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Your Quarterly Health Care Magazine

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DENTAL CARIES IN KIDS

CROWN LENGTHENING SURGERY

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Your Quarterly Health Care Magazine

Brightening Smile the World Over

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World Diabetes Day
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“It’s a Six!!”, **Dear Reader**, for The Dentcare.

Indeed, a master stroke @ 72 that has crossed the ropes with a sweet flamboyance that tingles your senses to yearn for more.

The Almighty has blessed this “Tooth and Health Series” in abundance and what you behold is compelling testimony of His unending Grace.

The soul of this endeavor has thrived resting on your quiet reassurance and firm belief in our collective efforts to engage your precious thoughts in each enthralling instalment.

Every new corner has an experience to look forward to. Uncertainties will always be there, but they add life to the way ahead, making the journey an interesting story.

Your strength has given us belief to accept change for the better. It is with these views in mind that we have decided to add fresh perspective to The Dentcare @ 7.

It heralds a colorful chapter and has all the signs of enriching our existence in the days to come.

Quiet moments with the Lord would usher in solace during these turbulent times and provide us the renewal that would invigorate our spirit to overcome the unknown.

Thank you for giving wings to our dreams and being the reason for Brightening our Smiles.

God bless you.

Yours truly,

Prof. (Dr.) George P. John

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QUIETING YOUR MIND TO HEAR GOD

FROM MD'S DESK

Diogenes, also known as Diogenes the Cynic, a Greek philosopher once said, 'We have two ears and only one tongue and hence, we should hear more and speak less'. Anywhere in the world, you can find a war of words or conflicts of every kind: marital conflicts; conflicts at work; conflicts between different countries or faiths or families over trivial things.

In the Holy Bible, it is said, 'Let every man be swift to hear; slow to speak, and slow to wrath'. There is beauty and power in being slow to speak. It helps transform the relationship and allows us to hear the inner voice of wisdom before we speak to others.

Let me take you to an amazing story which exhibits the profound effect of SILENCE.

There lived an old, industrious farmer who was known for his commitment and relentless hard work. Once, he was occupied in stacking hay bales in the barn, he suddenly noticed that his watch was missing. Though it seemed an ordinary watch to others, he had a sentimental value for it, as it was bestowed on him by his loving grandsire.

As the farmer had treasured the watch very much, he bent over backward to find it out from the barn at all costs. He searched for it everywhere and even in the haystack but ended in vain.

Though the farmer was exhausted, he did not want to give up the search and requested a group of children playing outside the barn to help him find out the watch. He promised an attractive reward for the person who can find his beloved watch.

After hearing about the reward, the children hurried inside the barn and went through and round the entire stack of hay to find the watch out. After a prolonged search for the watch in the barn, many of the children got exhausted and gave up the attempt. The number of children looking for the watch slowly decreased and all of them left the barn, one after another completely worn out, without detecting the watch.

The farmer lost all hope in finding out the watch and called off the search. Just when the farmer was shutting the door of the barn, a little boy came from nowhere and requested the old man to give



him a chance. The farmer did not want to miss the chance of finding the watch and allowed the little boy to try his best to hunt it up.

After a while, the little boy proudly got out of the barn with the watch in his hand. The farmer was overwhelmed with happiness that he cried with joy. He curiously asked how he succeeded in getting the watch while everyone including him had failed miserably.

The boy replied, 'My mother taught me to seek the help of God when I find it impossible do a thing'. Hence, I prayed to God to help me find the watch. Just as I was patiently waiting for the answer, I heard the ticking sound of the watch and focused my search in the direction of the sound'. The farmer was delighted beyond measure to get the watch and rewarded the little boy as he had promised.

We all pray to God. When we do not receive the answers for our prayers, it is likely that we may grow bitter and impatient. Instead of that, we should have the determination to wait for His absolute best. When He makes us wait, we ought to have the conviction that He has a good reason for delaying the grant of our wishes. In His perfect timing, God will answer our prayers and give the desires of our heart.

Let us put an end to our ego; endure our life with love, and continually forgive others and then wait patiently for 'God's intervention' in our life. May God grant us the wisdom to have the quietness of mind to wait for Divine Guidance. ©

Mr. John Kuriakose

Managing Director

DentCare Dental Lab Pvt. Ltd.

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DENTAL CARIES IN KIDS



Dr. Shradha Naik
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Dental Caries, more commonly known as Tooth Decay, is a globally prevalent disease and one of the most common causes for tooth loss. If proper oral hygiene is not maintained, there is a risk of developing Early Childhood Caries (ECC) in kids. ECC, if left untreated, may lead to loss of teeth, speech problems, psychological disturbances, as well as life-threatening orofacial infections.

If detected early, Tooth Decay can be managed with a simple filling. However, if left untreated, it may spread deeper into the tooth, involving the pulp. Eventually, the tooth may require a Root canal treatment or even an extraction. A detailed examination of the oral cavity will help a Dentist detect the risk factors for Dental Caries.

Parents should lay the foundation of good oral health in kids by following some simple oral hygiene protocols.

Nutritional guidance

Consumption of sugary foodstuffs and drinks is the prime factor for the development of Dental Caries. Therefore, allow your kids to eat less amount of sugar and reduce the amount as well as the frequency of the consumption of sugary foodstuffs and drinks.

Feeding practices

A prolonged feeding habit should be avoided as it can accentuate the risk of developing Tooth Decay in infants. After every feed, wipe the gums of a baby with a clean, damp gauze pad or washcloth in order to remove the residual milk.

Review of medications

The medications with high sugar content that a child takes should be identified and the mother should be instructed to clean the gums or teeth of the child with a sterile gauze pad soon after taking medication. At the same time, Physicians may consider prescribing sugar-free medications to kids.

Use of Fluoride supplements

Dietary Fluoride supplements should be recommended to reduce the risk of developing Tooth Decay. The use of Fluoride supplement and community water fluoridation are safe and effective in preventing Tooth Decay in both children and adults.

Conclusion

Early Childhood Caries is largely a preventable disease, but it remains the most common chronic disease in children across the world. Proper oral hygiene practices, such as cleaning an infant's teeth following the consumption of foods, drinks, or medication containing fermentable carbohydrates should be implemented properly. A child's teeth should be periodically checked at home as per the directions of the Dentist to keep the teeth and gums healthy. ©

The Tooth Series

Part II



The Tooth Enamel

The Tooth Enamel covers the crown of a tooth; i.e., the part of the tooth above the gum line. The Enamel is very hard and its color ranges from white to whitish-yellow and whitish-gray. Its primary function is to protect the tooth from wear and tear as well as degradation.

The Tooth Enamel is the hardest structure in the human body. It is the most highly mineralized substance in the body which is thickest at the cusp and becomes thinner towards the cemento-enamel junction. The Enamel is completely devoid of collagen and other organic matter when compared to other hard structures like Bone or Dentin.

The basic unit of the Enamel is the Enamel rod which

comprises of a tightly packed mass of Hydroxyapatite crystals having a 'keyhole'-shape in cross-section. While the Enamel covers the Dentin, the Enamel rods run perpendicular to the underlying Dentin.

The Tooth Enamel is formed by Ameloblasts, the cells which secrete Enamelin and Amelogenin (Enamel proteins), which later mineralize to form the Enamel. The development of Tooth Enamel starts at the dentino-enamel junction and continues outwards along the path of the retreat of the cells away from the Dentin.

The Tooth Enamel varies in thickness over the surface of the tooth. The Enamel rods may change in orientation in the different zones of the Enamel. They may be parallel to each other without any discontinuation in their structure and radially directed outwards from the dentino-enamel junction.



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Sometimes, they may even have a zig-zag orientation, which helps classify the Enamel structurally. There may be cross-striation between the layers of the Enamel, helping depict variation in the repair or even in the formation of the Enamel.

The Cementum

The Cementum is the calcified substance that covers the root of the tooth. It is the outermost layer of the root structure covering the inner Dentin. It is harder than the Dentin but it is not as hard as the Enamel. The primary function of the Cementum is to attach the tooth within the Alveolar bone.

Classification

Cementum may be classified as **Coronal Cementum** – found on the Enamel covering the clinical crown and **Radicular Cementum** – found on the entire surface of the tooth root, based on its location.

Based on the cellularity, it is classified as **Acellular Cementum** and **Cellular Cementum**. Acellular Cementum, which is usually present in the cervical region of the tooth root, is thick and is devoid of Cementocytes. Cellular Cementum, which is present along the rest of the Cementum, is thinner and has scattered Cementocytes in its matrix.

There are fibers present in the Cementum. Extrinsic fibers are part of the principle fibers of the Periodontal ligament that attach to the Cementum surface – helping in the attachment of the tooth to the bone. Intrinsic fibers are secreted by the Cementoblasts. The Cementoblasts form the Cementum. In the Acellular Cementum, the Cementoblasts disappear after formation of Cementum, whereas, in the Cellular Cementum, they remain.

The current classification of Cementum (Schroeder et al) combines the above basis of classifications

Acellular Extrinsic Fiber Cementum

Acellular Extrinsic Fiber Cementum (AEFC) contains no Cementocytes and has densely packed extrinsic fibers. This layer of the Cementum is approximately 20 – 50 Micrometre (µm) thick and covers much of

the root surface of a single-rooted tooth and about 30 – 40% of the root surface of a multi-rooted tooth. This Cementum layer is a completely mineralized layer, which gets thicker with age.

All the fibers that attach to Acellular Extrinsic Fiber Cementum are from the Periodontal ligament. These densely packed fibers attach perpendicular to the Cementum surface. There are several incremental resting lines that get highly mineralized. Any change in the orientation of extrinsic fibers at the incremental lines often correlates with the relative positional changes of the tooth and alveolar bone during tooth eruption.

Cellular Intrinsic Fiber Cementum

Cellular Intrinsic Fiber Cementum (CIFIC) contains both Cementocytes and intrinsic fibers. This type of Cementum is mostly a part of the Cellular Mixed Stratified Cementum layer.

Cellular Mixed Stratified Cementum

Cellular Mixed Stratified Cementum (CMSC) consists of both Cellular intrinsic fiber Cementum and Acellular extrinsic fiber Cementum partitioned by incremental lines. This layer of Cementum is usually present between the roots and in the apical regions of the roots. It is much thicker than AEFC and its thickness varies from tooth to tooth. There are stratified layers of CIFIC demarcated by incremental lines.

Acellular Afibrillar Cementum

Acellular Afibrillar Cementum basically refers to the layer of Cementum on the Enamel and just above the most coronal part of the Cementum. It is devoid of any cells or fibers.

Intermediate Cementum

Intermediate Cementum is a layer of calcified tissue lying between the Cementum and the underlying Dentin.

The Enamel and Cementum form the outermost covering of the teeth and are crucial in protecting the underlying Dentin. The Enamel has distinct roles in protecting the teeth against wear and tear. The Cementum on the other hand predominantly aids in harboring the fibers that attach the tooth to the bone.

The Cementum is more dynamic than the Enamel, as it is capable of repairing itself to some degree when it gets damaged. Though one may not notice the importance of the Enamel and Cementum, they require a lot of attention because they are prone to damage like any other part of our body. ®

To be continued...

Crown Lengthening Surgery



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Crown Lengthening Surgery is a surgical procedure performed to enhance the clinical crown length without violating the biologic width. It is performed by recontouring the gum tissue, and sometimes bone, to expose more of the clinical crown of the tooth.

There are many techniques available to lengthen the clinical crown, which includes Gingivectomy, an Apically displaced flap with or without Resective osseous surgery, and Surgical extrusion using a Periosteal.

Purpose of Crown Lengthening Surgery

Crown Lengthening Surgery is mainly performed to achieve better retention of a Dental crown.

A Case Report

A 32-year-old female patient presented to the practice, with a chief complaint of pain and discomfort in and around her decayed upper left lateral incisor. The patient was not willing to extract the decayed tooth and wanted to save it at all costs.

Radiographic Diagnosis

With the help of Radiovisiography (RVG), the tooth structure of the patient was measured from the Crestal bone, which had a length of 4 millimeters (mm).

Criteria for Crown Lengthening Surgery

To proceed with Crown Lengthening Surgery, there should be more than 3 millimeters (mm) of sound tooth structure from the Crestal bone. But, the crown height of the upper left lateral incisor of the patient was only 1 mm. Biologic width (distance between bone crest to gingival margin) of the tooth was approximately 3 millimeters.

Crown Lengthening Surgery was performed on the patient using a Diode laser to expose the sound tooth structure. After performing Crown Lengthening Surgery, the height of the Crown increased to 4 mm.

A Root canal procedure was performed for the tooth and a composite core build-up was then done to restore the tooth. After doing a Crown preparation procedure, an impression of the tooth was taken and forwarded to a laboratory to fabricate a Dental crown. After 4 days, a permanent crown was cemented onto the tooth of the patient.

The Crown Lengthening Surgery performed on the patient using a Diode laser was very successful and she was very happy with the treatment outcome. The Radiographic images of the patient before and after Root Canal Treatment are shown (Fig.1 and Fig.2).



Fig.1. Radiographic image before the Root canal procedure



Fig.2. Radiographic image after Root canal treatment

Conclusion

The outcome of Crown Lengthening Surgery performed using a Diode laser is very promising. When Crown Lengthening Surgery is performed in an ideal clinical condition, it yields satisfactory results both functionally and aesthetically. Whatever may be the clinical situation, we should make an earnest effort to restore the tooth of the patient to 'near normal' by providing the best treatment, utilizing the newer techniques and materials available. ©

Experience DentCare

Journey to Excellence

I always wanted to visit DentCare. I am glad that I could finally call at and spend a whole day at the lab. I can unequivocally say that the lab is completely worth seeing. The staff were so professional and exemplary. The equipment, materials, etc. were of optimal quality. All the departments of the lab were well orchestrated and compartmentalized.

It was an amazing experience for me, which I would certainly cherish in life forever. ©



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Meeting Expectations

Spenser W. Kimball, Businessman and Religious leader of the United States of America, once said, 'real craftsmanship, regardless of the skill involved, reflects caring and real caring reflects our attitude about ourselves, about our fellowmen, and about life'. This maxim is certainly applicable to DentCare, founded in 1988 and standing tall as the largest dental laboratory in Asia, which manufactures seamless solutions with optimum craftsmanship to address the evolving needs of the dental community across the globe.

When I arrived at the lab, I was warmly greeted by the staff at DentCare and was led by a guide who explained to me in detail each and every step of making dental prostheses.

I was astonished at seeing the meticulous and intricate infrastructure facilities of the lab, including the operating protocols. Being a Prosthodontist, I became overwhelmingly happy when I could witness the recent advances in the manufacture of dental prostheses at a small place like Muvattupuzha, Kerala, India.

The lab technicians were dexterous in their work and showed a lot of dedication and commitment.

Overall, I am extremely satisfied with the visit. ©



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Trigeminal Neuralgia



Some patients develop a severely painful condition called Trigeminal Neuralgia caused by irritation of the Trigeminal nerve – a nerve which is responsible for sensations, such as touch, pain, etc., in the face. The pain can be felt in the forehead, teeth, lower jaw, upper jaw or cheek.

Certain simple activities like washing / shaving the face; brushing the teeth; drinking cold water, or even blowing of cold wind on the face can trigger the pain. This pain is more common in women, especially those over 50 years of age, which becomes progressively severe as age advances.

Trigeminal neuralgia tends to run in cycles. Patients often suffer long stretches of frequent attacks followed by weeks, months or even years of little or no pain. Some patients suffer less than one attack a day, while others experience a dozen or more every hour. The pain typically begins with a sensation of electrical shocks that culminates in an

excruciating stabbing pain within less than 20 seconds.

The pain often is first experienced along the upper or lower jaw; hence, many patients may mistake it as pain due to a dental problem. They may use over-the-counter medications to get relief from the dental problem, but it would not be helpful in relieving the pain. When the pain persists, they may visit a dental practice. A Dentist can identify the underlying causes of the pain only by examining the patient in detail.

In Trigeminal neuralgia, the Trigeminal nerve's function is disrupted. The problem occurs when the contact between a normal blood vessel (an artery or a vein) and the Trigeminal nerve at the base of the brain puts pressure on the root of the Trigeminal nerve, thereby



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causing it to malfunction.

Trigeminal neuralgia can occur as a result of aging. Other causes may include Multiple sclerosis which causes demyelination (damage) of the nerve or a tumor pressing against the Trigeminal nerve. Physical damage to the nerve as a result of facial injury, a dental or surgical procedure, or infection may also be responsible for Trigeminal Neuralgia. Positive family history can be another reason.

Magnetic resonance imaging (MRI) scan is as an essential diagnostic approach in detecting Trigeminal neuralgia. This can detect any blood vessel pressing against the Trigeminal nerve or a tumor or Multiple sclerosis.

Treatment of Trigeminal neuralgia could be through medical, non-medical and / or surgical means. There are many drugs which are very effective in Trigeminal neuralgia. This includes Carbamazepine, Gabapentin, Oxcarbazepine, Baclofen, and Phenytoin. These are effective either alone or in combination in many patients but can also cause significant side effects in some patients.

If medications have proven ineffective or causing side effects in treating Trigeminal neuralgia, there are several surgical procedures that may help control the pain.

Surgical treatment is divided into two categories

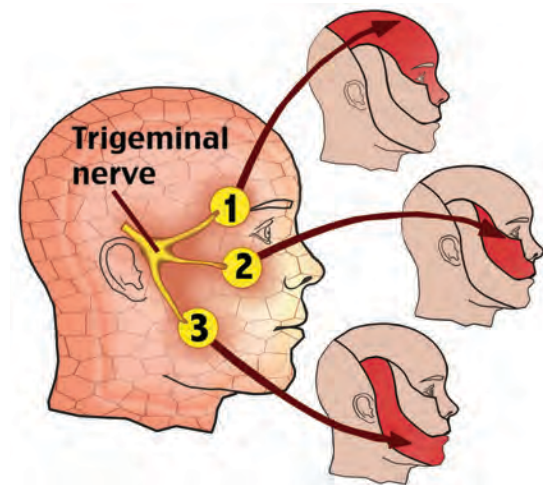
- ❑ Open cranial surgery or
- ❑ Lesioning procedures

In general, Open surgery is performed for patients found to have pressure on the Trigeminal nerve from a nearby blood vessel. This surgery is called Microvascular Decompression (MVD) and is thought to take away the underlying problem causing the Trigeminal neuralgia, and is thus often the treatment of choice for most patients.

In this procedure, the offending blood vessel is pushed away from compressing the nerve and a Teflon sponge is kept in between so that the vessel cannot press the nerve anymore. The surgery is very simple and usually curative. But it cannot be done if there is no blood vessel pressing on the nerve.

In contrast, Lesioning procedures include interventions that injure the Trigeminal nerve on purpose, in order to prevent the nerve from delivering pain to the face. The effects of lesions are often short-lived, lasting months to years, and results in numbness to the face.

Lesioning procedures are often considered for the patients



who have recurrent pain after Open surgery, those without evidence of a blood vessel pushing on the nerve, and those patients who do not have the psychological ability to cope with the complications that can occur after Open surgery.

The common Lesioning procedures used are Percutaneous Stereotactic or Glycerol Rhizotomy and Percutaneous Balloon Compression of the nerve. Here a needle or electrode is passed through the cheek and part of the nerve is destroyed by either Electric current or Glycerol injection.

Recently, Stereotactic Radiosurgery is being offered in Trigeminal neuralgia. The technique involves delivering a single highly concentrated dose of radiation (using a Gamma knife, Cyberknife or Linac) to a small, precise target at the Trigeminal nerve root. This treatment is noninvasive and avoids many of the risks and complications of Open surgery and other treatments. Over a period of time and as a result of radiation exposure, the slow formation of a lesion in the nerve interrupts transmission of pain signals to the brain.

Conclusion

In some patients, dental pain which mimics Trigeminal neuralgia is easily cured after dental treatment. So it is advisable for the patients with the symptoms of Trigeminal neuralgia to undergo a detailed dental examination.

The underlying causes of Trigeminal neuralgia are rarely serious. However, the possibility of a tumor or multiple sclerosis must be ruled out. Therefore, an MRI scan should be compulsorily performed to identify and accurately characterize the condition. ®



Color Science IN DENTISTRY

Wassily Kandinsky, a Russian Painter and Art theorist said, 'Color is a power which directly influences the soul.' We do not live in a monochromatic world; our lives are filled with colors and our dentition is no exception.

The common perception among the general public is that the color of the teeth is white. But clinically, the whiteness of teeth is not close enough to create an aesthetically pleasing smile that a person dreams of.

Let us get to know about the basic colors in dentistry.

What colors can I see?

Colors are electromagnetic energy waves which are measured in nanometers. Human beings can see the colors that lie within a narrow frequency band between 350 and 750 nanometers.

What gives the tooth the ability to have a unique color palette?

A tooth is composed of multiple layers and each layer is special in its way in terms of strength, composition, and thickness. A tooth is like a multi-layered glass structure of varying translucency.

Human dentition is not a uniformly smooth framework; they have a surface structure of alternating highs and lows. When light falls on this meticulously designed structure, there occur noticeable visual changes, as light gets reflected, refracted, or absorbed by the tooth structure.

How to select a shade for your teeth

Dentists generally use a standardized shade guide to select a suitable shade for your teeth by visually matching it with that of your existing natural teeth. The accuracy and the specificity of the shade selected or matched depend on the skill of the Dentist.

Sometimes, a Dental technician may also help a Dentist select a suitable shade. In certain situations, a Dentist may make use of high-resolution intraoral photographs of a patient along with a shade guide to communicate with the Dental technician to fabricate a dental crown that mimics the shade of a patient's natural teeth.

In a more sophisticated dental setup, digital shade guide-matching devices like VITA Easyshade® V are used to select a suitable shade, easily helping a Dentist choose a matching shade in a fast, reliable, and precise manner.



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What is the shade of your teeth?

The shade of your teeth is unique like your skin tone, which is a mixture of multiple shades. A tooth is slightly darker or yellowish at the gumline and lighter or translucent towards the biting surface.

What are the commonly used shade guide scales?

1. Shade A group – a shade of white with a reddish-brown hue
2. Shape B group – a shade of white with a yellowish hue
3. Shade C group – a shade of white with a grey hue
4. Shade D group – a shade of white with a red grey hue

Usually, people with fair skin have yellowish teeth when compared to those with a dark complexion. The teeth may become darker due to many external factors like tooth fracture, use of tobacco products, or ingestion of certain medications.

Why is matching the tooth shade important?

The beauty of your smile largely depends on the color of your teeth. Dental restorations are often detected due to poor shade matching causing embarrassment in some people. Proper color matching is pivotal in getting an aesthetically pleasing smile that a person dreams of.

The accuracy and the specificity of the shade selected or matched depend on the skill of the Dentist

How to improve the whiteness of your teeth?

There are different ways to improve the whiteness of your teeth.

1. **Temporary** – Tooth cleaning, polishing, and bleaching, in addition to using tooth-colored fillings.
2. **Permanent** – Ceramic Laminates and Veneers, which are paper-thin layers of high strength ceramic material fixed onto the front side of the teeth after minimal preparation, are a long-term solution to make your teeth look whiter and more beautiful.



Can makeup tricks improve the whiteness of your teeth?

Makeup tricks may make your ugly teeth look beautiful but it will in no way improve the whiteness of your tooth. It is a trick to make your teeth appear brighter. Subtle shades of berry, peach or darker shades of lipsticks are some of the commonly used hues to accentuate the whiteness of your teeth.

Conclusion

There have been a number of recent advancements in technology and materials that offer the potential to improve color matching in dentistry. However, it is a challenge for every Aesthetic Dentist to replicate a natural tooth, helping create an aesthetically pleasing smile that a patient dreams of. @



Dental procedures, such as Root canal treatment or Tooth extraction can be done safely during pregnancy. Elective treatment, such as teeth whitening and other cosmetic procedures should be postponed until after childbirth

Does Pregnancy Affect Dental Health?

A popular old wives' tale holds that a woman loses a tooth for every child she gives birth to. But, is it really true? Hormonal changes during pregnancy can lead to Gum Disease or Periodontitis, which is a possible risk factor for tooth loss.

Studies have shown that a woman, who develops severe mouth infection and suffers from bleeding gums during pregnancy, has a greater chance of giving birth to a premature baby unless the oral condition is managed effectively.

Therefore, before planning a pregnancy, a woman with oral diseases should opt for elective procedures so as to ward off the risk of developing oral diseases and their sequelae like preterm labor, miscarriage, or stillbirth. Preventive dental care and annual checkups during pregnancy are safe and should invariably be recommended. It can keep at bay the risk of developing dental problems during pregnancy.

Good oral hygiene practices like brushing your teeth at least twice a day with



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a fluoride toothpaste; flossing your teeth daily, and visiting your Dentist regularly for routine dental checkups will go a long way in warding off dental problems.

Before planning a pregnancy, prophylactic treatment such as dental fillings, scaling, etc. should be done to fend off the chance of developing dental problems. If you plan to do a dental procedure during pregnancy, the second trimester is ideal for it.

While getting treatment done, make sure that a pregnant woman sits straight on her back using proper back support and should avoid sitting crossed legged for more than 30 minutes. Once a woman reaches the third trimester, it may be very difficult to lie on her back for an extended period of time. So, postpone all dental procedures except those that are exigent in nature until after childbirth.

Dental procedures, such as Root canal treatment or Tooth extraction can be done safely during pregnancy. Elective treatment, such as teeth whitening and other cosmetic procedures should be postponed until after childbirth.



A pregnant woman should seek the advice of an Obstetrician, before planning dental treatment. If you tell your Dentist the details of medications and prenatal Vitamins prescribed by your Obstetrician, the dental treatment plan would be devised based on the information provided.

Some Useful Tips

☑ Medications used in dental treatment during pregnancy?

Currently, there are conflicting reports about the possible adverse effects of medications used in dental treatment during pregnancy on the developing baby. Lidocaine is the most common local anesthetic that dentists use. If a dental procedure is needed, the amount of anesthesia administered should be as little as possible but sufficient enough to make you feel comfortable. Antibiotics, such as Penicillin, Amoxicillin, Cephalosporin, and Clindamycin are safe to use after a dental procedure during pregnancy. Avoid the use of Tetracycline, as it may cause discoloration of the teeth.

Nonsteroidal Anti-inflammatory Drugs (NSAIDs) like Ibuprofen are not safe during pregnancy. For severe pain, it is safe to use Oxycodone. Medications like Codeine, Hydrocodone, or Propoxyphene are comparatively safe when they are used for a short period of time.

☑ X-rays are generally safe during pregnancy

Studies have shown that the dose of radiation in Dental X-rays is so low that there is virtually no risk to the developing baby.

☑ Pregnancy Gingivitis

Pregnancy Gingivitis is more common in the second or third month of pregnancy; about half of pregnant women experience Gingivitis due to increased levels of Estrogen and Progesterone. Pregnancy Gingivitis typically peaks during the third trimester. Women who have Gingivitis before pregnancy are more prone to exacerbation during pregnancy. A rise in hormone levels during pregnancy can cause the gums to swell and bleed.

☑ Coping with Morning Sickness

If Morning Sickness keeps you from brushing your teeth, change to a bland-tasting toothpaste during pregnancy or ask your Dentist or Hygienist to recommend a suitable one for you.

☑ Dental Caries

Brush your teeth along the gum line twice a



Brush your teeth along the gum line twice a day with a small, soft-bristled toothbrush and fluoride toothpaste

day with a small, soft-bristled toothbrush and fluoride toothpaste. Preventive dental treatment will help keep your teeth and gums healthy and reduce the risk for premature birth. Tooth Decay may be a risk factor for premature birth but not necessarily a cause of premature birth.

☑ **Eating Right for Your Teeth and Baby**

Avoid the intake of sugary snacks. Sweet cravings are common during pregnancy. The more frequently you ingest sugary food or snacks, the greater your chance of developing Tooth Decay. Eat a healthy, balanced diet. Your baby's teeth begin to develop about three months into pregnancy. Dairy products, such as milk and milk products are a good source of Vitamins and Minerals that are essential for a baby's developing teeth, gums, and bones.

☑ **Increase your Calcium intake during pregnancy**

Increase the daily intake of Calcium during pregnancy. Sufficient amount of Calcium can protect your bone mass and meet the nutritional needs of your developing fetus. Food rich in Calcium includes milk, cheese, unsweetened



yogurt, Calcium-fortified soy milk, and fatty fish, such as salmon and eggs.

Conclusion

Pregnancy may interfere with Calcium absorption and increase the production of the hormones that affect oral health. Profound biological and behavioural changes during pregnancy and childbirth can precipitate tooth loss.

Increasing the daily intake of Calcium; avoiding the ingestion of sugary foodstuffs and drinks; practicing healthy oral regimes, and visiting your Dentists for regular dental check-ups will go a long way in warding off Periodontal Diseases and tooth loss. @

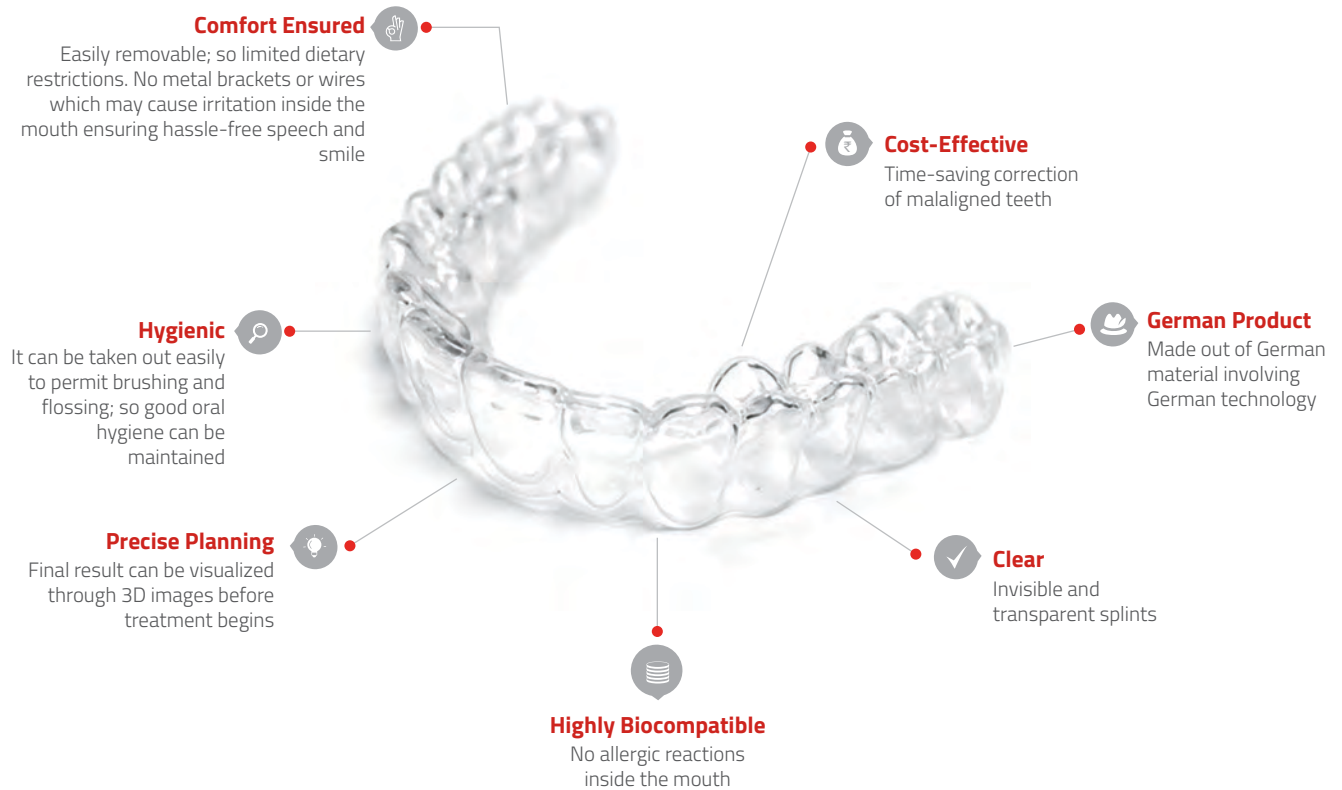


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Swine Influenza



Swine Influenza, also known commonly as Swine Flu, is a type of fever caused by H1N1 Influenza Virus, which was first seen in human beings in Mexico in April 2009. It was first detected in India in May 2009.

Initially, this infection was seen only in pigs and men who got infected when they came into contact with infected pigs. But later, a new strain of this Virus (H1N1 type A Influenza) developed, which gets transmitted from man to man. In August 2010, the World Health Organization declared Swine Flu as a pandemic (a severe variety of infectious disease). The new strain of Virus is responsible for the present epidemic of Swine Flu.

How is Swine Flu spread?

Direct contact

The caregivers of a patient infected with Swine Influenza or

those who come in contact (friends, relatives, family members, visitors, and health care professionals) may get infected, especially when they breathe in the air infected with this Virus or come in contact with droplets / body fluids of the patient.

Indirect contact

Swine Flu Virus can survive outside the body for two hours. So, when a person comes in contact with an object contaminated with this Virus, such as food, cloth (handkerchief), door / flush handles, remote control of television, computer keyboard, currency notes, toilet seats, handrails, etc., and touches the nose, eyes or mouth before washing their hands, may get infected with this Virus.



Dr. (Maj.) Nalini Janardhanan
Family Medicine Specialist
Hadapsar, Maharashtra, India

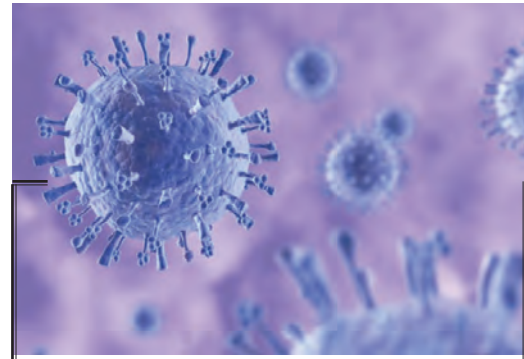
Symptoms

The symptoms of Swine Influenza include Fever with chills, Body ache, Sore throat, Persistent Cough, Running or Stuffy nose, Headache, Watery eyes, Fatigue, Loose motion, Vomiting, etc. The symptoms of Swine Flu may start developing three days after exposure to this Virus. The common symptoms seen in children are High fever, Stomach ache, Dry Cough, Sore throat, Vomiting, etc.

Consult a Doctor as soon as you experience any of the above-mentioned symptoms.

High-risk Groups

- Health care professionals – Doctors, Nurses, Health workers, and Hospital staff
- Hospitalized patients
- Children younger than five years of age, especially those under two years of age
- Elderly individuals
- Pregnant women
- Patients who are on long-term treatment with Aspirin
- Patients taking steroids for Asthma or other diseases
- Patients with a weak immune system



The symptoms of Swine Flu may start developing three days after exposure to this Virus

- Patients with long-standing diseases or conditions like Diabetes, Obesity, Heart diseases, Blood or Brain Disorders, etc.

Precautions during an outbreak

- Wash your hands thoroughly and frequently using soap and water. When soap and water are not available, an alcohol-based hand sanitizer may be used
- Do not take over-the-counter Painkillers, especially Aspirin
- Eat a balanced diet; drink plenty of water; get adequate sleep, and do exercise
- Avoid going to crowded places and traveling to areas where there is an outbreak of Swine Flu
- Wear masks and gloves to avoid the inhalation of air infected with this Virus or contact with infected objects or individuals / animals
- Keep away from patients with a Cough or Sneezing
- Clean floors, door handles, countertops, handrails, etc. with disinfectants
- If a member of your family has Swine Flu, place him in isolation. Only one member should be allowed to take care of the patient. Others must avoid close contact with the patient

Conclusion

In short, good hygiene is important, as it can reduce your risk of getting Swine Flu or passing it on to others when you have an infection. So take care and stay protected. ®

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AYURVEDA FOR ULCERATIVE COLITIS



Ulcerative Colitis is a major disease that not only affects the digestive system but also impairs the function of other systems. It is a disease of the Gastrointestinal tract, causing inflammation and ulcers on the inner mucosal lining of the large intestine and rectum. The prevalence ratio of this disease is equal in both males and females.

Symptoms

The symptoms of Ulcerative Colitis can vary, depending on the severity of inflammation and the place of occurrence. The most common symptoms include frequent loose stools; blood and mucus in the stool, bloating, acidity, abdominal pain, weight loss, indigestion, and a frequent urge to evacuate the bowel, including constipation in a few cases.

Etiology

The exact cause of Ulcerative Colitis is still unknown. But it is believed to be caused by the interaction of

factors like weak immune and digestive systems, unhealthy dietary and lifestyle habits, stress and strain, and certain genetic and environmental factors. Another main factor is the accumulation of toxins in the body. Long-term use of steroids may also be a provoking factor for Ulcerative Colitis.

Ayurvedic Concept

According to Ayurveda, a disease occurs as a result of an imbalance of the Three Doshas (Vata, Pitta, Kapha) or functional bioelements that are present in a person's body, Dhatus (Seven tissues in the body; namely, Plasma, Blood, Muscle, Fat, Bone Marrow, Nerve, and Reproductive tissue), Malas (waste products produced during digestion), and Agni (digestive power of the body which helps assimilate nutrients and gets rid of waste from the body).

Ulcerative Colitis starts developing in a person when Agni is disrupted, leading to indigestion, which in turn, leads to the formation and accumulation



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Ayurvedic Physician
Mohali, Punjab, India

of toxins, eventually causing an imbalance of the Doshas, the Dhatus, and the Malas.

Diagnosis

Ayurveda is a medical science based on the basic principles of body mechanism and organ functioning. An Ayurvedic Physician does pulse examination or utilizes diagnostic procedures like Complete Blood Count (CBC), Colonoscopy, etc. to confirm a diagnosis. However, an experienced Ayurvedic Physician can make a diagnosis of Ulcerative Colitis through observation, palpitation, or pulse reading.

Management Strategy

According to Ayurveda, the entire universe is composed of Five Basic Elements – Earth, Air, Water, Fire, And Space, which manifest in the human body as Three Basic Humors or the Three Doshas (Vata, Pitta, and Kapha). If there is a derangement in the equilibrium of the Three Doshas, a person may be highly prone to develop a disease. So, it is important to restore and maintain the equilibrium of the Three Doshas.



Treatment Strategies Include

- ☞ Rejuvenation of the skin that is damaged due to skin erosion
- ☞ Detoxification of the body
- ☞ Strengthening the immune system
- ☞ Modification in the dietary and lifestyle habits
- ☞ Restoring the normal function of the intestines

There are a variety of herbs, minerals, and metals in Nature that have the potential to cure the signs and symptoms as well as the root causes of Ulcerative Colitis.

Dietary Practices

A balanced diet and an active lifestyle are important for maintaining health and managing diseases. In Ayurveda, a patient with Ulcerative Colitis is recommended to eat High-fiber foods and is strictly instructed to abstain from ingesting sour, spicy, fermented foodstuffs, milk and milk products.

Lifestyle Modifications

Ayurveda also emphasizes the importance of maintaining health and preventing diseases through lifestyle modifications, including practicing Yoga or Meditation; doing mild exercises, and avoiding a sedentary lifestyle.

Conclusion

Along with Panchakarma Therapy, a balanced diet and active lifestyle are important for eliminating the excess amount of the Three Doshas and maintaining health and managing Ulcerative Colitis and other medical conditions. ©



Are You Using the Right Toothpaste?

There are different types of Toothpaste available in the market and hence, it may be confusing to choose the right one. These types of Toothpaste can strengthen the Gums or Enamel; whiten the teeth; prevent Tooth Decay and Tartar, etc.

What are the common types of Toothpaste?

- **Anti-Plaque Toothpaste**

This type of Toothpaste can control the accumulation of plaque on the teeth, helping reduce the effect of bacteria on the teeth and

their surrounding tissues, thereby reducing the chance of developing Gum Disease. If plaque is allowed to stay on the teeth, it can harden into Tartar over time. Anti-plaque Toothpaste contains ingredients, such as Pyrophosphates, Zinc Citrate, and Triclosan, an Antibiotic and Antifungal agent that assists to kill bacteria.

- **Fluoride Toothpaste**

Fluoride is the most important ingredient to look for when selecting a Toothpaste. It helps strengthen the weak areas of the tooth and exposed roots. It is a natural mineral that assists to prevent Tooth Decay. Therefore, using a Fluoride Toothpaste or drinking fluoridated water can reduce the risk of tooth decay and enhance the strength of the teeth.

- **Desensitizing Toothpaste**

If your teeth are sensitive to hot or cold, regular use of a Desensitizing Toothpaste will reduce the

If you have sensitive teeth, avoid using Whitening Toothpaste. Make sure that the Toothpaste you buy caters to your specific needs

sensitivity of your teeth, as it contains compounds, such as Potassium nitrate or Strontium chloride that helps block the transmission of sensation from the surface of the teeth to their nerves.

• **Whitening Toothpaste**

Whitening Toothpastes can improve the whiteness of the teeth. It contains an increased amount of abrasives and detergents, in addition to a Bleaching agent that can remove stains and improve the color of the teeth. But it cannot change the color of the underlying dentin.

• **Natural Toothpaste**

For those who are uncomfortable with using Toothpaste containing chemicals, Natural Toothpaste can be a better option. This type of Toothpaste is made from herbal extracts and other natural ingredients. The health claims of this type of Toothpaste have not



Dr. Saket Gaurav
Dental Practitioner
East Delhi, New Delhi, India

been clinically proven. However, people who are allergic to chemical-containing Toothpaste are increasingly using Natural Toothpastes.

• **Children's Toothpaste**

This type of Toothpaste typically contains less amount of Fluoride than the one designed for adults. Children's Toothpaste also contains fewer abrasives, as their teeth are much more sensitive than those of Adults. Additionally, Children's Toothpaste contains sweet flavors to make them love tooth brushing.

• **Smokers' Toothpaste**

This type of Toothpaste is specifically formulated for those who use tobacco. The teeth of smokers may become easily stained as a result of repeated drawing of tobacco smoke into their mouth. Gradually, their teeth may become tainted with yellowish-brown patches. Toothpaste for smokers contains strong abrasives that assist to remove stains from the teeth and refresh the breath.

Conclusion

Fluoride is the most important ingredient to look for when choosing toothpaste. If you have sensitive teeth, avoid using Whitening Toothpaste. Make sure that the Toothpaste you buy caters to your specific needs; for example, if you have sensitive teeth, buy one that alleviates Tooth Sensitivity. Consult your Dentist for advice or choosing the best Toothpaste for you. ©





DIABETES: PROTECT YOUR FAMILY

SIMPLE ACTION CAN REDUCE THE RISK



World Diabetes Day
14 November

A UNIQUE DIABETOLOGIST OF GLOBAL STARDOM

Padmashri Dr. Viswanathan Mohan is an internationally renowned Diabetologist of India. He is the Chairman and Chief of Diabetologists at Dr. Mohan's Diabetes Specialties Center, a World Health Organization (WHO) Collaborating Center for Non-communicable Diseases Prevention and Control and an International Diabetes Federation (IDF) Center of Education. He is also the President and Chief of Diabetes Research of the Madras Diabetes Research Foundation, Chennai, Tamil Nadu, India.

Dr. Mohan graduated from Madras Medical College, Chennai, Tamil Nadu and is a Fellow of the American College of Endocrinology, all the Four Royal Colleges of Physicians in Glasgow, Edinburgh, London and Dublin, the United Kingdom, and all the three Science Academies of India. He was conferred with Padma Shri, the fourth highest civilian award in India, in 2012.

Dr. Mohan has also been conferred with the prestigious *Harold Rifkin Award* instituted by the American Diabetes Association (ADA). It is one of the highest awards of the American Diabetes Association given to honor the outstanding service of an individual in the cause of Diabetes, performed with an international perspective and impact. He is the first Doctor from India to be conferred with this award.

In an informal chat, he shares his mind with 'The DentCare'.

1. *When did you decide to become a Researcher and a Physician of Diabetes?*

I had initially planned to do Post-graduation in English literature and become a poet and writer. But, after I completed my high school education, my father, Prof. M. Viswanathan, a Professor of Medicine and the first Diabetologist in India, who started the first Diabetic clinic in the country at



Stanley Medical College, Chennai, in 1948, requested me to take up Medicine as he wanted to set up the first private Diabetes hospital in India. Consequently, I had to accede to his request and took up Medicine so as to become a Diabetologist.

Since my passion was for writing, I requested my father to help me do research in Medicine so that I could write scientific articles. When I joined the Madras Medical College in 1971, I decided to help my father. Hence, simultaneously I started helping him with his research work by writing his research papers. So in fact, I decided to become a researcher and a Diabetologist, even when I started studying Medicine.

2. *What is the most unique thing you have researched so far?*

It is difficult to pick one thing from the things I have researched so far because my career as a researcher spans over 40 years in the field of Diabetology. My earlier research was in the field of Fibrocalculous Pancreatic Diabetes (FCPD), a secondary form of Diabetes which occurs due to the formation of stones in the Pancreas.

After conducting studies on patients with FCPD for a number of years, I could describe the natural history of FCPD. So far, there were no formal criteria for diagnosing Fibrocalculous Pancreatic Diabetes. I could formulate the first criteria for diagnosing FCPD which later came to be known as '**Mohan's criteria**' for FCPD.

My colleagues and I took up one of the largest studies on the epidemiology of Diabetes, which has ever been done in the country. This study is known as the Indian Council of Medical Research-India Diabetes (ICMR-INDIAB) study, which covers the entire country and provides accurate epidemiological data on Diabetes, Obesity, Hypertension, and Dyslipidemia throughout the country.

One of our breakthroughs has been in the development of a unique variety of rice, 'Dr. Mohan's High Fiber Rice', which has higher fiber content, almost five times, than that of in other white rice, with a much lower glycemic index. Hence, it is suitable for people with Diabetes. This rice is now available in many department stores in South India.

We have also done some exciting research on the genetics of Diabetes particularly on the monogenic forms of Diabetes like Maturity Onset Diabetes of the Young (MODY) and Neonatal Diabetes (which occurs within the first six months of life).

3. *What is the best piece of advice you can give someone living with Diabetes?*

I tell people with Diabetes that they can have a long and healthy life despite Diabetes. Many of my

patients have lived for over 60 to 70 years of age with this disorder and a few of them are approaching their 100th birthday and are now living well. However, in order to lead a healthy life, one should live a disciplined life; eat sensibly, and do regular exercise. One should also go for regular whole body check-ups to see that all the organs are functioning properly. A minimum of 3 – 4 visits a year to a Diabetes Specialist will help ensure that you do not develop any complications due to Diabetes.

4. *What are the common complications of Diabetes?*

Uncontrolled Diabetes can lead to complications, such as Boils, Skin / Urinary infection, and / or even other more serious conditions like Tuberculosis. Diabetes, in the long-term, can increase the risk of damaging the blood vessels and nerves, resulting in a wide range of complications. When the small blood vessels of the eye are affected, it can lead to blindness. Diabetes, if left uncontrolled, can cause Kidney Disease or Heart Attacks, or lead to amputation. These complications can be managed effectively when Diabetes is brought under control.

5. *Is Diabetes becoming the biggest epidemic in the world?*

The prevalence of Diabetes is very high among non-communicable diseases in the world. There is hardly any country in the world where the epidemic of Diabetes has been completely controlled. This epidemic is now very conspicuous in India, China, and other developing countries.

The prevalence of Diabetes has increased tenfold in India over the last 2 – 3 decades; almost 25% of all the adults above 20 years of age and 40% of people above 50 years of age in the metropolitan cities in the country suffer from Diabetes. As on now, there are over 73 million people with Diabetes in the country; but the more worrying fact is that there are also over 80 million people with Pre-diabetes, an early stage of Diabetes. Pre-diabetes will rapidly develop into Diabetes. It is estimated that there will be 134 million people with Diabetes in India by 2045.

“

One of our breakthroughs has been in the development of a unique variety of rice, 'Dr. Mohan's High Fiber Rice', which has higher fiber content, almost five times, than that of in other white rice, with a much lower glycemic index. Hence, it is suitable for people with Diabetes

What is more worrying is that Diabetes is no longer a disease of the rich, as it has now started affecting the middle class and even the poor. It is also no longer a disease of the elderly, as it has started developing in young adults and even in adolescents and children.

Finally, Diabetes is no longer an urban phenomenon in India. The incidence of this disease is becoming more common in rural areas as well. This has great significance because 70% of people in the country live in rural areas. An increase in the prevalence rate would mean that there will soon be hundreds of thousands of people with Diabetes in India.

Moreover, there is a dearth of healthcare facilities in the rural areas which can pose a challenge to controlling this disease. When the poor are affected by Diabetes, a substantial portion of their income has to be set apart for treating this condition. Therefore, people with Diabetes should take effective measures to bring this disease under control so as to avoid the complications associated with this condition.

6. What are the recent advances in the treatment of Diabetes?

There are several recent advances in the treatment of Diabetes. The first one relates to the efficient monitoring of blood glucose levels. In earlier days, there was only Blood glucose meter to measure the

concentration of glucose in the blood. This device did not give a true account of the day-to-day fluctuations of blood sugar levels. Today, there is Continuous Glucose Monitoring (CGM), a wearable device which can provide a complete profile of the blood sugar levels on a continuous basis. One can get up to 1400 readings of blood sugar levels in 2 weeks at the cost of less than two Rupees per test. This device plays a vital role in bringing Diabetes under control.

Another important advance is the introduction of Insulin Pumps. This pump is particularly useful for people who require multiple daily injections of insulin. Insulin can be delivered through a pump which has the size of a pager.

There are also exciting advances like New Insulin Products which work faster and are very effective. They can prevent, not only Diabetes but also the complications associated with this disease like Heart and Kidney Diseases.

Finally, the use of artificial intelligence to read the retinal images of a patient may help an Ophthalmologist make a quick and accurate diagnosis of Diabetic Retinopathy. All these are indeed exciting advances in the field of Diabetes. @

For The DentCare
Interviewed by **Ms. Nisha Philip Xavier**

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The Role of a Dentist in Forensic Investigation

In modern times, tens of thousands of people are riveted to their television screens watching crime investigation shows. They may often hear a Forensic Investigator or Odontologist saying a 'bite mark' or 'dental identity'. A Dentist may sometimes play the role of a Criminal Investigator or Forensic Odontologist.

A Tooth can often serve as a tool to identify a person involved in a crime or a dead body, especially when it is decomposed or mutilated beyond recognition. Surprisingly, crimes often feature an oral or dental component; one study report has revealed that approximately 99% of victims of sexual assault or violent rapes are bitten at least once by their assaulter or rapist.



'A Forensic Dentist is called upon to help in the identification of individuals involved in a crime or assist in the investigation of bite mark injuries on living or deceased individuals', said Veronique E. Delattre, Professor of General Practice and Dental Public Health (DPH), University of Texas Health Science Center, Houston, United States of America and Chief Forensic Consultant for the Harris County Institute of Forensic Sciences, Houston.

Oral history

A Forensic Dentist uses a variety of methods to identify a decomposed / completely mutilated dead body or an individual involved in a crime. They include

- ⊙ Identification, analysis, and comparison of the bite marks on the victim's body with the suspect's dentition.
- ⊙ Identification, analysis, and comparison of the lip prints on the victim's body with the suspect's lips.
- ⊙ Identification and comparison of dental specimens at the scene of a crime or on the victim's body with the suspect's dental specimens.

In order to analyze a bite mark, a Forensic Dentist will compare the physical characteristics of a suspect's teeth with the bite marks left on the victim's body and this includes



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- ⊙ The distance from a Cuspid to another Cuspid (the third tooth to the left and right of the midline of either jaw, also called Canine)
- ⊙ The shape of the dental arches
- ⊙ The evidence of a tooth out of alignment
- ⊙ The width and thickness or spacing between the teeth
- ⊙ The missing teeth
- ⊙ The curves of the biting edges
- ⊙ Patterns of tooth wear

Ted Bundy case

Forensic Dentists can successfully identify the perpetrators of a crime. Ted Bundy, a notorious serial killer of the United States of America, was convicted and executed largely because of a single bite mark he had left on one of his victims. Being a gifted law student, Bundy could defend himself during the trial of his case. He successfully managed to hide mountains of forensic evidence by using rented cars while carrying out his crimes and cleaning fingerprints off from the victims' bodies or scenes of crimes.

However, he failed to wipe away the bite mark he had made on one of his victims, a student at Florida State University, the United States of America. Forensic Dentists made a plaster mold of Bundy's

teeth and compared it with that of he had left on the victim's body. The bite patterns perfectly matched; accordingly, the Forensic Dentists could prove beyond doubt that Bundy was the person involved in the murder of the student, paving the way for his conviction and execution.

Identifying the Dead

The tooth is one of the hardest and most resilient parts of the skeleton system, having the power to withstand severe drought, extreme cold, prolonged immersion in water, and even temperature above 1000° Fahrenheit (F). Once a person dies, the teeth remain intact for tens of thousands of years, making the teeth an ideal tool to identify a person who died millions of years ago.

After the September 11 attacks on the World Trade Center, New York, United States of America, Forensic Dentists across North America were called upon to help identify the mortal remains of the victims whose bodies were fragmented, decomposed, or burnt / charred beyond recognition, as facial identification was quite impossible in such cases.

Even though the bodies of many victims of the attacks were burnt almost completely in the fire, their teeth remained intact, as they are the toughest tissue in the skeleton system, not often subject to change due to external factors like large fire or earthquake.

More Unique than DNA Profiling

Forensic identification using a dental impression is an invaluable tool. Most Forensic Scientists agree that bite marks are more unique than DNA profiling or fingerprinting. 'There will be 28 teeth coupled with four wisdom teeth in the oral cavity of an adult', Delatree said. 'Each tooth has five surfaces (occlusal, buccal, lingual, mesial, and distal), with a total of 160 surfaces. Each surface has its own characteristics and the teeth may have a dental crown, bridge, fillings, etc. Like the teeth, the roots and bones around them are specific to each person'. Given all these parameters, it can be concluded that the physical characteristics of human dentition are unique.

Forensic Dentists are proving themselves indispensable for criminal investigation through their ability to use something as seemingly simple as a person's dentition to identify the perpetrator or victim of a crime.

Conclusion

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. Forensic Dentists are often called upon to help identify the mortal remains of the victims of natural or manmade calamities like earthquakes, volcanic eruptions, cyclone, aviation accidents, especially when their bodies have been fragmented, burnt / charred beyond recognition; i.e., in cases where facial identification becomes quite impossible. ©

Becoming a Successful Dental Professional

Like any other profession, the Dental profession also has its own sets of pros and cons. Dentists belong to one of the highest-earning communities across the globe and hence, we certainly demand due respect. Our high professional status is often envied by others. We have achieved this privilege / enviable position after years of hard work and burning the midnight oil at dental schools.

Though we enjoy these prerogatives, we are badly hit by unhealthy lifestyle practices like lack of exercise, skipping meals, etc. In addition to that, we are too preoccupied with our work to get enough time for ourselves. It is high time to change our work schedule and took out time for ourselves and our body.

There are many institutions that provide a wide range of lifestyle courses. These centers have an expert team consisting of Family and Marriage Therapists, Nutritionists, Yoga Gurus, Aerobics Instructors, and Meditation Teachers who provide us with healthy lifestyle tips suitable for our profession. In some cities, there are wellness groups of professionals that help their members share the best health and wellness practices.

Dental Practitioners are one of the most stressed professionals in the world. Though stress cannot be completely eliminated from our profession, it can be managed or reduced to a healthy level.

Tips to Manage Work-related Stress

1. Understand that you cannot carry out every work in your office. Hire separate staff for the reception, chairside assistance, and inventory management.
2. Hire an Associate Dentist. Entrust him with the task of performing minor procedures; monitoring follow-up care, and providing pre- and post-treatment instructions. This will reduce your workload considerably.
3. If your practice has many Dentists, ensure that every Dentist has a trained chairside assistant. In case your dental office has ten or more employees other than Dentists, it is advisable to hire a



- supervisor to make sure that everyone is doing their respective duties in a streamlined manner.
4. Give your prosthetic work to a trusted laboratory and ensure that your laboratory technician understands your requirements or expectations.
5. Your chairside assistant should perform his duty of packing all the materials to be sent to the laboratory. Materials for every patient should be kept in a separate box.
6. Maintain a record detailing the schedule of laboratory pickups and delivery. Though this work carried is out



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by your staff, it is important that you are personally in touch with the lab technician. If the work from the laboratory is delayed on a regular basis or if the quality of the prosthetic work goes down, talk to the lab authorities. Give them strict instructions or warnings two or three times before assigning your work to another laboratory. Always give adequate time to the laboratory technicians to provide you with quality work. Never ask the technician to hasten up the work as this may compromise the quality of the work.

7. Take time off from work. It is advisable to take two-half day leaves and one full-day leave every week, and two full-day leaves (continuous) every month. If you are salaried and work five days a week, you are in a better position than practice owners.
8. Set apart time for your family. If you are working for more than seven hours a day, you may not enough time to spend with your family members. Unless there is an emergency, never miss family gatherings or important functions on account of preoccupation with your work.
9. Ensure that wallpapers, photographs, paintings, the color of the walls of your clinic, etc., are changed every two years. This can break the monotony at the workplace and will be appreciated by your staff and patients alike.
10. Do exercise / workout four days a week or practice Yoga regularly, as a healthy mind resides in a healthy body. It has been proven that people who do exercise regularly are more productive in their respective fields when compared to those leading a sedentary lifestyle.
11. Find your hobbies and passions, as they are great



stressbusters. For a Dentist, artistic hobbies like painting or playing musical instruments have proven to be more effective in relieving stress than other recreational activities.

12. Take a 15-minute break every two hours. This can improve blood circulation in your body.
13. Do not skip your meals. Make sure that you take a one-hour lunch break. Have lunch with your staff, as it will enable you to discuss with them the issues related to your practice.
14. Do not over expect from yourself. No one can work perfectly every time.
15. Be a content practitioner. The primary goal of your work must be excellent patient care and not money. Obsession with avarice never brings satisfaction.
16. Learn to say 'No'. Say no to patient expectations that cannot be met. Say no to the patients who miss their appointments or expect you to work extra hours to provide them special care. Lastly, say no to yourself when you seek perfection in every work you do.

Conclusion

The first thing you need to do upon entering your clinic every day is to note down the work that needs to be done that day. Prioritize your tasks. Professional work requiring less expertise should be entrusted to your Associate Dentist.

A fine balance of professional and personal life has to be maintained in all aspects so as to lead a successful and fulfilling life.

Unlike salaried professionals, we enjoy the freedom to choose our working hours every day. Do your work diligently and to the best of your ability, as you will be more gratified when you see the satisfaction on the face of your patients. ©

How to Stay Fit and Healthy





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Mindful eating is a technique that helps you gain control over your eating habits

Mindful eating

Mindful eating is neither a diet plan nor a specific recipe / menu. It is not about eating slowly or chewing your food for a long time.

Mindful eating is all about using mindfulness to reach a state of full attention to your eating experience. It is a technique that helps you gain control over your eating habits. It is also known as intuitive eating, a concept that has its roots in Buddhist teachings, aiming to reconnect you more deeply to the experience of eating and enjoying your food.

Scientists and researchers have already proved the surprising benefits of mindful eating to the body and mind. Mindful eating is based on the idea that there is no right or wrong way of eating, but rather using varying degrees of consciousness about what you are eating and why and how?

Mindful living

Let your body connect to your mind; practice mindful living to optimize your daily happiness.

To make yourself fit and healthy, practice Yoga, self-control, or healthy habits like sleeping on time / for 6 – 7 hours; waking up early in the morning; going for a walk in the morning; taking breakfast, lunch, and supper on time; drinking more than three liters of water a day; eating fresh / raw / organic foodstuff, and spending sufficient time with your family members and friends. In addition to that, always maintain a positive attitude or grateful heart to make you happier and more enthusiastic.

Conclusion

Healthy living is a combination of many things, including good nutrition, regular exercise, and a positive attitude. If you practice a balanced and healthy lifestyle, it may make you physically and mentally strong, helping you face everyday challenges positively. It is also better to practice self-regulatory and self-improvement strategies to make you healthier and stronger for life. ©

People are aware of the importance of staying fit and healthy, but they all know that it is very difficult to achieve or maintain it, especially in this fast-paced world. Most often, you come across articles and write-ups on health and basic lifestyle practices; but how many of you are sincerely reading them till the end is quite doubtful. In fact, very few people do so. If you keep reading them, they may enlighten and motivate you to lead a healthy and active lifestyle.

Being in the best of your health includes not only eating right but also optimizing your physical activity, your mental status, your sleep pattern, your early morning routines, your mealtimes, your level of self-esteem, your time management skills, your screen / recreation time, etc. Therefore, more than eating the right foods, many things are needed to make a person fit and healthy.

No one wants to live in an unhealthy / diseased body. But many people tend to ignore or overlook their health. If you willfully take just one healthy step a day, you can achieve a considerable improvement in your health status within a short span of time. Besides, you may feel regret for not choosing a healthy lifestyle practice so far.



Stay Mindful! Stay Healthy!



Coping with **DENTAL ANXIETY**

Dentists today are aware that many patients are fearful of dental treatment. The sound of the drill and pain of injection add to their mental agony. Nitrous Oxide / Oxygen inhalation is considered as a safe and effective technique to reduce anxiety, produce analgesia, and thereby enhance an effective communication between a patient and the Dentist.

Nitrous Oxide is on the World Health Organization List of Essential Medicines, the most effective and safe medicines needed in a health care system.

Purpose of using Nitrous Oxide (N₂O)

- ❑ Reduces fear and anxiety – Euphoric and anxiolytic property of Nitrous Oxide helps patients to overcome their anxiety.
- ❑ Enhances communication and patient cooperation – Inhaling Nitrous oxide allows a patient to tolerate unpleasant procedures by reducing or relieving anxiety, discomfort or pain and thereby enhancing an effective communication between the Dentist and the patient.
- ❑ Instills a positive dental attitude – The sensitivity towards treatment, lengthy procedures, irritation to the sound of a dental drill and suction are reduced which helps in a positive dental attitude.
- ❑ Improves the quality of dental treatment – Minimal sedation helps in reducing unwanted tongue and lip movements. This helps to reduce



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the treatment time which improves the quality of dental treatment.

- ❑ Reduces gag reflex – Depresses gag reflex in patients and helps in obtaining good dental impressions.
- ❑ Reduces stressful environment – A pleasant stress-free relaxed environment is created due to improved patient cooperation.

Indications

- ❑ Apprehensive and fearful patients – For patients who are apprehensive, nervous about upcoming dental treatment, Nitrous Oxide helps in reducing the hurdles during treatment such as restlessness and agitation.
- ❑ Patients with a previous negative dental experience – If the dentist is able to recognize the reason behind fear, then introducing Nitrous Oxide even before examination helps in overcoming the fear.
- ❑ Preschoolers and children with special needs – Treatment may be challenging due to their poor cognitive ability or anxiety because of their preexisting medical or behavioral problems. It is observed that with the use of Nitrous Oxide, there is an increase in the level of confidence and trust among these children.

Conclusion

In the past few years, it has become quite obvious that some dentists, who have not received adequate training in the successful administration of Nitrous Oxide, have caused death or serious injuries to the patient. Understanding the fear and anxiety of patients is the stepping stone towards the successful use of Nitrous Oxide sedation in a dental office. Conscious sedation should not be attempted unless the dental provider has undertaken appropriate training in its administration. ©

Contraindications

- ❑ Any condition that causes nasal obstruction such as common cold, enlarged tonsils or adenoids that would reduce an effective amount of gas from reaching the patient's lungs is contraindicated.
- ❑ Nitrous Oxide should be administered with caution to patients with chronic respiratory problems such as emphysema, chronic bronchitis, pneumothorax and cystic fibrosis because of hypoxia (condition in which the body or a region of the body is deprived of adequate oxygen supply at the tissue level) due to increased airway resistance.
- ❑ Bowel obstruction or abdominal pain – Nitrous Oxide can cause distension of bowel in patients, thus causing abdominal pain.
- ❑ Middle ear surgery / Infections / Otitis media – Nitrous Oxide infiltrates the rigid, noncompliant area of the middle ear and increase the intra-tympanic pressure resulting in ear pain.
- ❑ Severe emotional disturbances / psychiatric disorders – Nitrous Oxide exacerbates the underlying condition of patients under psychiatric or psychological care.
- ❑ Patients under treatment with Bleomycin Sulfate – May develop respiratory failure.
- ❑ Patients diagnosed with Autoimmune disorders / on Immunosuppressive therapy – Long term use of Nitrous Oxide can cause bone marrow depression.
- ❑ Patients having Cobalamin deficiency – Nitrous Oxide can further increase the deficiency of Cobalamin.
- ❑ Extremely anxious and fearful children who are crying uncontrollably.
- ❑ Children suffering from multiple sclerosis.

ROBOTIC UROLOGIC SURGERY

Robotic Urologic Surgery is an exciting and emerging procedure in the field of Urology. It has tremendous potential to become the procedure of choice in the future. Therefore, it is important for every Urologist to keep abreast of this sophisticated surgical procedure, including its limitations so that they can incorporate it into their day-to-day surgical procedures.

A substantial number of reports show that performing complex urological procedures in humans with robotic assistance is very safe, efficacious, and precise.

Most Robotic Surgery in Urology has been performed in the treatment of Localized Prostate Cancer (Radical Prostatectomy), Bladder Cancer (Radical Cystectomy with urinary diversion for muscle-invasive Bladder Cancer), Kidney Surgery (Partial Nephrectomy and Pyeloplasty), and Adrenal Surgery.

The potential of Robotics is tremendous and promising. A Robotic Surgery allows a Surgeon to perform all kinds of complex procedures with more flexibility, precision, and control than what is typically possible with a Traditional Surgical Technique. Besides, it is minimally invasive and uses special equipment, including a small Video Camera that helps provide enlarged 3D images of the surgical field through a keyhole incision.

More than that, a Robotic Surgery allows fewer complications, lower levels of blood loss and transfusion



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rate, minimal scarring, reduced pain and discomfort, and more.

A major hindrance in the widespread prevalence of Robotic Surgery is the exorbitant cost of this surgical device, including maintenance cost. It is expected that in the not too distant future, newer robotic devices will be added to the armamentarium so that a Urologist can perform different urological procedures more precisely and efficaciously.

But, it is least likely to expect a leap in the use of Robotic Surgery as long as the cost of the robotic-assisted procedure is beyond the reach of the common people. However, an expansion of its indications and increase in the use may help lower the cost of both Surgical Robots and Robotic Surgery.

Conclusion

Robotic-assisted Surgery offers a wide range of possibilities towards improving the current surgical techniques, helping offer many advantages to both the Surgeon and patient. With better visualization, improved dexterity, and reduced weariness, a Robotic Surgical System has the potential to allow for a level of precision superior to that of with Conventional Surgical Techniques. A Robotic Surgery brings about faster recovery time and fewer complications, allowing a patient to resume day-to-day activities within a short period of time after a Surgery. ©

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Ask the Expert



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What type of Toothbrush and Toothpaste should I use?

It is always better to choose a toothbrush with soft bristles since the one with medium and hard bristles can damage the teeth and gums.

There are also powered and manual toothbrushes. A manual toothbrush with mixed bristle heights or angled bristles can clean the teeth better than the one with bristles of even length. A powered toothbrush can be useful for a person with special needs or who has difficulty in using a manual toothbrush.

A toothbrush needs to be changed every 3 to 4 months or sooner if the bristles are frayed, as splayed bristles may not be helpful in cleaning the teeth effectively.

Toothpaste comes in various colours, flavours, and packaging. It contains a detergent which acts as an effective cleaning agent. Toothpaste with the American Dental Association (ADA) Seal of Acceptance always contains fluoride, helping strengthen and protect the teeth. Some other types of toothpaste contain antimicrobial agents that help fight pathogens causing Gum Disease.

Do I really need to Floss?

Brushing can clean the surface of your teeth. You need to floss the teeth to remove the food particles and plaque from interdental areas and under the gum lines. If plaque is not removed by brushing and flossing, it may harden into tartar or calculus. Over time, the gums may pull away, the bone holding the teeth will get progressively eroded, which results in loosening of the tooth within its socket.

Does a Mouthwash help?

Mouthwashes may be helpful in reducing the risk of developing Bad Breath, Cavities, Gum Disease, or Dry Mouth. A Mouthwash can be effective when it is used with regular brushing and flossing. Your Dentist can recommend the best type suitable for you. A patient with Gum Disease may use Mouthwash twice a day while one with Dry Mouth may use an alcohol-free Mouthwash.

Kids under 6 years of age should avoid the use of a Mouthwash.

What are the early signs of dental problems?

Mouth Sores, Jaw Pain, Swollen gums, Tooth Sensitivity, Broken teeth, Dry Mouth, Bleeding Gums, Bad Breath or a Bad Taste are the some of the early signs of dental problems.

Why is a regular dental check-up important?

Regular dental examinations will help you detect dental





problems early enough to prevent more complications in future. Many systemic diseases tend to manifest with oral symptoms, which can be detected by a Dentist during a regular check-up. Vitamin deficiencies, Diabetes, Gastric problems, and Immunodeficiency disorders are a few diseases which can be detected early, with regular dental visits.

Do the teeth need Fluoride?

Yes. Fluoride assists to make the teeth strong and prevent Tooth Decay. The American Academy of Paediatrics recommends that everyone, including children, should invariably use a fluoride toothpaste for brushing their teeth.

Do Cavities need Dental fillings?

Cavities may become bigger unless they are closed with dental fillings. A Dentist will prepare the cavity and fill it with a filling material. Usually, dental fillings may last for many years but need to be replaced once they wear down or break.

What are Dental Sealants?

A Dental Sealant is a thin, plastic coating painted on the chewing surface of the teeth, acting as a barrier to protect the teeth against decay-causing bacteria.

A Dental Sealant can protect against Cavities that form on the top surface of the teeth. Kids from about 6 to 12 years of age can benefit from having Sealants painted on the chewing surface of their back teeth or molars. Adults also can get Sealants to protect their teeth that have pits and fissures.



How can I fix disfigured / discoloured teeth?

➤ Dental Crown

A Dental Crown will cover a disfigured or discoloured tooth, making it look like a natural tooth. It can also protect a weak tooth from breaking down or hold together the parts of a cracked tooth.

➤ Dental Veneers

Dental veneers (sometimes called Porcelain Veneers or Dental Porcelain Laminates) are tooth-coloured materials to cover the front surface of the teeth, helping improve the appearance of your teeth by changing their colour, shape, size, or length.

Are sugary foods and acidic drinks really bad for my teeth?

Yes, when you eat sugary foods or acidic drinks for a long period of time, it can progressively wear down the Tooth Enamel, causing pain and tooth decay. ©



Digital Lab Procedures Overriding the Contemporary Ways

HOW AND HOW MUCH?

Dentistry has become highly digitalized as it has evolved a lot since its inception in 5000 Before Christ (BC). While both the conventional and digital dental technologies have their own pros and cons, it is apparent that digital technology is superior and is likely to become the future of Dentistry and all its Specialties.

The development of diagnostic tools with the help of advanced technology has allowed Clinicians to acquire a better knowledge of the anatomy of a patient that has brought potential improvement in the treatment options. Digital technology has positively influenced almost every aspect of Dentistry and in most instances has led to the improvement of clinical treatment when compared to that of conventional procedures.



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Dental 3D printing plays a central role in modern Dentistry. 3D printing is an additive process known as rapid prototyping; as it includes the addition of multiple thin layers of a given material in order to build a three-dimensional object. In contrast, traditional processes are subtractive in nature, as they remove material in order to achieve the same.

Rapid prototyping is an unconventional technology, with boundless applications. Its integrity lies in its adaptive ability for usage among varied Specialties of Dentistry. This technique offers a wide range of applications from the fabrication of impression trays to final restoration.

The traditional method of creating an impression of the patient's mouth involves the use of a rubber-like material to reproduce the impression of a patient's teeth. A new impression has to be made in case of any error while making an impression.

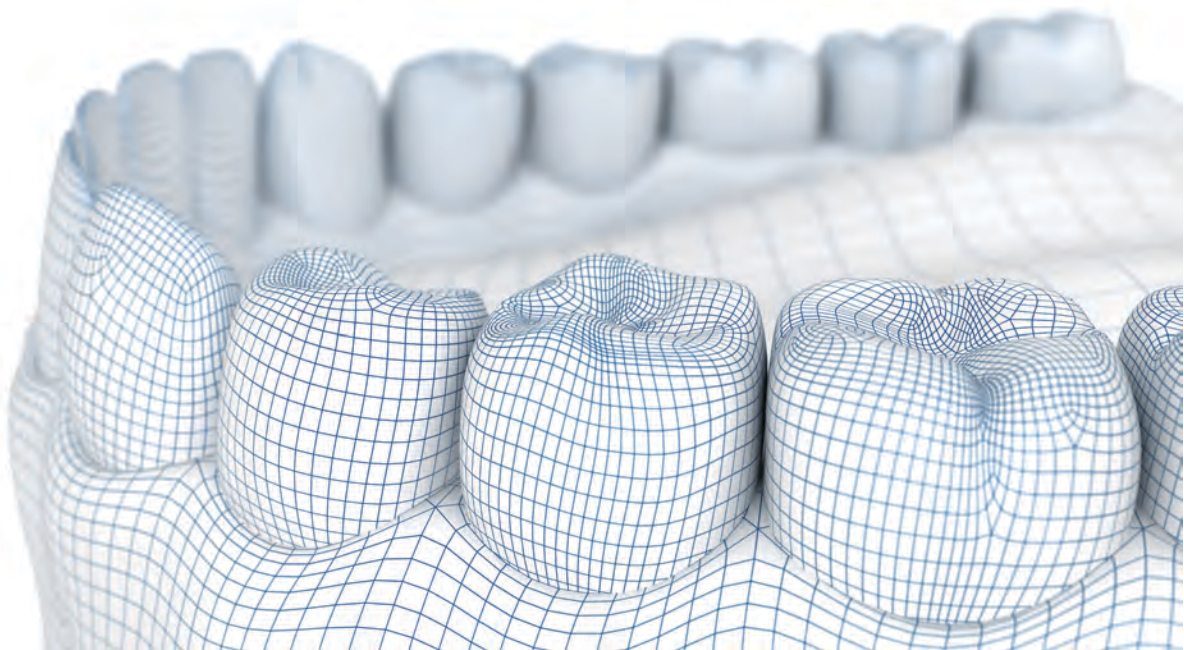
In contrast to the Conventional impression technique, 3D printing utilizes an intraoral scanner from which a virtual model is formed, which helps eliminate

the imperfections resulting from the Conventional impression technique.

Custom trays fabricated by this can be made easily available resulting in fewer errors, better fit and space enhancement of final impression. 3D scanners are also valuable in recording oral mucosa, teeth and adjacent structures in a patient suffering from severe gag reflex, temporomandibular joint disorders, limited mouth opening, and oral defects, especially with surgically rejected oral structures; as it requires more time, effort and skill in order to acquire an accurate impression with conventional techniques.

The complete and partial acrylic denture can be fabricated by an accurate method with the desired material of choice. With the use of pre-polymerized acrylic resin and denture teeth blocks, the fabrication of complete dentures can be done with the benefit of reduction in polymerization shrinkage and tooth fracture.

Rapid prototyping has been used for copings, bridge frameworks, and implant-retained prosthesis. Rapid





prototyping fabricated restorations are advantageous over conventionally fabricated restoration in terms of accuracy, precision fit, and reduced chairside appointments.

Stereolithographic models allow the surgeons to visualize, acquaint as well as perceive the concerned area before surgery; thereby yielding precision and efficiency during surgeries. Printed anatomic models also aid in designing surgical guides and templates during craniofacial surgeries rendering better information and realistic expectations for the patients undergoing maxillofacial reconstruction.

Rapid prototyping has contributed to the specialty of Orthodontics by producing Orthodontic aligners. These aligners are removable unlike conventional fixed orthodontic treatment, where patient compliance plays a major role in treatment outcome and predictability. Another aspect of Orthodontics that benefits from this technique is the fabrication of 3D printed brackets.

Endodontics is yet another branch of dentistry that has been benefitted by 3D printing technology through the fabrication of precise guides for application in surgical as well as nonsurgical Endodontic treatment. Periodontology most commonly utilizes 3D printed guides for esthetic gingival reconstruction. Gingivectomy and Smile designing employ patient's specific surgical guides enabling a precise and customized approach.

One of the most recent aspects of the development of Dentistry is the introduction of a genetically engineered Bio lab. There seems a strong possibility that teeth and other craniofacial structures can be regenerated. This may become possible by novel cell-based technologies combining current genetic and stem cell technologies.

Advantages of 3D printing over Contemporary technologies

- ⊙ Time-efficient

- ⊙ Good quality, consistent results, accurate reproduction of details
- ⊙ Enables printing of complex geometric shapes and interlocking parts requiring no assembly
- ⊙ Produces fewer waste products
- ⊙ Can produce single objects, in small quantities
- ⊙ Cost-effective
- ⊙ Faster delivery

Disadvantages of 3D printing over Contemporary technologies

- ⊙ High investment cost
- ⊙ The main setback with this technique is the final part quality. Because of the way each successive layer is deposited on the top of the previous layer in the typical 3D printing methods, an inherent weakness is built into the design
- ⊙ Stereolithography can be done only using light curable liquid polymers. The resin used can be messy and can cause inflammation and irritation on contact. Resin cannot be heat sterilized

Conclusion

Digital technology brings many advantages to the field of Dentistry like improved communication, increased control over the quality of data and fabrication of complex prosthetic frameworks and thus improves the patient experience that simply cannot be achieved with existing traditional procedures.

Although conventional methods are largely prevalent and are still a very good alternative, 3D printing has opened the door to enormous opportunities. The concept of scanning and sharing of information has made consultation of difficult cases easy, thereby improving healthcare. 3D printing technology has great scope in Dentistry and its use will contribute to amplify the overall patients' satisfaction. ©

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An Overview of DentCare Products



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”

The 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 on natural teeth (up to 16 units as a single restoration) as well as cement and screw-retained solutions for implants (single and multiple-unit).

DentCare Zirconia Variants

DentCare Zirconia Platinum Plus

DentCare Zirconia Platinum Cube

DentCare Zirconia Premium Plus

DentCare Zirconia Classic

DentCare Zirconia Basic

DentCare Zirconia Ultra Plus

DentCare BruxCare

DentCare Zirconia Solid Plus



Why Medical Grade DentCare Zirconia?

- ⊙ Natural feel and functionality
- ⊙ Unmatched aesthetics
- ⊙ High strength
- ⊙ Highly biocompatible
- ⊙ Unlimited characterization made available through more than 40 natural and lifelike shades
- ⊙ The tooth-colored 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 helps ensure outstanding marginal fit

DentCare Clear Aligners



Dental Braces are now entering a brave new world of comfort and ease with DentCare Clear Aligners – a series of transparent aligners to realign teeth. Each DentCare Clear Aligner is unique as it is customized for the patient's teeth. They can be easily changed every two weeks, sparing users the tedious task of heavy maintenance.

There is absolutely no need to spend long hours at the clinic negotiating conventional brackets and wire adjustments. Patients and dental clinicians stand to gain numerous valuable hours. Consequently, the dental clinician also gets to spend quality, value-added time with each patient.

Dental Implant Prostheses



Dental Implants are popular and effective to replace missing teeth and are designed to blend in with other existing teeth. They are an excellent long-term option for restoring smiles with uncompromised functionality.

Different variants of Implant Prostheses are offered by DentCare and may be made available as screw retained or cement retained crowns / bridges.

⊙ Screw-Retained Hybrid Dentures

'Hybrid denture' is referred to as hybrid because it combines the advantages of a fixed replacement with those of a removable denture. With this, patients regain self-esteem, confidence and can enjoy a wider variety of foods.

⊙ Implant-supported Overdentures

They are available as Bar Attachment / Ball Attachment Overdentures.

Removable Prostheses

DentCare has incomparable Removable dental prosthetic solutions with impeccable precision to recapture your oral function, aesthetics and liveliness. We have a number of removable dentures that are durable and akin to your natural teeth.

The range of removable prostheses available include

⊙ DentCare Flex

DentCare Flex is an aesthetically superior semi-flexible removable denture which blends perfectly with the natural gum tissue; providing better looks, function and comfort. It can be used in both complete and partial denture cases.

☉ **Cast Partial Denture (CPD)**

Cast Partial Denture (CPD) is used in cases with multiple missing teeth. It can be removed and placed back by patients themselves. It is ideal for patients for whom fixed prostheses or dental implants are not indicated. CPDs can be fabricated using Titanium and Cobalt – Chromium Alloy.

☉ **Bio-Functional Prosthetic System (BPS Dentures)**

DentCare offers BPS Dentures from Ivoclar Vivadent that is a long-lasting and high-quality option for dentures meant to reproduce the functions of natural teeth. The biofunctional set-up philosophy along with the Model Associated Positioning (MAP) of the artificial teeth in combination with the pressure injection molding procedure is the cornerstone of this system. BPS can be used in partial or completely edentulous cases.



☉ **Acrylic Removable Complete and Partial Dentures**

DentCare fabricates extremely natural looking Complete and Partial Dentures using acrylic and denture – teeth of the highest quality, imported from Germany and Italy.

The main advantage of these dentures is that they are cost-effective, yet uncompromising in terms of quality. Additional teeth and denture base can easily be added to an existing Acrylic Denture.

It is also the product of choice for Immediate Dentures and for Temporary Dentures in Implant patients.

☉ **Valplast**

The strong, flexible nature of Valplast is perfectly suited to a variety of natural conditions in the mouth, simplifying design and enabling the flexible nylon resin to act as a built-in stress breaker, in order to



provide superior function and stress distribution in Removable Partial Denture cases.

It is good for replacing missing teeth in small edentulous cases and should not be opted for in situations where teeth need to be replaced extensively.

☉ **Bio Dentaplast**

It is a high strength, injection molded, and biocompatible denture material.

Dental Precision Attachments

Dental Precision Attachments offer a connecting link between fixed and removable partial dentures, as it incorporates features common to both types of prostheses. Dental Precision Attachments help connect removable partial dentures to fixed bridgework under a male / female locking mechanism.

The 'male' part is fixed to the crown or bridgework, whereas the 'female' part is included within the removable partial denture and engages the 'male' part. The male part of Dental Precision Attachments is often a high strength precious alloy whereas the female part consists of a more elastic alloy.

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. ®

Smile confidently, go for
DentCare Prostheses.

TRAINING PROGRAM ON DENTAL IMPLANTS

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REVITALIZE THE TOOTH THROUGH REGENERATIVE ENDODONTICS

Dental Pulp Regeneration or Regenerative Endodontics, a biologically based procedure to replace the damaged tooth structures, such as the Cementum, Dentin, and Dentin-Pulp complex, is one of the most exciting developments to rejuvenate the root and surrounding tissues of the tooth, besides helping restore an immature permanent tooth with Pulp necrosis.

Regenerative Endodontics is the golden future of dentistry, which envisages converting a non-vital tooth into one that is vital again. The American Association of Endodontics has defined Regenerative Endodontics as a 'biologically based procedure designed to replace the damaged structure and cells of the Pulp-Dentin complex'.

Current Modalities

Currently, there exist other regenerative modalities like Root canal vascularization, Stem cell therapy, Pulp implantation, Scaffold implantation, Injectable scaffolds, and Gene therapy.

But Dental Pulp Regeneration Therapy is the only modality that is clinically more viable.

The American Dental Association (ADA) has recognized Regenerative Endodontics and included it in the Current Dental Terminology (CDT). Studies have concluded that most patients who underwent Dental Pulp Regeneration Therapy showed positive clinical outcomes.

The substantial advantage of Regenerative Endodontics over other restorative procedures is that the tissue regeneration matrix becomes more prominent in this approach, which enables to strengthen the root walls of the restored tooth.

Mahmoud Torabinejad, Professor of Endodontics, and the Director of the



Dr. Kalyani Behera
Private Dental Practitioner
Chennai, Tamil Nadu, India

Advanced Specialty Education Program in Endodontics at Loma Linda University School of Dentistry, California, United States of America has reported that Dental Pulp Regeneration Therapy could promote continued tissue development in a damaged tooth.

Call into question

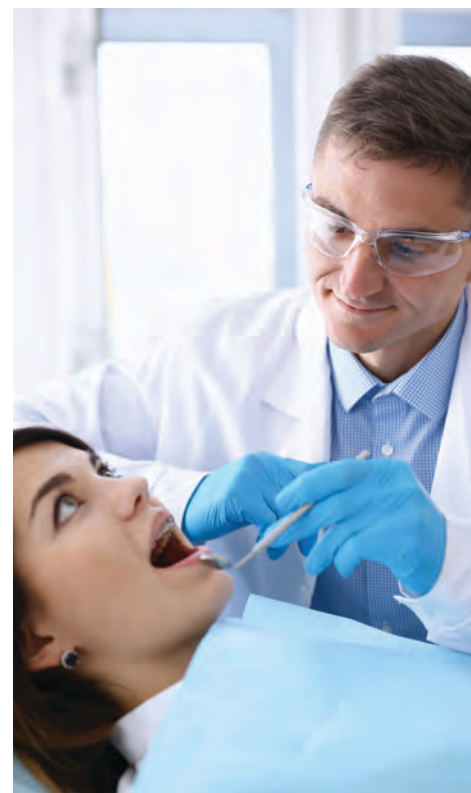
Can Intracanal Antibiotics be substituted?

It has been reported that the use of Triple Antibiotic Paste (TAP), which contains Metronidazole, Ciprofloxacin, and Minocycline, even in clinically recommended concentration can be cytotoxic to the stem cells. Also, a patient may require an additional appointment, as it is very difficult to remove the coating of Triple Antibiotic Paste (Propylene glycol) from the surface of the Dentin.

Unpredictable Outcome

Noosrat et al reported that when a regenerative endodontic procedure was performed to achieve root maturation in the maxillary central incisor of the patient, it resulted in an empty root canal space. Even after using tissue engineering strategies, Cementum-like hard tissue was deposited on the root canal walls,

Regenerative Endodontics is the golden future of dentistry, which envisages converting a non-vital tooth into one that is vital again



and bony islands were found throughout the root canals. These reports call into question the positive predictability of Regenerative Endodontics.

Future Outlook

Regenerative Endodontics has the potential to be a safe and effective procedure for saving the structural integrity of an immature non-vital permanent tooth. Researchers around the world are now incessantly working on to the next level of advancement in Regenerative Endodontics.

Soon, Dental Practitioners may be expected to deliver Regenerative Endodontic treatment in their routine dental practice. The advancements in the regeneration of the Dentin-Pulp complex will have a promising impact on retaining the natural dentition and reaching the ultimate goal of a healthy oral cavity.

Conclusion

Regenerative Endodontics is an efficient treatment option to replace inflamed or necrotic Pulp tissues with regenerated tissues to convert a non-vital tooth into one that is vital again. But efficient root canal disinfection and proper size of the apical foramen are the two requisites for the long-term success of a tooth treated using Dental Pulp Regeneration Therapy. More than that, regular follow-ups may become necessary to check the regenerated Pulp to ensure a long-term treatment outcome. ®

Cuisine for Kids

Healthy Granola Pudding



Ingredients

Jaggery.....	450 grams
Ghee.....	225 grams
Eggs.....	5

Oats.....	150 grams
Raisins.....	50 grams
Almonds, Sliced.....	50 grams
Cinnamon powder.....	½ teaspoon
Baking powder.....	20 grams
Salt.....	½ teaspoon
Milk.....	250 milliliters
Maple Syrup.....	25 milliliters

Preparation

Heat oven to 150° Celsius (C). Beat Ghee, Jaggery, Cinnamon powder, Baking powder, Eggs, and Salt in a bowl till the mix becomes creamy. Add Oats, Raisins, and Almonds to Jaggery mix and swirl gently with a spoon. Then add Milk. Transfer the prepared mixture to a ramekin and bake it with a water bath for 25 – 35 minutes until it becomes golden brown. You can steam it in a pressure cooker as well.

Once ready, spread Maple Syrup over the pudding and Serve it hot.





Celebrity Chef Vivek Tamhane
 Member, Canadian Culinary Federation
 Author, Culinary Consultant and Entrepreneur
 Mumbai, Maharashtra, India

Baked Eve's Pudding

Ingredients

- Castor sugar.....450 grams
- Icing sugar.....75 grams
- Butter.....225 grams
- Eggs.....10
- Flour.....450 grams
- Baking powder.....20 grams
- Hot water.....50 milliliters
- Tinned Apples.....500 grams
- Vanilla Custard.....1 cup



Preparation

In a bowl, beat Eggs, Butter, Castor sugar, Baking powder, and Flour to give a soft dropping consistency. Add a little hot water to loosen up the mixture. Drain Tinned Apples before chopping them. Transfer the chopped Apples to a baking tray and pour Flour mixture over it. Cover the baking tray with a silver foil and bake in a water bath at 150°C for approximately 35 – 45 minutes. Dust it with Icing Sugar, before serving with a Vanilla Custard.

Sticky Toffee Pudding

Ingredients

For Pudding

- Dates, Chopped.....350 grams
- Baking Soda.....1 tablespoon
- Boiling water.....250 milliliters
- Butter.....125 grams
- White Sugar.....125 grams
- Eggs.....2
- Flour.....350 grams

For Caramel Sauce

- Brown Sugar.....200 grams
- Butter.....100 grams
- Condensed Milk.....400 grams
- Vanilla Extract.....1 tablespoon



Preparation

Preheat oven to 175°C. Grease an 8-inch square or round baking dish. In a small bowl, combine Dates and Baking Soda. Pour a little boiling water over the Date mix to make it soft. Cream Butter with White Sugar until it becomes light and add the prepared mix to the Date mix. Add Flour to Date mix and fold the mixture. Then gently fold whisked Eggs to the mix. Pour the batter into the baking dish. Bake using a water bath for 25 – 35 minutes until it becomes golden brown.

To prepare Caramel Sauce, combine Brown Sugar, Butter, and Condensed milk in a small saucepan. Cook the mixture over medium heat till it starts boiling and becomes light brown. Then add Vanilla Extract to it. The mixture will look very thin and runny, but Caramel Sauce will thicken as it cools.

Pour Caramel Sauce over the pudding before serving. Serve at room temperature with Vanilla Ice Cream if you prefer. ©

DIGITAL DENTURES:

Where Virtual Becomes Reality



Edentulism, the loss of all the natural teeth, is a serious health problem among adults. Periodontal Disease and Dental Caries are the most common causes of Edentulism. It can impact the quality of life of a patient.

Complete dentures are the best option for a completely edentulous patient. Currently, Complete dentures are mainly designed and fabricated using conventional methods, which involve a large series of clinical and laboratory procedures.

In the conventional method, to obtain Complete dentures, an edentulous patient typically has to make five visits to a dental clinic for taking preliminary and final impressions; recording jaw relation, for the trial and then the placement of Complete dentures.

Since the clinical and laboratory procedures are

mainly performed manually in the conventional method, it is very challenging to ensure the quality of these dentures. Moreover, it is difficult to store the physical models of the dental arches or find them out when a patient wants additional Complete dentures in the future.

Computer-aided Design and Computer-aided Manufacturing (CAD / CAM) has emerged as a new approach for the design and fabrication of Complete dentures. Several commercial CAD software systems are now available for designing Complete dentures.

With CAD / CAM technology, only two appointments are needed for a patient to get the Complete dentures. The processes required for the fabrication of Complete dentures like making dental impressions, molds of teeth, and jaw relation; adjustment of occlusal plane; positioning of the maxillary anterior teeth, along



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with shade selection are finished in the first visit, helping save a lot of time for both the Patient and the Dentist.

Virtual Complete dentures are designed based on the Three-Dimensional (3D) digital images generated by scanning the edentulous ridges of a patient.

To get the images for designing Virtual Complete dentures, the edentulous ridges of a patient are scanned. Subsequently, the obtained data is imported to a software so as to design Complete dentures. The denture base and teeth are virtually designed using a Denture design software, which also allows virtual occlusal adjustments.

The data is then fed to the milling machine for manufacturing Complete dentures. The denture is milled from Polymethyl Methacrylate (PMMA) blocks.

In tune with the designed Virtual Complete dentures, artificial teeth and their corresponding baseplates are fabricated by milling Acrylic Resin Composite blocks. Complete dentures are produced by bonding the artificial teeth to their corresponding baseplates. Finally, the denture is inserted into the patient's mouth.



Conclusion

The use of CAD / CAM technology by both the Dentist and the Dental lab will assist in the fabrication of more comfortable and better fitting removable prostheses. Besides, Digital dentures are more authentic looking and fit more seamlessly than conventional dentures.

In addition to that, CAD / CAM dentures have helped not only reduce chairside time and the number of patient visits but also provide digital archiving, higher retention, and more favorable clinical and patient-centered outcomes. ©

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