



## Syamaparni - Camellia sinensis

Yearning to sip a cup of hot tea which but also a status symbol, and it comes as most of us like to do especially in ■ the cold monsoon days. Tea today is perceived as the quintessential British drink, but it has a long and complex history: its roots are deeply tied to ancient Chinese culture. It is difficult to tell where and how the first cup of tea came to be brewed. Some stick to the legend Emperor Shen Nung of China came across the Camellia Sinensis plant back in 2737 BC; a few leaves stirred by the wind fell in to a pot of boiling water as his troops took refuge under the tree, giving the world its first taste of tea. Others claim that tea originated in 1500 BC-1046 BC in China and was discovered by the Shang Dynasty as a medicated drink. There are other gruesome tales that tell of the origin of tea; the founder of Chan Buddhism, Bodhidharma, accidentally fell asleep for nine years and woke up in such disgust that he decided to cut off his own eyelids. It's believed that these took roots in the ground and grew to become the first tea bushes.

Whether or not these legends have any real facts attached to them can never be decoded, but the point of the matter is that tea has played a significant role in Asian culture for centuries and become a staple beverage. It is not just a curative no surprise that its popularity spread to the world over the years.

Chinese varieties of tea were first introduced in India by the British. India has a distinct tea history for thousands of vears before the British invasion. Tea was already present in north eastern parts of India but was mostly used for medicinal purposes. Today, India is the largest producer, consumer and exporter of tea after China.

In classical text books of Avurveda like Bhayaprakasha Nigandu, Yogaratnakara. Avurveda viinan and Saligrama Nigantu have clearly mentioned about the qualities. It is said to be hot in potency and light in nature with predominance of astringent and bitter taste. It promotes appetite and correct the digestive power, pacifies kapha and pitta dosha, vitiate vatha dosha at times.

Tea has antioxidants which prevent the body's version of rust and thus help to keep us young and relieve stress. Traditional teas have less than 50 percent of caffeine what typically is found in coffee. Tea may reduce your risk of heart attack and stroke. Black Tea may help protect vour bones.

Black tea contains chemicals called flavonoids which prevent brittle bones. Flavonoids are already linked with lowering cancer and heart disease risk. However, the addition of milk to the tea completely blunts the tea's artery-relaxing effects. L.theanine is an amino acid in tea that calms the mind vet keeps it alert and focused at the same time. Poultice of the leaves applied locally helps to stop bleeding.Decoction of tea is flavoured with cardamom, clove, cinnamon, ginger

Though there are number of benefits for tea similarly excessive consumption may lead to much health issues. Still tea is the second largest consumed beverage in the world as "a tea in the morning" defines so much in humans life and there is an





## Kandharasana

iving with back pain? Yoga gives answers for many of the issues related with spine, pelvic diseases, and menstrual disorders so on.

Kandharasana is one of the most effective spine relaxing posture which literally means shoulder pose in Sanskrit. As the weight of body parts are balanced on shoulders, hence the name.

#### How to do:

First of all, lay flat on your back. Then bend your legs at the knees and place the feet so that the heels are near or touching the buttocks.

The feet should be flat on the floor.Grasp the ankles with your hands and relax the whole body. If you are not able to hold or touch your ankles then just place the palms close to the heels.

While inhaling, arch your trunk upwards, lifting the buttocks. Try to push your chest and navel as high as you can without moving the feet or shoulders.In the final position of this pose, the weight of your body should rest on the head, shoulder, neck, arms and feet.

Hold this pose as long as you are comfortable. While exhaling, slowly lower your buttocks and trunk down to the floor.

Rest for a short time and then repeat the practice. This asana can be utilized as a counter pose for forward bending asanas

- Helps in proper alignment of spine and strengthens shoulder
- Relieves backpain and muscle spasm over lower back.

- Improves the digestion by stretching, the colon and abdominal area.
- Apart from helping women with menstrual disorders, it also helps bear vaginal discharge due to infections.
- This is one of the excellent asanas for helping to alleviate sexual malfunctions and to prevent any tendency towards miscarriage

#### **Contraindications**

Women in advanced stages of pregnancy should not practice, however after childbirth practice of this asana will help the abdomen regain its normal shape.

People with peptic/duodenal ulcers and or with abdominal hernia, cervical spondylitis or neck pain also should not practice this asana

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"Nature has the upper hand. So far it has 'gently' protested, but....." words of concern from a compassionate human being and doctor par excellance- Bernard Lown.

Rarely a day passes without some spectacular weather event, without nature wreaking havoc some where, without a fractured climate record. There was a time when work, rest and leisure were deeply related with nature, changing seasons and traditions. They make us remember those lovely days of peace and prosperity. Science and technology revolutionize our lives, but memory, tradition and myth frame our response. The art related to medicines is based on human values that nourishes the science that 'not just cures but heals'. Eying through nature's point of view Roots' team observes medical science; as a never ending quests of the study of man; not just the working of the physical body but of the mind and the relationship between man and his environment and man as an integral part of nature. And as we stand with our feet rooted firmly on traditional wisdom; we feel that a scientist is constantly walking a tightrope between blind faith and curiosity; between expertise and creativity; between bias and openness; between experience and epiphany; between ambition and passion; and between arrogance and conviction - in short, between an old today and a new tomorrow.

Science and tradition are not at odds. Let our glance be illuminated by science—by the science which brings man closer to God,—and simplicity and unity shine on all sides through this Christmas and New Year.



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## 'Born' Specialist

he moment we entered we saw seven year old Parvathy, with a broken leg who came with her father Rajeev, a carpenter. She sits on an iron bench on which, little bowls of herbal potions are arranged. A pleasant man runs his expert hand over the girl's leg.

"Fracture" he says, before briskly reaching for one of the bowls containing a green solution. He cracks two eggs, separates the whites and puts them into the bowl. The resulting gooey stuff is applied on the leg, and then topped with a paste of turmeric and lime before the limb is wrapped in cotton wool. The leg is braced with bamboo splints and tied up in soft white cloth. Soon Parvathy is all set to go home.

In a village called Puthur, in the state of Andhra Pradesh, a family makes this possible with their traditional knowledge and expertise, special herbal mixture which does wonder with their skillful hands deft touch.Roots explores the magical "Puthurkettu" through Dr.S.Prathap Raju (M.A MSc BL Phd), the present successor of the family

#### History

The history dates back to 1881, Mr.Gopal Raju (great grandfather of Dr.S.Prathap Raju) while hunting, accidentally discovered the healing property of a herb. An injured rabbit was seen on the bed of leaves and the next day he found that the health of the rabbit improved and it had started to limp. His research mind was very curious and he applied the paste of that leaves on the rabbit's injured area. The results were promising and the animal got cured completely. In the next few years, Gopal Raju experimented on limb-fractured chicken, calves and sheep. Once he was convinced, he went on to treat human beings. He became a successful native doctor, and people from far and wide beelined to Puthur for bone-setting, and it came to be called "Puthur Kattu." During the colonial rule, there was war everywhere and wounded soldiers were many. He was treating them to fitness. Gopal Raju's services were utilized by the British rulers. That took him to places, treating the wounded soldiers and civilians throughout the country. He had the unique honour of free railway first class pass to travel anywhere in the country.

As time flew, knowledge was passed on to the next generation through his nephew Mr.Surapa Raju Subba Raju who was a revenue official in the British Government. He gave up his lucrative job to serve the humanity. The great Subba Raju applied his learned and administrative skills and laid the foundation for a mission, that is the bone setting.

The third generation saw the first qualified Doctor in the family, Dr.Rama Raju and Mr.S Subramaniam Raju were the bellwether. Along with their cousins they took the bone setting to advanced level by bringing up lot of improvisations.

Now in the 4th generation there are 7 promising experts lead by Dr.S.Prathap Raju who keeps the legacy of traditional bone setting with some added aces up their sleeves. They practice two days in Chennai,



and Guruvayoor, twice in a month, one day in Nellore and spends the rest of the days in Puthur. The hospital in Puthur is known as Suraparaju's Bonesetting Hospital, where the practice is jointly done by his cousins - Dr. Lokesh Raju, Balasubramaniam Raju, S Juggal Kishore Raju, Sethumadhava Raju and A.Vikram Raju. The 30 bedded hospital providing treatments all days of a week from 7.30am to 6.30 pm.

#### Which conditions can you treat/cannot?

We treat mainly fractures, sprains, joint dislocations, cervical spondylitis, low back ache, osteo arthritis and related cases. The cases like compound fracture, open fractures, accident cases, major wounds etc we refer to modern hospitals.

#### How are the treatment procedures?

The herbal paste is mixed with egg white, applied over the affected area then tied with used clean cotton cloth and short bamboo sticks are used sometimes for the support. This bandage should be kept in place untill the next visit. 3-5 bandages will be done like this and once it is removed, the patient will be given some medicated oil for application and advised to do some

mild excercises. Usually a course takes around 60 days and sometimes even more depending on the age and condition. No internal medicines are advised, they can take calcium supplements and other medicines as per their Doctors recommendation.

Special herbal mixture is always freshly prepared everyday and its formulation stays within the family. The Puttur Raju family has been traditionally giving this treatment as a service to humanity, however a nominal sum is charged. Free treatment is given for the poor villagers in and around Puttur.

#### Diet

We recommend more calcium rich food like leafy vegetable egg white and milk. Some people gets itching while taking fish, brinjal and egg. If there are no such issues, patient can take any food without much restrictions.

#### Within the Family?

Yes, even the supporting staff are also from our family only. We don't appoint anyone from outside. As the treatment procedures requires manipulations and application of external pressure, a lot of strength is required, so only male

members are selected and trained in the family. If a female member comes with interest, we will surely teach.

#### Only in Puthur?

We have a 30 bedded hospital in Puthur where there will be 250 out patient consultations everyday, our service is available 365 days there. We visit Purasawalkam in Chennai and Guruvavoor in Kerala fortnightly. 7 members in the family float around all three places. How we started the practice here in Guruvayoor is also a story. Around 30 years before, one of the Directors of Rajah group who had severe knee pain and was planning to undergo surgery. After hearing about us, he decided to give it a try. He got significant results from our treatment and thus surgery was not required. After this Rajah group was very keen to get our services for all the common people in their hometown Guruvayoor and provided all the support. After seeing their generous approach, my father felt it is for a noble cause, we started the practice here.

#### **Unforgettable cases**

A pregnant lady with injury to pelvis was finding difficulty to stand for some time while teaching, pain triggered just

It all dates back to 1881 Mr.Gopal Raju while hunting, accidentally discovered the healing property of a herb. Now the fourth generation, there are seven promising experts lead by Dr.S.Prathap Raju who keeps the legacy of traditional bone setting with some added aces up their sleeves. The hospital in Puthur is known as Suraparaju's Bone setting Hospital, where the practice is jointly done by his cousins itary knowledge is strictly adhered for the treatment and is fully on the

basis of Ayurveda.



after delivery and she came to us with unbearable pain. Initially the response was not that great, but she was very optimistic and at the end of the treatment course she got better miraculously. She is now happily continuing her teacher's job.

Another case was of a Policeman after undergoing surgery thrice for pain over lower limbs, his condition worsened and was not able to move. He came to us in despair and it was very challenging for us. After the periodic repetition of treatments and by God's grace now he is able to walk.

Another happy moment of their life was treating Dr.Prathap C Reddy Chairman of Apollo Hospitals, who had a fracture and underwent surgery. But he didn't feel any relief. Then he invited me to Apollo Hospital, Chennai. We did bandage for 4-5 times and he felt so good after, which was truly a great honour for us.

They have also treated many famous personalities like N.T.Rama Rao(film actor) V.V.Giri (former president of India) Dr. Channa Reddi (former Chief Minister of Andhra Pradesh) and there is no

dearth for testimonies from people of different walks of life.

#### Psycological aspects

In most of the cases people come to us after trying all other systems of medicine. As they did not get any relief from the past, some approaches with a double mind whether this will work or not. They expect results in just one course and that too, complete cure. So the phsycological aspects of the patient is very important. They have to be patient and should trust our treatments and follow our advise. Many a times if they come initially to us, results would be much much better.

#### Ayurveda

We feel it is very important in the modern era that people are aware of Ayurvedic principles of diet and lifestyle. The scholars have described so beautifully thousand of years back and it is still very much applicable in our day to day life. We recommend the patients to take ayurvedic medicines internally inorder to improve nueromuscular function and to strenghten the muscles and joints; as pain killers and steroids have adverse effects.

#### Difficulties during practice

We do face some backlashes from the society that we are not qualified and our method is without any sceintifc base. Many appreciate and many brings controversy. We are taking it on lighter note and follow what we are doing for the past 120 years

Some people are always in a hurry and they need quick fix. They even don't follow our instructions properly. That is the most disappointing thing.

#### **Personal Care**

We usually spend 12 hours with patients and the treatment involves lot of physical manipulations. So fitness is very important. Alcohol and smoking is completely avoided along with junk food. As we require lots of proteins and carbohydrates we take fish and meat. Sometimes we miss our family and not able to spend enough time together as we work everyday. But they support us in all way.

#### Advice

We are not so great to advise the medical fraternity. We feel that when you consult a patient your mind should concentrate fully on them, examine

thoroughly and with absolute dedication. They come to us with lot of hope and we have all the responsibility to keep their hopes alive.

Sometimes during our practice we face natural disasters like cyclones, flood etc but we manage somehow and work without fail. As we know our patients are in pain, we cannot excuse them by saying these reasons. We think that is very important in the present day scenario.

#### **Inspiration**

Our grandfather died at the age of 92 and even on his last day of demise,he was actively working. Similarly my father also worked 10-15 hours everyday till the end of life. They are our source of energy and inspiration.

Similarly we do get lot of support from many great persons. Dr.Nataraj,one of the best orthopeadicians from Chennai is one among them who always visits our hospital and spends time discussing various cases.

#### Definiton of Success

It is a difficult question for us. We can put it this way, when we go outside for shopping, movies or some functions many people comes to us, with lot of love and thank us wholeheartedly that their health is much better. Sometimes we are not able to identify them still their warm affection makes us feel that our service was fruitful to many. So we define success as when our life bring happiness to the people around us.

#### Drean

Dream is very far from reality.We like to live in reality.As of now we are

happy with what we are doing and our patients are getting good results. We pray to God to keep this reality intact throughout. If God willing we wish to avail our services all over India.

For the modern world many questions may arise regarding scientific validation of these treatments, but the fact we have to accept is that hundreds of people come everday and they get releif of their condition which is undoubtedly a magic.







# Arrowroot Pudding

Arrowroot pudding is a traditional Kerala dessert prepared especially during Thiruvathira festival

rrowroot powder is the starch obtained from the rhizome of arrowroot plant that grows in tropical regions. Processed into a white powder, arrowroot is useful as a thickening agent for soups and sauces. An easily digestible nourishing food, especially ideal for infants. And is highly recommended in digestive disorders, improves circulation, clears urinary tract infections and promotes general well being.

The arrowroot is rich in Carbohydrates, Vitamin Bcomplex, Vitamin C, Iron, Potassium, Magnesium, Sodium, Calcium and good amount of dietary fibers, also low in calories which makes this a perfect choice for those who fancy for a gluten -fat free diet.

How to prepare Arrowroot powder? After washing the tubers, the skin is

removed before extracting the starch to avoid the disagreeable flavor. The peeled rhizomes are crushed into paste and water is added to it. Later it is sieved and filtered solution of starch is collected in a vessel. This solution is kept for a while and allowed to settle the starch particles. The process of decanting is repeated for about 6-8 times. Finally the left over white dough is sundried and crushed to make fine powder which is similar in appearance and texture to cornstarch.

#### Arrowroot pudding

Arrowroot pudding is a traditional Kerala dessert prepared especially during Thiruvathira festival as a tradition.

#### Ingredients

- 1. Arrowroot powder-250 gm
- 2. Jaggery -150 gm
- 3. Coconut Shredded/Sliced -1/4 cup
- 4. Ghee -2tsp

5. Cardamom powder-1/2tsp 6. Water -1 litre

#### Method of preparation

- 1) Mix water with arrowroot powder and stir until it is dissolved fully without any lumps.
- 2) Add some water to the cubes of jaggery and boil. Once the jaggery is fully melted, the syrup is filtered to remove impurities.
- 3) After heating the pan, sufficient amount of ghee is poured in. Then add slices of coconut, stir until it turns to golden brown color.
- Also the shredded coconut can be used directly without frying
- 4) Pour the diluted arrowroot and jaggery syrup to the pan, stir it continuously on low flame and add cardamom powder
- 5) Once mixture becomes thick, transfer to flat pan smeared with ghee and allow it to cool. Serve afterwards

## LYME DISEASE

A CASE STUDY WITH RESPECT TO LYME DISEASE THAT CAN HAVE GREAT RESULTS WITH AYURVEDA



#### Introduction

Despite decades of dramatic progress in the treatments and prevention, infectious diseases remain a major cause of death and debility, are responsible for worsening the living conditions of many millions of people around the world. This edition, we discuss about Lyme disease which is not prevalent in India at all but got significant result with Ayurveda.

Lyme disease also known as lyme borreliosis, is an infectious disease caused by bacteria, Borrelia burdorferi. It is the most common disease spread by ticks in the northern hemisphere, occurs mostly in USA, Europe Russia, China, Japan and Australia. The disease is named after the town of old Lyme in Connecticut, USA where the disease was first recognised.

The reservoir of infection is ixodid ticks that feed on a variety of large mammals, particularly deer. Birds spread ticks over a wide area. The organism is transmitted to humans through the bite of infected ticks. Larval, nymphal and adult forms are all capable of spreading infection.

Persons of all ages are susceptible to infection, although the highest reported rates of this disease occur in children aged greater than 15 years of age and in adults aged 30-59 years.

#### Clinical features

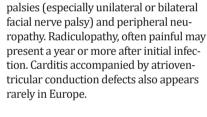
#### Early localized disease

The characteristic feature is a skin reaction around the site of tick bite, known as erythema migrans. Initially

a red 'bulls eye' macule or papule appears 2-30 days after the bite and then enlarges peripherally with central clearing which may persist for months. This lesion is not pathognomonic of lyme disease since similar lesions can occur after tick bites in areas where this disease does not occur. Other acute manifestations such as fever, headache and regional lymphadenopathy may develop with or without the rash.

#### Early disseminated disease

Dissemination occurs through the blood stream and lymphatics. Systemic reaction may occur with malaise, arthralgia and occasionally metastatic areas of erythema migrans. Weeks or months after infection neurological involvement may be seen. Common features include lymphocytic meningitis, cranial nerve



#### Late disease

Arthritis, polyneuritis and encephalopathy are seen as late manifestations. Prolonged arthritis particularly affecting large joints, neuro psychiatric abnormalities may occur. Acrodermatitis chronica atrophicans is an uncommon late complication seen more frequently in Europe. Progression may be arrested at any stage.

#### **Case Study**

A female patient aged 46 years from London came to our hospital with a history of tick bite.

#### **Presenting complaints**

- The patient was suffering from frequent attack of high fever and sore throat-since childhood
- Pain and stiffness in the neck, elbow, wrist, hip, ankles and whole spine since 10 years
- Recurrent attacks of migraine since 15
- Numbness and pain over lower limbs since 7 years

- Poor digestion associated hard stool since 3 years
- Generalised tiredness along with

#### History of present illness

She had a tick bite at the age of 6 years and suffered series of recurrent infections like tonsilitis, adenoiditis, sinusitis and bronchitis along with high fever. She developed costochondritis by the age of 15 years and was treated with antibiotics and cortisones. Later she suffered from severe migraine, loss of cognitive functions, lead to depression and early menopause by 37 years. When she was 37, she had another tick bite which worsened her conditions resulting in frequent attack of high fever, tonsilitis and adenoiditis associated with multiple joint pain including neck, wrist, elbow, hip ankle, whole spine etc. Underwent tonsilectomy and adenoidectomy as per Doctors advice.

#### **Personal history**

**Bowel** – irregular, mostly constipated Diet- Mostly vegetarian **Appetite** - Varies **Sleep** – disturbed

**Menstrual cycle** – menopause at the age of 37 years

Occupation - artist, massage therapist and yoga teacher

Marital status -Single

Exercise -Regular, yoga **Addiction** – Nothing specific **Family history** 

Father also had Lyme disease

#### **Investigations done**

- Antibodies to B.burgdorferi, ELISA, ISR - 5.03
- Quantitative IgM antibodies to B.burgdorferi, ELISA, ISR – 6.52
- IgM antibodies to B.burgdorferi Western Blot - positive

#### Findings on examination

Blood pressure -110/70 mm of Hg

Pulse - Regular, weak

**Body weight** -64Kg

Temperature -98.6 degrees Fahrenheit **Locomotor System-** O/E of joints, stiffness present over neck, hip and whole spine. Range of movements was moderate and tendernes present over spine. No swelling, redness and local temperature. SLR was negative

Cardiovascular System - Palpitation

Urinary System-No abnormalities detected.

Nervous System-Numbness over both hands

**Respiratory System-** Mild wheezing present.

Gastrointestinal System- No abnormalities detected.

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#### **Avurvedic view**

Symptoms resulting from this disease sometimes persist even after eradication of the Lyme bacteria (chronic Lyme disease). This is usually because of an ongoing auto immune response in the body. Immune-augmentative and antimicrobial medications to be utilized in this disease. Taking into account the concept of Dushivisha and Krimi, the treatment aimed to alleviate the symptoms, preventing further complications and boosting the immune status of the body.

#### **Treatments given:**

#### **Internal medicines**

- Indukantam kashayam + Agnikumara rasam
- Amritarishtam and Nimbamrtasavam
- Flex tablet
- Triphaladi choornam

#### **External therapies**

• Dhanyamladhara

- Lepanam
- Abhyangam
- Naranga kizhi
- Pichu
- Pizhichil
- AvagahamNavara kizhi
- Thailadhara

#### Panchakarma done

- Kashayavasti
- Snehavasti
- Nasyam
- Virechanam

#### **Condition on discharge**

After 28 days of treatment, her appetite improved, bowel was regular and could sleep throughout the night without interruption. Pain on the joints had largely disappeared and there was no fever during the course of treatment but had few episodes of head ache. Further to the follow up medications one month, the blood values showed

negative for B.burgdorferi. She visited her allopathic doctor who was quite happy with the disease condition and the toxicity level in blood.

#### Conclusion

Many new diseases are identified, invented, narrated, explained, and introduced in modern science. Scientists are able to research upon the causation and formation of diseases up to the DNA level. Questions always arise as to whether Ayurveda can manage contemporary diseases. Acharya Charaka has clearly mentioned in the classics that if a physician is not able to name a particular disease, he should not feel ashamed because it is not always possible. So a physician should try to comprehend the nature of dosha, the site of its manifestation, its etiological factors and then initiate the treatment. Such a physician would never fail in his attempt to cure the disease.

# IN A NUTSHELL

The coconut is a very unique tree in the world, providing food for millions of people, especially in the tropical and subtropical regions and with its many uses it is often called the Tree of Life.





long the coastline of tropical southwestern India set among the **L**picturesque lagoons, backwaters and seperated from rugged mountains of Western Ghats lies a land of spectacular beauty and heritage Kerala, the land of coconut and palms. The sea of palm fronds that stretches as far as the eye can see makes it clear why Kerala is called as land of coconut. Not only do coconuts dominate the archipelago of the land, they are intrinsically tied to the culture and lore of Kerala folk as well. It is a part of every celebration-as an ingredient in the delicacies prepared, as offering to the Gods, to mark an auspicious occasion by breaking a coconut and its endless medicinal benefits. This close tie with the palm tree has given it its special title as "KalpaVriksham" which means-a celestial tree which grants all wishes. Origin

The impact of the coconut palm on the history of human dispersal in the humid tropics is unparalleled in the plant kingdom. As a portable source of both food and water, the coconut played a critical role in the ability of humans to voyage, establish trade routes, and colonize lands as it provided the source of food and water in the Pacific Rim and regions throughout the Old World tropics.Coco-

nuts can float on the ocean for months and still germinate when beached, so they may have arisen anywhere between the eastern Indian and western Pacific oceans. It is clear that there were no coconut palms along the east coast of the Americas, western Africa, or the Caribbean prior to European exploration in the sixteenth century.

Today, coconut is distributed pantropically, and even reaches extra-tropical areas such as southern Florida and the Bahamas. Spanish explorers called it coco, which means monkey face as they thought that the three indentations on the hairy nut looked like the head and grimacing face of a monkey. When cocoa came to England, they added nut to it and that is how the name came about. Many studies were done considering the morphological features of the coconuts to get an idea about its origin. Later an advanced DNA study was conducted on 13000 coconuts from different parts of the world. The studies revealed that the first cultivation occured in Asia and spread in both eastward and westward directions across the pacific and atlantic ocean respectively.

Science of Life and Tree of Life
Coconut is highly nutritious and rich

in fiber, vitamins, and minerals. As it provides many health benefits and possesses healing properties, it is used extensively in Ayurveda. The coconut is highly valued as both a source of food and medicine that it is called as The Tree of Life.

Tender coconut water- Ayurveda clearly mentions about the qualities of water. The qualities are sweet in taste, unctous, light to digest, cleanses urinary bladder. And it is the best answer for cystitis and burning micturition as it acts as an excellent body coolant and relieves the irritation in urinary tract. It quenches the thirst thus makes you feel satisfied. External application of tender coconut water for babies with heat rashes is quite helpful. Even we can use it as a medium for shirodhara. One of the key ingredients in Tungadrumadi oil, excellent oil for chronic insomnia and stress related issues. Another important formulation is Elaneer Kuzhamb, used as collyrium which acts both as preventive and curative for eyes.

**Coconut Flowers**- Coconut flower has many medicinal values. It is highly nourishing and rejuvenative. Some Ayurvedic Doctors prescribe the juice of tender flower extracted by adding milk mixed

#### **Interesting Facts**

- Biodiesel has been making the rounds as a fossil fuel alternative and coconut trees happen to be one of the plants that can produce oil in workable quantities.
- Coconut water is a workable short-term substitute for human blood plasma and was positively tested as emergency intravenous fluid as far back as the '50s and was utilized during World War II.
- There are over 1,300 types of coconut, which can all be traced back to one of two genetic origins from either the Pacific or the Indian Ocean.
- The plantation of coconut is unique that 2/3rd of the seedling is placed under the ground.

along with powdered almonds, cashew with purified gold/silver for three consecutive days in 3rd, 5th and 7th month for a healthy progeny. This is one of the main ingredient in many traditional preparations especially Thenginpukkuladi Rasayanam which is given for low back pain, emaciation, bleeding disorders menorrhagia, and also puerperal disorders.

Coconut Midrib- Decoction made from Tender midrib, Bamboo leaf, stalk of Jackfruit leaf, Cumin and Ajwan commonly used for disgestive issues in children. The use of midrib as tongue scraper is mentioned in the context of oral hygeine in daily regimen.

Coconut Oil- In Ayurveda, coconut oil is one of mostly used base to prepare various medicated oils especially for all skin ailments. Coconut oil accelerates healing of wounds and prevents diseases which arise due to dry skin like psoriasis, eczema and dermatitis. As it promotes hair growth and prevents dandruff almost all ayurvedic hair oil contains coconut oil as its major content. Internal consumption is quite nutritive

**Coconut Kernel**- Tender pulp cools the body and provides nourishment. It is very



easy to digest and reduces acidity. Tender coconut pulp helps to boost body energy and strength. Fully ripe pulp acts as a very good aphrodiasiac as it is known to increase quality and quantity of semen. It is high in dietary fibers and cleanses the intestines. Nalikera lavanam one of the best formulation against gastritis.

Coconut Shell-Regular intake of water boiled with coconut shell was found to reduce the blood cholesterol level. External application of burnt coconut shell with coconut is helpful in eczema and psoriasis. Coconut shell is used to prepare Chiratta thailam which is used in skin diseases.



Coconut Milk- Homemade pure coconut oil is prepared from coconut milk by boiling and stirring it continuously untill it turns to clear liquid which is highly beneficial for the skin especially for massaging new born babies. Coconut milk is one of the main ingredients in various ayurvedic preparations, few famous preparations are Neelibringadi Keram and Cheriyachandanadi Tailam

#### **Healthy Myth**

This question is being asked again and again whether coconut oil is healthy and so many people are confused because 75% of the fat in coconut oil is saturated, and have probably heard that saturated fat is not good for cholesterol and heart health. The American Heart Association issued a statement saying that coconut is not a healthy source of fat, because it affects our LDL cholesterol levels. Unfortunately, cardiovascular disease is the leading cause of death, but it does not mean that the prime cause is the consumption of saturated fat.

One of the most beneficial properties of coconut oil is the large quantity of medium-chain fatty acids (MCFA) that it contains, as opposed to the long-chain fatty acids that many other foods contain. The reasoning behind the benefits of this type of acid is that medium-chain fatty acids are not only absorbed easily by the liver, but they are also metabolized quickly. This means they can further be converted into ketones. Ketones are utilized by the brain as an important energy source and have been shown to have





possible therapeutic effects on people suffering from memory loss, such as in case of Alzheimer's disease. Additionally, unique phenolic compounds and hormones found in coconut oil may be able to prevent the aggregation of amyloid beta peptides, which are part of a leading theory concerning the

The most abundant fatty acid comprising nearly 50% of the coconut's fat content in coconut oil is called lauric acid. This acid is especially effective in eliminating a large variety of bacteria by disintegrating their lipid membrane and destroying the organism. Specifically, coconut oil and it's potent lauric acid can help destroy the bacteria leading to stomach ulcers, dental cavities, and food poisoning. Lauric acid is



naturally found in breast milk, which is understandable because newborns need to be highly protected from dangerous infections and pathogens. Additionally, this can increase the levels of HDL, or good cholesterol, reduce inflammation, improve memory and boost the immune system.Coconut oil increases the absorption of endotoxins, a toxin that is present inside a bacterial cell.

#### **Trump card for Indian Agriculture**

A proverb in Philippines is "If you could count the stars, then you could count all the ways the coconut tree serves us" It is true in India Coconut industry is contributing more than Rs.8300 million to the Indian GDP and this industry helps to earning foreign exchange to tune of Rs. 13000 million per annum. The major portion of coconut cultivation is from the four south Indian states, namely Kerala, Tamil Nadu, Andhra Pradesh and Karnataka, which comes up to 90 per cent of total coconut production. This crop has a significant impact on social and cultural impact on the coconut cultivators. Marketability and price established of coconut and its by-products determine the economic

condition of farmers. Tamil Nadu is one of the most important states in country in terms of coconut production after the state of Kerala. Now, it is considered as an industry supplying food materials to the millions. India occupies the third position in the world with an annual production of 13 billion nuts, along with Indonesia and Philippines. The coconut palm exerts a profound influence on the rural economy of the many states where it is grown extensively and it provides sustenance to more than 10 million people. The export earnings derived by India from coconut are around Rs.3000 million, mainly through the export trade in coir and coir goods. The contribution of coconut oil to the national edible oil pool is 6 per cent. In addition, the crop contributes Rs.7000 crores annually to the Gross Domestic Product (GDP). In productivity too, India ranks number one among other coconut growing countries in the world.

#### **Its High Time To Act**

The constraints in enhancing productivity among the coconut cultivators are lack of awareness on recent development related to crop improvement, lack

of quality planting materials to farmers, lack of proper management practices and pest problems are to be tackled consciously to make coconut farming attractive. Further the farmers face number of problems in cultivating and marketing of coconut. It is reported that the farmers are not able to get adequate price for the coconut in many occasions which makes the farmers economically weak leading to financial crisis.

The cost of production and net return obtained per unit, would determine the profitability of the crop. Though production is the initiation of the developmental process, it could bring less gain to the producers unless there exists an efficient marketing system. The producers depend upon the market conditions to fulfill their hopes and expectations. But forced sales, multiplicity of market charges, malpractices in unregulated markets and superfluous middlemen are the problems faced by the cultivators Though coconut has a pride, not only for its diverse uses but also for its special preference to consumers, both rich and poor.Various factors like natural calamities, price fluctuation, problems from insects and also rainfall have considerable impact on the income of a farmer. They could not sometimes get the amount put in to grow or cultivate any types of crop. There is no chance for reimbursement of the amount lost by the farmers due to the crop failures or low yielding from the crops. The farmers who are involved in coconut cultivation have to wait more than 5 years to get income from the crops. Upto harvesting of coconut, the farmers are not in a position to invest huge amount in the crops and also to manage their family. Crop failure and fall in price render more trouble to the farmers. Regular application of silt containing organic matter stimulates soil life, helps multiplication of earth-worms and improvement of physical properties of soil. Ultimately use of synthetic fertilizers can be minimized or even dispensed with as this system depends on the primary production capacity of the soil and positive biotic interactions. It is also suggested that raising intercrops like banana and turmeric will fetch more income for the coconut farmer.

#### **Spiritual Superstar**

According to Hindu mythology, the coconut was created by Sage Vishwamitra to prop up King Satyavrata who was attempting to gain entry into heaven as a mortal but was thrown out by the

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the solar dynasty. He was a pious ruler and was greatly religious. Satyavrata had only one desire to go to heaven with his mortal body intact.

Once while Vishwamitra was away for a spiritual practice, great drought swept the land. Satyavrata saved Vishwamitra's family by giving them food. In gratitude, Vishwamitra agreed to help the king achieve his only desire. He started special ritual to the Gods and with the powers of his prayers, Vishwamitra made Satyavrata ascend towards the sky. As he neared the gates of heaven, Indra - the king of the God pushed the king back to earth. As Satyavrata fell he cried out to Vishwamitra, who cast a spell to stop him mid-air. Enraged Vishwamitra declared his intention to redesign the cosmos and create a heaven for Satyavrata. Peace was restored and a compromise was reached. The Gods allowed Satyavrata to stay mid-air. However, the sage realised that Satyavrata would fall back to ground once the spell weakened. So, he held him with a long

pole. In time this pole became the trunk of the coconut tree and Satyavrata's head became the fruit. Since, Satyavrata was suspended between space and earth; he got the epithet Trishanku – 'one who is neither here nor there'.

Coconut, which has a hard outer cover, is broken in temple as an offering for our prayers. But it has more meaning than offering coconut. The stripping of fiber is to emphasize the fact that we should be devoid of desires. Coconuts hard cover resembles the head of a human being. Once the coconut is broken, we find a white kernel representing our brain and the juice indicative of the internal tendencies of our brain such as jealousy, ego, selfishness. The breaking of coconut is considered as breaking of our ego. So, breaking of coconut stands for surrendering to God with utmost devotion and love.

Adi Shankara, the spiritual Guru, was instrumental in ensuring undesirable practice of human sacrifice was discon-

tinued at many spiritual centres. He denounced the practice as having no spiritual sanction whatsoever. The coconut was chosen as a suitable substitute by people who did not want to give up the practice of sacrifice of other beings, but wanted a similar ritual for fulfilment of their desires. Some equated the outer shell to the human being's gross physical body and the kernel to the subtle body. The marks on the coconut are even thought to represent the three-eyed Lord Shiva and therefore it is considered to be a means to fulfill our desires.

The coconut is also associated with Lord Ganesha. At the beginning of any auspicious task or a journey, people smash coconuts to please Ganesha – the remover of all obstacles. The association of human fertility cult with coconut is prominently manifested during wedding rituals across India. The fruit is often placed in a pot which is a metaphor for the womb, while the nut itself, a symbol or life, confers fertility on the bridal couple. In Gujarat it is customary for

the bride to present the coconut to the groom at the time of the marriage. The coconut is then preserved as a precious memento by the husband throughout his life.

#### New Horizons

The good positive news is that there are many promising things happening around the globe and the possibilites has to be explored fully.

Virgin Coconut Oil - Virgin coconut oil derived through wet-milling process. Coconut milk is expressed first by pressing it out of the wet coconut meat. The oil is then further separated from the water. Methods which can be used to separate the oil from the water can be mechanical or natural means with or without the application of heat. This way, the coconut oil stays in its natural form without the use of any artificial filtering which makes this as more fortified in quality.

Coco pith- Cocopeat is a natural fibre made out of coconut husks. Coir pith grow bags are manufactured by blending Coir pith with adequate quantity of short Coir fibre. This is then compressed and packed loosely in a UV stabilized Black and White Polythene bag. At the user end

Roots- used for making dye, tooth brush and mouthwash. Toddy can be made from the sap found in the root which is stronger. Sometimes, exposed roots are chewed along with betel leaves.

Trunk- fibrous decay resistant tree trunk also called as porcupine wood, is incorporated into the construction of huts, canoes, rafters, fences, and furniture. Used as firewood and paper pulp can be extracted from the trunk.

Leaf- Young leaf shoots may be eaten as salad. Leaves are plated and used for thatching houses, making fences, kindling fires. Skilled craftsmen also make hats, baskets, bags. The midrib of the leaves are used to make brooms, tongue cleaners and tooth picks. Also one of the favourite food of the elephants.

Flowers- Sap extracted from the closed inflorescence is called 'Neera'. A decorated stage with coconut inflorescence in a wooden or copper barrel filled with paddy is considered as auspicious symbol in Hindu marriage ceremonies.

Husk- Used as a natural scrubber to clean vessels, floor and as a craft material Coir made out of husk is used to make mats, ropes, mattresses, brushes, packing materials, floor polisher and coarse clothes.

Pith- It is an excellent soil conditioner and is being extensively used as a soil –less medium for agri-horticultural purposes. With its moisture retention qualities coir pith is ideal for growing orchids and anthurium.

Shell- We can easily colour the shells and carve them into beautiful art pieces and spoons. It is traditionally used at homes to steam food for Kerala traditional dish Chirattaputtu. Also made use as fire wood

Kernel- Shredded or flaked coconut is used in cooking and for making candies, puddings and halwa. Rice gruel mixed with scraped coconut is a healthy and delicious food for all ages.

Water- Sweet coconut water is highly alkaline with vit B, vit C, proteins, carbohydrates, potassium, sodium, calcium and magnesium. It is a quick refreshing drink. It is used in dehydration caused due to diarrhoea, vomiting, physical exertion and sunstroke.

Milk- Coconut milk is used in many Asian cuisines, especially in south India, Srilanka, and Thailand.It is well known for its skin and hair care as well.It is nourishing and strengthening, has a cooling effect on body.

Jaggery- The strained unfermented coconut sap is boiled crystallized and transferred into suitable moulds to prepare jaggery. Due to its low glycemic index it can be used as an alternative to cane jaggery. It contains thiamine, riboflavin, nicotinic acid and ascorbic acid.

Oil- The dried coconut flesh is called 'copra' which contains 60% oil. The oil extracted from it is extensively used in ayurvedic and cosmetic industry.

Cake- The solid material left after the oil is extracted from copra is used in making cattle feed and fertilizer. It is also used on the skin instead of soap in people suffering with dry skin and dry eczema.

Palm sugar- Coconut jaggery or palm syrup can be crystalised to produce granules of sugar called as coconut palm sugar.





suitable holes are to be cut for planting as well for drainage. The bags are ready to use as planting containers. Simply transplant plants into the Coir pith grow bags during the planting season.

**Activated carbon**- Activated carbon is a material that is produced from carbonaceous source materials, such as coal, coconuts, nutshells, peat, wood, and lignite. Activated carbon has an incredibly large surface area per unit volume, and a network of submicroscopic pores where adsorption takes place. The primary raw material used for activated carbon is any organic material with a high carbon content. The carbon-based material is converted to activated carbon through physical modification and thermal decomposition in a furnace, under a controlled atmosphere and temperature. The finished product has a large surface area per unit volume and a network of submicroscopic pores where adsorption takes place. Activated carbon is used to purify liquids and gases in a variety of applications, including municipal drinking water, food and beverage processing, odor removal, industrial pollution control, and point-of-use filters in the home. Many of these home water filters use activated carbon to reliably remove dissolved impurities and disinfection byproducts that can make water taste bad.

Neera- Neera is a sweet oyster white, translucent, and highly nutritious extract collected from the closed spathes of coconut and palm trees. It is a sugar containing juice and a rich natural source of minerals, vitamins and amino acids. The extraction of Neera is generally done before sunrise. This is because of it's high susceptibility to fermentation under ambient temperatures within a few hours of extraction. Tapped neera is filtered for removing foreign particles. Thereafter it is chilled and stored at refrigerated conditions. This is important because, otherwise it turns into toddy with 4% alcohol content by natural fermentation. Several technologies have been developed to process and preserve neera in it's natural form to retain it's abundant nutrients store. After processing neera with anti fermenting agents, it

is subjected to techniques like pasteurisation in order to remove the microflora present in it.

Women Takes the stage - Women have taken over a traditionally male-dominated occupation: coconut tree climbing. Now, coconut plucking will no longer be considered a male bastion. Their female counterpart will give them a knife-edge competition. The training programs are organised by the Coconut Development Board to train unemployed youth in the art of climbing coconut trees and caring for them. The programme covers introduction to coconut palm, climate, soil requirements and varieties, sessions on climbing machine-main parts, working and trial, nutrient management, recycling of palm waste, intercropping and mixed cropping, etc. Besides, practical lessons on climbing coconut trees, sessions are also held on harvesting, tender and mature nut identification, Identification of pests and disease of coconut and their management, crown cleaning aspects, seed nut procurement, safe handling of seed nuts and tender nuts, coconut nursery and its management.

The coconut is a very unique tree in the world, providing food for millions of people, especially in the tropical and subtropical regions and with its many uses it is often called the tree of life. It is the source of natural products for the medicines and industrial products. Coconut was one of the first, if not the first plant oil to be used by man, and was the leading vegetable oil until 1962. Unfortunately, due to lack of scientific validation in various concepts, this precious gift from our mother nature is trailing as most people in the world are left-brain thinkers who are said to be more logical, analytical, and objective. Hence, evidence-based research is highly needed for global recognition and acceptance. The globalised world while providing a canvas for new and evolving technologies also provides ample growth opportunities for the existing but requires the determination and dynamism to counter the challenges and to promote to its full potential. Ofcourse the oportunities are endless and have to be utilised. Our Yogis practiced Yoga thousands of years ago. We forgot about it and it was rediscovered in the West and we re-imported it as Yoga. Similarly coconut grows well in the areas where it gets human presence but flourishes in all terms where it gets more care.

## **Lost Art of Healing**

The Doctor-patient relationship is central to the clinical practice which is essential for the delivery of high-quality health care in the diagnosis and treatment of disease making foundations of contemporary medical ethics.

The lost art of healing is a compilation of Dr.Bernard Lown's experiences right from the beginning with his fellowship at Bostons Peter Bent Brigham Hospital in 1950. This book focuses on the importance of patient and Doctor relationship, to know the patient and not merely the disease of the patient as the only way for the true healing. Care of the patient is both a science and an art. Dr.Lown's volume is a powerful statement about how compassionate care, often in the form of attentive listening, creates a healing relationship with patients. As a cardiologist, he was highly aware of how negative emotional states were closely associated with stress and heart disease. It gives a glance on doctoring of the past and the author criticizes the present day rushed, "drive-through" in doctoring and of what this relationship might be in the future. According to him, the most important task for the physician is first to listen to the patients and thereby to make the diagnosis and prognosis on the basis of careful study of patient's history and examination rather than by laboratory testing.

Dr. Lown, who is a philosopher and a healer advise earnestly to take the responsibility of reassuring and encouraging the patients. His innovative research established the role of psychological and behavioural factors on heart rhythms and provocating factors of sudden death. Healing process, is not always a treatment or cure. He says 'Even when cure is impossible, healing is not necessarily impossible. While medical science has limit, hope does not'.

The first three sections comprise the bulk of the book. Dr.Lown chronicles his early medical training and career through stories of memorable patients, anecdotes about key role models (particularly Dr. Samuel A. Levine) and history of medical mistakes, diagnostic acumen and his remarkable research innovations. These achievements include the introduction of intravenous lidocaine, cardio version, defibrillation and development of coronary care unit.

The core of the book however shows how deeply he cares for his patients. "This book is a small recompense to my patients ultimately my greatest teachers who helped me to become a Doctor." One of the most touching chapter "The power of certainity" relates the need of communicating optimism as best medicine.

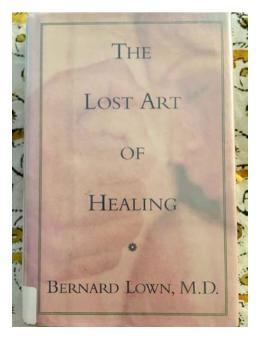
In a thoughtful chapter on death and dying, muses on his emotional and spiritual responses to encounters with the death and bemoans the medical professions increasing tendency to put technology between Doctor and patient to spare Doctors with the grief of failing to confront their own mentality. Doctors must listen to non verbal communication that he terms "the unspoken pain and the unshred tears that is always there".

The final chapter, takes an unusual twist and writes a treatise to patients, how to get the Doctor truly pay attention to them and what are reasonable expectations to have of one's own Doctor

This is indeed a thought provoking and inspiring book, especially for medical students struggling with the work load. He reminds that knowledge in academic grades are merely a means to end but the human quality such as empathy, compassion and a sound understanding of the human condition are crucial in the medical practice. It must be developed and practiced. Inorder to become a true healer, we have to know the patient and not just the disease he has.

Being the members of Medical fraternity, it is imperative for all the physicians that the relationship between a Doctor and a patient needs to be upheld as both has legal definitions and ramifications as well as emotional ties. We can regain this lost art and return love to our patients.

The author of this book Dr. Bernard Lown is a cardiologist and a peace activist. He worked as a professor of cardiology at the Harvard school of public health and developed direct current defibrillator.Dr.Lown is the co founder of the organization - International physicians for the prevention of nuclear war which won the Nobel prize for peace in 1985.



## **Patient Speaking**



Coming from a very different background of modern medicine, far from the Ayurvedic way of looking at the body, I decided to keep an open mind and go along with the treatment. The holistic approach really made me excited as well as curious too.

y name is Malin Åkerström; I'm a physician in the field of family medicine and the mother of three, living in Sweden.

This is the story of my journey. Many women suffer pain over the pelvic area for many years after pregnancy and cannot do the things that they used to do like running, walking far distance and standing up for long or lifting heavy things. This is something seldom talked about, atleast in my part of the world and healthcare has little help to offer.

I have problems with my hypermobile sacroiliac joints ever since my teenage years. I have been crooked with one leg shorter and leaning to one side ever since then. I am now 45yrs, five years before during my third pregnancy I fell sick with a severe inflammation to the pelvic joints and pelvic floor. During and after my third pregnancy, had been bedbound for long periods of time, with excruciating pain from my pelvic joints and muscles. Never been able to lift my baby, climb stairs, walk long distance or standing up for longer period. I was in need of a walker or a wheelchair. The pain and fatigue that came with it had totally changed my life.

Going from being very physically active, helping others both professionally and at home, to being very limited and dependant on others has been very hard, depressing at times.

Being a Doctor myself, it has been very sad to realise that pelvic conditions are a blank spot on the map of Modern medicine. Orthopaedic medicine has little knowledge in this area; often considering pelvic conditions as purely gynaecological. Gynaecologists on the other hand, in their training learn about the reproductive organs, not the structures holding up.

I have been prescribed a lot of different treatments to cure the inflammation, including NSAID, and immunosuppressive medicines like Methotrexate and even biological treatment with antibodies. I felt these medications have prevented deterioration but not made me well. Ofcourse there has also been a lot of pain killers, muscle relaxants and pain modifying medicines like Gabapentine.

Finding the right physiotherapy and activity level has been difficult, since the line to over-stressing the joints, leading to big back-lashes, has been very thin.



After many months in bed and years carrying my weight with my arms, exercise in water helped me alot, where I could walk somewhat normally again but still was using my walker on land.

The other thing modern medicine has offered me was surgical fusion of the sacroiliac joints, a controversial procedure with an uncertain outcome. In the midst of dilemma, I heard of Ayurveda from others with various health issues, who got significant results. Then I made my mind to give myself a chance before opting for fusion surgery. The holistic approach really made me excited as well as curious too.

My stay at Rajah Island was a life changing experience for me. Coming from a very different background of modern medicine, far from the Ayurvedic way of looking at the body, I decided to keep an open mind and go along with the treatment. I found the Doctors were knowledgeble and very interactive. The pleasant presence of Doctors around, give a chance to observe more about the patient, to analyse the effects of treatments and make the changes in treatments accordingly.

One of the most overwhelming part is that the loving care is not just from the Doctors, the entire staff including the therapists, the yoga master, the kitchen staff, even room service and watchmen expresses their care and positive attitude. This is the real healthcare with utmost affection. The cultural programmes, cooking demos and other activities in the evenings made

our stay memorable. For me, the treatments have been a great experience and it has done me very well. The process has been tough at times as the body tends to be weak during the treatments.

As part of my treatment I have received help from Jayaram, an amazingly skilled yoga master, who mobilised my pelvis and back, for the first time in thirty years I stood straight without much difficulty. Having visited numerous chiropractors, physiotherapists etc over the years and being prescribed special shoes with one sole thicker than the other to balance me, that was like a miracle for me!!! After the course of treatments, the body balance was better; less pain, felt much stronger and started trusting my body. I am pretty sure that muscles, joints and myself are on the right track.

I went home loaded with love, medicines to follow up at home, yoga lessons to practice and lots of hope that I am actually going to be well. As time flew, now am constantly seeing the progress. I do my yoga exercise daily. Many of the exercises that were challenging by the time I left Rajah Island are now performed with ease. I hardly ever use my walker indoor, only to transport things around the house. since lifting and carrying still puts too much stress on my pubic joint. Hope that I will be able to take care of my children and help patients in my profession; thus my life will be rich again.

I am determined to come back to follow up my treatment. Next time without a wheelchair!

# Making News

# **Touching Lives**Wearable devices take tech to new level



echnology has been advancing with every passing year and how! At one point, touch phones seemed to have been the new trend, and now we have wearable devices that help us monitor our fitness, heartbeat, sleep patterns, diabetes and even stress! Researchers from University of London have designed a wearable device that delivers heartbeat-like vibrations onto the inside of the wrist, which then can significantly reduce stress. Vibrations can affect our heart's rhythm. Humans naturally respond to rhythm. For example, the tempo of a song can naturally alter our breathing and heart rates. Slower tempos result in lower arousal and positive or calm emotional states, while we associate fast rhythms with arousing emotional states such as joy, excitement, surprise, fear or anger. The researchers assessed the calming effects of the device called doppel - a wristband designed to actively reduce stress by using the intuitive responses that we all have to rhythm, and especially to heartbeats. Beyond music, several studies report similar effects in responses to biological rhythms, and the heartbeat is perhaps the most ubiquitous biological rhythm in nature. "High arousal is correlated with increased heart rate, whereas calmness is physiologically correlated with lower heart rate," said Manos Tsakiris from University of London.

### As a Thumb rule

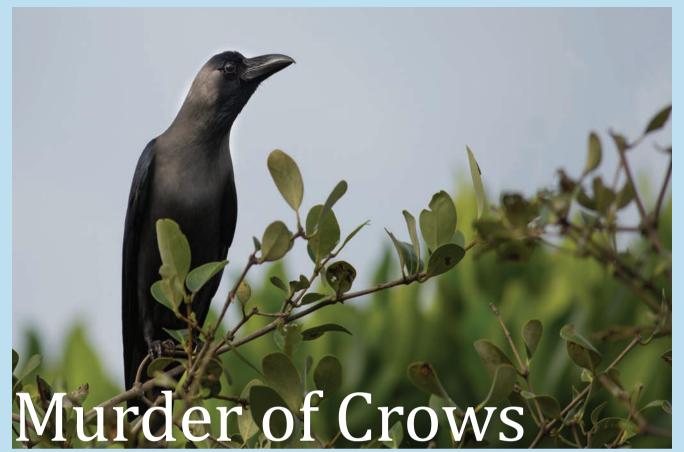
he times we live in, a smartphone is of utmost importance. Sure, it helps us stay connected with a large network of people, but too much of it could also start showing negative implications of one's health and wellbeing. Ever heard of 'Smartphone Thumb'? Well, it is real, and it is one of the consequences of excessive texting. Doctors have warned that people who spend too much time texting may be at increased risk of having "smartphone thumb", a painful condition caused by repetitive movements of typing that may lead to arthritis in the thumb.

Formally known as tendinitis, the condition was earlier only seen in factory workers. It causes the tendon that bends and flexes the thumb to become inflamed. But with increased use of smartphone for our daily activities, this type of pain has become more common over the years in the US, according to a CBSNews.com report.



Cannabis could hold the key to treating epilepsy in children, according to new research.The cannabis derivative cannabidiol was found to cut the frequency of seizures by 39 per cent for patients with Drayet syndrome - a rare, severe form of epilepsy - in the first large-scale clinical trial for the compound.Cannabidiol, or CBD, is a compound in the cannabis plant that doesn't contain psychoactive properties that induce a high.

Lead investigator Professor Orrin Devinsky, of NYU Langone Medical Centre in the US, said: "Cannabidiol should not be viewed as a panacea for epilepsy, but for patients with especially severe forms who have not responded to numerous medications, these results provide hope that we may soon have another treatment option.



t amazes most of the humans who often consider Crows as simple nuisance. Admonished as ill-omen, bad luck, or representation of evil; crows, on the contrary, are in fact very interesting birds, who perform some astounding feats with their cleverness and dexterity. Crows have shiny jet black plumage with curious eyes, hoping gait, and a remarkable level of intelligence that they have been successful in outsmarting humans for accessing food from their domain. Crows have the biggest brain to body ratio among all bird species and evolved with a highly developed forebrain, where intelligence is regulated, the anatomy of the crow's brain is much similar to humans'. With more than 120 species, crows thrive in almost all the continents, other than Antartica. A test conducted in 2004 revealed that crows are cleverer than Bonobo chimpanzees and made them the most intelligent creatures after humans, and hence, scientists named them as 'feathered apes'.

Crows belong to the genus Corvus of the family Corvidae. "Cawing" is the sound they make, and have a sophisticated form of communication language. Crows have a very complex form of language and their distinctive 'cawing' has different meanings at different times. They have also been known to mimic sounds of other animals and can associate different commotions to different events. They can hear very low frequency sound that cannot be perceived by humans similarly get the sensation of changes in the environment.

Crow meat is edible and is found in some selected restaurants in the Western part of the globe. In fact, crow meat is considered much healthier than pork as crow meat contains fewer toxins than pork. Crows are very social, even bond with humans. Crows are migratory birds and gather in large numbers to migrate during winter and autumn. Crows have single mate in their entire life and after hatching the eggs, both male and female take turn

to incubate them. On an average, they lay about 4-7 eggs. Crows can skilfully construct the tools for food.

The first crow appeared 17 million years ago, in the Miocene period, in Australia and Oceania. Crows are omnivores, and even eat dead animals and garbage. Moreover, they prove to be very useful when it comes to controlling pests that destroy crops. When a crow is dying; a group of other crows would flock around and attack it aggressively to death. This is the reason why a group of crows is known as murder of crows!

There are various myths associated with crows. They are depicted in various forms in different cultures. In Irish mythology, crows are associated with Morrigan, the goddess of war and death. According to the Greek mythology, when the white crow, the guard of God Apollo's lover Coronis, informed him about the affair of his lover with Ischys, then in anger, God Apollo cursed and turned its white feathers into black. And the crows are said to bear black colour from that moment. Finding a dead crow was a sign of good fortune and Russians believed that witches took the shape of Crow. The Celts believed that Crow was an omen of death and conflict. In the Middle Ages, people believed that sorcerers and witches used the symbol of Crow's foot to cast death spells. Stories about crows are seen in many religious epics like Ramayanam, Mahabaratam, Quran and Bible. Hindus strongly believe that crows plays a major role in linking the dead and the living people as they believe crows are the only birds which can communicate and act as a messenger to the ancestral world. Another belief is that the ancestors come in the form of crows.

Cultural superstitions often focus on black animals as they embodied the frightening dark. This bird deserves respect and admiration, but unfortunately, they are often misunderstood, maltreated, and misrepresented

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## **BEACH BAMBOO HUT**

RAJAH BEACH

