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EDPRESS



Dear Reader,

July is dedicated to the selfless service of Mankind.

How does this become an everyday possibility??

The answer lies in the souls of the Doctors who go beyond the call of duty to touch the agony of the Human race with the divine mission of Healing.

Recent happenings have not augured well for their undying spirit. Yet, they pursue their cause, relentlessly. A tribute to their tribe can never be confined to these pages alone.

The real gratitude should rather come from our belief in their ability and a trust in their intentions, though the claim to these morals too is circumspect in these trying times. They need our prayers more than ever, to remain unblemished.

Their timeless worth in our lives finds mention in every part of this rich script.

The Dentcare has deliberately chosen to cover every aspect of the true wealth we should be seeking – Evergreen Health.

There is so much for you to devour from its content that I am certain you would wonder if there is anything left to nourish your senses. Savour the Dessert too.

Truly July is meant to relish what you sow.

So plant well. Reap Well Being!!

Yours truly,

Prof. (Dr.) George P. John

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You Reap What You Sow

FROM MD'S DESK

News of disaster we are constantly receiving today from various parts of the world through different media sources surprisingly has found place in two categories. One is related to natural calamities and the other on the atrocities of human beings to one another. The latter is extremely shocking and painful.

Many psychologists have tried to find out the reasons behind this inhuman nature of a portion of the population, who have put forward their justification for these acts of sheer inhumanity. The brutality seen among humans still goes on unabated.

Mankind can experience liberation from unending misery and pain only when they realize the fact that their own misdeeds will come back in equal measure. Therefore, to attain a perfect state of peace and tranquillity, one should repent; putting put off their old way of life, and ameliorating oneself.

Let me take you through a parable.

Once there lived a King who was notorious for his cruelty and brutality; all the citizens in the Kingdom earnestly wished that he was dethroned or killed, However, one day he surprised them all with the announcement that he would turn over a new leaf.

“No more cruelty, no more injustice,” he promised, and ‘spared no effort’ to keep his word. In a short span of time, he earned a name as the ‘Gentlest Monarch’. A few months after his transformation, one of his Ministers mustered enough courage and asked him what had brought about this change of heart.

The King answered, “As I was galloping through the forest, I saw a fox being chased by a hound. The fox could escape into a hole but not before the hound had bitten into its leg and lamed it for life. Later, I rode into a village and saw the same hound there, which was barking at a man. Even as I watched, the man picked up a huge stone



and threw it at the hound, breaking its leg. The man had not gone far when he was kicked by a horse, which shattered his leg, making him disabled for life. The horse began to run but it fell into a trench and broke its leg.”

Reflecting on all that had happened, I thought: ‘Evil begets evil. If I continue in my evil ways, calamity will surely overtake me’. So, I decided to mend my ways. The Minister went away convinced that it was the ripe time to depose the King and seize the throne. Since he was so preoccupied, he failed to see the steps in front of him and fell down, breaking his neck.

This might be a story, but we can learn a moral lesson from this; we get back what we give to others. If we do good to others, good will come back to us; if we do bad to others, the same will come back to us.

Cruelty and immorality are there in the world ever since the beginning of human existence on earth. Those who can feel empathy and sympathy with the people who fall prey to the inhuman act of cruelty will never do cruel deeds; they will do everything possible to wipe out the tears of others.

A tree is known by its fruit and a man by his deeds. So, if you plant kindness, you can gather love. Let us bend over backward to cultivate goodness by eradicating the chaos and problems in every sphere of life.

May the Almighty shower His amazing grace on us to lead a virtuous life. 🙏

Mr. John Kuriakose

Managing Director

DentCare Dental Lab Pvt. Ltd.



THE DIVINE PROPORTION

The quest for the definition of beauty has been taunting scholars and philosophers from time immemorial. Artists have tried to define beauty by incorporating various principles and even mathematical calculations to create an esthetic balance.

Every artist has their own perspective of defining beauty in their artistic creation. Despite the differences in the presentation and interpretation of beauty, all explanations appear to align with the proportion of the **Golden Ratio / Divine Proportion**.

The Divine Proportion is a mathematical concept, which is an expression of the ratio of two sums whereby their ratio is equal to the larger of the two

quantities. This ratio, which is always constant and approximates to 1.618:1, was derived by Fibonacci, an Italian Mathematician, in the 12th century. The symbol of the Golden Ratio is 'φ'.

The Divine Proportion has been excellently employed in various forms of art, architecture, sculpture, music, and poetry. The Great Pyramid of Giza, ancient Egypt, one of the seven wonders of the ancient world, stands testimony to this. This proportion is also associated with esthetics in nature. It can be seen in sea shells, the morphology of flowers, in mammals and even in the Human face. Yes, the Human face!

Can the analysis of a beautiful face be physically done using a mathematical principle?



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The Golden Ratio can be ascribed to various geometric shapes like the triangle, rectangle, and Pentagon. A similar dynamic progressive relationship can be found between the Golden Ratio and the Human face.

Golden Ratio in the Face

The Golden Ratio can be extensively seen in the Human face. The horizontal dimension of the face is in the Divine Proportion. For example, the Mouth is in proportion to the Nose, while the Eyes are to the Mouth and the Width of the Head. Therefore, the Eyes are in proportion to the Nose also (Fig. 1). A similar ratio can be seen in the vertical dimension of the face as well (Fig. 2).

However, different reference points are chosen by different individuals while assessing the Divine Proportion. For example, the more common endpoint around the mouth is the upper or lower border of the Lips. However, the angles of the mouth or the commissure of the lips may sometimes be considered as reference points.

Golden Ratio of the Dentition

The Divine Proportion can be seen in the Human dentition where the lower incisors stand as a point of reference and the upper incisors are in Golden Ratio (ϕ) of the lower incisors.

In ideal occlusion, the mesiodistal width of the upper central incisor is in golden ratio to the lower central incisor. The upper lateral incisor is in golden proportion to the upper central incisor (Fig. 3). This makes the lateral incisor proportional to the lower incisor as well. This proportion continues with the canine and premolars as well. Eventually, all the upper teeth fall in proportion to the lower incisor.

There are various systems that have been discovered for golden proportions among dentition. Though they

follow the same reference ratio for the Golden/Divine proportions, these systems consider other reference points in the teeth than just the mesiodistal width of the teeth.

Golden Ratio in the Smile

When a group of smaller units follow the principles of the golden proportion themselves, they tend to follow the golden proportion even as a whole single unit. This is a useful analytical medium for assessing the esthetics of the smile.

The anterior dental segment spanning from the 1st premolar of one side of the arch to the other encompasses 8 teeth in total. The total width of the 8 teeth is always in Divine Proportion to the width of the smile in ideal occlusion. This is a key element in Smile designing and Esthetic Dentistry.

Orthodontic Implications

The Divine proportion can be seen in various aspects of the bones in the cranium and the jaws. This proportion helps in the assessment and planning of Orthodontic and Orthognathic procedures.

Other Implications

The Divine Proportion is followed in the design of the Human body. It can be seen in the Limbs, Digits, and Bones. A trained eye can spot a subtle deviation in this proportion. Most often than not, a deviation from the Golden Proportion points towards an imbalance in form, structure, or function.

Conclusion

God, the Divine Architect, has followed the Divine Proportion to the minutest of details in all of His creations. One can see this proportion in all its beauty during a casual evening walk, during research, or even during an intricate surgical procedure.

It is also important to train oneself to be observant and conscious of this balance and rhythm, as it plays an important role in Cosmetic Dentistry, Oral and Facial Esthetics and Facial Cosmetics. A sound understanding and a keen eye for detail are elementary to plan and achieve an esthetic and functional outcome with treatment. ©



Fig. 1. Horizontal Proportions



Fig. 2. Vertical Proportions



Fig. 3. Golden Ratio of the Dentition



Keep Your Hair Healthy

Long, healthy and lustrous hair is everyone's dream. Most elderly women, especially those of the previous generations had beautiful black hair, even as they grew old. Since their hair was properly oiled and taken care of, their scalp was free of dandruff and had no problems at all.

Many youngsters today have premature greying of hair. The reasons for its increasing prevalence are manifold.

What causes premature greying of hair and hair loss?

The leading causes of premature greying of hair and hair loss are Hormonal imbalance, Hypertension, Nutritional deficiencies, Stress / Anxiety, and the use of Chemical Hair Dyes. Genetic predisposition, Hypothyroidism, and Polycystic Ovary Syndrome (PCOS) in women of reproductive age, can also contribute to premature greying of hair and hair loss. Therefore, it is important to rule out underlying medical conditions if premature greying of hair and hair loss are severe.

Here are some useful tips that can help you deal with premature greying of hair and hair loss. Try them.



Dr. Geetanjali S. Bothe
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Amla (Indian Gooseberry)

Indian Gooseberry is a rich source of Vitamin C that helps prevent premature greying of hair and reduces hair loss. It can be used in any form; raw, powdered, or as an oil. Vitamin C also helps the body absorb Iron, a mineral that helps the hair to grow thicker and stronger.

Methi Seeds (Fenugreek)

Fenugreek is good for the hair. They not only kill bacteria and fungi present on the scalp but also strengthen the hair follicles, besides promoting hair growth.

Mix Fenugreek powder with coconut oil and apply on the scalp and hair. It can reduce hair loss; prevent premature greying of hair, and make your hair soft, shiny, and silky.

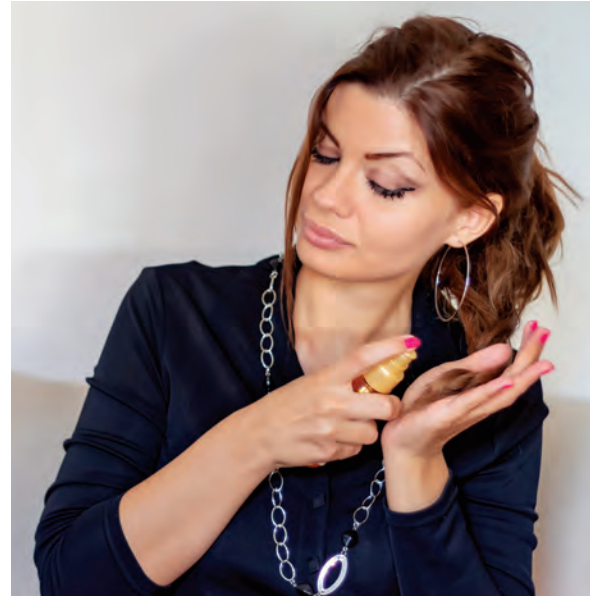


Leafy Vegetables, Pulses, and Buttermilk

They are a rich source of Vitamins and Minerals, including Iron and Zinc. Being nutritious for the hair, they should be included in the diet. Consumption of plenty of Leafy Vegetables, Pulses, and Buttermilk will help nourish the hair.

Henna

Henna is very good for the hair. You can add curd to it. Apply Henna to the scalp and hair and rinse it off after two hours. The natural properties of Henna will help promote hair growth exponentially. Henna oil nourishes and promotes hair growth, besides helping remove dirt and dandruff from the scalp.



Shikakai and Ritha

Shikakai is rich in Vitamins A, C, K, and D and essential Antioxidants that help boost hair growth. Ritha has Antibacterial and Antifungal properties, which can help remove dandruff completely and prevent hair loss. It is preferable to wash your hair once a week with Shikakai and Ritha.

Oiling the Hair

Regular oiling can provide essential nutrients needed for the hair which is helpful in preventing its premature greying, besides getting rid of dandruff.

Apply warm coconut oil to the scalp and hair using the fingers to gently massage the oil into the hair and leaving it overnight. If you massage the feet with warm coconut oil before heading to bed, it can provide you with a good night's sleep, in addition to making you feel mentally relaxed by reducing stress and anxiety, which play a role in premature greying of hair.

Yoga

Yoga, especially Pranayama helps rejuvenate the hair follicles. There are different poses in Yoga that help with the faster growth of hair.

Conclusion

Follow these simple tips to prevent premature greying of hair and hair loss. There are many effective medicines in Homeopathy that act in the gentlest and most natural way to halt the process of premature greying of hair and preventing hair loss, besides helping promote hair growth.

If you experience premature greying of hair or hair loss, consult a Medical Practitioner to take corrective measures. @



FORENSIC DENTISTRY: An Emerging Science

Forensic Dentistry is a branch of science which deals with the handling and examination of dental evidence for the proper evaluation and presentation of dental findings. This is an upcoming field which helps Police Personnel and the Judicial System to identify the perpetrators of a crime.

Dr. Oscar Amoedo, who was born in Matanzas, Cuba, is considered as the Father of Forensic Dentistry. He is the author of 'L' Art Dentaire En Medicine Legale', an exclusive book on Forensic Dentistry, wherein he wrote

about his experience of identifying the individuals who had been victimized by 'Bazar De La Charité' / fire in Paris, France and explained the importance of teeth in the identification / determination of sex of the individuals who are victims of mass fatalities.

The latest developments in the field of Forensic Science reveal that dental evidence can serve as one of the most successful means of Forensic Identification, such as for age estimation, bite mark investigation, identification of the offenders of a crime or a dead



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body, especially when it is unable to be recognized.

The precise estimation of age can be done based on the eruption of the tooth and the developmental stages of the permanent teeth. In the case of an adult, age estimation is done on the basis of the assessment of the regressive changes of the teeth. In children and adolescents, dental age assessment is more accurate than skeletal age estimation as the tooth, which is the toughest tissue in the body, is not often subjected to change due to external factors like fire or earthquake.

Bite mark investigation plays a crucial role in Forensic Dentistry which helps identify a suspect or victim involved in a crime.

The dentition of each individual is unique and hence, whenever a person bites another, it leaves a unique mark on the other, which serves as a clue for a Forensic Odontologist to identify the offender. This can be done with the help of superimposition of a bite mark injury with the suspect's dentition using software or a manual method.

In Forensic Dentistry, the use of Cheiloscopy (a forensic investigation technique that deals with the identification of humans, based on lip prints/traces) and Rugoscopy (the study of the patterns of the grooves and ridges of the palate to identify individual patterns) have been successfully proved as trustworthy methods to link a suspect to a crime.

Assessment of the Craniofacial features and Odontometric analysis are done to identify a decomposed body. When a dead body is mutilated or disfigured beyond recognition; when the skull alone is available; or when the aspect of facial reconstruction comes to play, Forensic Dentistry plays a part in the determination of the facial features of the deceased.

After a holocaust or fire, when the mortal remains are disfigured, charred, or unrecognizable, identification of the individuals is important for the Government to pay compensation to the next of kin of the dead. Besides, the kith and kin of the deceased would want the mortal remains to perform the last rites. In such a situation, a Forensic Odontologist is one of the members of the team involved in the identification of the dead.



Disaster Victim Identification (DVI) is a method to identify the victims of mass casualty incidents used by the International Criminal Police Organization, which is more commonly known as Interpol, an international organization that facilitates worldwide Police cooperation. The DVI Team use three features as primary identifiers which include Odontology or Dental Examination, Deoxyribonucleic Acid (DNA) Profiling, and Fingerprints.

Being the hardest tissue in the body, a tooth has the capacity to resist a lot of external factors, such as high impact collision or fire, making it an irreplaceable identifier. Hence, an Interpol DVI team mandatorily consists of two Forensic Odontologists for the identification of a mutilated dead body.

The dead body of Adolf Hitler, the Chancellor of Germany, was identified with the help of the denture that he had been wearing at the time of his death.

Conclusion

Forensic Dentistry is a very important field which plays a vital role in assisting Police Personnel and the Judicial System in identifying the suspect or the person involved in a crime. ©



BARIATRIC SURGERY FOR MORBID OBESITY

The likely precipitating factors contributing to the high incidence of Obesity include overconsumption of food and sedentary lifestyle



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Obesity, which was once considered as a symbol of opulence, prosperity, and health, was recognized as a lifestyle disorder during the 20th century. The likely precipitating factors contributing to the high incidence of Obesity include overconsumption of food and sedentary lifestyle. The prevalence of Obesity has increased at an alarming rate across the world over the past decades.

Morbid Obesity is defined as an excess accumulation of Fat in the body, which poses a threat to the health and lifespan of an individual. Obesity can increase the risk of developing many potentially serious debilitating diseases like Diabetes, High Blood Pressure, Heart Disease, Cancer, Arthritis, Obstructive Sleep Apnea, and many more, which further compromise the quality of life.

Various approaches, such as low energy diet, pharmacotherapy, exercise, and lifestyle changes have been recommended to deal with Obesity. Bariatric Surgery is a surgical method for treating patients with Morbid Obesity. It is generally recommended for a severely obese patient who does not respond to any of these conservative approaches.

The Body Mass Index or BMI is the parameter used to classify Obesity. It is calculated using a person's weight in kilograms divided by the square of height in meters. BMI classification of body weight is defined as seen in the Table.

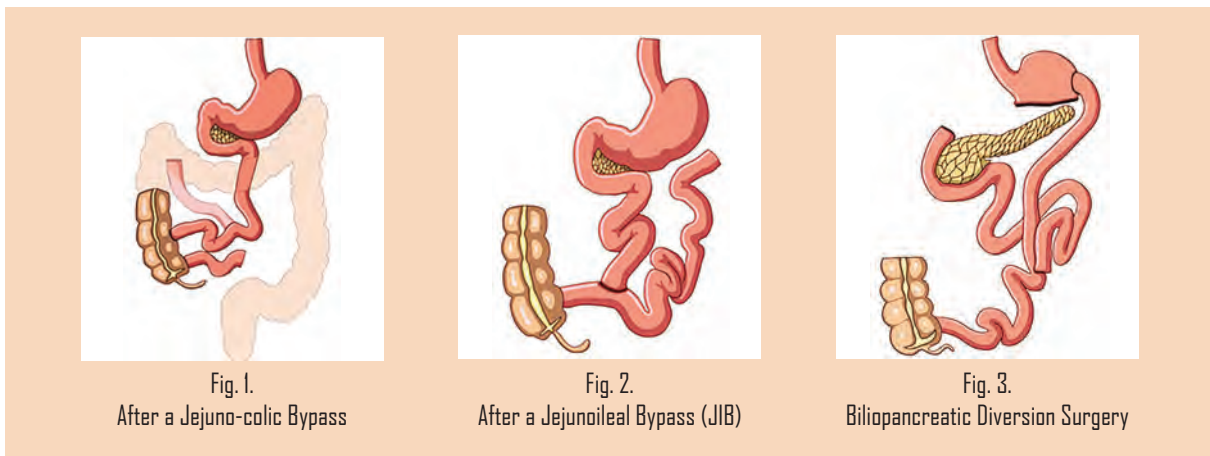
Group	Global	Indian
Normal	19 - 25	18.5 - 23
Overweight	25 - 30	23 - 25
Obese		
Class I	30 - 35	25 - 30
Class II	35 - 40	> 30
Class III	> 40	> 35

Patients with Class II and III Obesity are the candidates for Bariatric Surgery. However, this surgical procedure can also be done in patients with Class I Obesity and Metabolic Diseases like Diabetes. It is seen that these patients do better metabolically after this intervention. In such a situation the terminology used for this procedure is called "Metabolic Surgery".

Bariatric Surgery Or Weight loss Surgery

Intestinal Bypass Surgery was the first procedure done for weight loss. This surgery helps reduce the absorptive surface area of the small intestine by 85%, which results in the reduced absorption of food and weight loss. Jejunocolic Anastomosis (attaching the proximal jejunum to the colon or the distal end of the large bowel) (Fig. 1) and Jejunioileal Bypass (JIB) (Fig. 2) (attaching the proximal small bowel to the ileum or the distal end of the small bowel) are the two examples of Intestinal Bypass Surgery. But, these procedures are often associated with severe adverse effects like frequent Dehydration, Nutritional Deficiencies, Gas Bloat, Severe Diarrhea, and Liver Failure, in addition to a high mortality rate.

Biliopancreatic Diversion (BPD) Surgery (Fig. 3), a modification of the earlier procedures, could partially overcome some of the complications associated with Jejunocolic Anastomosis and JIB and is being performed in



some healthcare facilities even today. This procedure is performed in two stages. Since this procedure offers unmatched treatment outcome, it is considered as one of the best Bariatric Procedures for weight loss and Metabolic Disorders even now. However, this procedure warrants a close lifelong follow up.

Biliopancreatic Diversion with Duodenal Switch [BPD / DS] (Fig. 4), which is a modification of BPD procedure, enjoys greater popularity, as it entails fewer side effects.

Roux-en-Y Gastric Bypass [RYGB]

Roux-en-Y Gastric Bypass [RYGB] surgery (Fig. 5) involves the bypass of the stomach rather than the small bowel. Patients, who underwent Gastric Resection for Cancer, have lost their weight considerably. But the patients have found it hard to maintain adequate body weight.

Loop Gastric Bypass (Fig. 6) is a modified modality for weight loss. But this procedure poses a risk for Bile Reflux, leading to Stomach Ulcers. Modifications in this procedure like a small vertically oriented gastric pouch and the Roux-en-O configuration were introduced, which helped resolve the side effects. Banding of the gastric pouch (putting a plastic band around the stomach pouch to prevent it from dilating) was added to further restrict food intake.

RYGB entails fewer adverse effects and a patient can lead a better quality of life after this surgical procedure. It has been successfully performed for more than five decades and is considered as one of the most popular bariatric procedures performed for weight loss and also as a Revision Procedure; a surgery performed to compensate for a failed surgical procedure for weight loss.

The popularity of this surgical procedure has overwhelmingly increased, as it helps control High Blood Pressure and Diabetes, besides aiding

to reduce the levels of Low-density Lipoprotein [LDL] Cholesterol. Currently, this procedure is recommended for weight loss and to treat Diabetes.

Gastric Banding and Adjustable Gastric Banding

Gastric Banding is a procedure to place a band across the upper part of the stomach, which helps restrict the intake of food. This procedure, which was introduced in the 1980s, is less popular than Adjustable Gastric Banding (Fig. 7). An Adjustable gastric band has an inflatable balloon, helping a Surgeon reduce the size of the gastric pouch outlet, which in turn, restrict the intake of food, gradually resulting in weight loss.

Adjustable Gastric Banding is a simple procedure involving minimal complications. This procedure can also be safely performed laparoscopically. Weight loss and alleviation of Diabetes, Hypertension, Obstructive Sleep Apnea, Cholesterol levels, etc., following a Gastric Banding Procedure, are less when compared to a Gastric Bypass Surgery. After the initial popularity of this surgery in the 1990s, this procedure gave way to a more effective and restrictive bariatric procedure called Sleeve Gastrectomy.

Sleeve Gastrectomy [SG]

Sleeve Gastrectomy [SG] is a procedure in which the size of the stomach is reduced to about 15% of its original size by surgically removing a large portion of the stomach along the greater curvature (Fig. 8). It has emerged as a modification of Biliopancreatic Diversion with Duodenal Switch, a complex procedure that induces weight loss by a Sleeve Gastrectomy and Intestinal Bypass to improve the safety of high-risk patients.

Very often the patients lose a significant amount of weight with Sleeve Gastrectomy, the first stage of the procedure, and hence, they opt out of the second stage

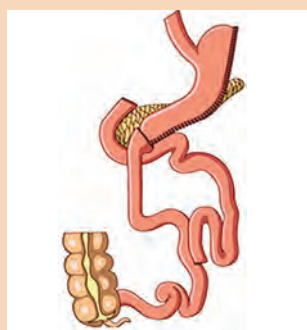


Fig. 4.
After a Biliopancreatic Diversion
with Duodenal Switch

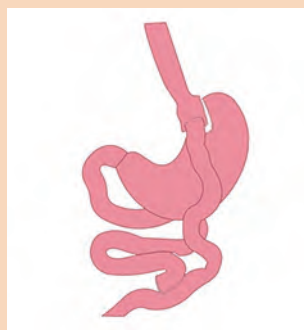


Fig. 5.
RYGB

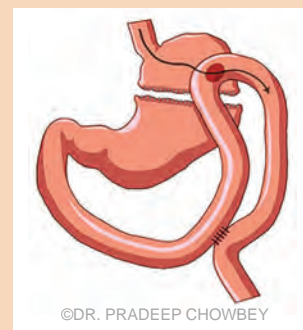


Fig. 6.
Loop Gastric Bypass Surgery

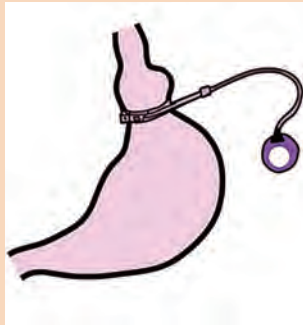
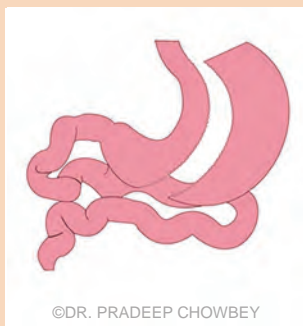


Fig. 7.
Gastric Banding



©DR. PRADEEP CHOWBEY

Fig. 8.
Sleeve Gastrectomy

Bariatric Surgery is a surgical method for treating patients with Morbid Obesity

(Intestinal Bypass). Subsequently, Gastric Sleeve Surgery has been recognized as an effective standalone procedure for weight loss. It is a simple procedure that helps achieve long-term weight loss.

Currently, SG enjoys the position of being the most commonly performed Bariatric Surgery worldwide. However, this procedure is associated with increased Gastric Reflux and a high incidence of weight recidivism (a relapse into a previous condition), which may lead to a revision of the procedure. Also, a leak following an SG is difficult to manage and often takes a very long time to heal.

Conclusion

Sleeve Gastrectomy [SG], Roux-en-Y Gastric Bypass [RYGB], and Adjustable Gastric Banding are the common bariatric surgical procedures. Whatever be the treatment of choice, a patient needs close follow-up and monitoring to achieve a healthy weight loss and avoid long-term complications, including protein and other deficiency disorders.

Besides providing sustained weight loss, Bariatric Surgery helps with the long-term remission of Type 2 Diabetes, improvement in cardiovascular health, elimination of Obstructive Sleep Apnea, and more. ©



Regular Dental Checkups: Do They Really Matter?



Dr. Mayakha Mariam
Dental Practitioner
Pathanamthitta, Kerala, India

It is vital for everyone to have a regular dental checkup at least once in every 6 months or as recommended by a Dental Practitioner, as it helps keep the gums and the teeth healthy. Besides dental problems, a dental checkup will help detect the early signs of many systemic conditions.

Here are some important reasons why you should visit a Dental Practitioner regularly.

Cavities

A normal adult has 32 teeth in the oral cavity, which can be susceptible to Tooth Decay. Since Cavities generally do not cause pain, they cannot be easily detected in the early stages. Usually, Tooth Decay is detected only after it worsens; that is when it is too late to be fixed with simple dental fillings.

Cavities and Gum Disease can be prevented by keeping the teeth and the oral cavity clean and healthy. Good oral care from a young age can promise healthy teeth even in your old age. Therefore, it is important to have a regular visit to a Dentist to detect the early signs of Tooth Decay or Gum Disease.

Calculus

Calculus is a form of hardened dental plaque (a sticky deposit on teeth in which bacteria proliferate) which is usually white or whitish yellow in colour. It is the root cause of many problems in the oral cavity like Cavities, Bleeding Gums, Bad Odour, and Tooth Sensitivity.



It is important to have a regular visit to a Dentist to detect the early signs of Tooth Decay or Gum Disease



Oral Health
=
Overall Health

Regular tooth cleaning by a Dental Professional is important to remove Calculus or Tartar, as it cannot be completely removed through normal brushing and flossing. Professional cleaning includes Ultrasonic scaling and polishing.

Overall Health Assessment

The mouth is the mirror of the body. A healthy mouth means a healthy body. This may sound a bit astonishing.

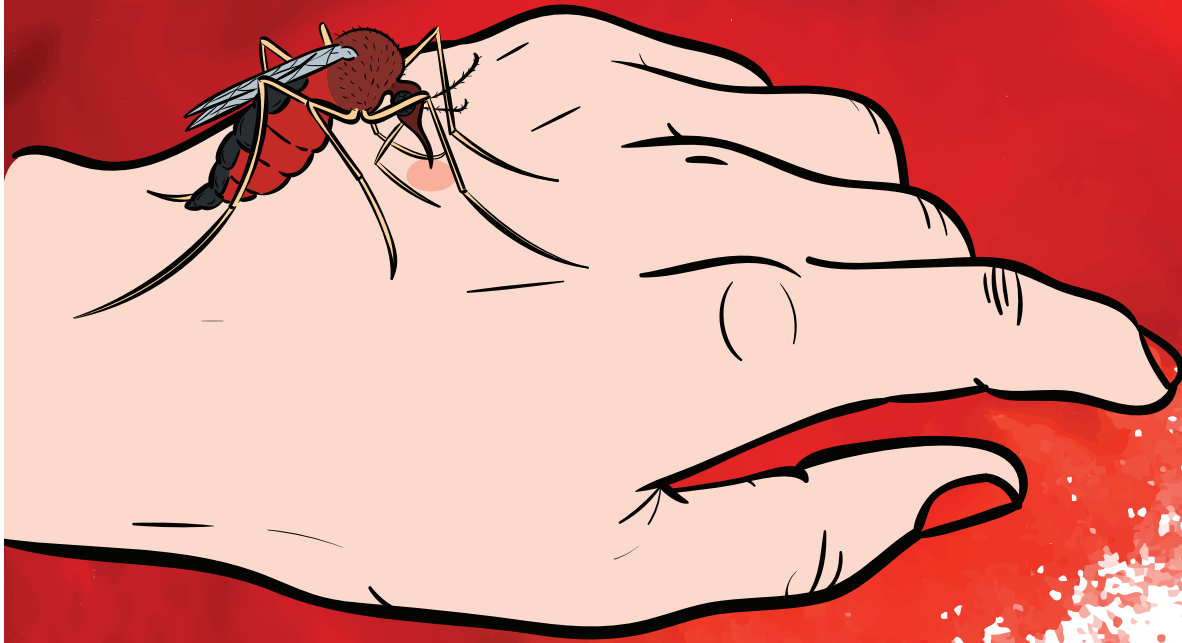
When a person has a systemic disease, it may often reflect in the oral cavity. For instance, when a Dentist looks into the mouth of a patient, the early signs of systemic diseases like Diabetes Mellitus can be made out as they often become apparent first in the oral cavity. Therefore, a dental visit could also help you become aware of certain systemic diseases that might have been unknown to you.

Conclusion

A routine dental checkup is very important as it helps the Dentist diagnose and identify the early signs of a majority of systemic conditions and oral diseases. ®

Chikungunya:

A Common Occurance During the Monsoon



Chikungunya is a viral infection caused by the bite of an infected female mosquito belonging to the *Aedes aegypti* or *Aedes albopictus* group.

The name 'Chikungunya' is derived from a word in the Kimakonde language (spoken by an ethnic group in Southeast Tanzania and Northern Mozambique, Africa), which means 'to become contorted or that which bends up'. This refers to the 'stooped appearance' of those suffering from Arthralgia (joint pain) due to Chikungunya.

Chikungunya is not a contagious disease, and an infected person cannot spread this infection directly to another person. The Chikungunya Virus gets into a mosquito when it bites a person already infected with it, and when the infected mosquito bites another person, the Virus is transmitted.

Symptoms

The symptoms of Chikungunya Virus infection usually begin to appear 3 – 7 days after the bite of an infected mosquito. The most common symptoms are Fever and Joint Pain. Other symptoms include Headache, Chills, Nausea, Vomiting, Joint Swelling, and Skin Rashes.

Most patients recover from the disease within a week or so. But in some



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patients, Joint Pain may persist for months. Once a person is infected with the Chikungunya Virus, he is likely to be protected from future infections; that is a person may get life-long immunity against subsequent infections from Chikungunya Virus.

Diagnosis

Chikungunya Virus infection is suspected in persons with acute onset of Fever and Arthralgia, especially those who have recently returned from areas infected with the Chikungunya Virus.

The common laboratory tests to confirm the presence of Chikungunya Virus include

- ◆ Reverse Transcription Polymerase Chain Reaction (RT-PCR)
- ◆ Enzyme-linked Immunosorbent Assay (ELISA)
- ◆ Hemagglutination Inhibition Assay (HIA)

Treatment

There are no specific drugs to treat Chikungunya Virus infection. Patients are treated symptomatically and are generally advised to take plenty of rest or drink fluids. Medications, such as Ibuprofen, Naproxen, Acetaminophen, or Paracetamol are prescribed to relieve the symptoms of Fever and Arthralgia.

People at risk for Chikungunya

- ◆ People aged 65 years or above
- ◆ Newborn babies
- ◆ Those with medical conditions like Diabetes, Hypertension, or Heart Disease



Wear full sleeve clothes



Apply a mosquito repellent to the exposed skin



Keep doors and windows closed

Prevention

There is no vaccine to prevent Chikungunya. The most effective way to prevent the infection from Chikungunya Virus is to prevent the bite of the mosquitoes of *Aedes aegypti* and *Aedes albopictus* groups. These mosquitoes will bite during the day and at night. To avoid mosquito bite, use an insect repellent; wear long-sleeved and full-length clothes. It is also important to avoid the stagnation of contaminated water to prevent the breeding of the mosquitoes.

Individual Protection

- ◆ Wearing full sleeve and full-length clothes
- ◆ Applying a mosquito repellent to the

exposed skin on the arms and legs

- ◆ Using a mosquito net / coil or an insecticide vaporizer
- ◆ Keeping doors and windows closed, especially during the evening and early in the morning
- ◆ Screening doors and windows

Conclusion

There is no vaccine to prevent or specific antiviral drug to treat Chikungunya Virus infection. The most effective way to prevent the infection is by taking adequate measures to avoid the bite of the mosquitoes of *Aedes aegypti* and *Aedes albopictus* groups. ©



Tooth Whitening: An Overview

Tooth Whitening helps brighten the smile and enhance your confidence. It is a perfect solution for the people who hesitate to smile because of their stained or yellow teeth

It is hard to imagine anything more appealing than a sparkling white smile. But our teeth rarely stay as white as we would like them to be. Hence, the importance of Tooth Whitening.

What are the causes of Tooth Discoloration?

The teeth get stained from many things they come into contact with. Tobacco consumption; chewing paan; smoking; drinking coffee / tea / aerated drinks, and red wine can contribute to the staining of the teeth.

As one gets older, the tooth enamel gets thinner over time, making the underlying dentin more visible, and the teeth less bright / yellowish white. Some medications are also known to cause tooth discoloration.



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Dental Practitioner
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Tooth Whitening Procedures

There are two techniques for Tooth Whitening

- In-office Bleaching Technique
- Home Bleaching Technique

In-office Bleaching Technique

A Tooth bleaching procedure done in a professional dental setting is safer, faster, and more effective than a home bleaching technique. Moreover, the whole process will be more efficient when it is done by a Dental Professional.

At the first appointment for Tooth Whitening, a Dentist cleans your teeth and removes the film of bacteria, food, and other debris that builds up on the teeth, which contributes to staining. The gums are then coated with a protective agent so as to prevent it from coming into contact with the tooth whitening gel, which contains Carbamide or Hydrogen Peroxide.

Following this, the powerful whitening gel is applied on to the front surface of the teeth which is activated by a strong laser light. During this procedure, a patient must wear a pair of protective goggles. The whole procedure usually takes 30 – 45 minutes and is followed by the application of a polishing agent on teeth for removing surface irregularities.

The patient may need 1 to 3 appointments to complete the treatment, depending upon how severe the stains are and how much brighter the patient wants the teeth to be.

A Tooth Whitening Procedure will help brighten the color of the natural teeth without causing damage to the enamel and the remaining tooth structure. It is important to remember that a Tooth Whitening Procedure will not help whiten your tooth-colored fillings or dental prostheses.

Home Bleaching Technique

It is always better to consult a Dentist before choosing an over-the-counter bleaching agent. There are many choices for bleaching the teeth at home; the most

common ones include Tooth Whitening Strips and Gels. A home bleaching kit contains a bleaching agent in low concentration and hence, it requires an application for a longer period of time.

The tooth whitening kits available over-the-counter are generally cheaper but overuse of these products can cause Tooth Sensitivity and Pain.

Similarly, tooth whitening toothpastes available in the market helps whiten the teeth. However, when the tooth whitening toothpaste is used for a longer period of time, it can cause damage to the tooth enamel, besides making the teeth and gums sensitive.



Possible side effects of Tooth Whitening Procedure

Though a Tooth Whitening Procedure has no long-term side effects, a patient may experience mild sensitivity or gum irritation that may last for a day or two.

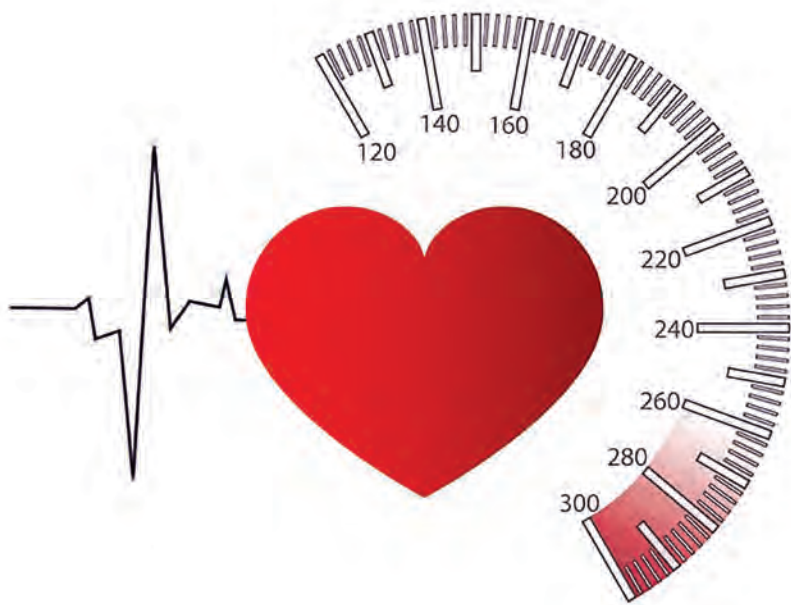
Maintenance of Whitening Effects

The effects of a professional Tooth Whitening Procedure may last up to one or two years. This duration varies from person to person. Regular tooth brushing, flossing, and rinsing after eating meals will help you maintain the effects of Tooth Whitening for a longer period of time.

It is also important to avoid or minimize the intake of foods and beverages rich in Tannin and Acids like tea, coffee, red wine, fizzy drinks, and strongly fermented food items. Tobacco chewing or smoking must also be avoided for maintaining the whitening effects for long.

Conclusion

Tooth Whitening helps brighten the smile and enhance your confidence. It is a perfect solution for the people who hesitate to smile because of their stained or yellow teeth. Therefore, visit your Dentist immediately for getting a dazzling, brilliant smile. ©



Hypertension in Pregnancy

Hypertension is a medical term for High Blood Pressure; that is when the level of blood pressure is 140 / 90 millimeters of mercury (mm Hg) or more.

Hypertensive Disorders of Pregnancy (HDP) affect 5 – 10% of pregnancies across the world. These disorders are the leading cause of perinatal and maternal deaths.

Classification of Hypertensive Disorders

Gestational Hypertension

Gestational Hypertension, also referred to as Pregnancy-induced Hypertension (PIH), is a condition characterized by High Blood Pressure in a pregnant woman after 20 weeks of gestation without

Proteinuria (presence of more than the normal amount of protein in the urine). It is seen more frequent in obese women and those with Diabetes or multiple pregnancies.

Preeclampsia

It is a Pregnancy-specific Syndrome characterized by Hypertension and often with Proteinuria. This disease is characterized by multiple organ dysfunction. Symptoms like Headache; Visual Disturbances; Nausea or Vomiting; Edema over the ankle, abdominal wall, or face. Thrombocytopenia (a condition in which there is a low blood platelet count), and Fetal Growth Restriction are also frequently seen in a patient with Preeclampsia.

Eclampsia

When Preeclampsia is severe, it might progress into a more dangerous condition known as Eclampsia which is associated with Fits or Convulsions. Convulsions are generalized and may appear before, during, or after childbirth.

Eclampsia is characterized by Generalized Tonic-clonic seizures. It has 4 stages; Premonitory, Tonic, Clonic, and Coma stages.

Convulsions or Fits generally last for a minute. During Convulsions, a patient may bite the tongue and fall down. After a Convulsion, a Coma of variable duration may ensue. The major complications of Eclampsia include Cerebral Hemorrhage, Posterior Reversible Encephalopathy Syndrome (PRES), Placental Abruption in pregnant women, Aspiration pneumonia, Pulmonary Edema, Acute Renal Failure, and Cardiac Arrest.

In the case of hospitalized patients, blood pressure monitoring, albumin estimation in the urine, weight recording, liver / renal function, serum uric acid test, and platelet count are performed at regular intervals



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HELLP Syndrome

This is a variant of severe Preeclampsia characterized by Haemolysis (rupture or destruction of the blood vessels), elevated liver enzymes, and a low platelet count. It has an increased risk for many severe complications like Placental Abruption, Pulmonary Edema, and more.

Management of Preeclampsia

Though various modalities are available, none is found to be consistently beneficial in preventing Preeclampsia. Low-dose Aspirin Therapy [50 – 150 milligrams (mg) per day] is shown to be beneficial in preventing Preeclampsia in some cases.

Women diagnosed with Preeclampsia need frequent antenatal checkups to evaluate the levels of blood pressure, Albuminuria (presence of the excessive amount of Albumin in the urine), fetal growth, and maternal well-being. Patients are advised to take rest and avoid the intake of excess salt.

Hypertensive Disorders of Pregnancy (HDP) affect 5 – 10% of pregnancies across the world. These disorders are the leading cause of perinatal and maternal deaths

Antihypertensive Drugs are given to control blood pressure levels, but they do not help prevent the progression of Preeclampsia. These drugs mainly help prevent the complications of Hypertension-like Cerebral Hemorrhage or Heart Failure.

In the case of hospitalized patients, blood pressure monitoring, albumin estimation in the urine, weight recording, liver / renal function, serum uric acid test, and platelet count are performed at regular intervals. Fetal growth and the overall well-being of the mother are also assessed regularly.

Fetal Biophysical Profile, Assessment of Amniotic Fluid Volume (AFV), and Non-Stress Testing (NST) are also frequently done. Diuretics are used only



when there is massive Edema. If the condition of the mother and the fetus are not satisfactory, pregnancy is terminated by 37 weeks.

Management of Eclampsia

Eclampsia usually follows Preeclampsia; so, to prevent Eclampsia, Preeclampsia needs to be prevented. Studies have shown that Magnesium Sulfate is effective in preventing the incidence of Eclampsia.

The patient is nursed in a railed cot in the head down position. Oxygen is continuously given to prevent Hypoxia (an inadequate supply of oxygen in the tissues). A Mouth gag is inserted to prevent tongue biting. The drug of choice for both the prevention and treatment of Eclampsia is Magnesium Sulfate. Respiratory rates, deep tendon reflexes, and urine outputs are frequently monitored to prevent Magnesium toxicity.

Once Eclampsia occurs, pregnancy should be promptly terminated either vaginally or by cesarean

section. After delivery, Magnesium Sulfate is continued for 24 – 48 hours. In the postpartum period, Convulsions may occur in the first 48 to 50 hours; hence, blood pressure levels should be carefully monitored. Rarely, Fits can occur up to 7 – 10 days after delivery. So, Antihypertensive Drug Therapy should be continued for a period of at least 14 days after delivery.

Management of HELLP Syndrome

There is no effective strategy to prevent HELLP Syndrome. To ward off this syndrome, it is important to keep yourself healthy before and during pregnancy and watch for the early signs of this condition.

Most often, the definitive treatment for a woman with HELLP Syndrome is the delivery of the baby. During pregnancy, many women suffering from HELLP Syndrome require a transfusion of some form of blood products like red cells, platelets, and plasma. Corticosteroids (steroid hormones) can be used in early pregnancy to help the foetal lungs mature.



Conclusion

Although many pregnant women with Hypertension have given birth to healthy babies without serious problems, High Blood Pressure can be dangerous for both the mother and the fetus. Women with preexisting or Chronic Hypertension are more likely to have certain complications during pregnancy. They are also at an increased risk for Hypertension, Ischemic Heart Disease, Stroke, and Diabetes, along with high mortality in later life.

Hypertension in pregnancy is a serious complication associated with significant maternal and fetal morbidity and mortality. Therefore, management of Hypertension in pregnancy is very important for the health of both the mother and fetus. ©



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An illustration showing several green, spherical Nipah viruses with spiky protrusions on the left. On the right, a human figure is shown from the chest up, with a blue translucent body and a glowing red brain, representing the internal infection.

NIPAH VIRUS INFECTION



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Nipah Virus (NiV) Infection is an emerging zoonosis (a disease that can be transmitted from Animals to Humans) causing lethal Respiratory Illnesses and Encephalitis in Humans. Majority of these zoonotic infections originate from wildlife, which account for more than 60% of the newly identified infections that have affected people over the past few decades.

Bats are the natural host of many potential zoonotic diseases, including Ebola, Severe Acute Respiratory Syndrome (SARS), and Middle East Respiratory Syndrome (MERS) as well as of pathogens like Coronavirus and Hendra Virus, besides the recently identified Influenza A and Nipah Viruses.

Nipah Virus was first detected in Sungai Nipah, a place in Malaysia in 1998. Subsequently, the outbreaks of this infection occurred in Bangladesh and India. Nipah Virus Infection was initially thought to be a form of Japanese Encephalitis (a brain infection); but later, it was found out to be one of the deadliest viruses known to infect Humans with a mortality rate ranging from 40% to 75%.

Transmission

Fruit bats, also known as 'flying foxes,' of the genus *Pteropus* are natural reservoir hosts of Nipah and Hendra Viruses, which are present in the urine, droppings, and saliva of Fruit bats.

Most probably, as a result of deforestation, the pig farms in Malaysia, where the disease was first discovered, had fruit trees which attracted the bats from the tropical forest, leading to exposure of the domestic pigs to bat urine and droppings. It is believed that the excretions and secretions of Fruit bats caused the infection of pigs in Malaysia followed by an outbreak in different parts of Malaysia.



Patients infected with NiV should be isolated and personal protective equipment, such as protective clothing, gloves, and masks should be used

Signs and Symptoms

The incubation period (interval from infection to the onset of symptoms) of Nipah Virus Infection generally ranges from 4 days to 2 weeks; but it may extend even up to 45 – 60 days.

Although some Nipah Virus Infections can be asymptomatic or mild, most of the infections are associated with Acute Respiratory Diseases. This infection usually begins with a Fever, Headache, Sore Throat, Myalgia (muscle pain) and often with a Non-productive Cough. This may be followed by Encephalitis with symptoms, such as Nausea, Vomiting, Drowsiness, Disorientation, Convulsions, Coma, and the signs of Brainstem Dysfunction.

The pathological changes commonly seen in a patient infected with NiV are Encephalitis and Systemic Vasculitis, sometimes in combination with Respiratory Disease. The Brain is the most severely affected organ followed by the Kidneys, Lungs, and Heart. Septicemia (a life-threatening complication that can happen when a bacterial infection in the body enters the blood and spreads throughout the body), bleeding from the Gastrointestinal Tract, and Renal impairment, along with other complications are possible in severely infected cases.

Diagnosis

Though NiV Infection can be diagnosed through clinical signs, its confirmation is often made through prescribed laboratory tests, such as

- ⊙ Virus Isolation
- ⊙ Immunohistochemistry
- ⊙ Electron Microscopy
- ⊙ Polymerase Chain Reaction (PCR)
- ⊙ Serum Neutralization Assay
- ⊙ Enzyme-linked Immune Sorbent Assay (ELISA)



Prevention and Treatment

Currently, there are no antiviral drugs or specific vaccines to treat Nipah Virus Infection. Intensive supportive care with the treatment of the symptoms is the main approach to control this infection in Humans.

The important measures to check the spread of this infection include avoidance of close contact with Fruit bats, including their secretions and excretions. Fruits should be washed thoroughly, peeled, or cooked before eating.

Patients infected with NiV should be isolated and personal protective equipment, such as protective clothing, gloves, and masks should be used. Good personal hygiene, including handwashing, should be done to reduce the risk of developing this infection.

Conclusion

Proper education and the use of Personal Protective Equipment (PPE), including improved hygiene measures, are inevitable to control the spread of Nipah Virus Infection. Consult a Doctor immediately when you have symptoms similar to those of a Viral Fever. ®



A Distinguished Rheumatologist Speaks

Prof. (Dr.) Debashish Danda, the President of Indian Rheumatology Association, is the Founding Professor and Immediate past Head of the Department of Rheumatology and Clinical Immunology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. He has been engaged in the all-round development of the Department, which is now a well-equipped wing with its own Videocapillaroscopy, Magnetic Resonance Imaging (MRI), Sonography, Real-Time Polymerase Chain Reaction (RT-PCR), and other facilities.

Dr. Danda is a Clinical Rheumatologist involved in teaching and the care of patients with Autoimmune Rheumatic Diseases, besides clinical and translational research. His special areas of interest include Sjogren's Syndrome, Takayasu Arteritis, Spondyloarthritis, Lupus, and Infection-related Rheumatism.

He is also the **President-elect of Asia Pacific League of Associations for Rheumatology (APLAR)**, a Federation of Organizations of Rheumatology of 31 countries, and the Immediate past Editor in Chief of International Journal of Rheumatic Diseases, a peer-reviewed Rheumatology Journal and the official publication of APLAR.

Q || What is the importance of observing Juvenile Arthritis Awareness Month?

Juvenile Arthritis Awareness Month is dedicated to making everyone aware that Juvenile Idiopathic Arthritis is a painful and debilitating disorder, which

has a serious impact on the lives of kids and teens, including their families.

In India, Juvenile Idiopathic Arthritis is not often detected early and people generally mistake and tend to consider it as a Rheumatic Fever or an infectious disease like Tuberculosis (TB). It needs specialized training to diagnose Juvenile Idiopathic Arthritis, especially in the early stages of the disease.

It is also important to create awareness among both Rheumatologists and Pediatricians, Physicians, and General Practitioners, as it will help them not only diagnose and treat the disease in the early stages itself but also prevent it from complicating further.

Q || What is Juvenile Idiopathic Arthritis (JIA)? What are the common types of JIA?

Like Adult Rheumatoid Arthritis, Juvenile Idiopathic Arthritis is an autoimmune disease; that is, the body mistakenly identifies some of its own cells and tissues as foreign bodies and begins to attack its own healthy cells and tissues. There are different types of Juvenile Idiopathic Arthritis including

Polyarticular Juvenile Idiopathic Arthritis (JIA) which affects five or more joints within the first six months of the onset of this illness. This type of Arthritis can affect the joints in the Jaw and Neck as well as the Hands and Feet. It is the second most common type of JIA in children and teenagers. It is again subdivided into two types – Rheumatoid Factor Positive Polyarticular Juvenile Idiopathic Arthritis and Rheumatoid Factor

Negative Polyarticular Juvenile Idiopathic Arthritis.

Rheumatoid Factor is an antibody that is present in the blood in a few patients with JIA. **RF-positive Polyarticular JIA** is rare in children and affects only less than 10% of children with JIA. It affects both the small joints of the Hands and Feet, and large joints like the Knees, Hips, and Ankles. This subset behaves more like Adult Rheumatoid Arthritis in the long run. **RF-negative Polyarticular JIA** is more common. In some young people, it will start in only one or two joints and then spread to other joints during the first six months.

Oligoarticular JIA affects less than five joints within six months following the onset of this disease. The joints most commonly affected are the Knee, Ankle, and Wrist. It can also affect the Eyes, most often the Iris and Ciliary body. This condition is known as Uveitis, Iridocyclitis, or Iritis. There are two types of Oligoarticular Juvenile Arthritis: Oligoarticular-persistent Arthritis and Oligoarticular-extended Arthritis. Oligoarticular-persistent Arthritis most often affects the large joints, such as the Knee, Ankle, Wrist, and / or Elbow while Oligoarticular-extended Arthritis affects both the large and small joints asymmetrically.

Systemic JIA, also called Still's Disease, can affect many systems or the entire body. Systemic Juvenile Idiopathic Arthritis usually causes High Fever and Rashes. Rashes often appear on the Trunk, Arms, and / or Legs. Systemic Juvenile Idiopathic Arthritis can also affect the internal organs, such as the Heart, Liver, Spleen, and Lymph nodes, but it does not usually affect the Eyes. It can affect both boys and girls equally.

Enthesitis-related Arthritis is a type of Arthritis that often affects the Spine, Hips, And Eyes, including Enteses; the connective tissue between tendon or ligament and bone. It more often affects young boys than girls.

Juvenile Psoriatic Arthritis affects the children who have both Arthritis and Psoriasis, a skin disease. Children with this type of Arthritis often have pitted fingernails. They may also have Uveitis, Enthesitis, an inflammation of the Enteses, and Dactylitis, an inflammation of the Fingers and Toes.

Q || What are the short- and long-term effects of Juvenile Idiopathic Arthritis?

The short-term effects of JIA include systemic conditions like a Fever and Chronic Eye Inflammation, which can be easily treated with Steroid eye drops; but it rarely requires systemic steroid intake.

Some children with Polyarticular or Systemic JIA may have serious long-term complications, such as Joint Problems, Growth Retardation, Joint Contractures, Muscle Weakness / Loss, Osteoporosis, etc.

Q || What are the treatment options for treating Juvenile Idiopathic Arthritis?

Nonsteroidal anti-inflammatory medications and Disease-Modifying Anti-Rheumatic Medications (DMARDs) like Methotrexate, Sulphasalazine, etc. are given to a patient to slow down the progression of this disease. When a patient does not respond to these medications, Biologics (drugs designed to target offending immune molecules in the body), such as Etanercept, Infliximab, Adalimumab, Abatacept, Tocilizumab, and Anakinra are recommended. Apart from that, Corticosteroids may also be prescribed to control inflammation or severe symptoms.

Regular eye examinations are also necessary to detect Uveitis or Iritis, which is associated with JIA. Physical Therapy can improve muscle and joint functions while Occupational therapy will help optimize activities of daily living.

Q || Does Juvenile Idiopathic Arthritis run in families?

Juvenile Idiopathic Arthritis is believed to be influenced by Genetics, certain Infections, and Environmental factors. JIA has a genetic association, especially with those having Human Leukocyte Antigen (HLA) genes.

A Child with Enthesitis-related Arthritis often has a family history of Arthritis of the spine, viz., Ankylosing Spondylitis, especially among their male relatives. Children with a family history of Psoriatic Arthritis are more likely to get the disease than those without. It probably comes from a mix of genes and other factors, including hormones and bacterial or viral infections that may send the immune system into overdrive. If a mother had Juvenile Idiopathic Arthritis, her child may develop another autoimmune disease and not necessarily JIA.

Q || Are Pediatric Rheumatologists very rare in India?

Pediatric Rheumatologists are very few in India. I took the initiative to start the Paediatric Rheumatology Clinic at Christian Medical College (CMC) and Hospital and eventually identified Dr. Sathish Kumar who was trained in Canada and is in charge of the care of children at CMC.

Dr. Surjit Singh in Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh; Dr. Sujata Sahani in Delhi; Dr. Amita Agarwal in Lucknow, Uttar Pradesh; Dr. Khub Chandani in Mumbai, Maharashtra; and Dr. Suma Balan in Kochi, Kerala are some of the other Paediatric Rheumatologists of repute in India. ©

For The DentCare
Interviewed by Ms. Nisha Philip Xavier



Building Strong Abs

Defined Abdominal Muscles (Abs) have become a symbol of fitness and health. The Abdominal Muscles which are located between the ribs and the pelvis help provide better balance and stability for the body, besides helping the physique look more beautiful.

The core of the human body includes all the muscles in the torso (the trunk of the human body) from the shoulders down to the hip. The torso is the centre of the power of the body, which houses the critical organs in the body. All the movements in the body are powered by the torso. Hence, it is essential to keep the trunk strong as it will facilitate the efficient movements of the body.

Abs help support the trunk; allow the movements in the body, and hold the organs in place by regulating the internal abdominal pressure. The Abdominal Muscles and the muscles in the back work together to support the spine when a person sits, stands, bends

over, picks things up, does exercise, and much more.

The combination of a cardiovascular exercise program coupled with a healthy diet will help burn the Fat while keeping the waist trim.

Major Muscles of the Core

Transverse Abdominis

It is the innermost of the flat muscles of the abdomen and is located immediately beneath the internal oblique muscle. The main function of this muscle is to activate the core musculature and stabilize the lower back and the pelvis.

External Abdominal Oblique Muscle

This muscle is situated on the lateral and anterior parts of the abdomen and helps support the trunk.



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Internal Abdominal Oblique Muscle

The Internal Abdominal Oblique muscle, the largest and the outermost of the three flat muscles of the lateral anterior abdomen, is located on the lateral and anterior parts of the abdomen. This muscle supports the abdominal walls and helps rotate or turn the trunk with the help of the other muscles.

Rectus Abdominis Muscle

The Rectus Abdominis muscle, a paired muscle running vertically on each side of the anterior wall of the abdomen, is located in the front part of the body, beginning at the pubic bone and ending at the sternum / breastbone. The main function of this muscle is to help flex the spinal column or the human trunk.

Abdominal Workouts

An abdominal workout helps tone and strengthen the core muscles (the muscles located deep within the trunk, extending from the base of the head to the pelvis). To rule out the imbalance of the muscles, Abs workout should be done together with the exercise for the Erector Spinae muscles (a set of three muscles that run along the neck to the lower back). The Erector Spinae muscles function to straighten the back and provide for the side to side rotation of the trunk.

The Abdominal Muscles and the muscles in the back work together to support the spine when a person sits, stands, bends over, picks things up, does exercise, and much more

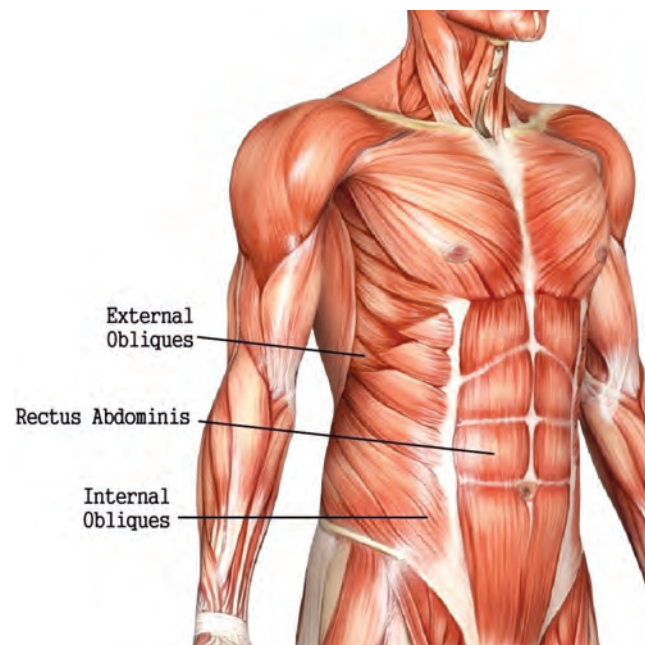
Conclusion

Strong Abs contribute to a healthy core, helping form a powerful axis for the whole body. They help maintain proper posture and reduce the wear and tear on the spine.

Start doing an Abs workout to improve the stability of the torso as well as to enhance postural support and balance. ©

Takeaway

- ☑ Do an exercise to target all the muscles of the abdomen and the lower back
- ☑ Perform a cardio warm-up exercise for 5 – 10 minutes
- ☑ Exercise slowly; perform 2 to 3 sets of each workout with 10 – 16 repetitions
- ☑ Remember that the quality of a workout is more important than its quantity or the number of repetitions
- ☑ Rest for 30 – 40 seconds after every set of exercise
- ☑ Workout the Abs 3 – 4 times a week, preferably on consecutive days
- ☑ Consult a Doctor before starting your workout, especially when you have had a major back injury





Vitiligo: An Ayurvedic Perspective



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Vitiligo is a common, acquired, idiopathic discoloration of the skin characterized by well-circumscribed ivory / chalky white colored macules (areas of skin discoloration) on the surface of the skin. The hair on the patch may be either normal or white (Leukotrichia). The total area of the skin that can be affected by Vitiligo varies from person to person.

Causes

The exact cause of Vitiligo is unknown. But it may be due to an Autoimmune Disorder or a Virus. Vitiligo is caused by the loss of pigment in the skin, due to the destruction of pigment-forming cells known as Melanocytes. This disease can also affect the inside

of the mouth and hair. Since there is no cure, Vitiligo usually remains as a lifelong condition.

In Ayurveda, Vitiligo is known as Swittrakushta. This is caused due to the vitiation of the three Doshas (Vata, Pitta, and Kapha) or substances that are present in a person's body. According to Ayurveda, the unique causes for Swittrakushta are consumption of Virudhaahara (incompatible diet), disgracing of teachers and distinguished people, engaging in sinful activities, and speaking untruth.

Treatment in Ayurveda

Internal Medications

- A patient with Vitiligo is advised to purify the body with Panchakarma treatment – a fivefold therapy which includes Vamana (Emesis), Virechana (Medicinal Purgation), Basti (Herbal Enema Therapy), Nasya (Elimination of Toxins through the nostrils), and Raktamoksha (Detoxification of the blood)
- Various types of Medicated Ghee, Decoctions, Powders, Oils are used for the treatment of Swittrakushta

External Medications

- Powders of Nalpamaram (a combination of four types of Ficus Plant), Triphala, and Turmeric (all in equal quantities) mixed together with Cow Urine is applied on the white patches
- Burnt Peacock Feather mixed with Cow Ghee is applied on the white patches
- Leaf extract of Golden Shower Tree (Cassia fistula) mixed with Red Sandal powder is applied on the white patches

Controlling Vitiligo with Diet

Vitiligo is generally considered to be an Autoimmune Disorder, Hence, it is prudent to eat a diet that can boost the immune system; promote healthy skin, and encourage the re-pigmentation of the skin.

Food that can help deal with Vitiligo are

- Moringa (drumstick) leaves boiled with Turmeric
- Raw Garlic cloves with Honey, daily
- Root vegetables, especially Beetroot, Carrot, and Radish
- Leafy greens, such as Kale or Romaine Lettuce



Conclusion

Vitiligo may often remain as a lifelong condition. Although it cannot be cured, there are medications that potentially help treat Vitiligo or prevent it from worsening. ©



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The Types of Dentists You will Meet

All Dental Professionals, whether they are General Practitioners or Specialists, fall into four broad categories

A Dental Practitioner is a healthcare professional who provides care and treatment to promote and restore oral health. This professional regularly wrestles with tooth extraction, dental trauma, broken teeth, gum problems, bad breath, mouth ulcers, and a host of other oral problems. Hence, many of them are often overburdened with work and stress.



Dr. Chinmoy Hazarika
Dental Practitioner
Dhaligaon, Assam, India

All Dental Professionals, whether they are General Practitioners or Specialists, fall into four broad categories.

Clinicians

A Clinician is the most common Dental Practitioner, who owns a clinical practice intended to address the oral problems of patients seeking professional help. This clinic generally serves as a one-stop solution for almost all the dental needs of the patients.

Residents

A Resident is a Dental Surgeon who is usually a young professional working in a Hospital or a large clinical setup. The Resident mainly puts into practice theoretical knowledge gained in the pursuit of clinical excellence and gathers as much experience as possible in a particular field.

Government Dental Surgeons

A Government Dental Surgeon is a Dental Professional in the service of the Government, generally working in a Government Hospital or Health Centre, who often works closely with other healthcare professionals to solve the various oral problems of patients belonging to various strata of society.

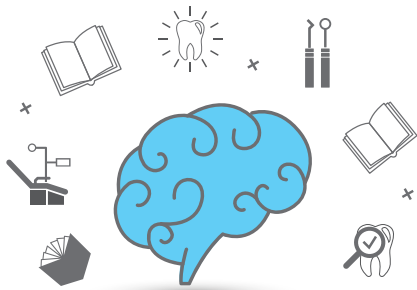
Consultants

Last but not the least is a Consultant who visits Hospitals and Clinics of other Dentists to help with patients who need a higher level of expertise. A Consultant generally specializes in a branch of dentistry. If not for a Consultant, patients would have the added burden of visiting different specialty dental clinics for treating their dental problems.

Conclusion

All Dental Practitioners or Specialized Dental Professionals do their best to prevent, diagnose, and treat all sorts of diseases and conditions in the oral cavity, helping patients maintain a healthy oral cavity. ©





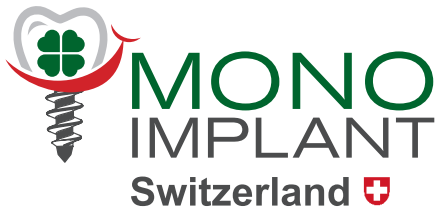
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THE FIGHT AGAINST CANCER



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Cancer is a heterogeneous disease and can manifest in different parts of the body as different diseases involving the abnormal growth of cells with the potential to spread to other parts of the body. It is a non-communicable disease with a predicted higher mortality rate than that of Heart Disease, in case adequate steps are not taken to prevent Cancer.

The incidence of Cancer had been higher in developed countries than in undeveloped and developing countries. But now, its incidence in developing countries is steadily increasing in alarming proportion

due to many reasons.

According to the International Agency on Research in Cancer (IARC), an intergovernmental agency of the World Health Organization (WHO), by 2025, the developing countries will harbor about 85% of the global burden of Cancer with only 15% resources to provide medical care to the affected population.

According to the Indian Council of Medical Research (ICMR), the apex body for the formulation, coordination, and promotion of biomedical research in the country, tobacco-related Cancers form 33% of all the Cancers in India. The higher prevalence of Oral Cancers in the country is due to many factors, including overconsumption of Alcohol and overuse of Tobacco products both in smoked and smokeless forms.

The fight against Cancer needs to be multi-pronged and the people of the world should unite together to take on this deadly disease. A few steps to reduce the incidence of Cancer are

1

Prevention

It is vital to keep ourselves away from using Cancer-causing substances like Tobacco, Slaked Lime, Betel Nut, and Alcohol, besides leading an active lifestyle; eating a healthy diet and avoiding exposure to vehicular exhaust fumes. A proportion of Cancers are attributable to Obesity especially hormone-dependent Cancers like Breast, Ovarian and Prostate Cancer. Hence, maintaining an appropriate weight is essential for a healthy life.

There are Cancer vaccines available that can prevent the development of Cancer. Two most common Cancers that can be prevented by vaccination are Cervical Cancer and some types of Liver Cancer. Studies have shown that vaccination can reduce the incidence of Cervical Cancer by 50%. To achieve the best possible effect, vaccination needs to be taken for six months before one plans a pregnancy.

2

Awareness of the Signs and Symptoms of Cancer

Since Cancer is a heterogenous disease, one needs to be aware that any symptom which does not resolve with simple medication within 2 – 3 weeks needs to be investigated into. The other conditions requiring an investigation include a Headache or Fits with no localizing signs such as blurred vision, hearing problem and focal neurological loss causing paralysis.

Other symptoms of Cancer can be painless bleeding from any part of the body; coughing up blood or bloody sputum; a fast-growing Swelling; Hoarseness of Voice; difficulty in swallowing solid food; alternating Constipation and Diarrhea; difficulty in and an increased frequency of urination, especially in males over the age of fifty years; a Fever of unknown origin lasting for more than three weeks and / or unexplained weight loss of more than 10% in 6 months.



3

Early Diagnosis

Cancer is curable if it is diagnosed early and treated properly. An early diagnosis can be arrived at by having a regular health checkup.

The fight against Cancer needs to be multi-pronged and the people of the world should unite together to take on this deadly disease. Some of the Cancers that have shown a downtrend due to sustained screening and early diagnosis are

- i. Cervical Cancer
- ii. Breast Cancer
- iii. Prostate Cancer
- iv. Colon Cancer

4

Adequate and Proper Treatment

Cancer treatment requires a multimodality approach in an appropriate sequence to reduce the side-effects of therapy and improve the treatment outcome. Besides Surgery and Chemotherapy, Targeted Radiation Therapy, Robotic Radiosurgery, Immunotherapy, Dendritic cell therapy, and Proton Therapy are now available to treat Cancer. The objective of Cancer treatment is to cure, palliate, or prolong the lifespan of a patient with minimum side effects.

5

Palliation and Supportive Care

To improve the quality of the life of a patient in the advanced stage, Palliation of the symptoms is very important. Hence, a concerted effort should be made to provide support to a patient at home or in a familiar surrounding with the comfort of his loved ones. Protein-rich diet, proper rest for the body, meditation, yoga, moderate exercise, emotional nurturance by family, friends, medical staff as well as counsellors can help in the recovery of patients undergoing Cancer treatment.

Conclusion

Cancer is a disease that can be prevented, diagnosed early and cured with appropriate treatment. To keep the disease at bay, it is important to make necessary lifestyle changes; avoid the use of Tobacco products; Do regular exercise, eat a healthy diet, and maintain a healthy weight, in addition to taking regular medical check-ups.

Let us join our hands to overcome this disease. ©



Infertility:

Psychosomatic Causes and Treatment

Infertility is the inability of a couple to have an offspring even after having two years of regular sexual intercourse without the use of contraceptives. A woman unable to carry a pregnancy to full term (babies born between weeks 39 and 41), resulting in a miscarriage, is also a sign of infertility. Both men and women can be infertile.

What is a Psychosomatic Disorder?

Psychosomatic Disorder is a physical disease that is thought to be caused or made worse by mental factors. Some physical diseases can be made worse

by mental factors, such as stress and anxiety. When mental factors cause physical symptoms when there is no physical disease, it can be attributed as a Psychosomatic Disorder.

Psychosomatic Factors

It was thought that only about half of Infertility cases had a physical origin and the rest were due to psychosomatic or other problems. But recent studies indicate that the leading cause of Infertility can be attributed to psychological / psychosomatic factors in both men and women.



Dr. Raajshree Vivek Tamhane
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Statistics show that Infertility occurs in about 10% of couples. Infertility can cause depression, anxiety, sexual dissatisfaction, decreased self-esteem, especially in women, adversely affecting a marital relationship. These couples may experience stigma and a sense of loss and social alienation.

Compared to men, women with Infertility experience more anxiety or depression. But when men learn that they are the ones who are infertile, they experience the same levels of low self-esteem, stigma, and depression as infertile women do.

External psychological causes of Infertility include

- ◆ Internal fears about impending parenthood
- ◆ Instability of family relationships
- ◆ Lack of confidence in a partner
- ◆ Deep psychological trauma in childhood
- ◆ Unwillingness to have a baby

Psychological effects of Male Infertility

The reactions of females and males differ in response to the news of Infertility. Men generally experience less distress than women do. However, the reaction of men largely depends on whether they or their partners are diagnosed with Infertility. When the problem is diagnosed in their wives or partners, men do not feel depressed as women do. But when men learn that they are the ones who are infertile, they experience the same levels of low self-esteem, stigma, and depression as infertile women do.

Treatment

There are about forty different ways to treat Infertility. About 85 – 90% of patients are treated with conventional methods and 3% with advanced interventions like In Vitro Fertilization (IVF). If a woman does not conceive naturally, comprehensive tests, such as Laparoscopy are done to examine the Fallopian tube to identify the cause of Infertility. The newer diagnostic technologies will help identify any abnormalities in the womb.

Most often, the physical causes of Infertility are taken into consideration and properly addressed while the psychological / psychosomatic factors are generally overlooked. When the psychological and psychosomatic factors of Infertility are appropriately addressed, the treatment outcome will be very high in infertile couples.

There are numerous ways to bring a positive effect on a patient with Infertility which include

Stress Reduction Technique

Regular prayer or walking in a quiet natural setting will help create a sense of peacefulness or a person can engage in artistic or creative activities to achieve tranquillity of mind. Meditation, Yoga, Body Awareness or Diaphragmatic

Compared to men, women with Infertility experience more anxiety or depression



Weighing too much or too little may sometimes put a woman at a risk for Infertility



Breathing, Guided Imagery, Autogenics, Progressive Muscle Relaxation, and Biofeedback are also helpful in reducing stress and anxiety.

Diaphragmatic Breathing Exercise

It requires no special equipment and can be practiced anywhere. Practice Diaphragmatic Breathing for 15 – 20 minutes a day; one can also think of a word or phrase, each time one breathes out.

Traditional Chinese Medicine

Acupuncture and Chinese herbs are effective in reversing Infertility. Acupuncture helps reduce stress and boost blood flow to the reproductive organs while Chinese herbs help regulate the menstrual cycle and create predictable ovulation.

Lifestyle and Dietary Considerations for Men and Women

The temperature of the scrotal sac is higher in infertile men and when the temperature increases in the scrotal sac, the production of sperm can be inhibited. So, an infertile man should take steps to keep the temperature of the scrotal sac down.



Estrogen, a female sex hormone, can cause a negative effect on the volume of semen and sperm count. Avoid the use of toxic substances, such as Fertilizers, Household Cleaners, or Animal Fat products. Eat foods that are not high on the food chain.

Lead, Cadmium, Arsenic, and Mercury can affect sex hormones and the quality of sperm. Hence, avoid exposure to these heavy metals.

Avoid Free Radicals

Free radicals can adversely affect sperm motility and viability. They may get into the human body from cigarette smoke, sunlight, unsaturated oils, etc.,

Vitamins and Minerals

Antioxidants, Beta-carotene, Vitamin C and E, Selenium, and Zinc aid in sperm production and motility. Zinc is found in whole grains, pumpkin seeds, nuts, and legumes. Deficiencies of Folic acid, Vitamin B12, or Iron can contribute to Infertility in women.

Weighing too much or too little may sometimes put a woman at a risk for Infertility. Overconsumption of alcohol can cause excessive levels of prolactin in the blood, which can be associated with Infertility.

A Woman who drinks a large amount of caffeine may take a long time to become pregnant and may have a higher risk of miscarriage.

Conclusion

Infertility affects both women and men of reproductive age and causes many major psychological and emotional problems. Attending to the emotional needs of infertile couples should be an integral part of Infertility treatment because the couple's relationship can be affected, especially when each partner needs the support and understanding of the other. Therefore, it is vital to properly address the emotional and psychological factors while treating the physical causes of Infertility to achieve a better treatment outcome. ®



Hearty and Healthy Soup

Spiced Beetroot Soup



Chef Reetu Uday Kugaji
Culinary Expert and Food Writer
Gurgaon, Haryana, India

Ingredients

Beetroot; Boiled, Peeled, and Pureed	1½ cups
Yellow Moong Dal; Split, Cooked, and Pureed	¼ cup
Coconut Milk; Thick	125 milligrams
Vegetable Stock	3 cups or more if desired
Salt to taste	

For Tempering

Extra Virgin Olive Oil	½ tablespoon
Mustard Seeds	1½ teaspoons
Cumin Seeds; Crushed	1 teaspoon

Curry Leaves; Chopped	1 sprig
Cilantro; Chopped	2 teaspoons
Curry Powder; Mixed with a little Water	½ teaspoon
Cashew Nuts; Roughly Chopped	2 teaspoons

Preparation

Transfer Beetroot and Moong Dal purees, and three cups of Vegetable stock to a medium pot. Heat the mix until it becomes thick. Add Salt to taste. Then add Coconut milk and whisk the mix well. Remove from heat. Pour the preparation into four soup bowls.

Heat Olive oil in a non-stick pan. Add Mustard seeds and allow them to splutter. Add Cumin seeds, Curry leaves, Cilantro, and Curry powder and mix them well. Sauté for half a minute, but ensure that the ingredients do not burn. Add Roughly chopped Cashew nuts. Pour the tempering over the Soup in the soup bowls. Serve it hot.

Chef's Tip

You may add a little Grated Ginger in the tempering to enhance the flavor of the soup further. ©

Green Tea:

Is it a Health Hype?



Green Tea, an aromatic beverage having originated from China, is made from the leaves and buds of *Camellia sinensis* that have not undergone the withering and oxidation processes similar to those for Oolong tea (partially oxidized form) and Black tea (fully oxidized form). The color of Green tea infusion is greenish, yellowish green, or yellow without the trace of the red or brown color found in Oolong and Black teas.

Green tea infusion provides a significant amount of Catechins or a rich source of beneficial Minerals like Manganese, Zinc, Chromium, Selenium, Antioxidants, and Alkaloids, along with various



Ms. Subhasree Prasanth
Consultant Dietician
Thiruvananthapuram, Kerala, India

Vitamins, such as A, D, E, C, B, H, and K. The major Catechin found in Green tea is Epigallocatechin Gallate (EGCG), an antioxidant compound that can protect against cellular damage caused by free radicals and also boost metabolism.

Benefits of Green Tea

- ⊙ Polyphenols present in Green tea help fight Cancer
- ⊙ The bioactive compounds in Green tea help improve health
- ⊙ Increases Fat oxidization during moderately intensive exercise
- ⊙ Helps clean the bacteria that cause damage to the tooth and thereby improves dental health
- ⊙ Inhibits intestinal absorption of dietary lipids
- ⊙ Helps lower the Low-density Lipoproteins (LDL) Cholesterol and thus lower the risk of developing Cardiovascular Diseases

Demerits of Green Tea

- ⊙ May cause Stomach Upset, Constipation, Headache, Nervousness, Sleep Disorders, Vomiting, Diarrhea, Irritability, Irregular Heartbeat, Tremor, Heartburn, Dizziness, Ringing in the Ears, and Convulsions
- ⊙ Can have adverse effects on the Liver, when it is consumed on an empty stomach in the morning, as it contains a high amount of Catechins
- ⊙ Could decrease the ability of the body to absorb Iron

How much Green Tea can be consumed in a day?

A report made available by the University of Maryland Medical Center, United States of America reveals that it is safe to drink two to three cups of Green tea a day. Due to high Aluminum and Lead content, consumption of Green tea can lead to health conditions like low Hemoglobin levels.

Drinking two to three cups of Green tea a day will increase the ability of your body to metabolize Fat while flushing out Trans fats that increase the risk of developing Heart Disease, Stroke, and more. It will also help prevent Hypotension and get rid of toxins or harmful bacteria from the body.



The major Catechin found in Green tea is Epigallocatechin Gallate (EGCG), an antioxidant compound that can protect against cellular damage caused by free radicals and also boost metabolism

Conclusion

Drinking two to three cups of Green tea a day can burn Fat and lower the risk of Obesity; improve dental health, besides lowering the risk of Type 2 Diabetes and Cardiovascular Diseases. Regular exercise and a healthy, balanced diet with plenty of Green tea will help you stay fit and healthy for long. ®



The Emergence of Aquaponics

Aquaponics is a form of agriculture that combines conventional aquaculture; i.e., raising of aquatic animals like fish, prawns, etc., in tanks with hydroponics (cultivating plants without soil; i.e., in water) in a symbiotic environment. In Aquaponics, the nutrient-rich water from raising fish provides a natural fertilizer for the plants while the plants help purify the water for the fish. The concept 'Aquaponics' has emerged when people realized the importance of healthy and toxic-free food.

The Importance of Healthy Food

Healthy food acts as preventative medicine, as they contain both preventive and curative properties. Consumption of unhealthy or contaminated food may predispose people to many chronic diseases.

While food cannot replace medications altogether, a healthy diet can act as the foundation for a healthier workforce, besides helping reduce healthcare cost. If you devise a healthy eating plan, it can improve one's health and the quality of life.

Consumption of fruits, vegetables, and whole grains is good for both the mind and the body. These foods help bolster the immune system. They also provide essential nutrients like Potassium, Fiber, Folic Acid, and Vitamins,



which are essential for the proper functioning of the body.

For example, Potassium helps control the levels of blood pressure and Dietary Fiber can reduce the levels of Cholesterol in the blood while Folic acid helps the body produce red blood cells and Vitamins.

The food one eats can affect one's mood and mental health. Certain foods may help keep the levels of Cortisol, a stress hormone, in the body stable. Eating foods containing Tryptophan, an essential Amino acid, will help the body produce more Serotonin, a hormone that regulates one's mood.

Leafy green vegetables contain Antioxidants that help protect the brain cells and prevent cognitive decline. Foods that are rich in Omega-3 fatty acids help improve concentration and mental alertness. There is a wealth of nutritious food that can help boost the health of the body and the mind. Traditional Indian food is a well-balanced diet and might be called medicinal food, as it can treat many illnesses.

The Green Revolution

The 1950s and the 1960s witnessed the emergence of the Green Revolution; an initiative resulting in the introduction of chemical fertilizers, synthetic herbicides and pesticides, high-yield crops, and the method of multiple cropping, which have helped increase agricultural production enormously.

Since inorganic chemicals and harmful pesticides are used in farming, agricultural products like fruits, vegetables, and cereals contain chemical and pesticide residues. As a result of this, these food materials have lost their health benefits. The consumption of these foods often predisposes people

to many dreaded diseases like Cancer, Diabetes, Cardiovascular disease including Stroke, etc.

Understanding the negative effects of inorganic farming, majority of the western and developed countries have reverted to organic farming. But it would take 5 – 8 years to convert inorganic soil into microbe-rich fertile soil.

Emergence of Aquaponics

Aquaponics is an inorganic method of farming. It is a form of agriculture that combines Aquaculture (rearing fish / aquatic animals) with Hydroponics (growing plants without soil). In Aquaponics, the nutrient-rich water from raising fish provides a natural fertilizer for the plants, which in turn, purifies the water for the fish.

This sustainable organic food production method involving integrated fish and plant farming requires only very less space / labor and very little water with no soil and harmful pesticides. It is the only method of farming as on date which can answer the current issues in Agriculture and Aquaculture like

- Soil contamination with inorganic chemicals
- Acute water scarcity
- Acute labor shortage for agriculture
- Space constraints due to urbanization
- Poor yield in conventional farming techniques

Conclusion

Aquaponics is the only method that answers the current issues in farming and aquaculture. In Aquaponics, microbes help transform fish waste into food for the plants. Install a home Aquaponic system to grow organic vegetables and herbs in your living space and add aesthetics to your home interiors. It will also help one grow organic food sustainably in the available space.

Lead a healthy life by consuming poison-free food. ©



Mr. A. K. Saravanan is an **Energy Engineer** and the **Chief Executive Officer** as well as the **Founder** of 'The Aquaponics India', which is based in Coimbatore, Tamil Nadu, India. As an Energy Engineer, **Mr. Saravanan** has invented many energy-saving products and services that has not only benefitted mankind but has also helped conserve Mother Nature.



DentCare Zirconia: The Trusted Brand



DentCare Dental Lab has embedded itself with an objective to bring together the world's preeminent branded materials of proven quality and high-end technologies. Most recognized brands like Ivoclar Vivadent, Shofu, EOS, and 3Shape sourced from Germany, Switzerland, Europe and the United States of America are used for manufacturing its extensive range of dental prostheses.

Over the past 31 years, we have dedicated ourselves to contributing to healthy, confident smiles for over 40 million satisfied patients and to the delight of more than 40 thousand dentists around the globe.

DentCare Zirconia – “One Product for Diverse Options”

A paradigm shift in dentistry for lifelike restorations that mimic natural tooth structure based on perceived

and actual aesthetic and functional patient demands has led DentCare Dental Lab to offer DentCare Zirconia – a revolution in Metal-Free Prostheses.

DentCare Zirconia is biomedical grade Zirconia made in Germany. Available in diverse options, DentCare Zirconia range of products assure natural feel and functionality, unmatched aesthetics and unlimited characterization and are made available in more than 40 natural and lifelike shades.

It is manufactured using an innovative Computer Aided Design / Computer Aided Manufacturing (CAD/CAM) technology offering perfect fit and marginal adaptation to the final product. This unique material provides full scope for cement-retained crowns and bridges (having up to 16 units as a single restoration) on natural teeth as well as cement and screw-retained solutions for implants (single and multiple-units).



Why Medical Grade DentCare Zirconia?

- Natural feel and functionality
- Unmatched aesthetics
- High strength
- Extremely biocompatible
- Unlimited characterization made available through more than 40 natural and lifelike shades
- The tooth-coloured translucent substructure helps ensure that the natural tooth shade comes right from the internal framework level, unlike Porcelain Fused to Metal (PFM) or other normal Zirconia systems with opaque frames
- Designing and manufacturing using CAD/CAM systems helps ensure outstanding marginal fit and prosthetic accuracy

DentCare Zirconia Variants

DentCare Zirconia Platinum Plus

DentCare Zirconia Premium Plus

DentCare BruxCare

DentCare Zirconia Classic

DentCare Zirconia Superlucent

DentCare Zirconia Basic

DentCare Zirconia Ultra

DentCare Zirconia Ultra Plus

DentCare Zirconia Solid

DentCare Zirconia Solid Plus

DentCare Zirconia Platinum Plus

Benefits

- Natural translucency and excellent aesthetics
- CAD Image will be provided to Doctors even before the production process starts
- Free CAD/CAM Provisional is available for Doctors
- Export quality
- High flexural strength helps ensure long-term success of restorations
- Extremely biocompatible
- The tooth-coloured translucent substructure helps ensure that the natural tooth shade comes right from the internal framework level, unlike PFM or other normal zirconia systems with opaque frames

Indications

- Crowns and Bridges having up to 16 units are possible
- Implant prostheses
- Primary telescopic crowns
- Custom Zirconia abutments for a wide variety of implant systems
- Inlays and Onlays

DentCare Zirconia Premium Plus

Benefits

- Natural translucency and outstanding aesthetics
- Extremely biocompatible
- High flexural strength helps ensure long-term success of restorations
- Designing and manufacturing are done using precision CAD/CAM systems for outstanding marginal fit



Indications

- Crowns and Bridges having up to 16 units are possible
- Implant prostheses
- In Bridges having up to 8 units, 4 continuous pontics may be given in the anterior region while 2 continuous pontics may be given in the posterior region respectively
- In Bridges having more than 8 units, 2 continuous pontics may be given in the anterior region as well as posterior region
- A cantilever may be considered in the case of Crowns and Bridges with at least 2 adjacent abutments. However, a distal cantilever is not advisable; it is also advised to avoid a cantilever in the canine and molar regions
- Primary telescopic crowns
- Inlays and Onlays

DentCare BruxCare

BruxCare crowns are monolithic medical grade zirconia restorations with no ceramic layering. They are designed specifically for the anterior and posterior teeth with more emphasis on strength, making it an ideal restoration for Bruxers and those people with limited occlusal space.

Benefits

- Glazed to a smooth surface to reduce plaque accumulation
- Low wear on opposing dentition
- Extraordinary strength
- Monolithic material makes the restoration completely chip-proof

- Staining technique is used (No ceramic layering)

Indications

- Ideal for patients with Bruxism
- Crowns and Bridges having up to 3 units as a single restoration

DentCare Zirconia Classic

Benefits

- Extremely biocompatible
- High flexural strength which ensures long-term success of restorations
- Designing and manufacturing using precision CAD/CAM systems for outstanding marginal fit

Indications

- Crowns and Bridges having up to 16 units are possible
- Implant prostheses
- Primary telescopic crowns
- Inlays and Onlays

DentCare Zirconia Superlucent

Benefits

- Layering technique
- Made from Cubic Crystalline form of Zirconia blocks
- Natural translucency and Excellent aesthetics
- Highly biocompatible
- Designing and manufacturing are done using precision CAD/CAM systems for outstanding marginal fit

Indications

- Crowns and Bridges having up to 4 units are possible but can be done only up to the 2nd premolar, in which case, only a single pontic is possible
- Single crowns in the posterior region

DentCare Zirconia Basic

Benefits

- Full contour crowns are chip resistant
- Highly biocompatible

Indications

- Crowns and Bridges having up to 5 units (3 continuous pontics may be given in the anterior region while 2 continuous pontics may be given in the posterior region respectively)
- A cantilever may be considered in the case of Crowns and Bridges with at least 2 adjacent abutments. However, a distal cantilever is not advisable; it is also advised to avoid a cantilever in the canine and molar regions

DentCare Zirconia Ultra

DentCare Zirconia Ultra has great translucency and high flexural strength. Crowns and Bridges are manufactured using CAD / CAM systems to ensure precision and good marginal fit. Full contour option can be used for posterior regions.

Benefits

- Natural translucency and excellent aesthetics
- Extremely biocompatible
- High flexural strength helps ensure long-term success of restorations

Indications

- Crowns and Bridges having up to 3 units are possible
- A cantilever may be considered in the case of Crowns and Bridges with at least 2 adjacent abutments. However, a distal cantilever is not advisable; it is also advised to avoid a cantilever in the canine and molar regions

DentCare Zirconia Ultra Plus

Benefits

- Digital Margin Perfection
- Working cast can be made with / without Die Preparation

Indications

- Full Contour Crowns and Bridges up to 6 units in Anterior and Posterior regions
- Maximum of 3 – 4 pontics can be chosen in the Anterior Region and 2 in the Posterior region

DentCare Zirconia Solid

DentCare Zirconia Solid crowns are fabricated in full contour out of a biomedical grade zirconia material. It helps eliminate the layer of porcelain over the crown which makes the crown much stronger.

Benefits

- Due to high strength, it can be used in posterior regions
- Staining technique is used (No ceramic layering)
- Glazed to a smooth surface to reduce plaque accumulation
- Strong and resistant to fracture

Indication

- Full Contour Crowns and Bridges having up to 3 Units in the Posterior region

DentCare Zirconia Solid Plus

Benefits

- Digital Margin Perfection
- Working cast can be made with / without Die Preparation

Indication

- Full Contour Crowns and Bridges having up to 3 Units in the Posterior region

Conclusion

DentCare strongly believes that technology hand in hand with art results in dental prostheses of greater precision and quality.

World-class products are the outcome of our incessant passion for improving the standards of dental care. And this helps to keep us at the forefront of innovation. Our dental prostheses experts are incessantly passionate about exploring new ways to address challenges in enhancing smiles.

All the materials we use in production have proven scientific quality and excellence, at par with international standards and lives up to the expectations of our customers. This has given us reason to brighten the smiles of more than 40 million patients, world over. ©



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Importance of Nutrition for a Sports person

Nutrition is a major contributor to the overall health and performance of a Sports person. Without an adequate amount of Carbohydrates and fluids, a Sports person will get tired very easily and quickly. Intake of an adequate amount of Protein is also important for a Sports person, as it is essential to increase his muscle mass and strength.

Consumption of an adequate amount of food and fluid is very important for a Sports person as it has an impact on the level of performance and the ability of the body to recover after an intense workout or training session. Most Sports persons do not get enough amount of nutrition from their diet.

If the diet of a Sports person is not balanced, problems like muscle soreness, poor concentration, low energy levels, fatigue, and depression may be experienced. Deficiency of Carbohydrates is a major contributor to fatigue, which may lead to the risk of an injury.

A healthy / balanced diet helps a Sports person get the required amount of Protein, Fat, Carbohydrates, Vitamins, and Minerals, which are essential for good health.

To get a better understanding of a healthy / balanced diet, it is important to know about the **Food Pyramid**, a pyramid-shaped depiction of the recommended daily servings from each food group.

A balanced diet should contain all the nutrients needed for the body. It should have macronutrients like Protein, Carbohydrates and Fat, along with micronutrients like Vitamins and Minerals. Each nutrient has its own role to play. The food items at the bottom of the Food Pyramid (Fig. 1.) should be consumed in more quantity because they give energy to the body and Protein to build and repair tissues.

If a person does not like any of the food in one Food Group, he can interchange it with one belonging to the same



Fig. 1. Food Pyramid



Ms. Silky Mahajan
Sports Nutritionist
Bengaluru, Karnataka, India

group. For example, one type of cereal can be interchanged with another type; that is, it should not be interchanged with one in another food group. Therefore, it is vital to include food from each Food Group in a person's daily diet, as the food in each group plays a crucial role in a person's overall health.

The intensity and duration of training / practice of a Sportsperson vary during a training session and a competition. Fueling one's workout is vital to give peak performance during a competition. Consulting a Sports Nutritionist is important to enhance one's performance and endurance during training and in the competition.

Conclusion

Considering the nutritional needs of a Sportsperson, it is important to focus on the quality / right choice of foodstuff and its consumption in appropriate quantities at a set time to help achieve peak performance during a competition. ©

Letters to The DentCare

I am truly amazed at the vivid content and exquisite get up of the magazine, 'The DentCare'. The items requiring special mention are the **Editor's note** and the **inspiring article of Mr. John**.

Prof. (Dr.) Paulose, an octogenarian and a veteran Physician of extraordinary record, who has been practicing as a successful Medical Practitioner for more than 60 years, and I are delighted, just like all of you, to read the enriching articles of the April 2019 issue.

Another noteworthy item is the interview with the veteran Physician, **Prof. (Dr.) T. V. Devarajan** of Madras Medical College [MMC], Chennai, India, who candidly spoke about the huge success of his career path. He is truly selfless and industrious; that is why he was bestowed with the prestigious Dr. B. C. Roy Award.

I pray to GOD that this magazine may get global recognition and appreciation. ©



Dr. M. Unnikrishnan
Dr. B. C. ROY National Award Recipient (2016)
President-Elect (Vascular Society of India)
Head
Department of Vascular Surgery
Sree Uthradom Thirunal Hospital
Thiruvananthapuram, Kerala, India



Experience DentCare

Journey to Excellence

”

It was a mind-blowing experience for me to visit DentCare and behold the state-of-the-art facilities, high-end dental equipment, and the top-notch personnel who work with uncommon bonds of harmony.

The interaction with the Doctors there was informative as well as the clarification on Dental Implants and various prostheses was very fruitful that it has helped a lot in my practice.

I am greatly satisfied with the lab. ©



Dr. Ruchi Bhuyan
Professor and Head
Department of Oral Pathology
and Microbiology
Siksha 'O' Anusandhan University
Bhubaneswar, Odisha, India

Meeting Expectations

”
Visiting DentCare was indeed an eye-opening experience for me. I had the rare opportunity to witness the flawless production processes using cutting edge technology, the stringent quality checks that have been implemented, and the excellent hygiene standards that are being ensured.

The visit helped reinforce my confidence in DentCare, as they have steadfastly committed to offering prostheses and services that are best in the class. I will surely recommend DentCare to my peers and friends.

My appreciation to the Management of DentCare for creating a workforce that quickly responds to the customers as well as in providing customized products that always meets the expectations of the customers.

May DentCare continue to be world-class in every dimension. ©



Dr. Vishada J.
Dental Practitioner
Tripunithura, Kerala, India

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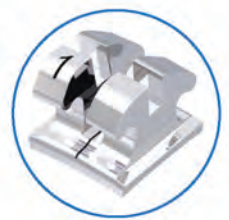
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