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THE DENTCARE

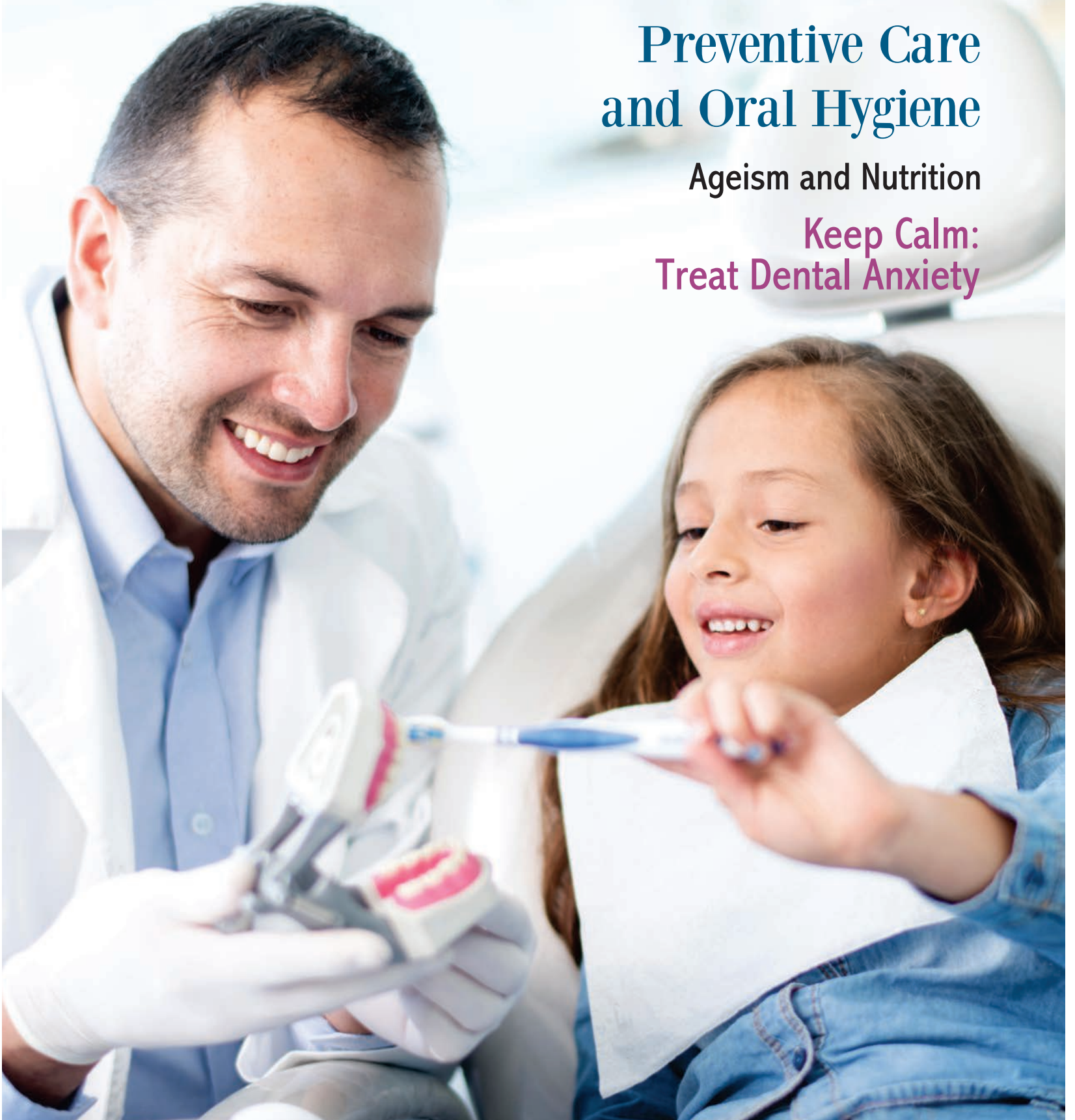
Your Monthly Health Care Magazine

Brightening smile the world over

Preventive Care and Oral Hygiene

Ageism and Nutrition

Keep Calm:
Treat Dental Anxiety





Brightening

Smiles

the World Over





DentCare Dental Lab Pvt. Ltd.

Muvattupuzha, Kerala, India

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Dear Reader,

M is here. M means a lot of excitement too!!!

The heavens have opened as well, adding welcome respite to the summer of summers in God's own giving us ample hope for witnessing yet another eagerly awaited season of M.....s.

For the moment, we have our precious M.....s to run to. You will agree – May 14 is not just another special day, but just one moment for us to thank them 'altogether' – for making every other one of the 364 days worth living. Their tender touch is timeless and is the soothing balm our battered souls need.

I believe it is time we reciprocate. It will add life to their years and years to ours. Give them a hug today...and if possible every other day too!!!

Technology too has, beyond doubt, added a new dimension to our inane lives. But has it taken life out of our existence??

See the youth around you. You will certainly sense the rampant deafness to “Being Human”. Yes, it should worry us when the only touch they share today is their touch screens. Let us strive to recapture their outlook on what really matters in life and beyond.

A Dental appointment is surely every human being's cause for anxiety. And when it comes to children, it redefines worry. Understandable, but not without reason for a solution – Stay calm!!

Dental care through oral hygiene is thus pivotal. Stem cells will bring in a fresh perspective to dentistry. For now, you are fortunate – there is DentCare for every other dental need.

When it comes to keeping the doctor at bay, please don't keep the apple away!! And when it comes to alcohol, tobacco and anger, read it as one – “Danger”.

Tickle your grey cells with our insightful quiz. No sweat for you there, I guess.

The Expodent @ Chennai was yet another wonderful opportunity for DentCare to espouse its global mission of brightening smiles the world over. Thank you India for giving us reason to clearly align with you!!!

Yours truly,

Prof. (Dr.) George P. John

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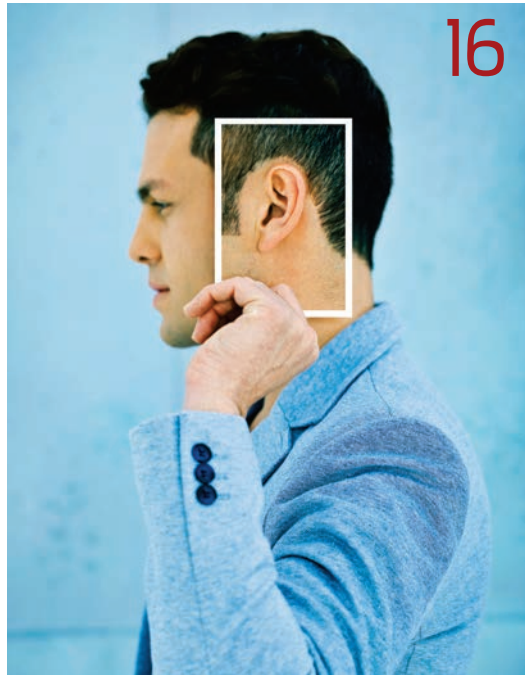
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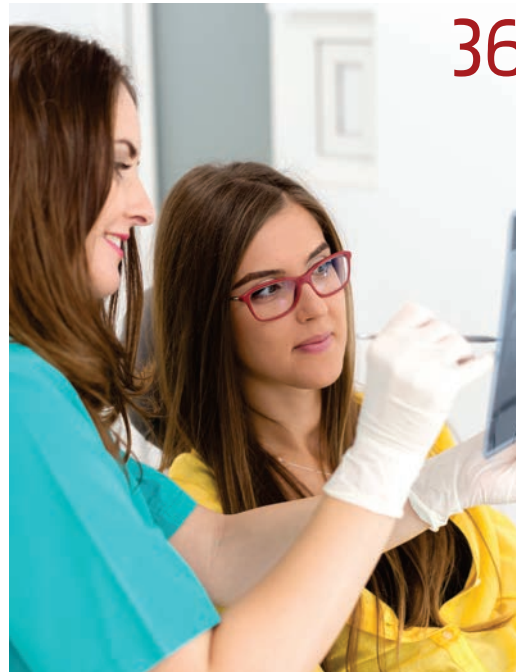
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AN APPLE A DAY KEEPS THE DOCTOR AWAY?

*India is the
sixth largest
producer and
consumer of
apples in the
world*

Growing economic burden and a drastic change in life style has led to increase in morbidity. There has been an increasing interest in natural alternatives (fruits and vegetables) to combat and even, prevent disease.

Amongst various fruits, apples are one of the most popular fruits in the world having mythological and religious significance in many cultures, including that of Norse, Greek and European Christian.

At present, there are at least 7500 different varieties that vary in shape, colour, texture, acidity, juiciness, sweetness, nutritional value etc. They are consumed in different forms, i.e. as fresh fruit, juice, wine, other processed foods etc.

India is the sixth largest producer and consumer of apples in the world. It has been increasingly regarded as beneficial for people's health due to the polyphenol content, justifying old proverbs like "an apple a day keeps the doctor away" or "eat an apple on going to bed, and you will keep the doctor from earning his bread."

Phytochemicals like carotenoids, flavonoids, isoflavonoids and phenolic acids serve as the key protective elements in most of the fruits and vegetables. Apples ranked the second for total concentration of phenolic compounds, and perhaps more importantly, they have the highest portion of free phenolics when compared to other fruits.

This means that these compounds are not bound to other compounds in the fruits and the phenolics may be more available for eventual absorption into the bloodstream. The phenolic content vary among different cultivars, within different tissues of the fruit, growing conditions, cultural practices, ripening during harvest, post-harvest storage conditions and processing. Several research findings have shown that Apple Peel contains more antioxidants and antioxidant capacity than the pulp fraction or the whole.

High content of phytochemicals in apples also account to their high antioxidant property. They not only contain their own antioxidants, but also cause the body to make more of one of its own internal antioxidants; it can be further stated that this internal antioxidant impacts health beyond what can be done by external antioxidants from foods.

Various studies have linked the consumption of apples with reduced risk of some cancers, cardiovascular disease, asthma and diabetes. Its strong antioxidant activity has led to inhibition of cancer cell proliferation, decrease lipid oxidation and lower cholesterol.



Association with Oral Health

Apple has a two - way mechanism in maintaining Oral Health,

- Its action on *Streptococcus* mutans (the main pathogen for dental caries and periodontal disease)
- Antioxidant activity

Action on *Streptococcus* mutans

The polyphenol content of apple has shown significant inhibitory effect on the adhesive property of *Streptococcus* mutans onto the tooth surface by inhibiting the production of extracellular glucans from dietary sucrose through the action of glucosyl transferase (GTF) enzyme. This property of apple can significantly help in preventing plaque formation.

Antioxidant activity

Oxidative stress in the oral cavity has led to increase incidence of oral cancer, dental caries and periodontal diseases. Apple has a high antioxidant property and consumption of this fruit has shown increase in the Total Antioxidant Capacity (TAC) of the saliva thus causing a local rise of available antioxidants which can help in preventing various oral diseases.

To summarize, the benefits of apple on general health have been time tested and a proven fact. However, in the recent years, interests on its effect on oral health has led to an understanding that consumption of apple and apple products can prevent various chronic oral diseases like cancer, periodontal disease and dental caries as well as maintaining oral health.



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Keep Calm: Treat Dental Anxiety

Dental anxiety is a very common problem that dentists face amongst patients visiting our offices. It is so common that it has been classified as a distinct psychological phobia.

Approximately 10 percent of adults and 43% of children and adolescents suffer from this “odontophobia” (fear of dentistry and of receiving dental care). Even a dentist who has to undergo dental treatment by one of his or her colleagues would no doubt, have some level of dental fear or anxiety, even though one is in the safe hands of a colleague.

With such a common occurrence in front of us, it would be better to know what causes our patients to be so scared and what dentists could do to make the patients more comfortable when they visit our dental clinics.

Simple management techniques will be beneficial to the dental clinics in terms of time management and would also attract more patients to the hospital as the patients feel that they are in a safe and comfortable environment.

Dental anxiety prevents patients from seeking treatment at the right time, thus aggravating and prolonging their morbidity. By the time they do come to hospital for treatment it would many a time be too late for them. It is a vicious cycle as the fear and avoidance of treatment will be followed by traumatic experiences when the patient actually comes down for treatment which aggravates the patient's fear further, leading to the postponement of the treatment till it is too late for eventual remedy.

Imagine a common scenario in which a patient in need of a root canal does whatever possible to relieve the pain on his own and comes to the hospital only when the situation becomes so bad that the tooth has to be extracted.



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Dental anxiety prevents patients from seeking treatment at the right time, thus aggravating and prolonging their morbidity

In the eyes of a practitioner, it could be argued that if the patient had reported even a few weeks earlier, he could have been provided root canal treatment rather than the extraction. The profits of which could have been much more.

We would also not have to work with a terrified patient who in the ordeal of losing the tooth is now even more scared of the dentist and may not agree to go ahead with further treatment to replace that missing tooth. Had that patient not been scared of the dentist in the first place he would have saved himself from the trauma of losing that tooth.

What causes our patients to be scared of us?

The very thought of going to the dentist sends shivers down the spines of many would-be and even seasoned patients. Studies have shown that patients are scared of dentists when consulting for trifle ailments.

The most common cause of dental fear and anxiety is the information floating around from the myths and tales of horrific occurrences at dental hospitals. Friends and relatives who themselves had horrific experiences at the dentist would tell the patient the worst case scenarios and as a result, the patients who come down to our offices, would have the mental image of a place equivalent to a 15th century torture chamber.

The fact that man fears pain and the thought that the dentist is going to inject him with something and pull out a part of his body, will aggravate the situation and this stands in the way of getting the patient treated early.

The second factor relates to what is “literally in the air”. The smell and sounds in hospitals do scare patients and make them a little anxious of what we may do to them. The sound of a crying child inside the operatory would scare children and probably even adults in the waiting area.

The sound of our dental turbine invokes the stereotypical fear of the “the drill”. All these work against us. A child who has been absolutely fine when the parents brought him into the office would break down at the moment he hears the crying of a child inside the operatory. Smells and fumes of the chemicals used in hospitals would result in distinct smells which also tempt to have antipathy towards the dentists.

Tackling the problem and maximizing profits...

Tackling the problem of the anxious and fearful patient boils down to a few simple and sometimes, calculated steps.

The first is the setup of our offices. Textbooks tell us to create comfortable setups, some of which would be equivalent to suites and lobbies of 5-star hotels: but this may not be possible for all dental clinics.

Simple measures like sound proofing the waiting area from the main operatory and playing pacifying instrumental music in the waiting area would generally be suffice. Aroma of mild scented oils in the waiting areas would relax the patient and block out the odour of the chemicals from our dental products.



Inside the operator, the key step is to educate the patient by dismissing his fear about what is going to happen. But remember, it has been proved that too much of information will cause a patient to get more scared of. Avoid showing patients real pictures and videos at the operator. Using animated videos and schematic diagrams would generally be suffice.

The highest rated fear among patients is about dental injection. Using thin narrow gauge needles is definitely an option. This, along with the use of topical anaesthetics and distraction techniques will reduce the trauma of undergoing an injection and in the long run, it will reduce the fear of an injection by the patient.

Studies on behaviour modification techniques in the dental setup have shown to be very effective. Simple techniques such as verbal and co-ordinated steps for relaxation and the use of personalized music for the patient using headphones have been shown to be very effective.

Lastly, the use of drugs to manage an anxious or fearful patient should be used as the last resort of any dentist. Sedatives and

anxiolytic drugs have a range of side effects. It has been recommended to use these drugs only if the milder techniques of behaviour modification and relaxation are ineffective on the patient.

Conclusion

Outlined here are the very basics of what causes our patients to fear us and avoid getting treated. The techniques mentioned are the simplest that one can use in the hospitals and for smaller dental setups. There are several articles in dental literature which teach us how to relax a patient using behaviour modification and allow us to carry out procedures without trauma to the patient and to have a relaxed environment for the doctors too.

Remember that a patient who receives dental care in hospitals should go in relaxed state, feeling that what he scared of when he walked in was baseless. Such patients will go again to the dentist the next time when he needs treatment. Besides, he will bring along more patients to the hospitals, whereby building up the practice.

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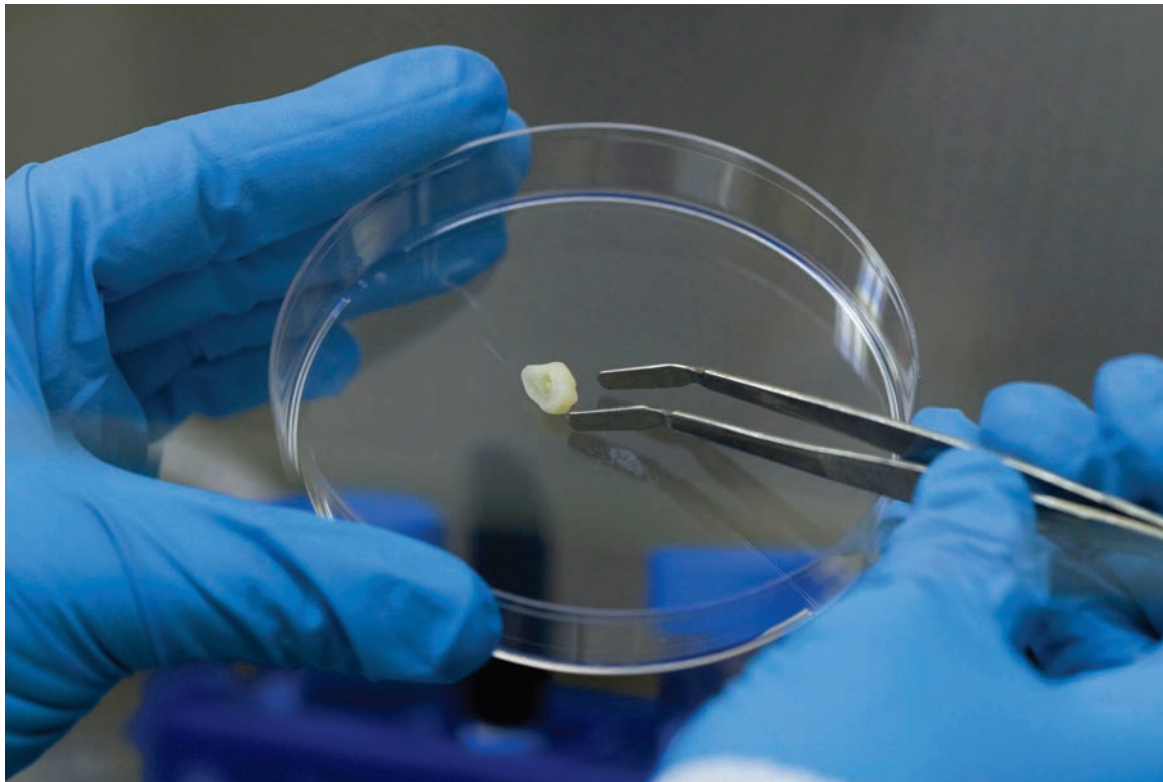
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STEM CELLS FOR PERIODONTAL DISEASES

Periodontal disease also known as gum disease is a progressive disease affecting the supporting and surrounding tissues of the teeth and also the usually strong jawbone. If untreated at the right time, periodontal disease can result in loose, unstable teeth or tooth loss. Periodontal disease is in fact the leading cause of tooth loss in adults in the developed and developing world and hence this cannot be neglected.

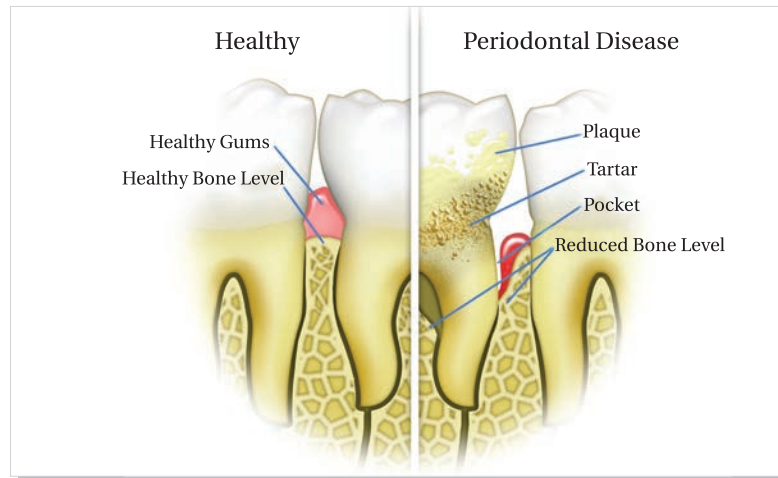
Soft pulp inside the tooth can

become inflamed and infected due to deep decay or repeated dental procedures on a tooth or large fillings or a crack or chip in the tooth. Root Canal Treatment is needed when an injury or a large cavity damages the tooth root associated with local infection. In order to reach the root of the tooth, an opening is made through the crown of the tooth to the pulp chamber. Initially, cleansing of the canals is necessary to remove debris followed by filling to suppress infection.

Periodontal disease sets in when the bacteria in the plaque start to attack the soft gingival tissues surrounding the teeth, rapidly breeding to cause infection. As the infection deepens, it starts to burrow deeper into the tissues causing inflammation between the teeth and the gums. Typically, the body responds to, by destroying the infected tissues and that is why the gums appear to draw back. The resultant gaps between the teeth if not addressed, lead to unstable teeth and finally to tooth loss.



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Generally, the dentist performs deep scaling procedures to cleanse the pockets in the periodontium. A combination of antibiotics and medicated mouthwashes are used to kill the bacteria and promote good healing of the pockets.

Chronic, Aggressive and Necrotizing Periodontal Diseases are harder to treat and to save with a regular antimicrobial treatment plan.

Recent advancements in Research and Development in Regenerative Dentistry have strongly advocated Stem Cell Treatment not just for regeneration but also as anti-inflammation agents. The only difference is with their stark biological and clinical properties that are advantageous with dual function at the site of infusion.

Although there are four different types of Stem Cell Treatment, depending on the source of their harvest, human mesenchymal stem cells (hMSCs) sourced from

stroma / mesenchyme are studied and evaluated in terms of mechanisms related to the antimicrobial function.

The studies in this regard reported that the hMSCs directly slow down the growth activity of the bacteria resulting in lower bacteria burden in the milieu. The slow growth and fewer bacteria is the first piece of antimicrobial effectiveness, thought to induce a window of opportunity for the antibiotics as well as the host's immune system to resolve the infection and restore the health of the microenvironment.

Pseudomonas aeruginosa, *Staphylococcus aureus* and *Streptococcus pneumoniae* are some of the pathogenic bacteria causing sepsis with the release of pro-inflammatory stimulators contributing to the tissue damage. The second piece of the important antimicrobial effectiveness of the hMSCs is their ability to secrete antimicrobial peptides including the peptide LL-37. LL-37 that is

shown to mediate its effects by softening the bacterial cell walls and allowing increased sensitivity to host and antibacterial agents.

Among the adult sources of hMSCs, milk tooth is a recent clinical discovery which has been identified as the best source to harvest. Tooth pulp derived hMSCs can be stored from 5-11 year old kids. The loose tooth (milk tooth) that would eventually fall off is to be collected sterile and the Stem Cell Banks provide the service of harvesting, culturing hMSCs from the extracted loose tooth once the family enrolls for the Service. The harvested hMSCs are cryopreserved immediately in Liquid Nitrogen Tanks.

The cryopreservation helps in storing Stem Cells Naive retaining their therapeutic properties to be retrieved for any application anytime later. The advantages of banking tooth stem cells now are manifold while every kid aged between 5-11 years would be eligible with 32 times of opportunity to donate.



Are You An Alcoholic?

Nobody is too young or too old to have trouble with alcohol. Use of alcohol is common and accepted as a stress reliever in most of the societies.

For most adults, moderate alcohol use is probably not harmful, but many a time a large section of people have developed an addiction for the same that they are unable to control their drinking habits due to both physical and emotional dependencies. This situation is called Alcoholism or Alcohol use disorder. The symptoms include continuous or repeated alcohol consumption despite physical and mental issues.

Most Health Organizations classify alcoholism as a progressive and chronic disease that can affect both physical and mental well-being of the affected person. An alcoholic is prone to liver failure and heart disease along with increased risk of cancer and many other diseases including diabetes. Drinking during pregnancy can cause problems to the baby. Generally, women are more sensitive to the harmful effects of alcohol than men.

It does not matter how long you have been

drinking or what brand you are drinking; what matters is—what drinking does to you.

If a person starts consuming alcohol for a long period, he may feel that only alcohol can make him feel self-confident and at ease with other people. Alcoholics drink in the morning to overcome hangover. Habitual alcoholism will reduce appetite, which in turn will lead to malnutrition and finally to a condition of blackout (temporary loss of memory and hallucination).

Alcoholism is associated with a set of social, cultural and behavioural influences as well as genetics. Alcoholism is classified as a progressive disease. A person does not become alcoholic overnight but gradually gets addicted to it. Once addicted, it will be very difficult for a person to come out of it.

Like many other diseases, alcoholism is rampant in all classes of society. If one walks in to an Alcohol Detoxification Centre, it can be seen that people who are rich and poor; educated and uneducated; religious and atheist; professionals, businessmen and daily labourers, are housed there for treatment.



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Alcoholism causes damage to the liver which is commonly known as liver cirrhosis besides causing heart related problems, ulcers affecting the stomach, decline in sexual function, pancreatitis, epilepsy / seizures and finally affecting the immune system in general.

Other physical impacts include damage to the Central Nervous System and Peripheral Nervous System which occur due to sustained alcohol consumption. Apart from these, prolonged drinking can be the cause of many mental health problems. Dementia is a commonly found problem in alcoholics. Excessive alcohol use causes damage to brain function besides Depression and Schizophrenia.

The social problems arising from alcoholism are serious and may affect the people and society. Alcoholism is associated with mismanagement of professional and personal life besides increasing the risk of committing criminal offences, including child abuse, domestic abuse, rape, burglary, assault, drunk driving and road accidents. Statistics reveal that nearly 70 per cent of road accidents are due to drunken driving.

Spouses or Life partners of alcoholics are firstly and mostly affected by the side effects of alcoholism. To start with they may be denied conjugal rights and gradually things will go haywire. Financial difficulties, depression, anxiety, stress, domestic abuses etc. can make the life of alcoholic's partner, a living hell.

Violence is not uncommon in these cases and many a time leads to divorce

or suicide. Children from the family of the alcoholic have to suffer a lot. Due to instances of child abuse and domestic violence, these children may suffer from depression and mood disorders.

Many International Medical Associations categorize Alcoholism as a Chronic Disease with no guaranteed cure. Alcohol Detoxification Programme or 'detox' is the best way for "abrupt withdrawal" (abstain from drinking).

Substitution of drugs (to prevent alcohol withdrawal syndrome) in a hospital or medical facility is an option for those who need additional assistance. Medications that reduce the desire to drink are now available. Most treatments focus on helping the people discontinue their alcohol intake, followed by therapy or counselling sessions to make them aware of pitfalls of 'relapse'. Since alcoholism involves multiple factors which encourage a person to continue drinking, they must all be addressed for preventing relapse.

Alcohol Anonymous (AA) is an international fellowship engaged in helping alcoholics to "stay sober and help other alcoholics achieve sobriety". AA members are concentrated in deterring people from alcoholism. AA has been established in 180 countries with more than 1 lakh groups functioning in different areas.

As you read this, an AA meeting is ongoing somewhere near you, filled with people sharing their experience, strength and hope with one another. By sharing their common problems, they help others recover from alcoholism.





Cochlear Implants: Breakthrough in the Treatment of Deafness

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Of all human disabilities deafness is the most traumatising. Human beings have empathy to fellow humans with any disability, except for deafness; the deaf have always faced ridicule.

From time immemorial to this day, all societies around the world equate deafness to low intelligence. Even Aristotle considered the deaf, unintelligent. In ancient Greece, the deaf could not own property. In medieval times, the Church forbade the deaf from entering the church.

Helen Keller, the world famous American author, activist, politician, was born normal. Later in her life, she became blind and deaf. In her biography, "The story of my life", she wrote "if I were to be born again and had to choose between blindness and deafness, I would choose to be blind. Deafness is worse than blindness. It is the loneliness, the sense of isolation and the lack of understanding among hearing people that makes it so. The blind receive all the sympathy; the deaf are looked down with contempt and ridicule."

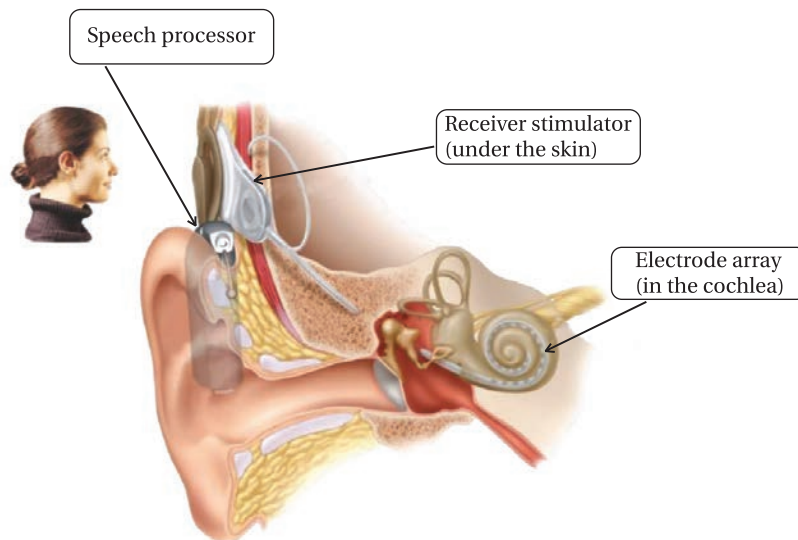
The quest for restoration of hearing started long back. It was known as far back as Volta's time in the 1790's that electrical stimulation of auditory nerve would produce a sensation of sound.

It took another 200 years before electrical stimulation of the ear became a reality. The advent of microelectronics made it feasible to make a working implant small enough to go into the ear. Biocompatible materials let the implant stay in the ear without rejection and microscopes that let the surgeon see what he was doing, made cochlear implant possible in 1972 in the United States.

Later it was Prof. Graeme Clark from the University of Melbourne, in Australia, who popularized cochlear implants. Incidentally, Prof. Clark's father had gone deaf in his middle age, and young Graeme experienced firsthand the struggle a deaf person goes through.

What is a Cochlear Implant?

It is a device to help people suffering from hearing impairment where medication, surgery or hearing aids are not beneficial. The cochlear implant has an external part called the speech processor and an internal part called the receiver stimulator.



How does a normal person hear?

The pinna collects sounds and channels it through the ear canal to the ear drum. The ear drum and the ossicles amplify and transmit the sound to the cochlea. Tiny hair cells in the cochlea, converts this

sound energy into electrical impulses which the brain can interpret.

How does one hear with the cochlear implant?

A microphone picks up sound. This is sent to the speech processor. The speech processor encodes the sound. This is exactly what the cochlea does, i.e. converting the sound energy into electrical impulses which the brain can interpret. The encoded impulses are then transmitted across the skin to the internal implant via radio frequency. The receiver stimulator generates impulses which are sent to the electrode array. The electrode array stimulates auditory nerve endings.

Who can benefit from a cochlear implant?

Cochlear implant is beneficial for any patient whose hearing cannot be restored with medicines, surgery or hearing aid. Hearing is a prerequisite for speech. Only a child who has hearing will develop speech. The child hears what the mother speaks and picks up the mother tongue. A child in Kerala hears his mother speak and will start speaking in Malayalam. Similarly a child in Tamil Nadu will





The internal part of the cochlear implant has to work flawlessly in the human body for the life time of the recipient. Implant volumes are low. India has probably 1.5 crore mobile phones but only less than 50,000 cochlear implant recipients.

To help the deaf in Kerala, the government has come up with 'Sruthitharangam' and under Deafness Eradication Program of Kerala Social Security Mission (KSSM), 200 implants per year

speak Tamil. It is true with the accent too. Malayalam is spoken with different accents in various parts of Kerala. Children in each region will speak with the accent of the mother.

Hearing loss can be classified into loss that has developed before the acquisition of speech and after acquisition of speech. Hearing loss that occurred before acquisition of speech is called prelingual deafness and that occurred after the acquisition of speech is called post-lingual deafness.

Cochlear implant is an excellent modality of management of prelingually deaf children. The cochlear implant will help revive their hearing. With the hearing, they will acquire speech. With the normal hearing and speech these children will integrate with main stream of education.

Deaf children were living in mute world before the advent of cochlear implants. The critical period for acquisition of speech is up to the age of three. Hence, the ideal time to do an implant in a prelingually deaf child is before the age of three years. Implants can be done up to the age of seven years. After this the results from cochlear implant, especially speech, will be poor. For a post-lingually deaf person, as they already have speaking capacity, cochlear implant can be done at any age.

Cochlear implantation is expensive

The cost of the cochlear implant can vary from five and a half lakhs to twelve lakhs. It is expensive because each implant is hand made in titanium and iridium, in the most sterile environment.

Cochlear implant is an excellent modality of management of prelingually deaf children. The cochlear implant will help revive their hearing

are being carried out free of cost. Patients under this Scheme are selected by the Technical Committee under very strict selection procedure.

The patient should fulfill the audiological, radiological and rehabilitational criteria for cochlear candidacy. The child should be below 4 years of age and the income of the parents should be below 2 lakhs per annum. Parents should be a permanent resident of Kerala.

Patients can apply to the KSSM through an empanelled cochlear implant surgeon. Patient can choose any of the empanelled hospital. Applications will be scrutinized by the Regional Committee and ratified by the Central Committee.

Sruthitharangam is the best Government program in the country. Programs in some States failed due to lack of monitoring. The surgeon and Centre in Kerala program are selected by an Expert Committee. Surgery can be done only in these Centres and only by the empanelled surgeon.

Details of surgery and results of each KSSM implant recipient are available on the web site for peer review. Since 2012, 640 cochlear implant surgeries have been done under this Scheme.



WORRISOME TOOTHACHES AND TOOTHACHES FROM WORRY



Dr. Anish N. R. K.
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in charge of child clinic
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Varun was a 6 year old who was like any other kid of his age in the city. One fine morning, he developed tooth ache and was taken to a local dentist, who fixed his caries with ease.

A few months later, just when he was getting ready to go to school, he again developed similar tooth ache. Though he missed his classes on that day, his mother managed to get the appointment with the same dentist. This time, even after a thorough dental examination, the doctor failed to find anything wrong with his teeth. He assured the mother that there is nothing to be worried about.

A few days after, Varun had similar pain on the same side and was rushed again to the dentist, who failed to find any significant cause. A radiological examination also did not report any abnormalities. Hence his mother was again given reassurance and sent back.

A few weeks after, when the school was reopened after a short vacation, Varun developed pain in his tummy. He was taken to a General Practitioner, who failed to diagnose any cause of the pain. More over, apart from the pain, there were no other gastro intestinal symptoms. The mother revealed to the doctor about a similar non-specific dental symptom a few weeks back and the doctor found both these symptoms were inter related. As the mother also reported that Varun had recently developed sad mood and irritability for trivial reasons, the doctor advised to take him to a Child Psychiatrist for detailed examination.

Upon spending some time with the Psychiatrist, it became evident that most of Varun's atypical symptoms had a psychological basis. Several

months back, Varun's father had an unexpected job transfer that forced Varun to leave his previous residence where he had a lot of thick friends. He also lost all his class mates at his previous school and he found it hard to find new ones at his current school. In addition to this, he lost his grandfather a few weeks prior to the onset of symptoms and his mother recalled he had been emotionally very much attached to the deceased.

All these acted as stressors one after the other for Varun and he started disliking school. He found comfort in expressing his psychological distress as physical pain like tooth ache, abdominal pain, head ache and so on, which was facilitated by the positive attention from his mother. The child preferred the comfort from the concerned mother to the discomfort he had at the new school.

The Psychiatrist explained to Varun's family that children, unlike adults need not verbalize their inner conflicts. Usually, you will not find a child going to his parent and telling them that he is depressed or is having a problem with his mind. Parents have to pick it up from a change in the behavior of the child. Some times, a sudden change in the behavior of the child especially following a stressor has to be paid attention. Not feeling happy, more tired than usual, not interested to go out and play as before, not asking for his favourite food, not wanting to watch a TV program that once happened to be his favourite are some examples.

Varun responded beautifully to psychological management. He started going to school again and has forgotten to express those miserable aches now.



Preventive Care and Oral Hygiene

Preventive Dentistry is the general term for dental care associated procedures or techniques to keep your teeth and gum healthy and hygienic by preventing, reducing or minimizing oral diseases.

The two main causes for tooth loss are Tooth Decay and Gum Disease. These problems have to be dealt with properly to keep your teeth and gums healthy all through your life.

The dental team and patients should work hand in hand to prevent the need for filling and extractions. Preventive Dentistry will benefit even to people without any tooth, as Oral Cancer and Denture Stomatitis can be detected in them. It is also beneficial to children and the youth.

In Preventive Dentistry the dentist may recommend treatment to strengthen the tooth, if it is broken or is likely to fracture, so as to prevent the breakdown of the tooth.



What is involved?

- ✧ Your Dental team will examine your teeth and gums and recommend you the right treatment to keep your teeth and gums hygienic by preventing dental and gum diseases.
- ✧ The dental team will remove all plaque and tartar, which is called “scaling and polishing”. They will recommend you the best way for cleaning your teeth and to use interdental brushes or flosses. When sweet food or drinks are consumed the bacteria in the plaque turn the sugar in to acid and result in tooth decay. Plaque, if it is not removed thoroughly and regularly, may cause Gingivitis and finally lead to the formation of hard tartar or calculus.
- ✧ Your dental team will advise you the best oral care products suited besides recommending healthy diet and habits.
- ✧ Your dental team will also ensure that all your fillings are in good condition and that there are no rough edges to make cleaning difficult.



Mr. Mohamed Raaz
Dental Hygienist
District Early Intervention Centre
Malappuram, Kerala, India

Fluoride

Fluoride helps prevent decay of the tooth. The dental team will recommend the right level of fluoride required in your toothpaste. Children suffering from tooth decay are recommended fluoride varnishes.

Dental Erosion makes you uncomfortable

Dental Erosion is the loss of enamel due to acid attack. Loss of enamel will result in dental pain and Sensitivity. Frequent intake of food and drinks containing acid such as citrus fruits, fizzy drinks, smoothies and fruit teas may result in Dental Erosion.

Acidic foods and drinks will become harmful if consumed often in large quantities. To prevent Dental Erosion, consume acidic foods and drinks at meal time and use straw for drinking. Teeth should be cleaned only one hour after the intake of food and drinks as there will be loss of the mineral content and softening of the enamel. Within one-hour saliva will restore the lost contents.

Are Pit and Fissure Sealants effective to prevent Tooth Decay?

There will be Pits and Fissures on the occlusal surface of the tooth and this can be protected by applying sealants, which make the tooth surface smoother and easier to clean besides preventing decay. Foods such as cheese, fruits, nuts and vegetables are better for the tooth. Diet rich in fruits, vegetables and minerals will help prevent Gum Disease, Tooth Decay and Cancer.

Smoking and Drinking affect Teeth and Gums?

Smoking and Drinking affect the Tooth and Gums. Smoking will result in tooth staining, besides making gum and dental diseases worse. It is also one of the reasons for oral cancer. Intake of alcoholic drinks more often in large quantities may cause Tooth Decay and Erosion. Chewing tobacco is also harmful as it leads to pre-cancerous situations and finally to Cancer.

Many mouthwashes contain antibacterial contents which helps prevent gum disease



Methods to prevent Dental and Gum Diseases

- ✦ Brush the tooth at least twice a day with fluoride tooth paste in the way recommended by the dental team.
- ✦ Clean the teeth with interdental brush or dental floss at least once in a day. Tooth brushes can help clean up to 60% of the tooth surface.
- ✦ Use mouthwash; many mouthwashes contain antibacterial contents which helps prevent gum disease.
- ✦ Use of fluoride helps prevent Tooth Decay.
- ✦ Cut down the intake of sugary foods and drinks.
- ✦ Use straw to take fizzy or acidic drinks to reduce acid attack on the tooth.
- ✦ Chew sugar free gum. It makes the mouth produce more saliva and prevents your mouth from drying out. It also helps reduce plaque and prevent Dental Decay and Erosion.
- ✦ Visit the dental team regularly as recommended.

Many specialized tooth pastes are now available, including total care toothpastes which help prevent Plaque, Gum Diseases and Tooth Sensitivity. There are also whitening toothpastes and mouthwashes especially those with antibacterial ingredients. Adults should use a tooth brush with small to medium sized head and soft to medium bristles. Kids should use only small headed brush with soft bristles.



My Experience with DentCare



Dr. Alias Thomas
Past National
President, Indian
Dental Association
Private Practitioner
Thodupuzha
Kerala, India

I have associated with DentCare Dental Lab for nearly three decades. Being the Past National President of the Indian Dental Association, I have had the opportunity to visit many labs inside and outside the country and I feel that DentCare Lab is the best that I have ever seen.

Whatever the latest in terms of advancement / technology in the field of Dentistry connected to the lab, DentCare introduces it forthwith, without considering whether it is pragmatically viable or not. DentCare always wants to give the most innovative developments in the dental field at affordable rates without compromising on quality for quantity.

I practice in an upcoming city of Kerala, Thodupuzha and even from here, I can practice at par with standards offered in Western Countries; this confidence is due to DentCare.

As technology advances, the general

public becomes more and more aware through various media and hence they demand for the latest treatment modalities in the field like Metal free ceramics, Aligners, Dental Implants, Lasers and much more. Since the expectations of patients are very high, Dentists have to live up to them; for that we need up to date Dental Labs like DentCare.

Kudos to the DentCare team for elevating the lab to such a tremendous and impeccable stature!!

At this juncture, I cannot help but mention about the praiseworthy dedication, commitment and simplicity of the DentCare staff.

I once again convey my best regards to DentCare and its entire staff for maintaining the excellent lab service network and also for the upkeep of contacts with Dental Surgeons within the country and outside.

IMPLANT COMPLICATIONS WHAT YOU NEED TO BE AWARE OF?



Dr. Yazad Gandhi
MDS(OMS)
Trained in Sweden



Dr. Neel Bhatavadekar
BDS, MS(US)
Diplomate,
American Board of
Periodontology
ITI Fellow

Co-directors of Fusion
Education who have
trained over 550 clinicians

The use of dental implants to restore missing teeth has steadily increased over the years. It is therefore a given fact, that the number of complications related to dental implants has grown as well. Numerous clinical studies involving dental implants have revealed encouraging outcomes, but what these outcomes have also done is, they have given rise to unrealistic expectations both from the point of view of the clinician and that of the patient.

Despite careful planning, there is always a potential for surgical complications as in the case of any clinical procedure. Needless to say a meticulous plan, technique and optimal choice of biomaterials go a long way in delivering a successful result.

Sound knowledge of surgical anatomy coupled with experience and training in the fundamentals of internal medicine are important prerequisites for predictable implant surgery.

Adequate pre-surgical planning, appropriate quality and quantity of available bone, a well-executed surgical technique, good primary stability, a sufficient healing period and detailed postoperative instructions are all factors that play a vital role in the success of dental implant surgery and osseointegration.

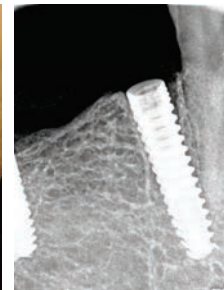
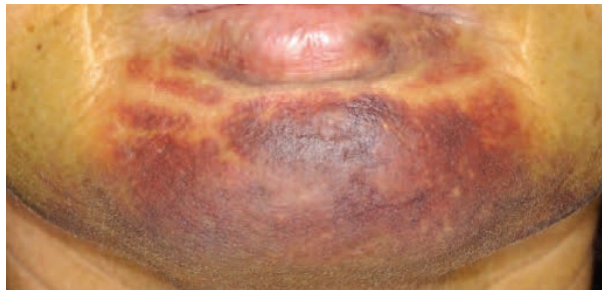
Highlighted below are a few surgical complications that a clinician may run into during implant surgery and therefore the operatory should be

adequately equipped with armamentaria to handle the same.

- ✦ Intra-operative hemorrhage during osteotomy.
- ✦ Inadvertent injury to the neurovascular bundle.
- ✦ Osteonecrosis during osteotomy.
- ✦ Injury to adjacent teeth during osteotomy.
- ✦ Over stripping of the implant osteotomy.
- ✦ Post-operative hematoma.
- ✦ Post-operative wound gape.
- ✦ Nasal floor perforation.
- ✦ Sinus membrane perforation.
- ✦ Displacement of implant into the maxillary sinus.
- ✦ Perforation of the buccal or lingual cortex during flapless osteotomy.
- ✦ Excessive insertion torque causing implant collar fracture or deformity.
- ✦ Aspiration or ingestion of foreign objects.

The list is endless but all these can and may be averted if the clinician is alert and adept at surgical protocols and embraces good technology and biomaterials.

Proper planning as well as its execution helps the operator in achieving a successful result with minimal complications which are encountered along the way.





Fusion Education

Creating Clinical Excellence

Current trends : Management of IMPLANT COMPLICATIONS

Course Date & Venue : 12-13 August 2017 - Hilton Delhi.

Dr. Neel Bhatavadekar MS Perio (US), Dr. Yazad Gandhi MDS (OMS)

Dr. Sachindeep Singh MDS (prostho)

**First course
of its kind**

Course highlights :

Management of - Intra-surgical complications

Esthetic / soft tissue disaster

Post - surgical complications

Re - grafting solutions for the esthetic area

Advanced Prosthetic complications and management

Screw mechanics and its implications

Biomechanical complications and solutions

Salvaging failing implants - bone, soft tissue and prosthetic synergy

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Fusion
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A Few DentCare Products at a Glance



The product
range of
DentCare is
unique and
comprehensive

DentCare Dental Lab is a full-fledged dental lab offering solutions to address the evolving needs of the dental care industry across the globe and provides a wide range of uncomplicated dental solutions at an affordable price with uncompromising quality.

Over the past 29 years, it has contributed to the healthy and confident smiles of over 30 million patients and has added value to the delight of more than 30 thousand dentists around the globe.

DentCare is an ISO 9001:2008, EN ISO 13485:2012, ISO14001:2015 and OHSAS 18001:2007 certified company in recognition of its quality management processes. It also has CE marking (Conformité Européene) for its products and has

also been registered with US FDA since 2014.

The product range of DentCare is unique and comprehensive. The product portfolio comprises of customized / individual dental Crowns and Bridges to Implant Restorations and Partial / Full Denture Prostheses.

A Few of DentCare's Dental Prosthetic Solutions

➤ 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.



DentCare Flex is an aesthetically superior, semi-flexible removable denture

Benefits

- ▲ Aesthetically superior removable denture with full functionality and comfort
- ▲ Has the perfect degree of flexibility (semi-flexible) and is unbreakable
- ▲ No metal clasps; only tissue-colored clasps that blend with the gums
- ▲ More stain-resistant than other flexible Nylon Thermoplast
- ▲ Monomer-free and manufactured using injection molding system
- ▲ Suitable for combination options (with Cast Partials)
- ▲ Available in three different shades – soft pink, dark pink and intense pink

➤ 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 moulding procedure is the cornerstone of this system. BPS can be used in partial or completely edentulous cases.

Advantages

- ▲ Strong
- ▲ Clean
- ▲ Accurate
- ▲ Healthy
- ▲ Aesthetic
- ▲ Precision in fit

➤ 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 Bredent Germany.

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.

➤ Dental Implant Prosthetics

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.



BPS Dentures

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. Patients regain self-esteem, confidence and can enjoy wider variety of food.

The variants available are:

- ▲ Titanium (Milled) with acrylisation – manufactured using CAD / CAM technology
- ▲ Titanium (Cast) with acrylisation
- ▲ Direct Metal Laser Sintered (DMLS) in Cobalt-Chromium with acrylisation–manufactured using CAD / CAM technology
- ▲ Cobalt-Chromium (Cast) with acrylisation
- ▲ Polyether Ether Ketone (PEEK) (Milled) with light cure composite – manufactured using CAD / CAM technology

Implant-supported Overdentures

They are available as Bar Attachment / Ball Attachment Overdentures

Implant-supported Overdentures are offered in various material options namely

- ▲ Titanium (Milled) – manufactured using CAD / CAM technology
- ▲ Titanium (Cast)
- ▲ Direct Metal Laser Sintered (DMLS) in Cobalt-Chromium–manufactured using CAD / CAM technology
- ▲ Cobalt-Chromium (Cast)
- ▲ PEEK (Milled) with light cure composite – manufactured using CAD / CAM technology



➤ Silensor-sl – Anti Snoring Device

For those ashamed of 'snoring' while sleeping and patients with "Sleep Apnea", DentCare offers the perfect solution in Silensor-sl. With the Silensor-sl, the lower jaw and the tongue are held in a protrusive (forward) position which opens up the airways stopping the snoring sounds when asleep.

Effectiveness of Silensor-sl

Silensor-sl consists of one splint for the upper jaw and another for

the lower jaw. The lower jaw is either held in a predetermined position or advanced by 2 connectors that are fixed laterally to the splint. Silensor-sl thus counteracts the narrowing of the respiratory tracts. The velocity of the inspired air decreases and so does the noise – generating vibrations of soft tissues. With Silensor-sl, jaw movements are possible and there is no falling back of the lower jaw. With this function, Silensor-sl is a comfortable and at the same time effective snore guard.



➤ Playsafe Triple Mouth Guard

DentCare proudly introduces the ultimate mouth guard, Playsafe triple, which makes possible the philosophy of Play safe for a safe play in high impact sports or may be for a pickup game in the backyard, whether it is for an amateur or professional athlete.

Playsafe is a triple layer laminated professional sports mouth guard available in 26 different colours, which is soft on the inside and outside while hard in between. It shows the Playsafe triple logo and upon request, can also bear the name of the athlete.



Playsafe Triple Mouth Guard

All products of DentCare are synonymous with superior quality, at par with international standards and live up to the

expectations of the customers ensuring smiles and complacency of more than 30 million patients.

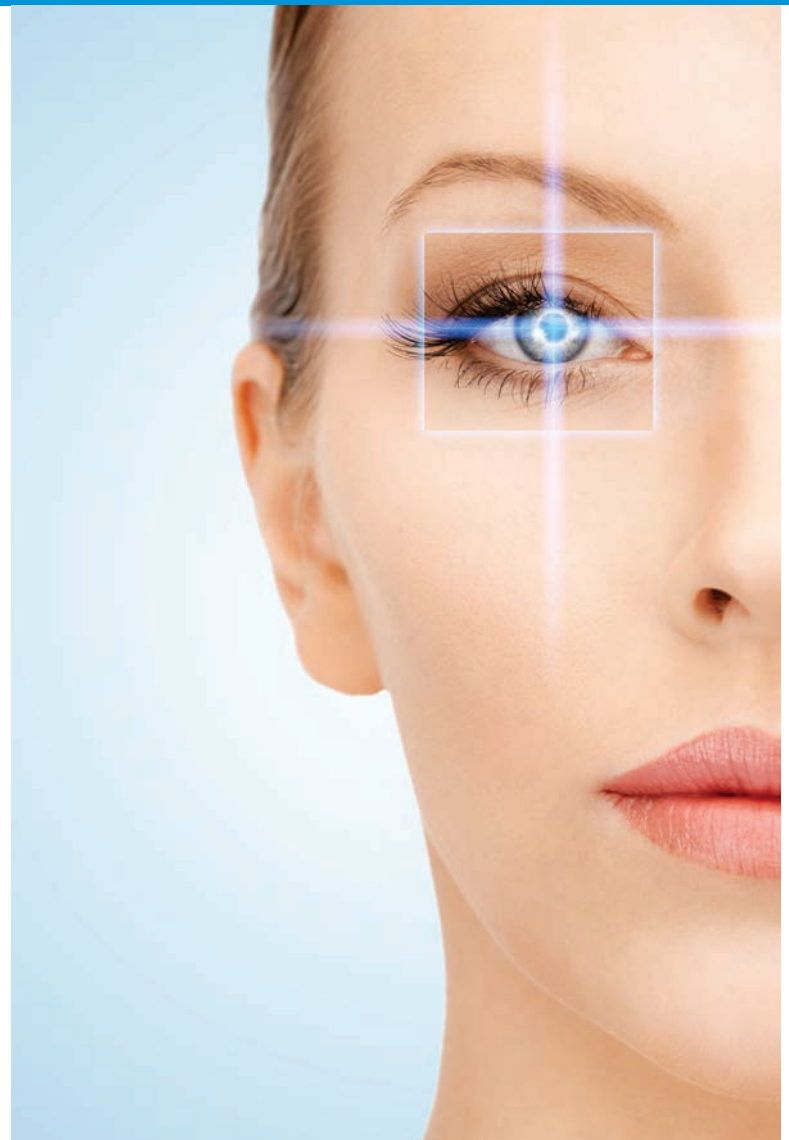
Did you know?

Bionic Retina for the Visually Impaired

Research from the Oxford University has come up with a development that heralds new hope for the visually impaired.

Scientists have developed a retinal implant (bionic retina) that can restore lost vision to the visually impaired.

The implant will convert light into electrical signals that will stimulate retinal neurons. This will truly become a blessing to millions who experience retinal degeneration especially retinitis pigmentosa (a group of rare, genetic disorders that involve a breakdown and loss of cells in the retina).





DIGITAL ERA IN TEMPOROMANDIBULAR JOINT IMAGING



Dr. Meera Mathai



Dr. Tatu Joy E.

Consultants in Oral Medicine and Radiology
Kochi, Kerala, India

The discovery of X-rays is a revolutionary event in the history of medicine and the honour of this discovery goes to Sir Wilhelm Conrad Roentgen. 14 days later, Dr. Otto Walkhoff made the first picture of the teeth.

William James Morton Junior is the first user of the X-rays in the United States. He published the first dental skiagraphs in USA and the first article in the Dental Cosmos. 121 years after the discovery, radiology has been developed to another level.

From the technique, rate of radiation exposure, contrast, sharpness, dimension and radiology have come long way. Now, radiology is in the path of digital imaging. This article focuses on the digital imaging methods used for imaging of Temporomandibular joint (TMJ).

Temporomandibular Joint is formed by your lower jaw and head. It is the only movable joint in the head and neck area. Disorders of this joint can be inflammatory, developmental abnormalities, dysfunction of articular disc and associated ligaments and muscles or neoplasms.

Clinical features

Temporomandibular disorders (TMD) are the most common jaw disorders having various symptoms with increased incidence in females. It can be precipitated as pain in the TMJ area or as ear pain, headaches, muscle pain, joint stiffness and various sounds in the joint like clicking, popping, grating while opening and closing. Other common symptoms are swelling around joint, elevated temperature and redness of the overlying skin.

Imaging of TMJ

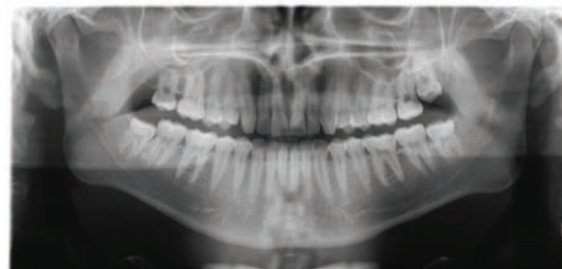
TMJ imaging is necessary to supplement information obtained from clinical examination. It is a must for a patient with a history of trauma, significant dysfunction or when osseous abnormality or infection is suspected.

The purpose is to evaluate the integrity and relationship of hard and soft tissues and to confirm extent or stage of progression of known disease and evaluate the extent of treatment.

A variety of digitized imaging modalities that are available for imaging of TMJ are:

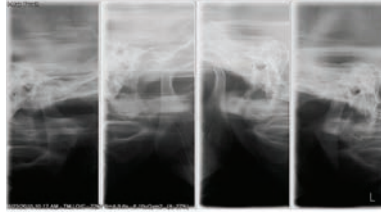
✦ ORTHOPANTOMOGRAPH (OPG)

It is often included as a part of routine examination as it provides all over view of teeth and the joints, thereby providing a means of comparing both sides and serves as a screening projection. However, the superimposition of other structures of the skull is considered to be a major disadvantage of this projection.



✦ TOMOGRAPHY

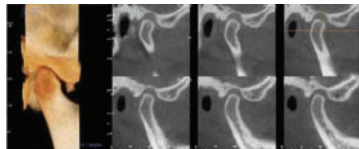
This is another imaging technique used extensively for the evaluation of osseous components of TMJ in a lateral orientation.



This is taken in both open and closed position. This image helps view both joints separately without superimposition.

✦ CONE BEAM COMPUTED TOMOGRAPHY (CBCT)

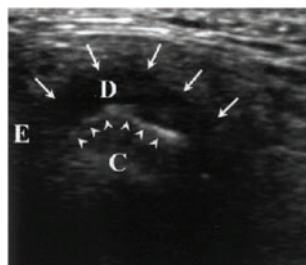
Conventional tomography is now gradually replaced by CBCT. It provides a 3D view of the



joint. Patient is usually scanned in a closed mouth position. The data gained can be manipulated to produce panoramic or 3D images. It offers a better visualization of osseous structures with less radiation exposure compared to CT which makes it acceptable for most of the cases.

✦ ULTRASOUND (USD)

It is a non-invasive, less expensive, easily performed imaging modality for TMJ evaluation. It uses sound waves for the image perception. It is the simplest way to find out the joint effusion or fluid in the joint due to trauma or inflammation. It is also widely used in the evaluation of articular disc.



✦ COMPUTED TOMOGRAPHY (CT)

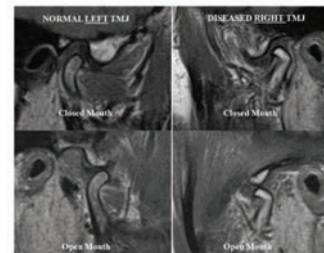
CT is used for the evaluation of bony structures of TMJ as well as adjacent soft tissues. It is ideal for the evaluation of fractures, degenerative changes, erosion, infections tumours as well as congenital anomalies. It is taken in



a closed position. CT also allows the 3D reconstruction and the bone density measurement to the thinnest section.

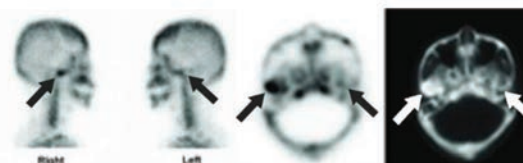
✦ MAGNETIC RESONANCE IMAGING (MRI)

MRI is the ideal imaging modality in case of soft tissue abnormalities or if internal structural derangement is suspected. It provides high resolution and great tissue contrast. It uses magnetic waves rather than ionising radiation for image acquisition. It not only helps detect the position of articular disc but also aids in evaluating the pathological changes in the muscles of mastication which can lead to TMDs. MRI is contraindicated in patients with pacemakers, metal particles in the vital structures like intra cranial chips and in pregnant patients.



✦ RADIONUCLIDE IMAGING

This method provides the only one for assessing the physiological changes in the body. A minimum of 30-40 % damage should be present in the TMJ for it to appear in the radiographs. Hence by this method, a minimal hyper activity or hypo activity can be measured. But it can show false positive results in the presence of tumour, inflammation or a trauma.



Radioisotope Bone Scan (R. TMJ Inflammation)

Conclusion

The type of imaging depends on a specific clinical problem, amount of diagnostic information, radiation exposure and cost. Depending on individual evaluation, sometimes a combination of various techniques may be required for the final diagnosis.



Do you know?

Q1. The state of Jammu and Kashmir has got India's longest and supposedly safest tunnel. Which one is it?

Answer: **Chenani-Nashri**

(The 10.89 km long tunnel, which is located on the Jammu-Srinagar highway, will cut down travel time between Jammu and Srinagar by two hours.)

Q2. Indrani Das, a 17-year-old Indian-American teen has recently won the top award, worth Rs. 1, 63, 86,250 crore, in the oldest and prestigious science competition held in the US. Which one is that?

Answer: **'Regeneron Science Talent Search'**

(It is the oldest US science competition for students, which is nicknamed the "Junior Nobel Prize." Twelve of the contest alumni have won Nobel Prizes.)

Q3. Which Indian premier Genomics based research and Diagnostics Company launched the liquid biopsy blood test, Oncotrack for cancer detection?

Answer: **MedGenome**

(The liquid biopsy based Oncotrack is a non-invasive screening test that is set to transform the way physicians in India can identify genetic alterations, interpret, assess and treat various forms of cancer.)

Q4. Which Indian bank launched a digital banking service, "SIMsePAY"?

Answer: **YES Bank**

(This bank has launched a digital banking service, 'SIMsePAY', whereby any account holder can do money transfers, pay utility bills and other mobile banking

services without the need for a smartphone or Internet.)

Q5. Which is the largest solar farm built in the world now?

Answer: **Longyangxia Dam Solar Park**

(Built by China is in the western province of Qinghai, the park spans over 27 square km of area and can produce 850 MW of power which is enough to supply up to 2 lakh households.)

Q6. Which Indian Lady Badminton player holds the second position in the world rankings for women's badminton?

Answer: **Pusarla Venkata Sindhu**

(This was propelled by her winning the India Open Super series title, where she beat her Rio Olympics rival, Carolina Marin in the final.)

Q7. Name the American astronaut who broke Sunita Williams' record of the most spacewalks by a woman?

Answer: **Peggy Whitson**

(American astronaut, Peggy Whitson floated outside the international space station, which marks the eighth career space-walk by her on 31st March, 2017.)

Q8. On 28th March, the U.S. Food and Drug Administration (FDA) approved the first drug to treat adult patients with relapsing forms of Multiple Sclerosis (MS) and Primary Progressive Multiple Sclerosis (PPMS). Which is that drug?

Answer: **Ocrevus (Ocrelizumab)**

(Ocrevus is an intravenous infusion given by a health care professional.)

Q9. Name the Indian –origin British Cabinet Minister, who received Pravasi Bharatiya Samman Award On 28th March, 2017?

Answer: **Priti Patel**

Q10. Name the Public Sector Undertaking with which the Indian Space Research Organization (ISRO) has tied up to develop low-cost lithium ion batteries for electric vehicles?

Answer: **Bharat Heavy Electricals Ltd.**

(This is part of India's plan to promote low-cost electric vehicles with the use of lithium-ion batteries.)

Q11. Name the first visually impaired runner from India to compete the historic Boston Marathon?

Answer: **Sagar Baheti**

(Boston Marathon is the world's oldest and hardest marathon in which he covered the 42.195 km distance in 4 hours, 14 minutes and 7 seconds and finished the race at the 18th spot in the visually impaired category.)

Q12. Name the social activist who has been selected for the Goldman Environmental Prize 2017, also called the 'Green Nobel', from the Asia Region?

Answer: **Prafulla Samantara**

(Prafulla Samantara, Indian environmental activist has been announced as the Asia recipient of the Goldman Environmental Prize for championing the cause of Odisha's Dongria Kondh tribals and safeguarding their land and culture.)



Let us be honest. We have all heard stories about the "rough dentist" whom patients do not look forward to seeing, or the one they request to maintain a distance from at their next dental visit. We have also heard patients complaining about how it hurts to get their dental treatment done.

I believe it does not have to be this way. If we take the time to focus on patient comfort, dental treatment can gain a more positive reputation and patients will be more than glad to have their turn in the dental chair.

It requires additional time and thought to guarantee that our patients' visits are as comfortable as possible under the circumstances. Completing the whole

procedures with the least amount of discomfort is definitely a challenging task.

I believe that this goal is achievable and that we as a whole should bend over backward to make our patients' encounters, positive ones. Discussed herein are the possible keys for a dentist to keep their tender touch alive.

Watch your patients' expressions

The main thing to do is to watch out for the patient's facial expressions. Their outward appearances inform a considerable insight regarding what is happening in their mind. Never hesitate to make inquiries or mention remarks about your observations. At that point,

Keep Your Tender Touch Alive



Dr. Navneet Kaur
Consultant Dental Surgeon
Government Hospital
Khanna, Punjab, India

once a cause is pinpointed, an answer can be found so that source of discomfort could be avoided.

Be proactive about keeping pain away

The following way to keep comfort a priority is by addressing to any potential issues that may bring discomfort. As dentists, we as a whole realize that time is rare, yet that is never a legitimate reason to give up patient comfort. One should generally attempt to see the circumstance from a patient's point of view and imagine finding themselves on a dental chair. This is an extremely vulnerable position to be in and patients feel most comfortable with a clinician who has sympathy and comprehension for them.

One of the amazing things about developments in the dental field is that there are so many great products that can make our jobs easier. Besides injections, topical anesthetics can be used to make procedures more comfortable for apprehensive patients. Applying Sensitive Pre-Procedural Desensitizing Paste before a

procedure can help relieve discomfort for sensitive patients. We just have to remember what is available to us and keep it prepared to utilize.

Utilize the most ideal instrument for the procedure

For dentists to operate capably, it is fundamental to have a wide assortment of instruments to browse since we experience a number of "anatomical challenges" in the mouth. Other than that, we should take full advantage of all of the tools available at our disposal to operate in wide variety of situations.

Advances in dental technology have made dental treatment more reliable, more comfortable and more efficient. For example, dental laser is an option that allows us to perform many common treatments, including cavity preparations and periodontal therapy with less bleeding, greater comfort and a shorter healing time.

Also, we can use digital imaging and intraoral cameras to identify problems as soon as possible. Not only do these images help you avoid painful dental problems, they are also more comfortable than their older counterparts.

The sensors used for digital x-rays are small and rounded for a more comfortable fit than traditional film and the intraoral camera is about the size of a pen. We should also realize that we can quickly and more efficiently get the task accomplished and it will ease the patient. In order to accomplish this, a dentist should never hesitate to practice skills repetitively.

Verbal acknowledgement can comfort a patient when working in delicate zones. Do not delay to apologize when the patient is encountering distress

Keep the lines of communication open

Attempt to address any possibly painful region before you come into contact with it. On the off chance that something is harming a patient, let the person know promptly that it is because of inflammation or some other reason.

Generally the individual may unwittingly expect that it is because of something on the dentist's part. This is particularly valid in the event that it is the patient's first visit to the office and that they are not acquainted with the dental procedures.

Verbal acknowledgement can comfort a patient when working in delicate zones. Do not delay to apologize when the patient is encountering distress. Most often, the patients are aware of the fact that they should have taken better care of their teeth.

At the point when the appointment is finished, compliment them for the greater part of their efforts, for example, keeping their mouth open wide, remaining still, and for on edge patients, having the fearlessness to appear. These comments make a positive dental experience for patients as they realize that you are genuinely concerned about their comfort.

Be aware of all possible causes of discomfort

I trust that making a patient's appointment as torment free as could be possible can be quite a difficult task. We must think in multiple directions at the same time. We should be aware of where our mirror is situated, where the light hits, where our fingers are situated on the instrument and where the tip of the instrument is situated.

These components are all important to achieve the desired goal. At that same point, we have the additional task of keeping our patients at ease while doing these things. We should keep our full concentration going at all times in order to perform ideally.

In case of working on patient with orthodontics, ensure that your finger is not pinching the soft tissue against a bracket. On the off chance if the patient has an ulcer, always remind yourself to abstain from touching that region. By keeping patient comfort in front, we are doing everything to make their visit a positive one.

To total everything up, dentists must develop multitasking with a specific goal to keep understanding patient comfort as a need. This could be a very challenging task, but it is attainable when we keep the points discussed here in mind.

A gentle and thorough dentist is an extremely valuable asset to any dental office and I believe we all want to be the clinician that our patients look forward to visiting.

MOTHER'S DAY

Interesting Facts

"I remember my mother's prayers and they have always followed me. They have clung to me all my life."

Abraham Lincoln

Mother's Day in 2017 falls on Sunday, the **14th of May**. It is celebrated annually to pay homage to all mothers and motherhood. The origins of the holiday date back to the times of the ancient Greeks and Romans.

Mother's Day was first made to celebrate a person's own mother. Now it is made to celebrate all mothers and motherhood in general. It is celebrated at different times in different countries.

The modern form of the celebration of Mother's Day started in 1908 by Anna Marie Jarvis.

In the United States, Mother's Day is celebrated on the second Sunday of May. In most Arab countries, Mother's Day is always celebrated on the **21st of March**, which is the Spring Equinox.

In the United Kingdom and Ireland, Mother's Day is celebrated on the fourth Sunday during Lent.

On the auspicious occasion of Mother's Day let us salute mothers - the embodiment of selfless love - who toil and moil relentlessly to nurse, fondle, lull and rear up their infants to become ideal citizens.





Anger Management: an Essential Tool

Anger is a completely normal and usually healthy, human emotion. But when it gets out of control and turns destructive, it can lead to problems at work, in your personal relationships, and in the overall quality of your life. And it can make you feel as though you are at the mercy of an unpredictable and powerful emotion.

Some people are more "hot headed" than others; they get angry more easily and more intensely than the average person does. There are also those who do not show their anger in loud spectacular ways but are chronically irritable and grumpy. Easily angered people do not always curse and throw things; sometimes they withdraw socially, sulk or get physically ill.

Why do some people behave this way?

One cause may be genetic or physiological. There is evidence that some children are born irritable, touchy and are easily angered and that these signs are present from a very early age.

Another may be socio-cultural. Anger is often regarded as negative. We are taught that it is

Simple relaxation tools, such as deep breathing and relaxing imagery, can help soothe angry feelings

alright to express anxiety, depression or other emotions but not to express anger. As a result, we do not learn how to handle it or channel it constructively.

Research has also found that family background plays a role. Typically, people who are easily angered come from families that are disruptive, chaotic and not skilled at emotional communication.

Relaxation

Simple relaxation tools, such as deep breathing and relaxing imagery, can help soothe angry feelings.

- ☑ **Breathe deeply, from your diaphragm.** Breathing from your chest will not relax you. So picture your breath coming up from your "gut."
- ☑ **Slowly repeat a calming word or phrase,** such as "relax" or "take it easy." Keep repeating it to yourself while breathing deeply.
- ☑ **Use imagery.** Visualize a relaxing experience from your memory or your imagination.
- ☑ **Try non-strenuous, slow exercises.** Yoga and similar activities can relax your muscles and calm you down.

Problem Solving

Sometimes anger and frustration are the result of very real and inescapable problems in our lives. Anger can be a healthy, natural response to these difficulties. Some people

have a cultural belief that every problem has a solution. That belief adds to their frustration when they find out that this is not always true. If you cannot find a solution, focus on how to handle and face the problem.

Better Communication

Angry people tend to jump to conclusions, however far-fetched. If you are in a heated discussion, slow down. Listen carefully to what the other person is saying and take your

time before answering. Instead of saying the first thing that comes into your head, think carefully about what you want to say.

Humour

Humour can help defuse rage in several ways. For one thing, it can help you get a more balanced perspective. When you find yourself thinking of a co-worker as a single-cell life form, think what that would look like, picturing an amoeba



sitting at a desk and talking on the phone. Or draw a picture. Doing so will take the edge off your fury or help defuse a tense situation.

Environmental Change

Sometimes it is your immediate circumstances that prompt angry feelings. Problems and

risk. Angry drivers are more aggressive, take more chances and report more accidents and near-misses than their more relaxed counterparts. If your commute leaves you frustrated or enraged, perhaps you could find a less congested or more scenic route. Or investigate alternative options, such as

reaction triggers a cascade of physical reactions that extends throughout your body.

Interestingly, the last finding, uncovered by researchers suggests that although anger is perceived as a negative emotion, it actually prompts you to become closer to the object of your anger, likely as a means to stop the conflict. And when it comes to anger, resolving the reason for being upset is a very wise decision.

It does not feel good to be angry and this is a clue that this emotion is also likely damaging your body on a physical level.

This is especially true of your heart. One study from Washington State University found that people over the age of 50 who express their anger by lashing out are more likely to have calcium deposits in their coronary arteries, an indication that they are at a high risk for a heart attack, than their mellow peers. Letting your anger out explosively may be harmful because it triggers surges in stress hormones and injures blood vessel linings.

However, simply holding in your anger is not the answer either; this has been linked to increases in blood pressure and heart rate. A new study even found that suppressing your anger may triple your risk of having a heart attack.

Since it is obvious that you are going to experience anger from time to time, it is very important for your health to have a healthy form of release. You do not want to lash out violently, neither do you want to hold it in either ... it turns out that the best solution is actually somewhere in the middle.



responsibilities can weigh on you and make you angry at the trap you seem to have fallen into and all the people and things that form that trap.

Take road rage, for example. If driving makes you furious, research suggests, you are putting yourself and others at

taking a bus or train. Finding alternatives can ease your anger, making the road safer for everyone.

Anger and Health

The feeling of anger, like all emotions, is not isolated in your mind. The mental



We come across many fruits which are succulent, tempting and luscious. Among these, Rambutan, a small, round and colored fruit with spiky hair on the skin offers many benefits as the fruit has rich amounts of proteins, carbohydrates, fats, iron, phosphorus, calcium and Vitamin C.

Health benefits of Rambutan

Anti-inflammatory properties

This fruit contains Gallic acid, which is an organic acid with potent anti-inflammatory properties.

Lowers blood pressure naturally

This fruit is low in calories and saturated fat, hence perfect for people with hypertension.

Good during pregnancy

During pregnancy increased intake of iron is necessary. Combine this fruit with morel mushrooms, parsley, dried apricots, sun-dried chillies, spinach for ideal iron levels.

Antioxidant properties

Antioxidants work by 'enhancing the bodys defenses against potentially dangerous compounds called free radicals. In addition to the antioxidants within the fruit, the skin of the fruit has numerous types of antioxidants which can be boiled and the water can be ingested to fully enjoy these health benefits.

Healthy bones

Manganese is essential for normal growth of human bone structure. 100g of this fruit contain 15 percent manganese of the recommended daily intake.

Boosts immunity

Immunity is an important benefit of vitamin C. 100g of this fruit contain 5 percent vitamin C of the recommended daily intake.

Rambutan a Wholesome Fruit

Provides energy

Carbs provide the body with energy immediately. 100g of this fruit contain 16 percent carbs of the recommended daily intake.

Prevents heart disease

Folate can maintain healthy blood circulation. 100g of this fruit contain 2 percent folate of the recommended daily intake.

Lowers LDL cholesterol and triglycerides

Niacin (vitamin B3) helps convert food into energy by helping enzymes do their job. 100g of this fruit contain 8 percent vitamin B3 of the recommended daily intake.

Be alert

Eating fruit too ripe is not good for people suffering from hypertension and type 2 Diabetes Mellitus, as sugar will turn into alcohol that will raise LDL cholesterol levels in the body.

Seeds of the fruit are mildly poisonous, if eaten raw, but have no adverse effects, if they are cooked.



AGEISM AND NUTRITION

Proper nutrition is essential to the health and comfort of oral tissues and healthy tissues enhance the possibility of successful prosthodontic treatment in the elderly

Aging is a natural process. Old Age should be regarded as a normal, inevitable biological phenomenon. Elders above 65 years (old age) have health problems as a result of aging process, which calls for special consideration.

Proper nutrition is essential to the health and comfort of oral tissues and healthy tissues enhance the possibility of successful prosthodontic treatment in the elderly. In patients with partial or complete tooth loss, prosthetic therapy may be important to maintain or restore masticatory function.

Many other factors also are essential for the nutritional status of older adults. Thus, many age-

related medical problems and diseases have nutritional aspects and the patient's socioeconomic status and dietary habits have a profound influence on their dietary selection. The dental team must be aware of these potential detrimental effects of dental treatment and provide counteractive dietary guidance.

Portrait of Today's Denture Patients

It has been reported that the typical complete denture patients of today have a greater mean age, live independently, are financially able to afford care and are retaining more teeth. Additionally, missing teeth are being replaced by more fixed



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partial dentures, more removable partial dentures, and more implant-supported prostheses. These trends are viewed as positive and are reflective of the advances in dental prevention, personal oral hygiene and maintenance.

The current denture population may be characterized as having a larger number of medical problems that require the care of one or more physicians. These patients are frequently taking a large number of medications, often prescribed by different physicians, without collaboration.

These factors may result in tissue responses to complete dentures being less satisfactory and reduce the healing capacity of the oral tissues. Subsequently, it may be more difficult to manage the edentulous patient with predictable success.

Clinically, many of these patients are seen with severely resorbed residual ridges and prominent anatomic landmarks or bony abnormalities. The soft tissues are often redundant and unsupported. Maxillary arches frequently demonstrate enlarged tuberosities and redundant anterior tissues resultant to the use of maxillary complete denture opposing a mandibular removable partial denture with natural anterior teeth.

Anterior teeth on existing prostheses are often in occlusal contact because of wear and loss of vertical dimension. Some patients expect the anterior teeth of the new dentures to contact in a manner similar to their natural teeth. In many situations, the restoration of natural anterior tooth contacts could result in compromised function and esthetics, making it necessary to educate the patient about the need to modify the tooth position and tooth contact to facilitate an acceptable functional prognosis.

Patient education

Many common characteristics of an aged population, such as decreased neuromuscular coordination, reduced ability to sense where the mandible is in relation to the maxilla (oral awareness) and impaired ability to position the mandible or tongue in desired locations (oral dexterity), will complicate the complete denture treatment process.

A thorough examination is invaluable for proper diagnosis, treatment planning and identification of realistic goals or expectations. Many patients are aware that physical changes have occurred in their bodies, but some are unaware of the impact on their oral cavities.

Burnett et al points out that attempts to improve denture hygiene (habits) of veteran denture wearers with either verbal or written instructions were equally ineffective in changing the habits when

reviewed six months after the instructional material was delivered.

Nutritional objectives

- ❖ To establish a balanced diet consistent with the physical, social, psychological and economic background of the patient.
- ❖ To provide temporary dietary supportive treatment, directed towards specific goals such as caries control, postoperative healing or soft tissue conditioning.
- ❖ To interpret factors peculiar to the denture age group of patients (which may relate to or complicate nutritional therapy).

Aging factors that affect nutritional status

Physiological factors

With a decline in lean body mass in the elderly, caloric needs decrease and risk of falling increases. Vitamin D deficiency in turn, is a major cause of metabolic bone disease in the elderly. Decline in gastric acidity often occurs with age and can cause mal-absorption of food-bound vitamin B12.

Many nutrient deficiencies common in the elderly, including zinc and vitamin B6, seem to result in decreased or modified immune responses. Dehydration, caused by declines in kidney function and total body water metabolism, is a major concern in the older population.

With a decline in lean body mass in the elderly, caloric needs decrease and risk of falling increases



Overt deficiency of several vitamins is associated with neurological and / or behavioral impairment B1 (thiamine), B2, niacin, B6 (pyridoxine), B12, foliate, pantothenic acid, vitamin C and vitamin E.

Psychosocial factors

A host of life-situational factors increase nutritional risk in elders. Elders, particularly at risk, include those living alone, the physically handicapped with insufficient care, the isolated, those with chronic disease and / or restrictive diets, reduced economic status and the oldest old.

Functional factors

Functional disabilities such as arthritis, stroke, vision or hearing impairment, can affect nutritional status.

Pharmacological factors

Most elders take several prescription and over-the-counter medications daily. Prescription drugs are the primary cause of anorexia, nausea, vomiting, gastrointestinal disturbances, xerostomia, taste loss and interference with nutrient absorption and utilization. These conditions can lead to nutrient deficiencies, weight loss and ultimate malnutrition.

Oral factors that affect diet and nutritional status

Xerostomia affects almost one in five older adults. Xerostomia is associated with difficulties in chewing and swallowing, all of which can adversely affect food selection and contribute to poor nutritional status. The use of drugs with hypo-salivary side effects may have deleterious influence on denture bearing tissues.

Age-related changes in taste and smell may alter food choice and decrease diet quality in some people. Factors contributing to this reported decreased function may include health disorders, medications, oral hygiene, denture use and smoking.

The presence of natural teeth and well-fitting dentures were associated with higher and more varied nutrition intakes and greater dietary quality.

Effects of dentures on chewing ability As you age, you tend to use more strokes and chew longer, to prepare food for swallowing. Masticatory efficiency in complete denture wearers is approximately 80% lower than in people with intact natural dentition.

Nutritional Care for geriatric patients

Adequate nutrition is a vital factor in promoting the health and wellbeing of the aged. Energy needs decline with age due to a decrease in basal metabolism and decreased physical activity. Cross-sectional surveys show that the average energy consumption of 65-74 year old women is about 1300 kilocalories (Kcal) and 1800 Kcal for men of the same age. Caloric requirements decrease with advancing age. The mean Recommended Dietary Allowance (RDA) is 1600 Kcal for women and 2400 Kcal for men.

As the patient becomes older, the amount of protein required increases. Protein depletion of body stores in the elderly is seen primarily as a decrease of the skeletal muscle mass. Protein is a must for denture wearers.

The RDA for proteins, for persons aged 51 and over, is 0.8g protein / kg body weight per day, which is 56g for males and 46g for females, or 9 and 10% respectively, of the recommended calorie intake. The best sources of proteins for the elderly diet are dairy products, poultry, meats and fish in the boiled and not dried form. Nuts, grains, legumes and vegetables contain protein, which if eaten in the proper combination, is of the same quality as animal sources of protein.

Functional disabilities such as arthritis, stroke, vision or hearing impairment, can affect nutritional status

The elderly consumes a large proportion of their calories as carbohydrates, possibly at the expense of protein, because of their low cost, ability to be stored without refrigeration and ease of preparation. The recommended range of intake is 50 to 60 per cent of total calories. Food sources include grains and cereals, vegetables, fruits and dairy products.

An important component of complex carbohydrates is fiber, which promotes bowel function. Fiber in the form of bran is frequently added to dry cereals and breads, but vegetable fiber is more effective and less expensive. Reduced selection of foods rich in fiber that are hard to chew could provoke gastrointestinal disturbances in some edentulous elderly, with deficient masticatory performance.

Elderly people are particularly susceptible to negative water balance, usually caused by excessive water loss through damaged kidney. Inadequate intake of fluid by the elderly will lead to rapid dehydration and associated problems such as hypotension, elevated body temperature and dryness of the

mucosa, decreased urine output and mental confusion. Under normal conditions, fluid intake should be at least 30ml per kg body weight per day.

The RDA for vitamin A is 800-1000 micrograms. Vitamin A in food occurs in two forms: retinal or active Vitamin A in animal foods (liver, milk and milk products) and beta-carotene or pro-vitamin A found in deep green and yellow fruits and vegetables (apricots, carrots, spinach etc.).

Deficiency causes Bitot's spots (eyes), conjunctival and corneal xerosis (dryness), xerosis of the skin, follicular hyperkeratosis, decreased salivary flow, dryness and keratosis of oral mucosa and decreased taste acuity.

For Vitamin B12, RDA is 3 micrograms. Food sources are kidney, heart, milk, eggs, liver and green leafy vegetables. Deficiency causes nasolabial seborrhea, fissuring and redness of eyelid and corners of the mouth, magenta-colored tongue and genital dermatosis.

The elderly is frequently deficient in Vitamin D because of lack of sun exposure and an inability to synthesize Vitamin D

in skin and convert it in the kidney. Vitamin D is found in fish liver oils. The RDA is 5 micrograms. Deficiency causes bowlegs. Vitamin E deficiency in the elderly does not seem to be a problem. Total plasma vitamin E levels increase with age.

Good food sources of folic acid include leafy green vegetables, oranges, liver, legumes and yeast. Deficiency causes megaloblastic anemia, mouth ulcers, glossodynia, glossitis, stomatitis. The RDA of calcium is 800mg / day. Because calcium absorption decreases in the elderly (lack of hydrochloric acid in the stomach), the calcium must be acidulated before digestion.

Food sources of calcium include milk and milk products, dried beans and peas, canned Salmon, leafy green vegetables and tofu. Elderly patients with complete dentures often experience a rapid and excessive ridge resorption, which may be related to negative balance of calcium, which contributes to development of osteoporosis.

The RDA for iron is 10mg. Good food sources include meat, fish, poultry, whole grains, fortified breads and cereals, leafy green vegetables, dried beans and peas. Deficiency causes burning tongue, dry mouth, anemia and angular cheilosis.

Conclusion

Many prosthetic failures are the result of nutritional deficiencies. Good health and nutrition of older patients are necessary for the successful wearing of dentures or any prosthesis. A better informed, more demanding elderly population is less likely to accept traditional treatment philosophies based around extractions and replacement of teeth with complete dentures.





YOUR THYROID GLAND NEEDS CARE

Think of your thyroid gland as a car engine that sets the pace at which your body operates. An engine produces the required amount of energy for a car to move at a certain speed. In the same way, your thyroid gland manufactures enough thyroid hormone to prompt your cells to perform a function at a certain rate.

Just as a car cannot produce energy without gas, your thyroid needs fuel to produce thyroid hormone. This fuel is iodine. Iodine comes from your diet and is found in iodized table salt, seafood, bread and milk. Your thyroid extracts this necessary ingredient from your bloodstream and uses it to make two kinds of thyroid hormone: thyroxine, also called T4 because it contains four iodine atoms and triiodothyronine, or T3, which contains three iodine atoms.

T3 is made from T4 when one atom is removed, a conversion that occurs mostly outside the thyroid in organs and tissues where T3 is used the most, such as the liver, the kidneys and the brain. Once T4 is produced, it is stored within the thyroid's vast number of microscopic

follicles. Some T3 is also produced and stored in the thyroid.

When your body needs thyroid hormone, it is secreted into your bloodstream in quantities set to meet the metabolic needs of your cells. The hormone easily slips into the cells in need and attaches to special receptors located in the cells' nuclei.

Higher levels of TSH prompt the thyroid to produce more thyroid hormone

Your car engine produces energy, but you tell it how fast to go by stepping on the accelerator. The thyroid also needs some direction; it gets this from your pituitary gland, which is located at the base of your brain. No larger than a pea,

the pituitary gland is sometimes known as the “master gland” because it controls the functions of the thyroid and the other glands that make up the endocrine system.

Your pituitary gland sends messages to your thyroid gland, telling it how much thyroid hormone to make. These messages come in the form of thyroid-stimulating hormone (TSH). TSH levels in your bloodstream rise or fall depending on whether enough thyroid hormone is produced to meet your body's needs. Higher levels of TSH prompt the thyroid to produce more thyroid hormone. Conversely, low TSH levels signal the thyroid to slow down production.

The pituitary gland gets its information in several ways. It is able to read and respond directly to the amounts of T4 circulating in the blood, but it also responds to the hypothalamus, which is a section of the brain that releases its own hormone, thyrotropin-releasing hormone (TRH).

TRH stimulates TSH production in the pituitary

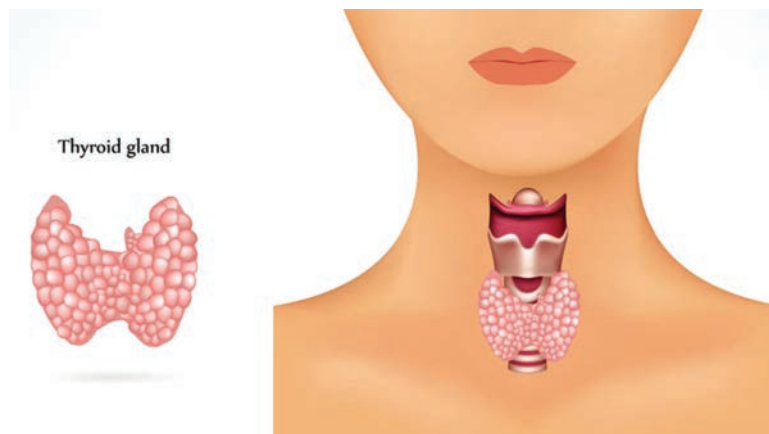
gland. This network of communication among the hypothalamus, the pituitary gland and the thyroid gland is referred to as the hypothalamic-pituitary-thyroid axis (HPT axis).

There could be a number of reasons why your thyroid is not performing well. For example, if your body is not getting enough iodine, your thyroid cannot make enough thyroid hormone, but it will try to respond to rising TSH levels by working harder and harder anyway. This can cause your thyroid to become enlarged and develop into a goitre that looks like a protrusion or large swelling in your neck. Goitres used to be common, but they have become much less common in developed countries because of iodine-fortified foods.

In other cases, your thyroid comes under attack by your body's own immune system. Normally, substances called antibodies protect you from dangerous bacteria and viruses. But in this condition, known as **Hashimoto's thyroiditis**, your antibodies mistake your thyroid for a foreign invader.

Hashimoto's thyroiditis involves the presence of two types of antibodies called antithyroid peroxidase (anti-TPO) and antithyroglobulin (anti-TG) antibodies. These antibodies play a role in the destruction of the thyroid by the immune system. Over time, your defenceless thyroid, inflamed and scarred, surrenders and fails.

Ailments like Hashimoto's thyroiditis that result from an abnormal immune response are called autoimmune diseases. Hashimoto's thyroiditis is but one form of **thyroiditis**, an inflammation of the thyroid that causes hypothyroidism.



The endocrine system consists of several glands that control all our hormones and neurotransmitters. Hormones and neurotransmitters are chemicals that control our mental and emotional states. These chemicals help the brain balance emotions.

When there is a problem with one gland, such as the thyroid, all the other glands play into it as well. Our endocrine system works like a vehicle and all the parts have to be working at just the right time for us to feel good and be biochemically balanced.

When looking at low thyroid levels, we also need to look at the adrenals, pituitary, hypothalamus, pancreas and ovaries as well. When you have hypo-thyroid or hypo-adrenals (hypo means low), mood swings can be an everyday problem. Many women feel this way and it is very common for them to go to a medical doctor and give symptoms of mood swings, anxiety or depression and leave with a prescription for anti-anxiety or an anti-depressant.

The truth is that this is not depression. The cause is the common problem of your poorly functioning inflamed glands in the game of emotional stability and if not working at the right speed, can give you symptoms

that include riding on mental roller coasters.

Most people know the thyroid regulates metabolism, but did you know it is also part of your immune system, nervous system and also helps the functioning of your brain? Most people think that our brains tell our bodies what to do; however, the truth is that our hormones go into our blood, travel to the brain and stimulate the brain to tell our body what to do.

Hormone imbalances are hard on us because once the symptoms start, they set in motion an exhausting, self-perpetuating cycle that can be very difficult to stop. This is a downward spiral for most women. Women suffering with low thyroid and / or low adrenals usually feel very stressed and overwhelmed and they are usually irritable and moody. The stress creates more feelings of being overwhelmed, creating more stress on the adrenal glands, which in turn creates more fatigue. The cycle continues into a snowballing multi-level problem.



WORLD **NO** TOBACCO DAY

Recent studies have revealed that there are **1.1 billion tobacco users in the world** today. Each year, tobacco kills about 6 million people around the globe. Out of these, more than 5 million deaths are the result of direct tobacco use and more than 600,000 are the result of non-smokers being exposed to second-hand smoke.

Since tobacco use is the single greatest cause of preventable death and disease, the World Health Organization has started to observe “World No

Tobacco Day” every year on May 31st since 1987, with the intention of encouraging people to abstain from tobacco use for a day in addition to drawing attention to wide spread prevalence of tobacco use and its adverse impact on health.

The theme for World No Tobacco Day, 2017 is “Tobacco – a threat to development.” It proposes measures that Governments and the public should take to promote health and development by addressing the tobacco crisis.



making work easy



There's sandblasting and then there's sandblasting!

For 15 years I worked with two aging, i.e. 20 year-old, sandblasters from a quality German manufacturer in my laboratory (up to three employees). Each of them had two tanks for the appropriate abrasive. Replace the tungsten carbide nozzles once in a while, renew the odd leaking pressure hose and the viewing panel again and again, that's all we ever did. There was no need to change anything.

At first I wasn't enticed at all by Renfert's offer to try out the Basic quattro IS. The time and effort required for installing it and what should it do other than sandblast...? I'm sure you know what I mean. If one were to try out everything, there would be no time for working. And what happened then? I installed the Basic quattro IS after all.



The first reaction is that 'the glass pane is missing', yet that's not true. But, the viewing panel really is fantastic – giantsized and crystal clear. At second glance I realized that it's not the pane alone which is so great – after all, a brand new pane ought to be crystal clear – it's the pane together with the illumination. That's really something or, to put it better, you can actually see things and it even stays that way after six months of use! The glass is still crystal clear and the excellent diode illumination has not faded. The blasting chamber side of the glass pane is coated with a thin layer of silicone which apparently is not affected by the abrasive – simply ingenious! Once in a while just carefully wipe the pane moist, dry it and align it. Great!

Many new features and canny solutions only become apparent when you start working with the machine. For example, the working pressure for each of the large sized abrasive tanks can be selected separately. Blasting is only triggered once the desired air pressure has built up in the tank and it stops immediately when the footswitch is released (IS = Immediate Stop). This saves time, abrasive and money as well as promoting precise working – what more do we want?



The dust extractor uses a wide diameter duct, which removes dust reliably without creating a powerful and disturbing jet of air. This 'flow effect' is supported by an air inlet Membrane located opposite the extractor which ensures that the influx



Rainer Semsch

Rainer Semsch is a certified German Master Dental Technician. After his MDT he set up and led the practical division of the MDT School, in Freiburg Germany until 1992. He ran a dental laboratory in Freiburg until 2005 and currently runs his own dental laboratory in Münstertal / Blackforrest, Germany. Rainer Semsch is a member of the DGÄZ (German Society for Esthetic Dentistry), speaks at various national and international conventions, holds courses and regularly publishes articles in the dental press.

Renfert

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**3 year guarantee
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of air 'carries off' the dust effectively – ingenious! 'Odds and ends' such as the air blower in the blasting chamber go almost unnoticed.

And what about the actual sandblasting? Yes, I was amazed there too. Even at a pressure of 0.5 bar (and lower) precise blasting is possible. The abrasive strokes the object without choking up, spluttering or clogging to conjure up a uniform surface structure. At a blasting pressure of 6 bar there's no more stroking, the microblaster develops enormous power and, together with aggressive 250 µm 'Cobra' aluminum oxide (Renfert) things really get going. The 'edge definition' of the sandblasted surface can be adjusted depending on the distance between the nozzle and object.

Without having to exaggerate, I can claim to be totally convinced of the Basic quattro IS sandblaster. I can now work faster, more precisely and relaxed – stock-taking will tell how much less abrasive has passed thru the nozzles.

No way will my 'old' sandblasters be put back on the bench – period!"



Sweating is a natural, essential body process designed to help your body stay cool. But some may wonder whether it is beneficial to encourage your body to sweat more for reasons beyond temperature control.

You have two different types of sweat glands: Eccrine sweat glands which are distributed over your entire body and Apocrine sweat glands which are located on your scalp, armpits and genital area. While abhorred by many, sweating actually has numerous health- and beauty-related benefits. Your skin is the largest organ of your body and serves important roles just like any other bodily organ.

Know more about Sweating

Sweating helps your body to:

- ↻ Maintain proper temperature and keep the body from overheating
- ↻ Expel toxins, which supports proper immune function and helps prevent diseases related to toxic overload
- ↻ Kill viruses and bacteria that cannot survive in temperatures above 98.6 degrees Fahrenheit
- ↻ Clean the pores, which will help eliminate blackheads and acne

Interestingly, you are born with approximately 2 million – 4 million sweat glands and the number of such glands you have will determine, in part, how much you sweat. While women generally have more sweat glands than men, the glands in men tend to be more active and produce more sweat.

As your body temperature rises, your body will automatically perspire to release salty liquid from your sweat glands to help cool you down.

This is controlled by your autonomic nervous system, which you cannot consciously control. However, certain emotions, such as anxiety, anger, embarrassment or fear can prompt you to sweat more.

Since exercise raises your body temperature, sweating associated with exercise is a sign that you are exerting yourself and gaining the many benefits that exercise has to offer.

Most detoxing happens through the liver and kidneys, but when the amount exceeds the capacity the body can handle, your pores will start to pitch in. “There is only so much they [the liver and kidneys] can grab and package. If there is more, then

the body has to manage it. That is when the body starts trying to sweat things out.”

Research backs up the point, with multiple studies that have shown heavy metals like arsenic, lead and mercury in sweat after exercise. “They also know that there are some fat soluble toxins in the sweat as well. Just like you can absorb them through the skin, you can also pass them back through it.”

Heat and humidity

Sweating is your body's built-in cooling system. When the temperature rises, millions of tiny sweat glands in your skin are activated and sweat is released through your pores. As your sweat evaporates, it cools you off. Yet leftover sweat can leave your skin soaked – especially on humid days when the air is already so saturated with moisture that your sweat evaporates more slowly.

Hard workouts

Exercising turns up your body's internal heating system. As you pump your arms and legs, your body temperature rises. Sweating is your body's way of getting rid of that extra heat.

Strong feelings

Your emotions – from anger to love to stress – can make you sweat. Emotional sweating triggers the sweat glands on the palms of your hands as well as under your arms and on the soles of your feet. That is why your palms get moist when you are really attracted to someone or during a job interview.

Hot and spicy food

Spicy foods trigger the same receptors in your skin that



respond to heat, which is why you have to dab your forehead and upper lip when you eat an extra-hot curry. The beer you drink with that curry could also make you sweat by widening blood vessels in your skin. Even your morning coffee can cause you to sweat, because caffeine stimulates the sweat glands as well.

Body odour is the unpleasant smell produced by bacteria on the skin that break down the acids in your sweat. The medical term is bromhidrosis.

Anyone who has reached puberty can produce body odour, as this is when the apocrine sweat glands develop, which produce the sweat that bacteria can quickly break down. Men are more likely to have body odour, because they tend to sweat more than women.

Things that can make body odour worse include

- ✦ being overweight
- ✦ consuming rich or spicy food and drink – such as garlic, spices and alcohol
- ✦ some types of medication – such as antidepressants

Take a warm bath or shower every day to kill the bacteria on your skin

- ✦ certain medical conditions – a fruity smell can sometimes be a sign of diabetes, while a bleach-like smell may indicate liver or kidney disease

Excessive sweating

Hyperhidrosis is a condition where a person sweats excessively and much more than the body needs to regulate temperature. If you have hyperhidrosis, you may also have smelly feet (bromodosis). Smelly feet are caused by wearing shoes and socks that prevent sweat evaporating or being absorbed, which attracts bacteria. Excessive sweating and body odour is an unpleasant problem that can affect a person's confidence and self-esteem.

A body odour problem can usually be managed by getting rid of excess skin bacteria which are responsible for the smell and keeping the skin in the affected area (usually the armpits) clean and dry.

Self-care advice

Your armpits contain a large number of apocrine glands, which are responsible for producing body odour.

Keeping your armpits clean and free of bacteria will help keep odour under control. Following the advice mentioned below could be helpful for you.

- ✦ **Take a warm bath or shower every day** – to kill the bacteria on your skin. On hot days, you may need to have a bath or shower twice a day.
- ✦ **Wash your armpits thoroughly** – using an antibacterial soap.
- ✦ **Use a deodorant or an antiperspirant** – after bathing or showering.
- ✦ **Regularly shave your armpits** – this allows sweat to evaporate quicker, giving bacteria less time to break it down.
- ✦ **Wear natural fibres, such as wool, silk or cotton** – they allow your skin to breathe, which means your sweat will evaporate quicker.
- ✦ **Wear clean clothes** – make sure you wash your clothes regularly.
- ✦ **Limit the amount of spicy food you eat** – such as curry or garlic because they can make you smell of your sweat. Evidence also suggests that eating a lot of red meat tends to make body odour worse.

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Youth *and* Gadgets

The present youth culture is the result of individualization of identity, age, race, gender and class. The multicultural immigration and different ethnic backgrounds have greatly influenced the perception and interests of the youth.

Today's young generation are considered to be the centre and the basis for future generations because of several reasons. This generation between the ages of 8 and 14 years are the controlling entities of the future. From the business point of view, this segment of the market is considered to be the most profitable segment because they have ample of money to spend on. They are growing fast; know their own minds and are growing with distinctive attitude.

For these individuals older values no longer hold true and they are greatly influenced

by urbanization 24/7 and the new online media. Most of their decisions are not based on logic but are influenced by the social environment in which they exist. They are keener on clothes, image, tastes, sports, technology and electronic gadgets.

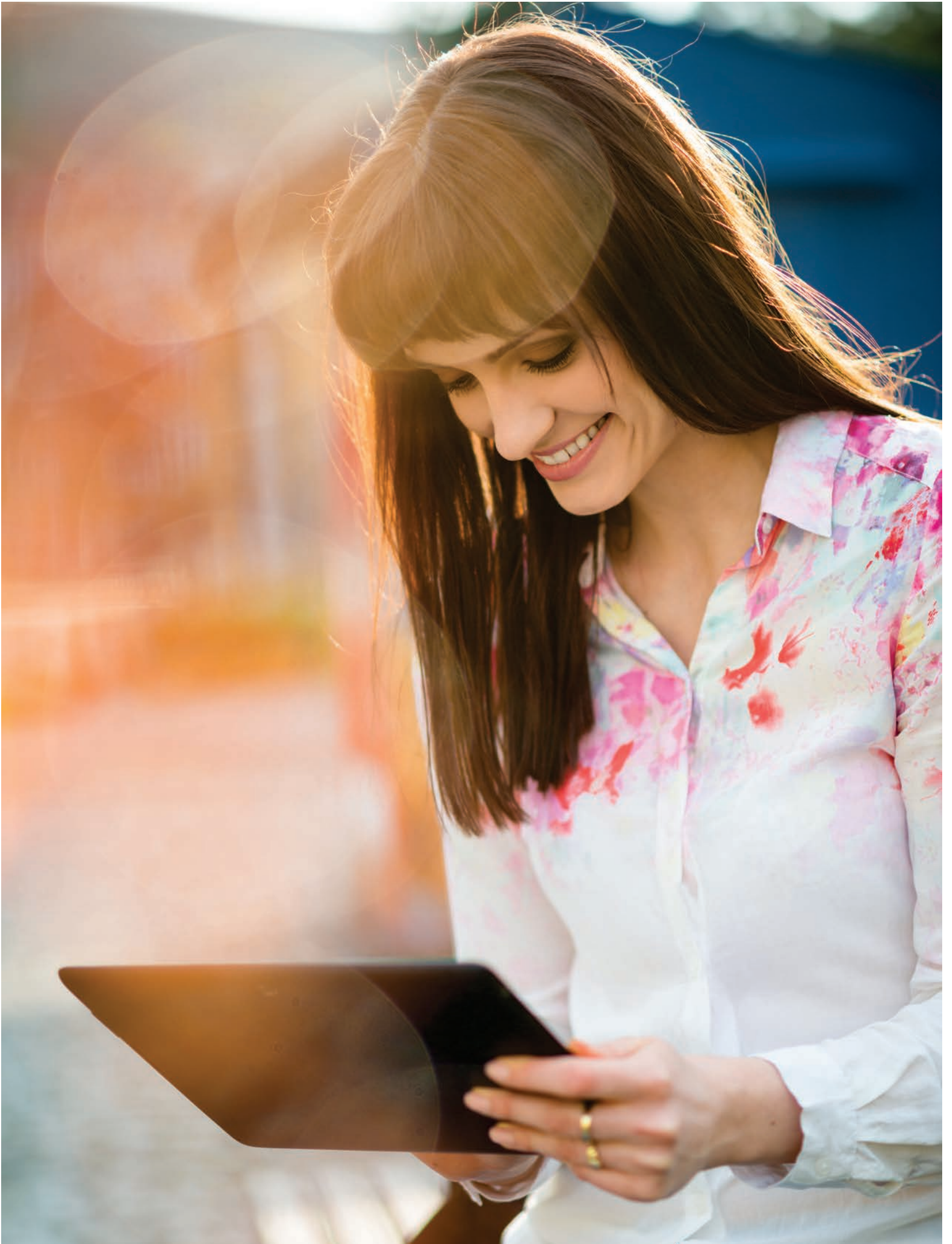
Gifts, leisure goods and mobile phones are quite essential for keeping them connected with their friends. They have obsession towards advanced gadgets and they even cannot think of their life without cell phones in their pockets, laptop bags on their shoulders and their day does not start without chatting on 'face book' or 'orkut'.

It has generally been observed that instead of watching natural beauty – birds, mountains, trees and greenery, the teenagers are more interested in watching movies, serials, listening songs, reading comics,

playing games etc. The mind, mood and style of today's youth are absolutely different.

Research indicates that these games can have a positive effect on the youth's mind. However, sometimes it may cause terrible changes in their behavior. It was seen that playing video games or computer games actually help the young people in concentrating much better. There are games which require you to use your brains and those games may indeed prove to be helpful. It has also been observed that it has a very good impact on the motor skills and spatial skills of today's youth.

Aggressive behavior, long-term depression and eye problems are known to be some of the major illnesses found in children who are addicted to video games. Other effects of this sort of addiction are poor lifestyle, less social life, lower health





status, both mentally and physically.

Effect of Computers

Increase in Stress: Work in office is getting stressful now-a-days. This is not just because of the work pressure, but it is also because of continuous exposure of your eyes to computer monitors. It is not good for eyes. You will be able to see the monitors for long, but unconsciously the eyes are being strained which results in a **silent increase in stress to your brain** and body. Television can also be taken in the same category as computer monitors.

Physical and Internal Organ Disorders: We have reached a stage that nothing can be done without computers. We humans are responsible for it because we created it and we use it. Most of the diseases are because of less physical activity.

Diabetes is becoming common even at an early age. Less physical activity plays a vital role in getting diabetes. Do not think diabetes is just a single disease. It is the gateway for all other internal organ malfunctions and fatal disorders. Once we are locked before computers, we do not (or cannot) do any physical

activity which makes your physical fitness get worse.

Obesity is becoming an alarming issue. It may be because of bad habits of food culture, but less physical activity makes it worse. Software professionals are addicted to **junk foods** because it can be edible at their work table itself. Since they are keen on computers, they just take those junk foods sitting in without burning the calories and obviously adding up fat resulting in obesity, indigestion, gas trouble, diabetes and **even heart attacks**.

Neck, Shoulder and Wrist Pain: Using the keyboard and mouse for a long time will create pain in the neck, shoulders and in the wrist. If the **mouse is not handled in the correct position** or if it is used for a long time, you are prone to **Carpal Tunnel Syndrome** – a syndrome that is caused due to the pressure caused at the nerve in the wrist which will lead to numbness, weaknesses and damage of muscles in the wrist and fingers.

Effect of Mobile Phones

Damage of Brain cells due to Mobile Phone Radiation: As we all know mobile phone radiations are harmful to health, but still we use it, because it has

become like a second heart in our day to day life. When used for long hours, it creates pain in our ears and when this condition happens daily then we may suffer from hearing disability and damage of brain cells.

Text Messaging Syndrome: Texting is a new word used for Text Messaging. Repetitive or continuous use of mobile phones for text messaging or playing games will lead to pain in fingers. And this may be called as **Text Messaging Syndrome**. This will weaken the nerves of all your fingers and make them stiff not allowing your fingers to move easily.

Conclusion

Addiction to electronic gadgets, which by itself may be lesser of an evil, as to when one realizes there is a deeper problem rooted in the use of the gadget itself. Rather than use, it is the abuse / misuse of the same that triggers the problem. Children as young as 10 and 12 who have access to mobiles, laptops and internet connectivity are exposed to this evil at a very tender age. What is even more disturbing is many a time parents and elders are unaware as to what their kids are indulging in. The youth on the other hand do not know how to deal with the dilemma they have accidentally or otherwise encountered or how to get out of the predicament. Well, this dilemma is not restricted to boys alone. There are an equally large number of girls, if not more, who are addicted to watching such sexual exploits, violence and abuse.

Prevention is better than cure

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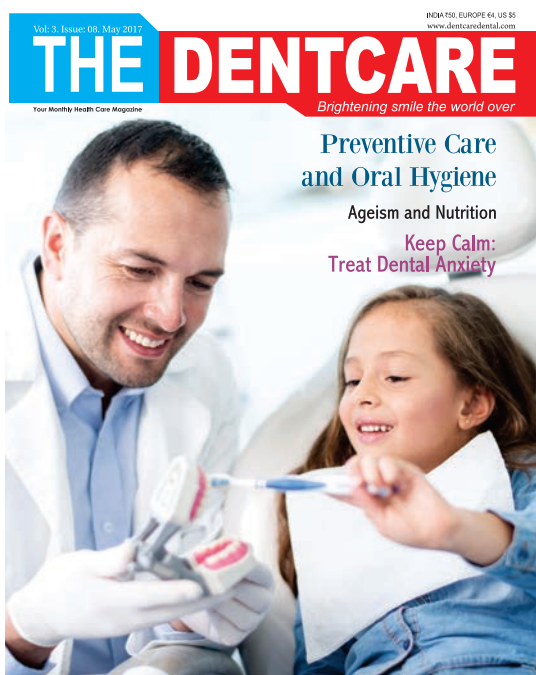
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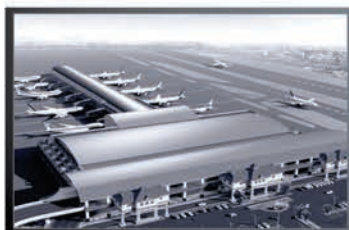
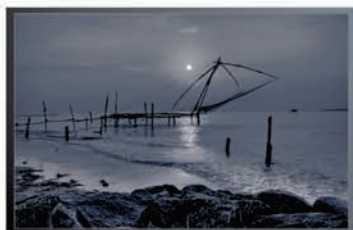
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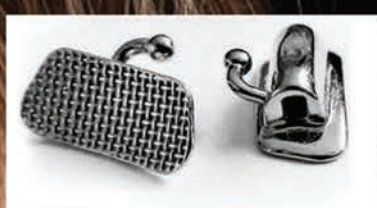
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