the predominance of a particular taste. If that is the case, naturally westerners could satisfy with four tastes, as they have only four seasons.

Each taste is generated by the predominance of two elements. Thus earth and water generate sweet taste, fire and earth generate sour taste, water and fire generate salty taste, ether and air generate bitter taste, fire and air generate acrid taste and earth and air generate astringent taste. Accordingly they increase or decrease the three humors. Sweet sour and salty tastes increases Kapha and decreases Vaata. Bitter, acrid and astringent tastes increase Vaata and decrease Kapha. Sour, salty and acrid tastes increase Pitta and astringent, bitter and sweet tastes decrease it.

All materials being composed of all the five elements contain all the six tastes at various levels. Even the sugar is a bit bitter, but we are unable to appreciate it because it is at unperceivable level.

People say that variety is the spice of life. Remember that spices are substances with sharp tastes, mostly acrid. They amend the taste of food substances. Many think that spices are harmful things. But bland food without any spice is equally bad. Bland and monotonous food is considered as the culprit behind diseases like urinary calculus. That is why Ayurveda has advised to use all tastes with the predominance of sweetness as sweetness represents energy food and nutrients necessary for construction and maintenance of the body. Moreover sweet taste is pleasant and favored by the majority. It is also accustomed right from birth, as mother's milk is sweet.

Preference of taste is a matter of training too. Young infants usually prefer to have sweet things. At the time of the feeding ceremony infants are exposed to other tastes. Most of the children cry at this occasion evidencing strong protest against unaccustomed tastes. Little by little the child learns to con-

sume even very acrid substances such as chilly and black pepper.

At any given moment we are the essence of what we have consumed and what goes into us is mostly dictated by our preference of taste though odor, color, touch and even sound too have a say in it. It is the smell first. A rotten thing can be identified as unfit for consumption even from a distance. To find it disagreeable by tasting we have to let the substance touch our tongue. Uneatable substances can be made to have agreeable smell and color by artificial means. Adding or covering with substances of agreeable tastes also could alter the taste, but it is a very difficult task. When even obnoxious odor is adapted quickly, taste is not easily adapted. Hence even when attractively colored and flavored, a putrid food material could be easily identified as it touches the tongue. Tongue is thus the guardian of our health and life. Here, taste is a test of quality. Mouth is the natural entrance of food into the port called gastrointestinal tract from where essence of food is to enter the body. The position of tongue is thus strategically crucial at the entrance as security officer.

The acuity of taste differs from person to person and those who are gifted with a marvelous acuity and are keen to protect it could find job as tea tasters and wine tasters. They test the taste. Even in this era of computers, electronic equipments have not successfully replaced the tasters.

Ayurveda has considered taste as the most important of the pharmacological categories such as other properties, metabolic effect, potency, special potency and action. That is why treatises like Caraka Samhitaa, Susruta Samhitaa, Ashtaanga Sangraha and Ashtaanga Hrdaya have devoted special chapters on taste. Initially it was thought that by knowing the taste of a material its pharmacological action could be identified. Characteristics and actions of each taste are detailed with this idea. But later it was understood that though tastes are reasonable indices of drug action, they might even misguide us. Hence importance was finally paid to the drug from a holistic point of view. Susruta even mentions that drug action is not amenable to thousands of contemplations and arguments. A constipating drug will not be a purgative irrespective of its taste and other features.

We have a tendency to refer anything in terms of food. Perhaps this is an animal instinct as the prime requirement of any animal is food. Shelter and sex are other priorities. It is why Ayurveda has considered food, sleep and sex as three sub-pillars (upasthambha) of life. So we refer to a beautiful girl as a sweet girl, a bad poem or drama as sour, an adverse event as a bitter experience and a stimulating influence as spicy. Our love for beauty and aversion for ugliness are translated in terms of dietary articles. So things can be chocolaty or fishy even when they are not food substances or not even substances.

Food is consumed i.e., taken in and converted into our body. Anything that cannot be converted into us is rejected promptly. It is not consumable. Hence anything agreeable coming into us is referred to as tasty and those that are disagreeable are disposed off as distasteful. But our agreement with things may change from time to time. Tasting the same experience repeatedly, however delicious it is, causes aversion. In terms of food, we get fed up with it. So all sweet experiences require some intervals preferably filled with a bit of bitterness so that the sweetness can escalate. Excess of even nectar is poisonous. Constant exposure is a type of excess. On the contrary repeated exposure to disagreeable experiences taper off their adversity and they become accustomed and agreeable.

Fondness or preference for certain tastes is okay. An anemic child may prefer to eat earth or chalk pieces to bread for a dinner. But there are extreme cases of perverted preferences of taste as when somebody obsessed in eating human excreta. It is a mental disease. On starving some may attempt to eat

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ing the texts studied in lower classes, anyone who has done justice to UG studies will naturally get fed up quickly.

PG courses are usually deprived of lecture classes. They are mostly replaced by the discussions and seminars, where the teacher generally has no active role. Majority of the teachers does not recognize the difference between PG and UG and many think that PG scholars have to study themselves. This means that the academy is very loose in the case of PG. This is reflected in the dissertations also. Subjects for dissertations are chosen hastily when the scholar is just a beginner in research, when he or she is not well informed about the task to be undertaken. At a later phase, when they have better wisdom they cannot change or trim the chosen topic to a reasonable dimension.

The standard of dissertations is also not satisfactory. Many are just manufactured out of wild imaginations of 'expert helpers' outside or inside the campus who professionally undertake production of theses on wholesale at a fair cost. This is like the rackets that generate practical records for UG scholars.

In many institutions PG scholars are made to take classes for UG students. This is mainly done to evade the work of teachers than to train the scholar. No remedial measures are employed to perfect the scholar in the art of teaching. There is no formal teachers' training in the PG course even when PG is considered as the minimum qualification for the entry cadre in teaching profession. Subjects like teaching methodology and Educational psychology are not included in the syllabus.

All these put together has devalued the PG studies all over India. It is our humble duty as friends of Ayurveda to see that the PG studies serve the proclaimed purpose. Some positive intervention without inviting opposition is essential in the field. It is with this intention that Kerala Ayurveda Ltd. Has recently instituted the Kerala Ayurveda Research Awards. The annual award has two categories viz. Gaveshakratna Award for the scholar on the basis of the dissertation submitted as part fulfillment of the course and Acharyaratna Award for the guide of the scholar. The Prize money for the scholar is Rupees Two Lakhs and for the guide is Rupees Fifty thousand. The prize money is very attractive and naturally will stimulate scholars and guides to consider the preparation of the dissertations more seriously. The finalist scholars and their guides will get appreciation prizes including prize money of Rupees Twenty five thousand and Ten thousand respectively. The prize money for the scholar winning the award is the largest for similar awards in the field.

We sincerely hope that these awards will be positive strokes in encouraging PG research to find the correct track though much more is to be done to perfect the field and to cultivate a research culture in the youngsters.

As a tailpiece, it should be added that globally there is a consensus that studies on any alternative or complementary medicine should be totally at postgraduate level to modern medicine. This is to ensure minimum modern medical knowledge to the all practitioners of medicine irrespective of the system. The idea is plausible. But on implementation level it may pose serious problems for the existence of Ayurveda as an independent system of medicine. So what happened to homeopathy in its country of origin might happen to Ayurveda in India too. We have also the experience of the integrated courses. They had their merits but on the whole the experiment was damaging to the image of Ayurveda. That is why we opted back the so-called 'pure Ayurveda'.

Diabetes mellitus - Preventive aspects

Dr. Sahny. M. Soman BAMS, MBBS

Diabetes mellitus, a chronic disease, once thought to be uncommon in developing world had emerged as a crucial public health problem including Asian countries. As people of developing countries were unaware of the nature of the disease, its occurrence increased rapidly and touched 77% of the global burden. This alarming figure reminds that Diabetic Mellitus is an iceberg disease.



Why should we prevent it?

A late diagnosis and inadequate treatment cause the development of chronic complications leading to irreversible disability and death. Coronary Heart Disease and cerebrovascular accident are more common in diabetics than in general population. Also diabetes mellitus is listed among the most important determinant of cardiovascular disease. In many cases a cluster of variables like elevated VLDL, reduced HDL-cholesterol, increased LDL, insulin resistance and hypertension co-exists. The one constant is that the variables are all related to insulin resistance. This typical combination of metabolic disorder is at presently called as metabolic syndrome or syndrome X. Morbid conditions like Diabetic retinopathy and Diabetic nephropathy should drag our attention to the field of prevention.

Ayurveda consider Prameha as a major disease *(mahaaroga)*. Though role of familial inheritance is strong, by adapting proper preventive measures morbidity and mortality can be reduced to a great extent. Primary prevention comprises all actions taken prior to the onset of disease. All possible preventive measures should be implemented even in a person who is having *Poorvaroopa* or prodromal symptoms. Progressive changes related with *dhaatudushti* and transition of *kaphajameha* to *Pittajameha* and then to *Vaatajameha* could be prevented. In this aspect secondary preventive measures are important in reducing the long term complications of DM and treatment proper stays as the mainframe in such conditions.

To Whom It Is Needed

Ideally preventive measures should start for a person from the period, even when he is in his mother's womb. Screening and treating DM in the gestational period is the solution. It prevents the child to

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become diabetic at a later age. In addition saves the mother from the same condition.

Though whole population should be aware of this dreaded disease, improvising the preventive methods to all is practically impossible. Also procedures including screening test could not be cost effective. Undoubtedly a person having prodromal symptoms explained in Ayurveda should be subjected to preventive measures. Let us review the prodromal symptoms.

Excessive perspiration and bad smell

Flaccidity and reduced tone of muscles

Desire for excessive sleep and rest

Feeling heaviness over body parts and feeling of some coating over the heart, eye, tongue and ear.

Excessive growth of hair and nail

Excessive desire for cold climate and chilled food items

Dryness of mouth

Feeling sweet taste in the mouth

Burning sensation on palms and soles

Ants crowd over the place where one passes urine

Beyond those who having prodromal symptoms the other target groups that should be focused are

1. Women who show excess weight gain during pregnancy
2. Women who have had a baby weighing more than 4.5Kg
3. Those who are obese
4. Those with a family history of DM
5. Those in the age group 40 and above
6. Patients with premature atherosclerosis

How it should be done

By focusing the risky groups, in the manner explained above one can use the modern screening methods as a tool for active intervention, to avoid a delay in diagnosis.

Screening methods

A. For general groups

FBS and Oral glucose tolerance test (OGT) are the standard tests.

Oral glucose tolerance test here the patient is subjected to an oral administration of 75gm glucose. Blood sugar value is checked after 2 hours of administration. Result is interpreted comparing with the standard cut off values.

Impaired glucose tolerance describes a intermediate - at risk group – between DM and normality.

B. For pregnant women

To screen all pregnant women during 16th week and 24-28th week by doing a OGT. Here the cut off value is a little more low. A venous whole blood sug-

	Whole Blood	
	Venous (mg/dl)	**Capillary** (mg/dl)
Diabetes mellitus		
(a) Fasting Value	?120	?120
(b) 2 hrs after glucose load	?180	?200
Impaired glucose tolerance		
(a) Fasting Value	<120	<120
(b) 2 hrs after glucose load	120-180	140-200

(contd. on page 31)

Sub-fertility Ayurvedic Perspective

Kerala Ayurveda Vaidyam Bureau

Man is yet to master many mysteries in the field of physiology and pathology. In spite of the vast insight into the realm, human reproduction still continues to be one among such riddling mysterious areas. Couples with sub-fertility usually complain that expert gynecologists have confirmed, after all tests and examinations possible, that there is nothing wrong with them, yet there is no issue for years together. This is an instance when one and one do not make three. This is a problem above all our calculation skills. In many such cases physicians find success with simple Ayurvedic treatment. But such successful ayurvedic practitioners are mostly unable to explain the mode of action of their treatment in a fashion or language that could be apprehended by the modern scientific society. They might have their interpretations in an Ayurvedic language and style. But to the world it is mostly Latin.

Not only in the case of couples with fertility problem without unidentifiable physiological and anatomical problems, but also in cases with established abnormalities ayurvedic treatment has oft and again proved effective. Here also, the pathology as well as logic of therapy cannot be explained satisfactorily. Hence sub-fertility is usually considered mostly treated by the grace of God than the wisdom of the physician. Usually child is considered as a gift of God, though there is sufficient human effort in acquiring the gift. God, in such cases, is usually an elevated name for our ignorance. When we know things we rarely depend on God but better try to explain them logically. Note that it is in the context of reproduction that Ayurveda boldly proclaims, "powerful human effort will even surpass God".

In the case of sub-fertility the affected couple mostly resort to all sorts of religious help and healing and may fall into the depths of superstitions to combat the problem where skeptics may joke that in all these attempts there is a fifty-fifty chance of success. But, to a couple deprived of any child, taking a fifty-fifty chance is far better than total disappointment. Always there is the psychic element in such cases and the torment of the husband and wife who have failed to reproduce cannot be underestimated. Hence we cannot overlook the possibilities of the psychic effect of many religious procedures and the belief factor in the treatment of sub-fertility. Even when things are apparently impossible we have no right to deny the hope of the couple because we all live just because we hope.

Family planning is comparatively a recent trend. In the past, population was not much of a social problem in spite of poverty and famines. There was the belief that the God that gave us the mouth will find us something to eat too. This is opposing to the Semitic concept that God cursed man to live with the sweat of his brow. We find in ancient Indian literature that a large family is always considered preferable to atomic families. Women were greeted with blessings to "deliver more and live long". This was mainly because of the very high death rate. Wars, diseases and famines had their death toll. Male child was preferred because in a patriarchal system family is sustained only through male children and male death rate was more because of the frequent wars. So in Ayurvedic treatises we find that attempts are to have as many male children as possible. We find that even now some countries suffering from longstanding wars and consequent reduction in population are presenting awards to mothers who deliver more.

But in India, the stroke is negative. In the present social scenario any preference for male child is considered as a taboo and wishing for more than three children is a crime. Goodness, currently, is to have

as minimal children as possible without any discrimination of sex. When science has to play to the tunes of the society, perhaps it will have to compromise at the cost of physiology and psychology. The age of legal maturity and the minimum age for marriage prescribed now for girls does not have much biological backing. According to Ayurveda the girls could marry on completion of the age of sixteen. But we are now settling it to be eighteen or twenty. The increase in the age for marriage, and evading pregnancy even after marriage because of occupational or educational purposes have contributed substantially for the increased incidence of sub-fertility. At the age of thirty-five years, those women who were evading pregnancy till the age of thirty or more, frantically seek medial help for solving the problem of sub-fertility when it is almost very late. It is noteworthy that highly educated couples are exhibiting this syndrome, as higher professional education is a lifelong process and one attains professional ability and stability only after studying till the age of say, thirty-five. So they naturally postpone pregnancy even if they marry at a ripe age, creating problems in getting pregnant and delivering normally.

The professional stress and strain also contribute to the problem of sub-fertility as well as many other sexual problems. A peaceful mind is a prerequisite for effective and successful sex. We all agree that fear and hunger are not the keys of sex. When we are under such strong psychological or physiologic stress, libido is the last thing to act perfectly. Reproduction is a phenomenon well controlled by hormones and we know that mental affects have a say on the function of hormones. With any emotion we sprinkle a lot of hormones into our blood stream. Even mild professional stress may cause problems when it is continuous and especially when the incumbent is carrying the workload to home and burning midnight's oil. Perhaps such stress may be contagious, as the spouse also will soon share the stress, not to reduce it but to double it. Such psychological factors involved in sub-fertility cannot be overlooked in treating sub-fertility.

Ayurvedic study of the body begins with embryology as in the case with modern anatomy. Here embryology is not mere descriptive as it is of a normative style. Ayurveda approaches the subject even before from the topic of sperm and ovum. Ayurveda begins the topic from a preventive aspect and stipulates norms for a healthy marriage. In fact the concept of genetic counseling is latent in Ayurveda as the prospective spouses has to premeditate on the possibility of genetic diseases. It is mentioned that one should not marry from his family or cult as marriages between blood-related couples usually is at a high risk of generating genetically defective children. In a society that is intent to have the best progeny, such considerations are still valid. But critics may find fault with such stipulations as inhuman because if stringent genetic considerations are taken from a health point of view many will have to stay unmarried or will have to opt not to have any progeny. Just think of diabetes alone. Now a sizable share of the Indian population is of diabetics. Diabetes can be hereditary. If marriage is legally prohibited to all diabetics on this basis it will create a social crisis.

The minimum age for having children according to Ashtaanga Hrdaya is sixteen years for women and twenty years for men. If either of the couple has not reached this age their child may be sick, short-lived, or will not thrive. Pregnancy may not occur even. There are other prerequisites too for pregnancy. The womb (garbhaasaya), the path (maarga), the gametes (sukla and rakta), the wind (vaata) and the heart (hrt) should be 'pure' to get conceived. The path here implies the passages such as the lumen of fallopian tube, the lumen of the cervix of the uterus and even the vaginal canal. Of the gametes Sukla means semen or sperm and rakta means menses or ovum. In Ayurveda the concepts of menstruation and ovulation are interconnected and the more perceptible menstruation is considered as the index of ovulation and ovum. Hence the term for blood is used to denote the ovum and menstruation. The wind here

refers to the function of the controlling humor Vaata. The faction of Vaata responsible for the control of menstruation as well as ovulation is termed apaana vaayu. Vaata is also responsible for movement of all sorts and thus controls the migration of the ova from the ovary to the uterus. It also implies all reflexes in connection with reproduction. Heart here is mind. In Ayurveda and Indian literature the names for heart are also used as synonyms of mind. Thus purity of the female reproductive system in its structure and function, the perfection of the gametes and purity of mind are prerequisites for getting pregnant.

Fertilization according to Ayurveda requires not only the union of the sperm and the ovum but also the entry of a factor termed 'satva' at the same time into the zygote. This factor is the 'Sentient' representing the soul and mind. This idea is to go with the concept of rebirth. The urge for such entry is considered as the residual effect of the action or prior life. The generation of life by the union of the gametes is analogous to the generation of fire by the collision of flints.

When purity of the gametes is an essentiality for fertilization and further development of the zygote it is implied and even stated that vitiated gametes cannot be considered as seeds. Ashtaanga Hrdaya has enumerated eight types of vitiation for both the gametes. They are listed below:

Vitiation of semen & sperm	**Vitiation of ovum and menses**
1. Vitiation by Vaata	1. Vitiation by Vaata
2. Vitiation by Pitta	2. Vitiation by Pitta
3. Vitiation by Kapha	3. Vitiation by Kapha
4. Putrid semen (dead sperm)	4. Putrid menses (dead ovum)
5. Tumor semen (coagulated)	5. Tumor menses (coagulated)
6. Suppurated semen (with pus cells)	6. Suppurated menses (with pus cells)
7. Reduced semen (with low count)	7. Scanty menses
8. Polluted semen (with excreta)	8. Polluted menses (with excreta)

Of the eight types in each group the first three are vitiations caused by one humor each and the causative humor is evident from the name of the condition. They could be identified by the general characteristics of the humors. For example, Vaata is dry and vitiation with Vaata will cause dehydration to semen and menses. Kapha being stable vitiation with Kapha will make semen and menses very thick and viscous. The semen will not liquefy properly so that movement of the spermatozoa will be highly restricted. In case of vitiation of Pitta, semen and menstrual blood will be hotter and the increased temperature may cause death of the spermatozoa. In case of ovum unduly increased heat may damage it. Putrid vitiation is due to the involvement of blood as a humor. The tumor type vitiation is due to the combined vitiation of Kapha and Vaata and suppurated type is caused by the involvement of blood and Pitta. It is noteworthy that in suppuration there will be an underlying inflammatory disease. Reduction or weakness is due to the aggravation of Vaata and Pitta. Pollution with excreta may be with urine or feces. In both the cases the presence of a fistula is to be suspected. Fistulae communicating the genital tract with rectum or bladder may be connected with venereal diseases. In the case of males urine can get mixed with semen even without a fistula as both urine and semen share a common passage. But in this path there is the golden rule of one at a time. This rule should be violated by confusion of reflexes for urine to get mixed with semen. All these conditions are very difficult to cure. Though the eighth variety is mentioned as incurable, proper surgical measures for fistula may help in this condition. Special medications are prescribed in all the conditions separately for men and women.

It is to be noted that even when the cause and name of condition is same for men and women the treatment is different because according to Ayurveda there is evident difference in man and woman especially in the case of the reproductive system. We all know that

male and female hormones are different. Hence the involvement of hormones in sex problems of men and women are also different dictating difference in treatment. Ayurveda considers that semen is towards the cool side whereas menses is warm. It is considered that female is warm, hot, fiery or sunny whereas men are generally moony. Biologically sun represents catabolism and moon represents anabolism. In India this concept also has geographical and sociological implications. South India is in the fiery (sunny) tropical zone (zone of Vindhya) and North India (zone of Himalayas) is in moony temperate zone. Aryans are Moony and Pre-Aryans or Dravidians are sunny. Right from the Vedas we find this differentiation.

Another consideration is that the male is from up above the sky and the female is down to earth. Perhaps the Aryan migration and their intermingling with the 'women of the soil' might have generated this idea. Anyhow, it has a biological basis too. We find that during ovulation the body temperature of the women increases slightly. This is indicative of the hotness of the ovum. Similarly testes have descended from the abdominal cavity down to the scrotal sac, just gone out to air them to escape from the internal heat. They prefer to keep cool. If the temperature is increased by wearing tight underclothes or by traveling continuously on two-wheelers the chances for reduction of sperm count and male infertility are more. This concept reflects in the treatment and preventive measures. We are advised to treat the woman with oil, black gram and other substances that increase Pitta. In real practice making oil (sesame oil) and black gram as part of diet itself sometimes cures many menstrual disorders and connected inconveniences.

In sexual intercourse, Semitic religions stipulate that only 'man on position' should be followed. This also has psychological and sociological connotations. A superior physical position gives a sense of superior social status and authority over the inferior. Hence man on position provides ego satisfaction to men. The Indian concept that Earth as mother is repeatedly emphasized in epics and legends too. Vedas post the father up above in the heavens. Even for plants it is so. There are references in Vedas that the father of the medical plant is the sky and its mother is the earth.

In Ayurveda it is stipulated that one should not have intercourse with a woman who is opposing to take a supine posture. It is to be noted that Vaatsyaayana's 'Kaama Sootra' provides us a good number of options in sex postures, but Ayurveda does not encourage such fancy postures. Whatever is the physical posture there is only one psychological stance or posture for sex, the posture of unison. Compared to the rear entry in most of the mammals the shift to front entry in humans is a revolution in sexual posture indicating masculine superiority over feminine counterpart as a matriarchal society changed or was made to change to a patriarchal one. Though many think that some sexual postures will facilitate fertilization, there is no concrete evidence for such convictions. Posters may perhaps encourage female orgasm, but orgasm is not an essentiality to get pregnant.

Referring casually to plants, it is also worth stating that in Ayurveda reproduction is often considered as analogous to agriculture. In agriculture we should prepare the proper fertile field, we should sow the proper seed at the proper season, nourish it with water and fertilizers, provide sun, shade and aeration according to the requirements so that we can reap a good harvest. Similarly in reproduction too all these factors or similar factors are involved. The term fertility itself has an agrarian connotation.

Ayurveda has advised special care for the menstruating women. Menses is to be viewed as the preparation of the soil for sowing. It cleans up the uterine bed for the fertilized seed or zygote. This event is very important and hence special care is warranted. Today we find that women resort to napkin care than special care. The crux of menstrual

regimen of Ayurveda is to limit physical movements, avoid over food, use food materials that assist cleaning up of the womb, avoid sex (because sex involves physical exertion and hormonal secretion those may enhance the chances of excessive bleeding and because socially some taboo is attached with menstruation which is a mystery), isolation (mostly because of taboo and also because hygienic considerations and prevention of infections) and keep the mind free from mundane problems and direct it towards auspicious things. Such a culture is believed to facilitate the proper preparation of the fetal bed so that a healthy child can be generated.

Keeping the mind pure and auspicious is here of prime importance. Researchers have proved that during menses the criminal tendency of many women increases. We have already seen that a pure mind is also a prerequisite of gestation. Caraka Samhitaa emphasizes this point and states that of all the factors concerned with production of pregnancy good mental temperament (saumanasya) is the most important. Sex should not be an act for act's sake. It is also mentioned that one, especially the woman, should have total attention (tanmanaa) to the act and should not participate passively in the act. This is a dictum of Ayurveda not limited to the case of sex. Any human activity, whether it is dining or defecating, should be done with full mind in it. The corollary here is that a corrupt mind corrupts fertilization and pregnancy and will produce a corrupt child. The famous story of the epic Mahaa Bhaarata, regarding the birth of the blind and anemic children to Vyaasa in AmbiKa and Ambalika who were reluctant to coitus is an example to the belief that mental affects really affects the pregnancy and its product.

Mental inhibitions also can inhibit sex and cause sub-fertility. A saint cursed the Emperor Dasaratha that he will suffer from misery due to children. This curse stayed with the emperor as a prejudice. He had difficulty in having children, rearing them and maintaining them and had to die in suffering due to the departure of his son. He had to resort to artificial means, some sort of medical help, to get children. Man is usually what he thinks him to be. It is also noteworthy that physical treatment was given not to Dasaratha but to his three wives those ate the sweet porridge whereas the whole process of fire sacrifice was a positive mental stroke to the emperor. Also we find that medical help might cause twins or triplets as we have seen in the case of a wife of Dasaratha.

Frequency of intercourse is another factor that is usually overlooked in cases of sub-fertility. Couples having the problem will tend to increase the frequency of intercourse as an earnest attempt from their part to be productive. But increase of frequency may cause a decrease of sperm count and will make the problem worse. Hence some sort of judicious celibacy in the case of the male partner is essential in the treatment of sub-fertility. Even when sex is considered as a sub-pillar of life along with food and sleep, as sex is an essentiality to perpetuate life, Ayurveda praises the merits of celibacy. Intercourse is to be avoided at the time of safety period and should be synchronized with ovulation to have maximum possibility of fertilization. The fourteenth or fifteenth night after the starting of menses is considered in most cases the apt time for fertilization. Even ancient Semitic communities who were blessed to have a multitude progeny outnumbering the sands on the seashore and stars in the sky knew this.

Sterility may be a male or female problem. The term for sterile women in Sanskrit is Vandhyaa. The term for male sterility is termed Shanda. People usually misinterpret this term as impotence. Now a day, in vernacular there is a tendency to refer both male and female sterility as Vandhyataa, sometimes discriminated as purusha vandhyata (male sterility) and stree vadhyataa (female sterility). But in Ayurveda the term vandhyataa is exclusive for female sterility as it is defined as the absence of the uterus or menses. Sub-fertility, which is a curable transient problem of reproduction, cannot be thus correlated as vanthyataa though the term is in vogue.

A woman may be sterile congenitally or become sterile later. According to Haareeta Samhitaa female sterility is of six types either due to defects of the uterus (garbh kosa bhanga) or due to reduction of reproductive tissues (dhaatu kshaya): -

1) Congenital sterility
2) One who does not get pregnant at all
3) One who delivers once but fails to conceive later (kaaka vandhyaa – crow sterility)
4) Women affected by frequent abortions
5) One who is without child due to stillbirths
6) Infertile due to physical weakness

Of them there is treatment for all the conditions except the first.

According to Caraka samhitaa infertile women may be of three types:

1) With child (saprajaa) – secondary infertility after the first delivery.
2) Without child (aprajaa) – sub-fertility and
3) Congenital (sahaja vandhyaa)

Vandhyataa is to be interpreted as absolute sterility. The term Avandhyaa is used by Cakrapaani, the illustrious commentator of Caraka Samhitaa, to denote a woman capable of pregnancy but is not getting pregnant due to some other reason. Such women may get pregnant later and it is to them that treatment of sub-sterility should be directed.

Habitual abortion is a main cause of sub-fertility according to many ayurvedic authorities. In this context Kaasyapa Samhitaa has detailed affections by a divine character called Revatee or Jaatahaarinee. This concept goes with the belief in ancient society that evil spirits cause damage to pregnancy and even the newborns. It seems that different forms of Revatee are infections of some sort that culminate in abortion or miscarriage.

Bhela samhitaa states that infertility may be due to defective gametes, non-consumption of congenial tastes, suppression of natural urges and disorders of female genital system and that these etiological factors may even generate defective children.

Infertility is included as one of the eighty diseases caused by Vaata. Caraka mentions that abnormalities of the female genitalia, psychic factors, defects of gametes, malnutrition, coitus at improper time, loss of immunity and strength are also causes of sub-fertility in otherwise fertile women.

Prognosis of conditions causing sub-fertility is also detailed in Ayurveda. They generally depend up on the nature of the specific etiological factor. Infertility due to incurable disorders of the genitalia and menstruation will be incurable. The congenital sterility is incurable. Other conditions are generally curable. Some infections cause permanent sterility as it may damage the ovaries or testes by inflammation and subsequent degeneration.

Ayurvedic treatment is generally three fold viz. logical treatment, psychological assistance and divine treatment. All these three modalities are employed in the treatment of sub-fertility. In Ayurveda there is a specialized branch for reproductive medicine. This is termed Vajeekarana tantra. Though this is generally intended to improve sexual prowess and ability to reproduce in men, the same branch can be utilized to treat sub-fertility in women with suitable modulations. A pre-requisite of this therapy is purification of the body. Hence all purification therapies are to be employed in both the husband and wife and they should be simultaneously treated. Only after purification, medication for sub-fertility is to be employed. It is specifically stated that reproductive medicine employed in an impure body is futile. It is evident that failure in treatment of sub-fertility is mainly due to applying medicine without or proper prior purification therapy.

Many formulations mentioned in other contexts of Ayurveda are also indicated in sub-fertility. For

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Sudarsana Coorna

Dr. Jolly, Dr. Sarala Samuel and Mr. Manu Somanath

Nature always fascinates us. It is always an addiction to many. "Land is the only thing in the world that amounts to anything" is what Gerald O' HARA tells his daughter in Mitchell's Magnum Opus GONE WITH THE WIND. In the run for cure of diseases, Coorna or powder plays a pivotal role because of numerous reasons.

- Easy access to procure
- For the Scientist it is easy to authenticate and rec ognize them
- Manufacturing process is simple due to single step of powdering
- Labour involvement is minimum because the process is simple
- The time involvement in the manufacture is min imum
- No solvents are involved since it is a powder form and so the residual solvents wont occur
- Preparation of powder is more economical
- Powder of organically cultivated plant parts will eliminate all toxic elements
- Minor and major inorganic elements will remain for the selective absorption by the body
- Fibre content is more and it will not allow any constipation
- Since it is an entire form nothing is missing. Par tial is always remaining partial.

Above all it is mostly palatable, is an entire form from nature and allows the gastrointestinal tract to access what it needs and rejects the system what does not need. A wonderful phenomenon. It will be fascinating to observe the particles of the powder in a Microscope and see the creator's designs.

The following text narrates one of the important Coornas which is extensively used by Ayurvedic physicians. There are slight variation mentioned in different texts but the following is the formulation mostly accepted one by the Ayurvedic fraternity

Action: Antipyretic, Antiperiodic, Anti infective, Blood purifier, Digestive

Indication: Fever especially viral fever, Respiratory infection, Hepatitis, Enlargement of liver, Loss

Composition of Sudarsana Coorna:

Sanskrit	Scientific Name	Therapeutic Action	Quantity
Hareetakee	*Terminalia chebula*	Anti-inflammatory/ febrifuge/ laxative/antioxidant	1 part
Amalkee	*Emblica officinale*	Alexitric, immunomodulator	1 part
Bibheetakee	*Terminalia belerica*	Ant Inflammatory, anodyne	
Rajani	*Curcuma longa*	Antioxidant/ Anti viral anti-inflammatory/ Blood purifier	1 part
Ghana	*Cyperus rotundus*	Effective in intermittent and malarial fever	1 part
Darvee	*Berberis aristata*	Febrifuge	1 part
Kantakaaree	*Solanum suraltense*	Effective in fever, inflammations and cough	1 part

Gokshura	*Tribulus terrestris*	Anti inflammatory	
Sathee	*Kaempferia galanga*	Digestive	1 part
Sunthee	*Zingiber officinale*	Anti-inflammatory/ digestive/ antipyretic, Loss of apetite	1 part
Marica	*Piper nigrum*	Alexiteric, antiperiodic, bio enhancer	1 part
Granthika	*Piper longum*	Febrifuge/ expectorant/ bioavailability enhancer	1 part
Pippaleemoola	*Piper longum (root)*	Digestive tonic,expectorant	1 part
Moorvaa	*Chonemorpha microphylla*	Febrifuge, anodyne	1 part
Gudoochee	*Tinospora cordifolia*	Antiperiodic, anti-inflammatory , antipyretic	1 part
Citraka	*Plumbago rose*	Antiperiodic	1 part
Duraalabhaa	*Tragia involucrata*	Diphoretic, antiperiodic	1 part
Katukee	*Picrorhiza kurroa*	Antiperiodic, antipyretic, digestive, Hepatitis	1 part
Parpata	*Oldenlnadia umbellata*	Antipyretic	1 part
Traayantee	*Bacopa monnieri*	Anti-inflammatory	1 part
Vaalaka	*Coleus zylanicus*	Cooling, antipyretic	1 part
Nimba	*Azadirachta indica*	Effective in intermittent fever. Antiseptic/ refrigerantt, Skin diseases	1 part
Kushtha	*Sassuea lappa*	Febrifuge, anodyne	
Madhuyashtee	*Glycyrrhiza glabra*	Refrigerant, expectorant,	1 part
Kutaja	*Holarrhena antidysentrica(stem, bark)*	Febrifuge/ expectorant	1 part
Jeeraka	*Cuminum cyminum*	Anti inflammatory, anodyne	1 part
Bhaarangee	*Clerodentrum serratum*	Anti-inflammatory , Febrifuge	1 part
Vacaa	*Acorus calamus*	Anti-inflammatory/ anodyne/antipyretic	1 part
Tvak	*Cinnamomum zeylanicum*	Analgesic, febrifuge	1 part
Padmaka	*Caesalpinia sappan*	Refrigerant, Blood purifier	1 part
Useera	*Vetiveria zizanioides*	Febrifuge , diaphoretic	1 part

Note: Since Swertia chirata is obtained from Himalayas, at the time of non availability, Andrographis paniculata (Kalmegh) is being substituted.

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Kerala Ayurveda Research Award

Kerala Ayurveda Ltd. is today a major force in health care growing at a spectacular pace with new clinics, new market strategies, new products and new cures. Kerala Ayurveda is backed by advanced technology and spans across India and the US encompassing the main business units of Academy, Products, Clinics, hospitals, Resorts and Services. For more than a century Ayurveda fraternity has been lamenting about the need for research in the field of Ayurveda so that the science can exist, progress and flourish. Onset of postgraduate studies has naturally necessitated research activities at the academic level. Kerala Ayurveda feels that there is a strong need to promote Ayurveda and evoke interest in the younger generation to undertake more meaningful research and help rejuvenate the science of Ayurveda itself.

With this objective Kerala Ayurveda has instituted the Annual National Award known as Kerala Ayurveda Research Award in two categories on the basis of the thesis submitted by PG scholars in Ayurveda as partial fulfillment of the course. This year we are instituting the award as Kerala Ayurveda Research Award 2007 based on PG theses submitted to the Universities of India during the period April 2006 to March 2007.

There are two awards based on one thesis, an award for the scholar and another for the guide. There is only one award for the scholar of the best thesis of the year. This cannot be bracketed. The guide of the best thesis of the year too will have a cash award. The awardees are presented with a cash award, certificate of merit and a memento.

The award for the scholar is termed Gaveshakratna Award which carries a cash prize of Rupees two lakhs. The guide of the scholar selected as Gaveshakratna is presented with Acharyaratna award. It carries a cash prize of Rupees fifty thousand.

All the finalists except the winner are awarded with Appreciation prize of Rs.25,000 each and their guides are awarded with a prize money of Rs.10,000 each. This year there are three finalists excluding the winner. These scholars and their guides will also be presented with a certificate of merit and memento.

The candidates for the competition registered the titles with Kerala Ayurveda before 31st May 2007 in specific registration forms. There was no registration fee. The applications were scrutinized as per the byelaw of the award and were accepted. Accordingly the candidates submitted the print copy of original thesis as well as CDs of the same to us within the prescribed period. The candidates also submitted a certificate from the head of the institution that the thesis has been submitted to the University and that the University has approved it.

A three level screening was done to select the winner. The first level screening was done by a panel of experts with the following members on 5th & 6th of July 2007:

1. Dr. K. Murali, Reader, MD (Ay.) Govt. Ayurveda College, Trippunithura
2. Dr. K. Raghunathan Nair, Reader, Ayurveda College, Kannur
3. Dr. Manoj Kumar, MD(Ay.), Lecturer, VPSVAyurveda College, Kottakkal.
4. Dr. V. Gopakumar, MD (Ay.), Lecturer, Govt. Ayurveda College, Kannur
5. Dr. Prakash Mangalassery, MD (Ay.), Lecturer, VPSV Ayurveda College, Kottakkal.

The Second level screening was done by a panel of experts with the following members on 14th of July 2007:

1. Dr. C. Retnakaran, MD (Ay), Principal, Govt. Ayurveda College, Trippunithura
2. Dr. N.V.Sreevaths, MD (Ay), Principal, Ay-

urveda College, Coimbatore

3. Dr. T. Sreekumar, MD (Ay), PhD. Reader, Vaidyaratnam Ayurveda College, Thrissur.

4. Dr. N.K.M. Ikbal, MD (Ay.) PhD. Reader, Vaidyaratnam Ayurveda College, Thrissur.

5. Dr. P.P. Kiratha Moorthy, Reader, VPSV Ayurveda College, Kottakkal

6. Dr. C.V. Jayadevan, Reader, VPSV Ayurveda College, Kottakkal

The final selection will be conducted on 29th September 2007. The finalists have to present their theses and defend them before a select audience of experts and judges and followed by an interview by a board.

There are specific criteria of selection at each level and accordingly there are prescribed score sheets. Novelty of topic selected, Usefulness of the topic, Original contribution, Language, Scientific validity, Literary collection, Experimental work, Clinical trial, Presentation and Graphs, pictures, diagrams etc. were evaluated at each phase of the screening. No member of any of the selection committee is directly related to any of the candidates coming under his evaluation. Each member evaluated the theses and the scores awarded were tabulated and average was taken to rank the candidates.

There is a core committee appointed by Kerala Ayurveda to govern the entire procedure of selection of the Research Awards. The core committee consisted of: -

1) Mr. Sonjoy Mohanty, M.D & CEO, Kerala Ayurveda (Chairman)

2) Dr. C.R. Agnives, Editor in Chief, Kerala Ayurveda Vaidyam (Program Coordinator)

3) Dr. K. Anilkumar, Executive Director, Kerala Ayurveda

4) Dr. K. Rajagopalan, Director, Kerala Ayurveda

5) Dr. C.I. Jolly, Research Advisor, Kerala Ayurveda

All decisions concerned with the Research awards is under the powers of this Core committee.

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of apetite, Epigastric stress & Skin diseases.

Method of preparation:

Drugs mentioned above are cleaned and dried properly. They are separately powdered and sieved and weighed separately and mixed properly. The powder should pass minimum 50% through sieve no.BSS 85 and 100% pass through BSS 44 mesh sieve.

Organoleptic characters:

- Colour - Brown
- Odour - Characteristic
- Taste - Bitter

Physico-chemical Parameters:

The following physicochemical parameters are used to standardize the formulation in addition to the organoleptic characters

- Moisture content : 7.4%
- Total Ash: 7.74%
- Acid insoluble ash: 2.54%
- Alcohol soluble extractive: 11.45%
- Water soluble extractive: 21.8%
- pH of 10% solution: 6.2
- Heavy metals: Within limits
- Microbial load: Within limits

Dosage: 2 to 3 grams daily

Shelf life: 1year

Concluding remarks:

From olden times Sudarsana Coorna saved as well when modern medicaments were not available. Even now, being a natural product entity which is easily biodegradable and very much compatible, it has an edge over modern dosage forms. Since extracts are not single molecules, the dosage will be slightly higher. But time tested classical medicines are part of our life, looked after us in all difficult times.

Fever and pain makes a healthy man shaky and incomfortable. Those are the times Sudarsana coorna comes to our rescue.

Swertia chirata (Roxb. ex. Flem) H.Karst

Dr. Sarala Samuel, Dr. Jolly, and Mr. Raison Raphael
R&D Dept. Kerala Ayurveda Ltd.

OTHER NAMES

Sanskrit: Kiraatatikta

Malayalam: Kiriyaat

Hindi: Kalmegh

English: Gentian



DISTRIBUTION

This plant is a native of temperate Himalayas, found at an altitude of 1200–3000 m (4000 to 10,000 ft), from Kashmir to Bhutan, and in the Khasi hills at 1200–1500 m (4000 to 5000 ft). It can be grown in sub-temperate regions between 1500 and 2100 m altitudes. The genus Swertia Linn. consists of annual and perennial herbs.

PLANT DESCRIPTION

The plant can be grown in a variety of soils with sandy loam rich in carbon and humus. It is also found in open ground and recently slash-and-burnt forests. S. chirayita has an erect, about 2–3 ft long stem, the middle portion is round, while the upper is four-angled, with a prominent decurrent line at each angle. The stems are orange brown or purplish in colour, and contain large continuous yellowish pith. The root is simple, tapering and stout, short, almost 7 cm long and usually half an inch thick.

Flowers in S. chirayita is in the form of numerous small, axillary, opposite, cymes arranged as short branches and the whole inflorescence is 2 ft long. Flowers are small, stalked, green-yellow, tinged with purple colour, rotate and tetramerous the corolla is twice as long as the calyx and divided near the base into four ovate–lanceolate segments. The upper surface of the petal has a pair of nectories covered with oblong scales and ending as fringes. Fruit is a small, one-celled capsule with a transparent yellowish pericarp. It dehisces from above, septicidally into two valves. Seeds are numerous, minute, many-sided and angular.

The plant is harvested for the drug industry when it sets into flowering in July–September.

PLANT CONSTITUENTS

The drug (chiretta) obtained from the dried plants. Chiretta is reported to contain a yellow bitter acid, ophelic acid, two bitter glucosides, chiratin and amarogentin, gentiopicrin, two yellow crystalline phenols, a neutral, yellow crystalline compound, and a new xanthone, swerchirin. Amarogentin is one of the most bitter substances known.

Secondary metabolites found in Swertia is summerised in the following table. Swertia possess a large number of properties and its major activity is as an antipyretic anti-inflammatory and analgesic

Secondary metabolites of Swertia chirata

Compound	Chemical nature
1, 3, 5, 8-tetrahydroxyxanthone	Xanthone
tetrahydroxyxanthone	Xanthone
trihydroxy-5-methoxyxanthone	Xanthone
1, 5, 8-trihydroxy-3-methoxyxanthone	Xanthone
1, 8-dihydroxy-3, 5-dimethoxy xanthone/swerchirin	Xanthone
1, 8-dihydroxy-3, 7-dimethoxy xanthone/7-O-methylswertanin	Xanthone
1-hydroxy-3, 5, 8-trimethoxy xanthone	Xanthone
1-hydroxy-3, 7, 8-trimethoxy xanthone	Xanthone
2,5-dihydroxyterephthalic acid	Aromatic carboxylic acid
21- ahop-22(29)-en-3-b-ol	Triterpnoid
Amarogentin	Seco-iridoid glycoside
Amaroswerin	Seco-iridoid glycoside
Chiratanin	Dimeric xanthone
Chiratenol	Hopane triterpenoid
Chiratol/1, 5 dihydroxy 3,8-dimethoxyxanthone	Xanthone
Decussatin	Xanthone
Enicoflavine	Triterpenoid alkaloid
Episwertenol	Triterpenoid
Erythrodiol	found in Hexane extract
Gammacer-16-en-b-ol	Triterpenoid
Gentianine	Triterpenoid alkaloid
Gentiocrucine	Triterpenoid alkaloid
Kairatenol	found in Hexane extract
Lupeol	Triterpene alcohol
Mangiferin	Xanthone
Mangostin	Xanthone
Oleanolic acid	Triterpenoid
Pichierenol	Swertane terpenoid
Sweroside	Seco-iridoid glycoside
Sweroside-2¢-O-3²,5²-trihydroxy biphenyl-2² carboxylic acid ester	Seco-iridoid glycoside
Swerta-7, 9(11)-dien-3-b-ol	Swertane terpenoid
Swertanone	Triterpenoid
Swertenol	Triterpenoid
Swertianin/1, 7, 8-trihydroxy-3-methoxyxanthone	Xanthone
Syingaresinol	Lignan
Taraxerol	Triterpene alcohol
Ursoilic acid	Triterpenoid
b-Amyrin	Triterpenoid alcohol
b-Sitosterol-3-b-D-glucoside	Sterol
Ø-Taraxasterol or heterolupeol	found in Hexane extract

STRUCTURE OF COMPOUNDS

Amarogentin

Amarogentin, bitter principle of Swertia chirayita (Chirata) has anti-leishmanial activity.

Swerchirin, xanthone from Swertia chirayita (Chirata) has antidiabetic activity. Researchers compared the effects of mode of action of three different hypoglycemic agents; centipiperalon, tolbutamide and swerchinin in normal as well as diabetic rats. Except in rats with severe pancreatic damage, swerchinin showed better glucose lowering effect compared to tolbutamide.

PHARMACOLOGY

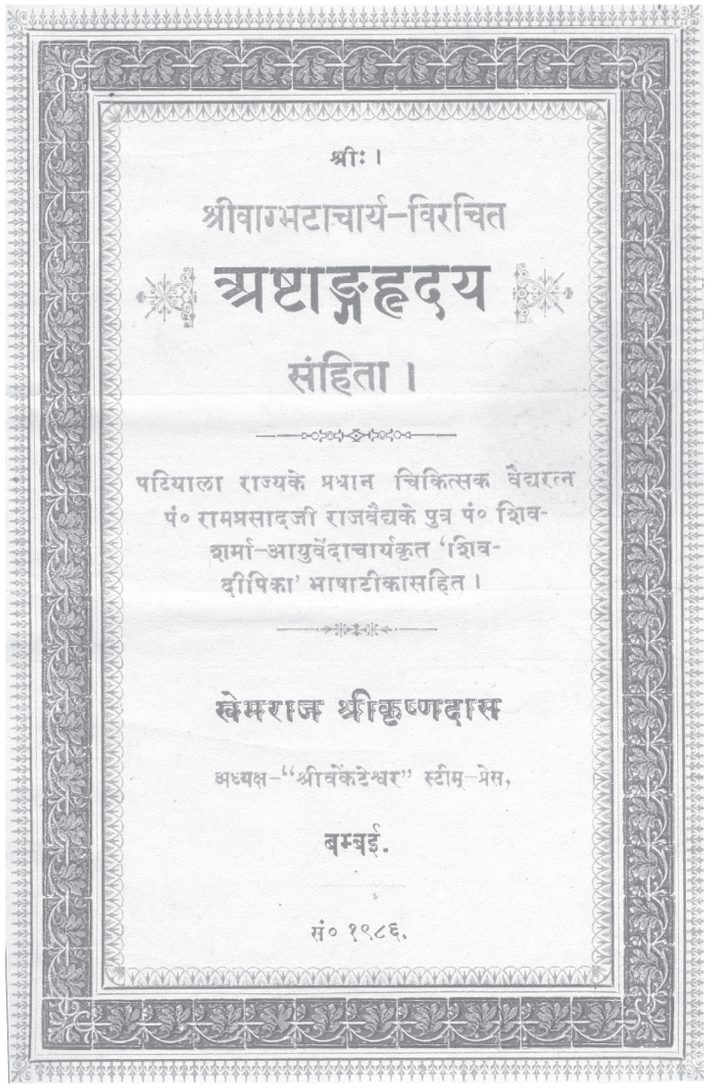
Among the different species of Swertia reported in India, Swertia chirayata is considered the most important species for its medicinal properties. The bitterness, antihelmintic, hypoglycemic and antipyretic properties are attributed to amarogentin (most bitter compound isolated till date), swerchirin, swertiama-

(contd. on page 24)

Kerala Ayurveda VAIDYAM A JOURNAL ON EVOLVING AYURVEDA

Wisdom from Patiala

Pandit Shiv Sharma is a noted luminary of Ayurveda who lived in the twentieth century CE. Born to the famous ayurvedic scholar Pandit Ram Prasad Sharma, court physician of Patiala, as the eldest son on the 12th day of March 2006 he had his education in Patiala. After studying Sanskrit he obtained the degree of Ayurvedacharya from the Government Ayurveda College, Patiala. He joined as a professor at Dayananda College, Lahore (now in Pakistan) in 1928. Later, at the time of partition of India, he migrated to Jhansi as the Vice-Chancellor of the Ayurvedic University of Jhansi. He is a great leader and organizer. His literary and scientific abilities are illustrated by his great works.


श्रीः ।

श्रीवाग्भटाचार्य-विरचित

अष्टाङ्गहृदय

संहिता ।

पटियाला राज्यके प्रधान चिकित्सक वैद्यरत्न पं० रामप्रसादजी राजवैद्यके पुत्र पं० शिव-शर्मा-आयुर्वेदाचार्यकृत 'शिव-दीपिका' भाषाटीकासहित ।

खेमराज श्रीकृष्णदास

अध्यक्ष-"श्रीवेंकटेश्वर" स्टीम्-प्रेस,

बम्बई.

सं० १९८६.

His first work 'System of Ayurveda" was in English. This was written to provide valid information of Ayurveda to modern thinkers on Ayurveda who found it difficult to follow original Sanskrit treatises. The frontal page, provided here, is from his second work namely Shiv Deepikaa Hindi commentary of Ashtanga Hridaya. The book was first published by Khemraj Shrikrishna Das at is Shri Venkateshwar Steam Press, Bombay in 1929. The book is a complete commentary of the full text of Ashtaanga Hrdaya. Critics have esteemed this commentary as the best and this Hindi commentary is the forerunner of many other Hindi commentaries such as Vidyotinee commentary. At a period when Vaagbhata was not much honored in North India as they revered either Caraka or Susruta, the Hindi commentary of Shiv Sharma paved way for familiarization of the book in the Hindi belt through his clear commentary. Perhaps Pandit Shiv Sharma was inspired by his father who edited Ashtaanga Hrdaya with its various commentaries.

As an organizer and leader the contributions of Pandit Shiv Sharma deserve special mention. He was the elected President of All India Ayurveda Congress for six times. He was member and Chairman to many expert committees of Ayurveda constituted by Central and State Governments. In 1960, as per the request of the Government of Ceylon he served as Columbo Plan Advisor to set up Bandaranaike memorial Ayurvedic Research Institute of Asian Health Organization. This institute rose to fame by his earnest hard work. He had toured in USA to propagate Ayurveda there. Later he served as Advisor on Ayurveda to the Planning Commission of India. Considering his services he was even nominated as a member of parliament.

Apart from his official and literary contributions, Paditji was also a very good physician. He was a dedicated follower of pure authentic Ayurveda and was always at war against the westernization of Ayurveda. Of course he was modern in his outlook. But making changes in the core of Ayurveda for fancy without scientific support was never tolerated by him. Panditji departed us on 20th May 1980, but the spirit of his heritage is still living in us.

(contd. from page 7)

non-edible substances like dry leather. But starvation is not a mental disease except in anorexia nervosa. Anorexia and loss of appetite are two different clinical entities. They are related with food intake and nutrition. Hence they are concerned with taste. They may have a psychological background. There are pathological changes of tastes too. One may have a bitter taste, acrid taste or sweet taste in the mouth due to diseases.

When we taste things in a haste we are unable to discriminate what we taste and even identify what the taste is. Our tasting becomes just an ordeal, tasting for tasting. It is a waste. It won't contribute to mental or physical satiety. Satiety is the most important benefit of consuming. Consumption for consumption's sake is a futile exercise. That is why Ayurveda advocates a peaceful meal than a hasty fast food. A slow meal also increases the time of experience of taste. Once swallowed, taste is immaterial. So we like to escalate the taste of the toffee and want to keep it in our mouth for long. But remember, if the toffee is not dissolving in our mouth we will have to spit it out. We cannot afford to keep a toffee in our mouth forever.

(contd. from page 22)

rin are other active principles of the herb.

TRADITIONAL USES

According to Ayurvedic pharmacology chirata is described as bitter in taste (rasa). The thermal action (veerya) of S.chirata is defined as cooling (seeta). Chirata is light (laghu), ie, easily digestable and ruksha (dry).These characters drain heat from the blood and liver. Its use has also been mentioned in unani medicine. Concoction of chirata with cardamom, turmeric and kutki is given for gastrointestinal infections and along with ginger it is considered good for fever. When given along with neem, manjishta and gotukola, it serves as a cure for various skin problems. This herb is a bitter tonic, stomachic. It is useful in liver disorders, eyes, heart.

Swertia chirayita is used in British and American pharmacopoeias as tinctures and infusions.

The biological activities are summarised as follows

Biological activities attributed to S. chirata

Activity

Alternative, antihelmintic, anti-leishmaniak, anticholinergic, anticonvulsant, anthelmintic, anti-inflammatory, antimalarial, antipyretic, antitubercular, astringent, bitter, cardio stimulant, choleretic, cholagogue, CNS depressant, emollient, hepatoprotective, hypnotic, hypoglycemic/ antidiabetic, laxative, secretagogue, stomachic, tonic, undersedative & vermifuge.

As Indians we can proudly state that this medicinal plant is indigenous to temperate Himalayas. Its medicinal usage is reported in Indian pharmaceutical Codex, the British and American Pharmacopoeias. As per the classical ayurvedic text, the plant is used as a bitter tonic in treatment of fever and for curing various skin diseases.

Swertia chirata plays a vital role in the classical formulation namely Sudarshan churna. Herbal medicines are used throughout the developed and developing countries as home remedies and acts as raw material for the pharmaceutical industry. It is necessary to establish internationally recognized guidelines for assessing quality of these herbs. WHO/OECD guidelines support the national standards and regional norms.

Posture and Poise

Dr. Yatish Agarwal

The way you sit, stand and walk, work on the desk, lift and carry objects, choose footwear, travel, sleep, maintain your body weight and the positive energy you exude has a telling effect on the health of your back. If you wish to reduce the wear and tear of the muscles, bones and joints of your back, make it a habit to keep a good posture. It also adds considerably to your poise.

Sit Correctly

Sitting puts a lot of strain on the lower back. There is a fifty percent higher compression on the lower back discs than if you were sitting. Think about your daily routine whether it is reading, working at a desk, watching television, traveling, or eating and you will probably find that you spend most part of your walking hours in a seated position. Despite this, few of us pay sufficient attention to how we sit. The basics are simple – sitting correctly simply means that:



- Your feet are supported on the floor.
- Your knees are bent at a 90- degree angle.
- Your hips are at the same height or slightly higher than your knees.
- Your back is fully supported – especially in the hollow curve.
- You sit far back into your seat.
- Your head and shoulders are in line with your hips.
- Your abdominal stabilizers are contracted.

Relaxing at home

The seeds of posture related back pain are often sown as people sit at home, relaxing from the stress engendered by a hard day at work. Sometimes we are plain too lazy to care about posture, but the problem may also relate to ill designed couches or chairs.

Use back-friendly sofas and easy chairs

Furniture designers should all receive a basic lesson about the needs of the human back. The spine's natural curve needs support in the lower back and much home furniture does not provide this.

Sofas and easy chairs can cause back problems if they are too soft, the seat is too low and too deep, or the back rest is too short. An overly deep seat forces you to either sit forward with your feet on the floor, a position that encourages you to hunch, or with your lumbar region against the back rest and your feet of the floor. Both these positions may bring on back pain. If the seat is too soft or excessively low, then also you could be in trouble. You are likely to sit in a position that puts excess strain on your spine.

A back-friendly easy chair allows you to sit with

Dr. Yatish Agarwal (e-mail : dryatish@yahoo.com)
**Reproduced from 'Dream - 2047' August 2006*

your lower back firmly against the backrest and both feet flat on the floor. The backrest should also be shaped to give some extra support to the lumbar region. If it is not, place a cushion or two behind the small of your back. If the seat is two low, you may be able to have new, higher legs fitted by your carpenter.

Watch your posture

Even the best designed sofas and armchairs may not protect your back if you do not pay attention to your posture. Sit upright, make sure the small of your back is supported and keep your feet on the floor. Do not slide into a lounging position. Many people do, but that's not correct. By sliding down the chair you cause an excessive rounding of your back, and this position subjects your back to additional strain.

Watching television or reading

While watching television, it's best to sit in a chair positioned in front of the screen. This way you do not have to crane your neck see the picture.

Many people, however, like to lie in bed, or on their side with their head on the armrest of the sofa while reading, watching television or dozing. It's a habit you could do well without.

The angle of the armrest strains the neck, leading to neck pain. If you must take this position, try to keep your neck in the neutral position by sitting up a bit. Support your neck with cushions and try to move every thirty minutes to even the strain.

The position of the television is also important. It should ideally be pleased at your eye level. This way you will be able to keep your head in the neutral position while watching. A television kept too high or too low puts strain on the neck.

Take a break

Whatever you do, take a break every now and then. Change your position. Stand up and move around. Stretch your back. It does your back a world of good.

Stand and walk correctly

It is important that you allow your spine to retain its natural shape by standing and walking correctly. Keep your posture as upright as possible. As you stand and walk, make an effort to straighten up.

Keep your stomach in, your back straight and try not to hunch your shoulders. But do not overdo it. Do not try to march around with your upper body rigid like a sipahi on parade, as this can also cause strained and painful muscles.

If you stand for a long while, stand with one foot firmly planted on the ground, and rest the other on a ledge, stone or railing. A footstool is extremely useful. Rest your back against the wall. Use a handrail. Change legs every few minutes.

Workplace etiquette

If your job makes you feel like a hunchback, you need help. Follow these simple guidelines:

Find a comfortable position: Use a chair that supports your lower back's curve or place a rolled towel or pillow behind your lower back. The seat of your chair should not press on the back of your thighs or knees. If you can afford to procure a new chair, find one with the attributes described here.

Relax : Check your shoulders from time to time. Are they tense? Take three deep breaths. Make a conscious effort to relax them.

Change positions often: Get up and move. For example, stand while you're on the phone. Print out computer files, move to a new location and proofread on paper instead of the monitor.

Avoid high-risk moves: Don't bend continuously over your work. Hold reading materials at eye level. If you are on the phone a lot, get a headset. Too much twisting, bending and reaching fatigue your back and leave it vulnerable to injury.

Rest your feet: If you stand for long periods, rest

one foot on a footrest or stool from time to time. Change leg positions often.

Lift objects properly: Carry objects close to the body at about waist level.

Working on a computer

Computers are increasingly becoming a part of life in each and every vocation. If you work long hours at a computer, here's what you must be careful about:

● Keep your computer monitor and your keyboard at a proper height. The computer screen should be positioned straight in front of you. It should be 15 degrees lower than the height of your eyes and about an arm's length away from you. In the seated, position, your work surface should ideally be at elbow height. So should your keyboard. Lighting should be adequate and the screen should be in focus.



Simple stretching exercise can help prevent strain on the neck back

● Sit comfortably upright. Use a proper work chair. Avoid slouching.

● If you do a lot of word processing, you should consider getting a stand to hold documents. Placed adjacent and at the same height to the screen, the stand will limit straining. You will not need to look up and down repeatedly.

● Use a good wrist pad and armrests.

● If you have problems with your eyes, consider getting a bigger screen so that you can see more clearly without having to poke your chin forward.

● Make sure your eyeglasses allow you to see the screen without tilting your head. If you use bifocal lenses, avoid wearing them while working at a computer. If you do, you will tilt your head back to look through the bottom of your glasses, and this shall strain your neck.

● Often we tend to sit in front of the computer for long periods of time, forgetting about posture and not checking whether we are actually comfortable. This can damage your back. Take 3D-second micro-breaks every 30 minutes. During these breaks move your neck from side to side and turn your back from left to right; this will help prevent strain on the neck back.

● Don't type while cradling the phone on your shoulder. Use a speakerphone. If you spend much time on the phone, consider using a headset.

Finding a good worktable and chair

Never hesitate in investing in a back-friendly worktable and chair - it's a must for maintenance of good posture. You may decide by looking for the following virtues:

Worktable

● The table should be of suitable height such as you do not suffer strain on the back while working. If it is too low, you might stoop during work.

● A desktop that has a slant or tilting top is ideal for reading and writing.

● It should also allow leg space under it, to prevent undue arching forward of the back and the neck.

Desk chair

● Sit in a desk chair that supports your upper spine and your lower back and keeps your knees and hips level. Ideally, you should be able to adjust its height to suit your height as well as the level of your desk.

● It must be able to swivel, so that your body does not have to turn from left to right all the time.

● It must support the hollow part of your lower back.

● It must have armrests that are as high as your

elbows, when your arms are bent at 90 degrees. A chair with arm supports helps relieve neck tension.

● It must be the right height for the surface at which you are sitting, thereby minimizing the amount of time you will have to bend down or lift your arms excessively to do your work.

● It must have a soft but firm cushion.

Footwear selection

Your shoes also influence your posture. They could be the culprits behind back pain. Look for the following qualities when you next shop for a new pair:

Wear low-heeled shoes: Stiletto-type heels are the worst, but all high-heeled shoes may cause problems. They hollow the lower back, push the whole body out of alignment and strain the leg muscles.

Well-cushioned, comfortable walking shoes with a heel of not more than 2.5 cm (1 in) are the most back-friendly footwear. For smarter shoes, choose a pair with heels that are less than 5 cm (2 in) high and try not to stand for long periods. Kick them off soon as you are home.

Tie your laces: If you wear shoes with laces, tie them up properly. Wearing them unlaced causes you to curl your toes in order to grip the soles, transmitting tension through your legs and into your back.

Lifting and carrying

Your back has three natural curves - inward at your neck, outward at your shoulder blades and inward again at the small of your back. Whether you're carrying a heavy shopping bag, lugging a suitcase or toting your toddler, you must preserve the proper alignment of these curves to prevent back injury.

Think through your task: Clear the space for proper lifting. Make sure the pathway and your destination are clear of obstacles. Would the task be easier if you used a cart? When possible, push a heavy load rather than pull.



Lift with your legs: Position your feet shoulder-width apart. Place your feet firmly - toes pointed slightly outward, one foot slightly ahead of the other. Stand as close to the load as possible.

Never stoop to pick the load from the ground. Instead, bend from your knees, and use your powerful leg muscles to lift the load. Keep your back as upright as possible. Hug the load. As you lift, tighten the abdominal muscles that support your spine.

While holding the load, avoid turning or twisting. Carry the load close to your body. This way it puts less force on your lower back.

Travel and your back

Driving in a car: If you live in a big city, you could be spending considerable amount of time in the car, either driving to and back from work or on social and domestic visits. To protect your back, here's what you must do:

Sit up : Try to sit upright with your chin tucked in rather than stuck out.

Do not slouch: Do not grip the wheel too tightly, try. not to hunch your shoulders and keep your head up. After driving for a few minutes, most people find they unconsciously slump down a bit. Keep a check on this.

Adjust your seat: Your seat should be firm and offer support for the lumbar region of the back. It should be adjusted to allow you to sit upright with your arms relaxed.

Your legs should be comfortable, and you should be able to depress the clutch pedal or accelerator with ease. If the seat does not provide adequate lumbar support, use a cushion.

Adjust the headrest: Adjust the headrest fitted to your car seat, such that it supports your head in the event of a sudden stop that could abruptly jerk your neck backward and forward.

Stop and stretch: A long car journey can be stressful for the back. Even in a car with the best suspension, a continuous series of minor shocks and stresses are transmitted up the spine. Therefore, the next time you embark on a trans-city journey by car, try to build in time for at least two-hourly stops to get out and move around. Step out and stretch yourself. This will ease the strain on the back and hamstrings.

Road and train travel

Travelling in buses and trains is rather stressful for the back. You must remain seated in the same posture for considerable periods of time. There's however one recipe to ease your back. If you are a bus passenger, make sure you get out and stretch your legs at every available rest stop. On trains, move out of your seat every 30 or 40 minutes to exercise your back by strolling up and down the passageway.

Travelling by air

Air travel holds many risks for those with back problems, beginning right at the start of the journey. The seats in airport lounges usually have low backrests and little, if any, lumbar support. If you have a long wait, use a rolledup towel, sweater or coat to give you some lumbar support. Get up every 30 minutes and do some simple muscle stretching or go for a walk.

The standard seats on most aircraft are not usually particularly comfortable and the rows are often so close together that there is not much legroom. However, a cushion placed at the small of your back will give you some extra lumbar support. Most airlines provide a cushion. If not, a folded blanket works equally well.

Lugging baggage

Some people travel real light and manage to do just with a shoulder bag. But there are rules for even that. Change it regularly from shoulder to shoulder to equalize the strain on your spine and upper back. Heavy shoulder bags carried for any length of time on one side of the body or with the strap around the neck can strain the back. It is far better to try and divide a heavy load between two handbags.

If you have to take a single large suitcase, buy one with stable wheels or use a folding luggage trolley to lug it around. Fortunately, most airports in this part of the world let you use a cart, which are lined right next to the point of entry and the baggage claim. Still, there are areas over which you have to carry the bag, for example up and down stairs. Make sure, too, that the case is not so tall that you have to bend your arms to keep the bottom from bumping on the ground. This can strain the back. Carrying a single, heavy suitcase for any length of time is almost guaranteed to cause back trouble. Equalize the lo~d on your spine by dividing your luggage. Take two small cases.

Beds and backs

People spend up to a third of their lives in bed and yet, often do not care about how good their sleeping apparatus' is. If your bed is sagging, worn out or uneven, and you wake up feeling stiff and sore, you

have only yourself to blame. A bed, which allows the spine to sag, strains the muscles and ligaments of the back. If that's the case, you should consider buying a new one.

The proper bed

The ideal bed should be both supportive and comfortable. It should be firm enough to support your back, and at the same time soft enough to mould to the contours of your body and support its hollows and curves. A bed with a wooden board as its top, covered with a good 5-8 em-thick mattress, which is soft but firm and does not have any holes or indentations, makes a perfect bed.

The best sleeping position

Sleeping on your side: The best sleeping position for your lower back is to sleep on your side. Let your legs be drawn up slightly toward your chest and place a pillow between the legs. By sleeping in this neutral position, you do not risk stretching your vertebral column.

Sleeping on your back: Lying on your back is not a bad second option. If you experience discomfort in your lower back in this position, place a pillow under your knees. It will help ease the strain caused by the pull of the hip flexors and hamstrings.

Sleeping on your stomach: This is a far from ideal position, but if it's your favourite, it is advisable to place a pillow underneath your stomach. This will prevent excessive hollowing. The prone position does put some strain on your neck because it is forced to turn to the side. If you like sleeping on your stomach, try and turn slightly so that you are half on your stomach and half on your side.

Pillow talk

Your head pillow should be just the right height to keep the neck in the neutral position and not bend it forward or backwards. It is important to make sure that your shoulders are not on your pillow as it is only your neck and head that will benefit from support. You will need more height in your pillows when you sleep on your side than when you sleep on your back.

DECLARATION

The following particulars regarding the ownership of *Kerala Ayurveda VAIDYAM the English Quarterly Journal are published as called for, by the*
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Printer & Publisher

Ernakulam
30th Sep. 2007

(contd. from page 10)

ar level above 140mg/dl after 2hrs of taking 75gm. Glucose is indicative of Gestational Diabetes Mellitus (GDM).

Those who are diagnosed should be treated actively. Irrespective of the lab values the target groups should follow the preventive programme. Gestational diabetes mellitus should be given special attention.

Current health strategy gives paramount importance for early detection of gestational DM. If found positive adopt measures to keep the blood sugar level normal. This is the simple step to prevent two individuals becoming diabetic in the future. Current studies reveal that 95% cases of GDM get good control by simple diet management itself. Women need to avoid large meal and instead take two small meals. The said redistribution of calories helps to keep blood sugar level normal

Ayurveda advocates a great number of facts out of which most of them belongs to evasion of etiology. *Nidanaparivarjana* the basic pathology starts with vitiation of doshas which results in the increase of Kapha and Medas. Dietary regulations and daily living activities comprises the avoidance of

1. Excess sweets and carbohydrates and sugar.
2. In take of salty food and excess in take of curd
3. High calorie food
4. Foods which passed their shelf life
5. Refrigerated food items.
6. Fresh grains
7. Alcohol
8. Excess intake of meat which contain more fat, e.g. mutton, pork
9. Excess use of milk
10. Excess sleep
11. Sedentary life style

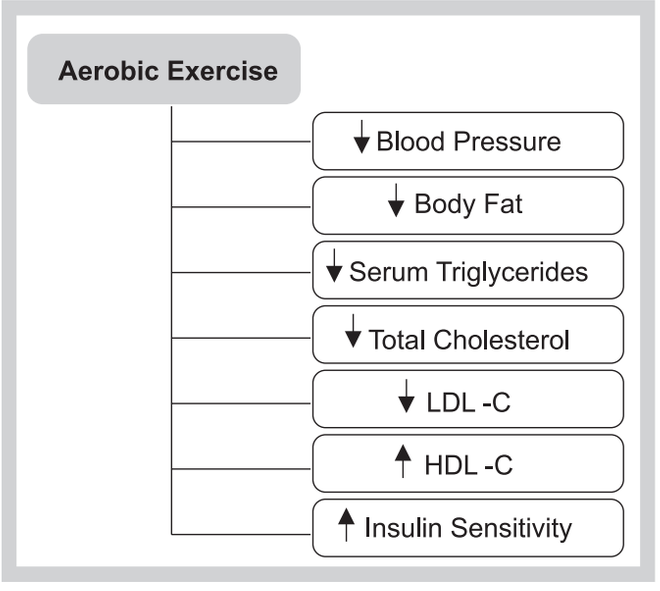
Avoidance of cigarette smoking, controlling of hypertension and dyslipidemia, keeping BMI with in normal limits are also should be placed in the forefront of prevention. If these measures are neglected metabolic derangement can manifest at an earlier stage.

General Measures

One who expects high standard in health care strictly follows the advice for daily regimen, seasonal regimen and designs his activities accordingly. In particular those who are at high risk for diabetes mellitus can focus on all acts that would wash off the chances for vitiation of Kapha and medas. This is because an abnormal increase in Kapha and medas is the basic mechanism that triggers the pathogenesis of diabetes mellitus.

1. Physical exercise :

Vyaayaama (exercise) will help in reducing medas to a great extend. It is contraindicated in conditions like *Vaatapittaja* diseases. It is restricted to the geriatric and pediatric cases. Pregnant women and those with cardiovascular diseases should seek expert opinion regarding physical exercise. Please see the benefits aerobic exercise from the chart below.



2. Udvartanam (Powder massage) :

It helps to alleviate Kapha and Medas. It can be practiced by the patient and the patient should be advised to practice it preferably with a Choorna (Powder) preparation.

3. Rasaayana therapy :

Rasaayana therapy done to a healthy middle aged man, as per the treatment principles, could prevent diabetes mellitus

Changes in the formulation of drugs that do not subvert the basic essence of treatment can be tried. Omission of adding jaggery while preparing the drug is one among them. We should bear in mind Aacarya's advice regarding this appropriate changes according to the change of time – *'Yugaanuroopani rasaayanaani'*

However it is emphasized that good moralities and realization of spirituality is the cornerstone of preventing diseases and most often described as Aacaara rasaayana in ayurvedic classics.

Emerging higher degrees of prevention in Ayurveda?

Higher degrees of prevention aim to reduce or limit impairments and disabilities, minimize suffering caused by existing departures from good health and to promote patients adjustment to irremediable conditions. Rehabilitation centers for DM based on Ayurvedic treatment modalities should emerge. If supported by modern medical facilities this can bring wonders. Its ultimate aim should be to reduce patient's sufferings to a minimum. Remember in the success of rehabilitation clinics a major role is played by the well disciplined and high standard nursing care. By moving in the right direction and pulling out the positive aspects from the inner core Ayurveda can contribute much in this area.

(contd. from page 16)

example, the medicated ghee Kalyaanaka ghrta mentioned in the context of insanity (unmaada) is also indicated in sub-fertility. Generally most of the formulations prescribed in ayurvedic psychiatry find utility in the treatment of sub-fertility. This establishes the role of psychic factor in the generation of sub-fertility.

Identifying the exact nature and cause of sub-fertility and removing it is of prime importance in the treatment of sub-fertility. Success in treatment is not dependant on the luck factor. Correct diagnosis in ayurvedic lines is a pre-requisite of any ayurvedic treatment. Treatment should not be just catalogue based. Judicious application of all modalities including psychiatric and psychological assistance, providing correct sexual education to the couple and even attempting divine treatment consisting of meditation, pilgrimage, fasting, donations and sacrifices along with medication might help the childless couple to solve their problem.

Solicited

Those who wish to publish their scientific articles related to medicine, in **Kerala Ayurveda Vaidyam** may please send them to the following address. The articles should be in CD, in Microsoft Word program using Times New Roman or Ariel font.

Any picture to go with the article should be Windows compatible. A printout of the article also should be sent.

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