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# THE DENTCARE

Your Monthly Health Care Magazine

*Brightening smile the world over*



## A March Towards Better Dentistry

Is Skin Tightening  
Treatment Effective?

Immunization in  
Children

Decisions  
Make Life

Retreatment in  
Endodontics

**TRADITIONAL**

Food Wisdom

Effects of  
Tobacco  
Cessation &  
Oral Cancer



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**Dear Reader,**

There are more reasons for celebration this August.

International Youth Day is one. Let us encourage our young lads to stay active and healthy.

On offer within this edition are lasting solutions to Dental Sensitivity and Cavities, youthful Skin, Infertility and even, Pain. Reasons galore for this exuberance!!

Between them lie traditional food wisdom and conscious efforts to seize tobacco – “to cease Cancer”. Not far behind is the haunting Stress – Anxiety equation. Is the TMJ – a missing link??

Decisions that could turn your life into a true celebration!!

Beyond it all, imagine a Life without children. Would it bear significance? Remember to keep them immunized. Do spare a moment to focus on issues as serious as Conduct Disorder – a weed rather than a seed, if I may contend.

Your Smile is reason enough to celebrate. Choose Porcelain Veneers, Endodontics or Implants to ensure its joy lasts.

Last, but not the least.

Thirty years of excellence is probably the rationale that tops them all.

As we march towards better dentistry and think beyond the drills, I trust you will clearly align with your true brother in arms!!

Mark your calendar too, for the exciting dental season ahead!!

Yours truly,

**Prof. (Dr.) George P. John**

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**Is Skin  
Tightening  
Treatment  
Effective?**



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**A**ging is a natural process. As we grow old, the cumulative effects of the sun, gravity, genetics and other factors cause facial structures to descend, producing jowls and other physical signs of aging, such as wrinkles, folds, age spots, skin thinning etc.

Cosmetic therapy, especially skin tightening treatment has gained momentum in modern times with a change in people's perception of beauty; especially among the aged, as this will help enhance their cosmetic appearance and look, beyond the chronological age.

### **What are skin tightening procedures?**

Skin tightening procedures are nonsurgical alternatives to more invasive procedures for correcting skin laxity and improving skin quality besides making the skin young and beautiful. Today, a number of different devices and technologies are being used in noninvasive skin tightening therapies; especially in the case of people who want to turn back the clock. These treatments can be performed not only on the face but also on the neck, the upper arm, the abdomen and the thighs.

### **How does it work?**

The basic mechanism of skin tightening devices and technologies is as follows. There is initial collagen contraction and destruction occurring through

both mechanical and biochemical pathways. As a result of deep delivered energy into the skin, collagen remodeling through a controlled wound healing response occurs over time with associated Neocollagenesis (new collagen formation).

Appropriate cooling is also required for these devices, since the energy delivered needs to penetrate into the deep dermal and subcutaneous fat layers without damaging the more superficial structures.



The following are the general modalities for nonsurgical skin tightening.

### **Radiofrequency**

This heats only the deep layer of the skin, without damaging the epidermis or the outer layer of the skin. The natural wound healing response of the body causes the regeneration of collagen in the skin, resulting in skin tightening.

### **Laser and Intense Pulsated Light (IPL)**

In Laser skin tightening treatment, laser light in the infrared spectrum is utilized to heat up the collagen underneath the skin, through a bulk heating process. This causes collagen denaturation and results in the formation of new collagen. There are three options for skin tightening procedures when it comes to laser skin tightening:

- ⊙ Ablative with total skin resurfacing—The entire surface of the skin is peeled away. (Carbon dioxide / Erbium laser).

- ⊙ Fractional ablative laser resurfacing – Pinpoint laser beams peel away many small areas of the skin.

- ⊙ A hand piece is used to administer an infrared light / Ultrasound / Radiofrequency heating.

Most nonsurgical skin tightening procedures take at least thirty to ninety minutes to complete; but some may take longer. Nonsurgical skin tightening is usually performed on an outpatient basis. Therefore, make sure someone is accompanying you when you undergo the treatment.

### **Aftercare and recovery**

Nonsurgical skin tightening procedures have minimum recovery time and you are usually able to resume full activity immediately after treatment. Some improvements may be noticed immediately in your skin, but full results will unfold over the course of two to six months. You may feel some pain, when anesthesia wears off. Depending on the device your doctor used, you may experience skin reddening, swelling and





numbness at the treatment area / areas.

Since the natural process of new collagen formation takes place over time, your results will become more evident over the course of two to three months. As new collagen is being formed, you may see continued improvement and contouring for up to six months. Your doctor may be consulted to ascertain if additional treatment is needed.

### **How long will the results last?**

Most nonsurgical skin tightening results will last for one to three years on an average. Therefore, the procedures may need to be repeated periodically to maintain the benefits. The results seen are less extensive and dramatic than those obtained from facelift or body contouring procedures.

### **Limitations and Risks**

Fortunately, significant complications from nonsurgical skin tightening are infrequent. All procedures have some degree of risk. Some of the potential complications of all nonsurgical procedures are:

- ⊙ Changes in sensation.
- ⊙ Contour irregularities.
- ⊙ Scarring.
- ⊙ Allergic reactions.
- ⊙ Damage to underlying structures.
- ⊙ Unsatisfactory results that may necessitate additional procedures.

### **Other risks specific to nonsurgical skin tightening are outlined below:**


- ⊙ Small burns.
- ⊙ Skin reddening, swelling and numbness of the treatment area / areas.
- ⊙ Pigment (skin color) changes.
- ⊙ Loss of volume beneath the treatment area / areas.

Risk related to nonsurgical skin tightening can be minimized by following the advice



Nonsurgical skin tightening procedures have minimum recovery time and you are usually able to resume full activity immediately after treatment

and instructions of your doctor; both before and after your nonsurgical skin tightening.

To sum up, skin tightening treatment is a nonsurgical procedure with minimum discomfort and downtime that helps correct skin laxity and improve skin quality in addition to making the skin young and beautiful. 



# A March Towards Better Dentistry

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Science, in the last four decades has taken a giant leap in terms of technological breakthroughs and innovations to serve mankind. This astounding progress is invasive and transcends the scenario of routine life by improving its quality.

Telecommunication has shrunk the barriers of time and distance making the world smaller. Local area networks, cellular phones, pagers, Personal Computers, Faxes and email (Electronic mail) have transformed office setups, making work faster and easier with improved efficiency.

These technological advancements have benefited the medical field substantially by providing sophisticated equipment, making various medical procedures more efficient, accurate and least traumatic to the patients, thus increasing their life expectancy. Computer controlled sensors can give live images of moving organs within the body aiding various types of endoscopies (pinhole surgeries) with minimum invasion of neighboring structures.

Dentistry has progressed to fantastic limits, perhaps even more than the medical field, in the last three decades. Earlier trends in treatment were radically towards elimination of the causes of problems without worrying much about the loss to the patient.

This was followed by a phase of **Conservative dentistry** where dentists tried to save teeth with more refined treatment modalities. This was succeeded by **Preventive dentistry** where patients were educated in oral hygiene to prevent dental problems.

Dentistry also deals a lot with facial structures and helps enhance our looks. This has paved the way for a separate field of dentistry – **Aesthetic dentistry**. Present trends are towards adapting principles which will enhance `Aesthetics`.

**Implant dentistry** has now drastically improved the treatment procedures for replacement of teeth making better rehabilitation of dentition where older technics used to fail.

Modern dental equipment is now designed to precision with aseptic principles for maximum safety

to the patients as well as to the dental practitioners alike. Primitive manually operated foot pedals and belt driven drills have been replaced by modern air turbine hand pieces which render less painful drilling. They now have fiber-optic light attachments for clearer illumination of the tooth and air-water sprays with anti-suck back valves to prevent transmission of infection from one patient to another.

Lasers developed can be used to disinfect decayed teeth before final fillings or to perform minor surgical procedures with little trauma, without much blood loss and with greater accuracy. Ultrasonic Scalers make gum treatment non-surgical and less painful.

Dental materials used in different treatment procedures have also evolved into fourth and fifth generations providing better results, compared to their earlier predecessors. Modern ceramic crowns and light-cured composite tooth colored filling materials can even fool a dentist in detecting artificial fillings or crowns against natural teeth; so life-like are the results.

Presently, computers with sophisticated software providing 3D CAD / CAM facilities to plan treatment; special intraoral video imaging and digital X-ray techniques; Lasers and other electronic gadgets have effectively advanced dentistry to modern space age frontiers.

Dentistry is coming of age in India as these advancements are rapidly invading from the west and dentists here are striving their best to upgrade their practices against all odds.

### **Computers, Digital radiology and Intraoral camera**

Computers have been in use in dentistry for the last fifteen years and the special software developed has been providing meaningful service in patient data management, in maintaining financial records and in treatment planning. Most computer systems are becoming more user-friendly especially with the invention of the Graphic User Interface (GUI) which generates graphical icons and picture windows

Many patients keep hopping from dentist to dentist only for temporary / short term and cheaper solutions without realizing the money lost in the long run

displaying dialog boxes through which the user can easily give the necessary commands.

Intraoral video imaging systems represent one of the popular applications of a video camera used with a computer that has enhanced various presentation aspects of dentistry. These systems can take close up live images of different areas inside the mouth and the teeth, in addition to the normal facial and “smile views”, which can be stored as permanent visual records for comparison of treatment results.

Intraoral Radiovisiography equipment generates radiological images on a digital receptor instead of an X-ray film. An added advantage of the system is that the images can be magnified or zoomed into and contrast adjustment can produce clearer images to be stored in, along with other records, related to the patient for future reference.

Computerized cosmetic imaging is also an increasingly popular technique that provides opportunity for the dentist to illustrate before and after treatment images to confirm treatment results. Expected results of treatment being planned for esthetic, restorative or orthodontic (braces) purposes can be displayed to the patient for obtaining consent even before the treatment is started. Patient can choose a smile style or profile which the computer shows and matches his face!



Computers can also help in the designing of restorations, crowns and bridges for a patient as per specifications required, automatically through Computer Aided Designing (CAD) and these specifications can be fed to computer controlled milling machines which mill restorations from ceramic blocks accurately to fit to the patient through Computer Aided Manufacturing (CAM).

### Current status of dental health care in India

In India, majority of the dental problems arise due to secondary importance given to oral health maintenance rather than due to any pathological or constitutional factors. Compared to European or American races, we are genetically born with teeth having more resistance to decay. But, gum disease is very common in India due to poor oral hygiene maintenance and deleterious habits like “paan” or tobacco chewing which in turn has led to different types of oral cancers.

Possible reasons for the neglect towards receiving dental health care are many; inadequate education; anxiety towards expected pain during or after treatment or reluctance to spend time in a dental office etc. Also a feeling of futility towards the whole procedure grips many patients.

Many patients keep hopping from dentist to dentist only for temporary / short term and cheaper solutions without realizing the money lost in the long run; as the doctor recalls a young patient sighing, “I have spent a fortune with dentists and yet nothing seems to be right with my teeth” or another one asking, “Is there no permanent solution to my problems?”

### The future of dentistry in India

Dental treatment has two major aims; the first is to try and diagnose, fight and eradicate the diseases of the tooth as well as the gums and the second is to restore the damage caused besides rehabilitating the dentition to provide better function and improve quality of life for the patient.


These advances have reached the doorstep of the “Indian Dental Scene” which is fast changing. Dentists, here, have become busy in updating themselves to incorporate newer techniques. Dental Associations are linking dentists together on a national level and also with professional colleagues from abroad for transfer of technology.

The average Indian dentist has been working against odds for long trying to cater to large number of patients and has provided good dental health care considering the economic status of our country and health attitudes of its citizens. In no way have Indian dentists been less competent or inferior compared to their colleagues from abroad.

This is proved by the fact that many foreigners not

only from the Gulf but also nowadays from Western European Countries travel to India to get their dental treatment done here, where they find them better and cheaper compared to those of in their own countries.

Newer trends may find the newer generation of dentists scheduling appointments during office hours rather than in the evenings, forcing people to conscientiously take time off from work to permit dental treatment.

If dentists, here, approach new technologies with healthy skepticism, train and treat patients with proper implementation of these technological advances, they will be easily able to provide treatment at par with international standards. 

# INTERNATIONAL YOUTH DAY




**Y**oung people are not just the leaders of tomorrow – they are making huge changes to the world around them, right now. This generation – the most interconnected generation ever – has innumerable qualities like; vigour and vitality; flexibility and adaptability; creativity and criticality; gentleness and sociability, besides being an educated

and dextrous workforce capable of meeting the brainpower demand of the global economy.

These qualities should be channelized to refurbish and improve the world.

International Youth Day is celebrated every year on 12 August – to focus on measures to strengthen capacities of youth and to increase the quality as well as quantity of opportunities available to young people for full, effective and constructive participation in society.

Theme of International Youth Day 2017 is – Youth Building Peace. Young people have the potential in preventing conflict and sustaining peace. Their contributions to conflict prevention and transformation as well as inclusion, social justice and sustainable peace are rich and varied.

Let us hope that this young generation will do their best to usher in peace and amity in the world by modifying the deleterious effects of the chaotic international system. 



# Immunization in Children

**I**mmunization is the process by which an individual's immune system gets fortified against an Immunogen. It is the most important as well as effective method to prevent infections and their associated morbidity and mortality.

This method helps us develop an immune response similar to that which is acquired by natural infection, by introducing an organism which is either attenuated or killed, or by introducing the body parts of the microorganisms. With this process, we are able to evoke an immune response in the recipient either by stimulating a cell mediated or antibody mediated response.

The Bacillus Calmette Guérin (BCG) vaccine induces cell mediated immunity whereas many other vaccines induce antibody responses.

The first vaccine, which was introduced by Edward Jenner, was based on the observation that those who developed Cowpox did not develop Smallpox later. Thus, Smallpox became the first disease to get eliminated from the earth with the use of vaccine. The last case of Smallpox was reported from India in 1977.

Now we are on the verge of eliminating many other infections also, like Polio and Measles. Polio is seen in only two countries now, Afghanistan and



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Pakistan. The western world is free of Measles now.

Since the Globe has become small with improved transportation facilities, any infection can reach any place within a matter of few days. We will be able to achieve the elimination of diseases only by working together. Though vaccines can have complications like anaphylaxis, the lives saved by vaccination are far more than those who can have an allergic reaction or other complications.

### **Vaccines included in the National Immunization Schedule**

#### **BCG Vaccine**

This vaccine is one of the oldest vaccines, introduced way back in 1921. The attenuated bovine strain of tubercle bacilli is used. The vaccine is known after the name of the scientists who developed the vaccine. The vaccine protects the

child from severe forms of tuberculosis like Tuberculosis Meningitis, disseminated and military Tuberculosis which occur commonly in young children, producing morbidity and mortality. The vaccine is to be given to all children at birth or within a few days of birth, but it can also be given later.

#### **DPT, Hib, Hep B (Pentavac)**

These five vaccines are given as a single shot – Pentavac. Diphtheria, Pertussis and Tetanus are together known as triple vaccine (DPT) and when Hib (Haemophilus Influenzae type B) and Hepatitis B are added, they become Pentavac.

Each vaccine can be given individually also. But if given in combination, the number of injections can be reduced. Among the vaccines, Pertussis is the one having the maximum complication.

Fever is very common. Some babies can develop encephalopathy characterized by irritability, alteration in sensorium, seizures etc. This is due to the presence of cellular elements of the bacteria in the vaccine.

So, a new Pertussis vaccine has been introduced which contains antigens only. The toxicity is less but not zero. Since there is a doubt of its effectiveness for primary vaccination, the recommended vaccine is still the conventional DPT vaccine.

The Hib vaccine protects the child from infections due to Haemophilus Influenzae, which is a bacteria producing illness like meningitis, pneumonia, septicemia etc. affecting children.



Hepatitis B is a viral vaccine preventing the child from HBV infection. Hepatitis B virus results in jaundice. The virus is a dangerous one which paves the way for liver Cirrhosis and hepatic cancer, years after the infection. Those mothers who had the infection can be chronic carrier and can transmit the infection to their babies. Those babies who are born to HB carriers should be given vaccine as well as antibodies to protect the baby immediately.

### **Polio Vaccines–OPV/ IPV**

Poliomyelitis is a dreadful disease which can either kill the child or make him disabled forever, due to the post-polio paralysis. Though the first introduced vaccine was the injectable one, the oral vaccine got more acceptability.

With the widespread use of the oral polio vaccine, most of the countries have been able to eliminate the illness. India has been free of polio from January 2011. Though oral vaccine is safe and effective, there is a small chance of developing an illness due to the vaccine virus itself; which is a live attenuated virus, not a killed one.

In an immune compromised child, or in a healthy child, the vaccine virus itself can cause a paralytic illness. When millions of wild poliovirus cases were there, it did not matter much, but now what we want is not a wild poliovirus free world but a paralysis free world. We are able to achieve a zero paralysis status by using inactivated polio vaccine.

Just like all other countries which have attained zero wild polio status by switching over to IPV, we have also switched over to IPV. Till its eradication, we must continue with OPV.

### **Rota virus vaccine**

Rota virus is one of the important causes of diarrhea. It is a reason for morbidity and mortality in infants. The Rota virus vaccine has been included in the National Immunization Schedule of India since last year, in a phased manner. It has already been started from the four Northern States. Very soon, all the States will be included. Earlier the vaccine was imported, but now it is manufactured in India.



### **Measles / Mumps / Rubella**

Measles is an acute viral infection characterized by fever, cough and rashes. The disease can be complicated by Respiratory and Nervous System problems. Children can develop malnutrition after measles. It is a killer disease, especially in undernourished children.

Rubella is a benign viral infection with fever and rashes. Vaccination is required because of its ability to produce intra uterine infection. Mothers getting Rubella infection during pregnancy can transmit the infection to the fetus in utero producing congenital Rubella syndrome which produces severe damage to the heart, the brain, the eyes and the ears, besides producing severe chronic disability. Rubella vaccine prevents Rubella syndrome in babies.

Mumps virus produces infection of the parotid glands. It can be complicated by encephalitis and pancreatitis. In an adolescent or young adult, it can involve the testes leading to sterility.

### **Additional vaccines**

#### **Pneumococcal vaccine**

Haemophilus Influenzae and Pneumococci are the leading causes of invasive bacterial infection in young children. After the introduction of Haemophilus Influenzae vaccine, Pneumococcal infection has come to the front. In many of the developing countries it is included as a mandatory vaccine. It is needed for Indian children too but millions of our children are bereft of it because of financial constraints.

#### **Hepatitis A vaccine**

Hepatitis A infection is not considered to be as dangerous as Hepatitis B infection, since it does not have long term complications like cirrhosis of the liver or liver malignancy. The virus is transmitted through contaminated water and food.

Earlier generations used to get natural infection in childhood and thus immunity was gained from natural infection. Because of the higher level of environmental and personnel hygiene, the chance of natural infection is rare now; as a result, in later life, the disease becomes non benign and can have life threatening complications. So, it is better to administer the vaccine.



### **Varicella vaccine**

Varicella or Chickenpox is a viral infection characterized by fever and papulovesicular rashes. Here again, the illness is associated with more complications when you are an adolescent or a young adult. Mothers can transmit the infection to their babies resulting in the baby developing Congenital Varicella syndrome.

### **Typhoid vaccine**

Availability of clean water, food and increased standards of personal hygiene will protect you from this illness. It is a health problem in India especially in certain areas where the aforementioned reasons are compromised. The Capsular Polysaccharide vaccine offers only short term protection for three years. The conjugate vaccine is available now which can give long term protection.

### **Human Papilloma virus vaccine**

This virus is known as a causative agent of uterine cancer as well as colorectal and penile cancer in men. The vaccine available in India can only be given to women.


### **Japanese Encephalitis vaccine**

This is the common virus producing viral encephalitis which causes severe morbidity and mortality in children and adults. It is endemic in certain areas of India and vaccination is administered only in those areas.

Japanese Encephalitis is a mosquito borne viral infection of the brain. The vaccine is an inactivated injectable vaccine given as two doses. The first dose can be given from 9 to 12 months and the second one at 18 months.

### **Vaccines under trial**

Many vaccines are under trial, out of which two are important for India. Malaria and Dengue are two infections which kill many in India every year.

Dengue vaccine is under phase three clinical trial in many countries and will soon be available. It will be able to prevent all four types of Dengue fever. So is the case with the malaria vaccine. After 30 years of intense clinical research, the vaccine is undergoing phase three clinical trial and will hopefully be available soon. 



## **A Lasting Solution to Tooth Sensitivity and Cavities**

**A** study report came up in ACS Nano, a scientific journal published by the American Chemical Society which discloses a longer-lasting solution to tooth sensitivity and cavities.

Loss of the enamel layer covering the tooth results in sensitive teeth and raises the risk of cavities, pulp inflammation and other dental diseases.

Chun-Pin Lin, a Professor of Dentistry at National Taiwan University and his Colleagues reported that they have developed a new biocompatible material that potentially rebuilds worn away enamel, reduces tooth sensitivity and is much longer-lasting than current solutions.

These Researchers encapsulated nano-hydroxyapatite, a demineralizing material and a green tea polyphenol-epigallocatechin-3-gallate (EGCG) in silica nanoparticles, which can stand up to tooth erosion and prevent biofilm formation. It also showed low toxicity.

Based on these findings, the Researchers state that the material could indeed be a good solution to help fight tooth sensitivity and cavities. 



# Brothers in Arms!



I write this article to address some concerns and mysteries about aligner practice. Many things have been said and discussed by those ill-informed and sometimes by those with vested interests. Misinformation and heresy are the tools of the weak and the wicked. I hope this article will shed light on the misconceptions and eradicate the ambiguities around aligner practice.

## Aligners and the Orthodontist

Aligners are an adjunct, a treatment modality used to align malaligned teeth, viz. diastema closure, corrections of deep bite, overbite and overjet besides, corrections of minor to moderate crowding of anterior teeth. Just as you would not use a fork to have soup, you





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cannot use an aligner on every orthodontic case. Aligners do have their limitations. Aligners cannot correct skeletal problems, treat mixed dentition cases or impacted teeth.

The new age Orthodontist has to understand that only a fraction of malocclusions can be treated with aligners, and from this fraction, a smaller percentage of the populace can actually afford the aligner treatment. The remaining patients would only be treated with conventional orthodontics. Rest assured, aligners can never replace an Orthodontist.

Sufficient scientific literature is available online for those genuinely interested in learning about the aligner's capability and those who wish incorporating aligners in their regular orthodontic practice.

### The DentCare Assurance

DentCare has on its aligner team; a panel of Orthodontists who examine every case that comes in for review: and a team of 30 highly trained and skilled technicians who ensure that the final finished product is of the highest quality and precision.

After all the necessary records are obtained, a preliminary assessment is made to check if the case is ideal for aligners. After which, a treatment plan is devised keeping in consideration, the treatment objective of the patient and the dental practitioner. The treatment plan is discussed among all the orthodontists on the panel, and only after a common

consensus is reached, the final treatment plan along with the diagnostic setup is forwarded to the dental practitioner. They have a very strong system of checks and balances to ensure the best treatment outcome.

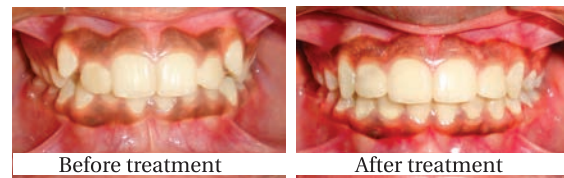
### Need for change

The beauty of the human mind is its limitless capacity to adapt and function according to the ever changing environment. Failure of which would almost certainly push us into extinction.

This brings to mind, the story of Kodak. Those of us fortunate enough to have been born in the pre-digital camera age would remember taking the film roll to the nearest Kodak lab, the long wait in anticipation to actually see how the pictures have turned out.

When the digital camera entered the market, the executives at Kodak (in all their infinite wisdom) considered this to be a passing trend (even though the first digital camera was invented by the one who worked for Kodak) and refused to adapt to the new change in the consumer preference and continued with their conventional film cameras. They continued to rely on producing films for cameras. Various companies like Canon, Nikon and Sony adapted to this new trend, leaving Kodak scrambling for the market share.

Much like the modern camera consumer, the modern dental patient is better informed and well aware of the various treatment options available. Those practitioners who are able to adapt to the patients' needs and provide various treatment options will be preferred and stand to benefit a great deal.



### My experience with DentCare

My experience with DentCare has been like that of an avid International Indian traveller who has seen the world but has missed out on seeing the Taj Mahal right at home. To say that I was mesmerized by the sophisticated and advanced technology utilized by the laboratory, would be an understatement.

The methodical process of sorting out the orders from the moment it is received, to starting the manufacturing process, has been impeccably perfected. The staff is extremely professional and dedicated to their craft. The Lab maintains a high level of organization and cleanliness. There is a constant effort in perfecting existing technologies and a pursuit in advancements as they happen.

The milling machines, the 3D scanners and model printers and every conceivable hardware and software are directly imported from Germany, besides the raw materials. What I was surprised to hear about is that, the team gets trained in Germany and in other parts of Europe for educating themselves on advancements in techniques so that the final product delivered is of absolute perfection. 



# Traditional Food Wisdom



**Dr. Prachi Mehta**  
Dental Practitioner and Nutritionist  
Kachchh, Gujarat, India

**W**e might have heard a lot about what not to eat, which food is fattening and so on... But do we really know what exactly a balanced diet means??

A balanced diet focuses on providing all the nutrients that our body needs. It comprises of macronutrients like protein, carbohydrates and fat along with micronutrients including vitamins and minerals. Each of them has a different role to play in maintaining various body functions.

These nutrients are mainly derived from five major components: fruits, vegetables, cereals and pulses, milk and milk products, fats and oils.

**Have a "King's breakfast, Common man's lunch and Beggar's dinner."**

## **An ideal breakfast**

Breakfast is the start of your day; so it should be full of energy and nutrition. Banana is one of nature's ideal snacks and it can be combined with a cereal as breakfast. It is generally thought that banana will lead to weight gain, but when one has it with breakfast, it can even help with weight loss.

## **An ideal lunch**

What happens to our body when we have Roti with ghee topping and vegetable or rice with dal or curries?

The above Carbohydrates are energy packed which might cause sudden spike in blood sugar. But this is where our traditional Indian food wisdom plays a major role; Roti or rice is always had with dal, vegetable or curries, which have ample of vitamins and minerals. When topped with ghee, it helps reduce the glycemic index of Roti and rice. This delicious platter helps reduce sugar; hence even a diabetic can have ghee with Roti.

Our meal would be incomplete without fiber: both soluble and insoluble. It helps with digestion, but only a few people are getting enough. Eat; do not drink your fruits and vegetables. Most fruits and vegetables (besides potatoes and corn) and whole grains are also foods with a low glycemic index; which means that they do not cause sudden spikes in blood sugar levels, instead they help maintain the same.

## **An ideal dinner**

Our dinner can range from Idli Sambar or Pulav, to Khichadi Paratha. All of the above items, when had in moderation, give us a balanced diet throughout the day. Let us divide them into carbohydrates, proteins, fats, vitamins and minerals and know the portion size of each.



## Carbohydrates

The National Institute of Nutrition (NIN) suggests 30 grams of cereals and millets along with 100 grams of starchy vegetables. Do not curb carbs; it is all about quality and quantity.

Recommended dietary allowance:

Men: 2320 Kcal/day

Female: 1900 Kcal/day

## Proteins

Almost every next person has protein deficiency; so it is recommended that one should have a little amount of protein with every meal; be it in any form like whole dals, cottage cheese or gram flour or 30 grams of pulses as per NIN.

Recommended dietary allowance:

Men: 60 grams/day

Female: 55 grams/day

## Fats

Fats are the store house of energy and vitamins, helping in synthesis of hormones. Today we are more inclined towards fat free; but even they are an essential part of our diet.



According to NIN, about 1/5 or 20% of our diet should be devoted to fats; all three kinds—polyunsaturated, monosaturated and omega-3 fatty acids.

Depend more on unrefined (Kachi Ghani) or cold pressed oils versus refined oils; because more refined means less nutritive.

## Vitamins and Minerals

The body is unable to manufacture most of the vitamins and minerals for itself: they should be an essential part of the diet. These micronutrients support metabolism, nerve and muscle functions, bone maintenance as well as cell production.

They can be derived from nuts, oilseeds, fruits and green leafy vegetables. Vitamin A, E, B12 and D are vital and so is calcium and iron. The National Institute of Nutrition recommends consumption of 100 grams of greens and 100 grams of fruits each day.

Calcium and Iron deficiency is seen in majority of women due to hormonal changes taking place at different phases of life; menstruation, pregnancy and menopause. Milk and milk products are the best source of calcium.

Recommended Dietary Allowance of Calcium

Men: 600 mg/day

Female: 600 mg/day


Recommended Dietary Allowance of Iron

Men: 17 mg/day

Female: 21 mg/day

## Water

It is vital for life. Although water is not a nutrient, there would be no life without water. One should have adequate amount of water. Lack of it can lead to acidity and water retention. Approximately six to eight glasses of water are needed to keep your body hydrated.

This is a brief summary of the quality and quantity of food one must have on a daily basis. 

# HAND IN HAND WITH IDA MUMBAI



DentCare Clear Aligner CDE programme  
@ Hyatt Regency, Mumbai on 23<sup>rd</sup> July 2017



# Keys to Success with Porcelain Veneers



**Dr. Pankti Patel**  
Cosmetic Dentist  
Ahmedabad, Gujarat, India

Cosmetic dentistry and “smile makeovers” have gained great momentum in the modern world, with the change in perceptions for boosting aesthetic appearance. This has led to a significant increase in the number of patients seeking porcelain veneers in recent years.

Porcelain veneer is a conservative alternative to full coverage restorations, for improving the appearance of anterior teeth. It is a shell of tooth colored porcelain material bonded to the tooth structure. Porcelain laminate veneers were invented in 1928 by Dr. Charles Pincus, a dentist from California.

#### **Keys to successful Porcelain veneer therapy**

- ✦ Patient selection
- ✦ Tooth preparation
- ✦ Choice of laboratory
- ✦ Cementation technique



### Patient Selection

Veneer treatment cannot be done in every case. Therefore, case selection is very important. The patient's chief complaint and history plays a very important role in treatment planning for porcelain veneers. After combining the patient's expectation with smile analysis, the dentist will present the patient with the potential final outcome of the treatment.

### Indications

- ⇨ Stained or darkened teeth
- ⇨ Enamel hypocalcification
- ⇨ Spaces between teeth
- ⇨ Incorrect shape of a tooth
- ⇨ Chipped teeth

### Contraindications

- ⇨ Bruxism and parafunction
- ⇨ Compromised periodontal health
- ⇨ Lack of enamel (highly fluoridated teeth)
- ⇨ Patients with high caries index
- ⇨ Unstable occlusion



### Procedures

#### Diagnosis and treatment planning

During the first visit, a complete radiological and photographic documentation of the patient is collected along with shade matching. An alginate impression is also taken for preliminary wax-up and mock-up procedures. Impressions are poured in type IV dental stone and mounted on a semi-adjustable articulator.

Tooth preparation for veneer treatment is one of the least invasive procedures. Success of the porcelain veneer is highest when the restoration is bonded to enamel rather than to dentin.

Diagnostic wax-up / mock-up assist in the planning of the desired outcome. Wax-up will allow the making of putty index

for provisionalization and reduction guide for the tooth preparation process.

Wax-up should have the final contour and form of the tooth, so that when it is transferred into the patient's mouth through putty index in the form of mock-up made from bisacryl temporary material, the patient should be able to appreciate the preview of their desired appearance.

The mock-up will facilitate accurate and conservative reduction of the tooth. Spot etching is done in the center of the tooth on the labial aspect. Avoid etching near the final veneer marginal area, as this area of bisacryl will easily flake off, facilitating better margin placement. Bonding agent is then applied, followed by light polymerization. Bisacryl is loaded into the matrix and seated in the mouth. Excess flash is trimmed off with composite trimming round tip carbide burs to prevent damage to tooth structure. Then it is polished and the patient is allowed to wear this for a few days.

Once accepted by the patient, the crown preparation is started on the mock-up itself to minimize the tooth reduction. The reduction will be done in such a way to cement the veneer horizontally and not vertically.



Labial reduction not exceeding more than 0.5mm is done with the help of a depth cutting bur. The depth grooves are marked with pencil to ensure contrast with the remaining tooth structure. Then the coarse diamond bur is used till the depth of pencil marks on the whole facial surface. Incisal reduction is done in the same way as that of on labial side.

The tooth is evaluated to see whether any mock-up material is still there to be removed. The margins are then prepared with a definitive chamfer finish line. Margins should be either equigingival or supragingival. The sofex disc is used on the facial surface to blend the three planes of reduction and to round off the corners of incisal edge, to prevent stress on porcelain.

The benefit of this technique is that only minimal tooth structure is removed and the tooth preparation is done entirely on the enamel. This is the key to success of porcelain veneer bonding.

### Impression

Following tooth preparation, a small diameter retraction cord is placed in the gingival sulcus to obtain adequate gingival displacement. It is left in place to limit the flow of fluid while taking impression. A high quality impression material is used to record the details of tooth preparation.

### Cementation

Rubber dam is advisable for adequate isolation. Hydrofluoric acid etching and ceramic primer procedure are done on the porcelain veneer after trial in the patient's mouth. Adequate etching of the tooth with 37% phosphoric acid for 20-30 seconds is done followed by copious rinsing with water. Bonding agent is applied on the




dried tooth as per manufacturer's instructions. Do not polymerize the bonding agent.

Light cure resin veneer cement is used to cement the porcelain veneer and the residual remnants of cement are removed with a probe and no.12 surgical blade. Finally, flossing is done properly in interproximal areas and then the margins are finished and polished.

### Choice of Laboratory

Communication between the dentist and dental laboratory is paramount to successful veneer treatment. Photographs play a very important tool in communicating

with lab technicians. Technology is ever changing and plays a vital role in the production of good dental prosthesis.

A good laboratory, which keeps on investing and advancing with technology to meet the requirements of the clients, is to be chosen. Digital scanning, 3D printing and exceptional milling units represent a few advancements in dental labs. There should be efficient and certified lab technicians for manufacturing veneers who can understand the client's expectations. The final outcome of any dental prosthesis depends on the quality of material used by the laboratory. 

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ECONOMY DC  
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FLOOR MOUNTED SINGLE ARM

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# Effects of Tobacco Cessation and Oral Cancer

**N**on communicable diseases are a “slow moving catastrophe” with the potential to overwhelm all countries unless decisive action is taken to address their causes as described by Dr. Margaret Chan, the Former Director-General of World Health Organization (WHO).

Tobacco use is one of the risk factors common to four main groups of Non-communicable diseases (NCDs) i.e. Cancer, Cardiovascular Diseases, Diabetes and Chronic Lung Diseases.

According to the World Health Organization estimates, there were 100 million premature deaths due to tobacco use in the 20<sup>th</sup> century and this

number is expected to rise to 1 billion in the 21<sup>st</sup> century if the current trend of tobacco use continues.

## **Targeted Populations**

Certain groups of population are vulnerable to become the victims of tobacco. These include the poor, the young and women. The prevalence of tobacco use among men, all over India has been reported to be very high, exceeding 50% and women from most parts of India use smokeless tobacco. High prevalence of tobacco use, in different forms, is also reported among school going adolescents who take up this habit due to peer pressure.





**Dr. Kaveri Hallikeri**  
Professor and Head



**Dr. Biji Babu**  
Post Graduate Student

Department of Oral and Maxillofacial Pathology  
S.D.M College of Dental Sciences and Hospital  
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### Hazards of Tobacco Use

Tobacco smoke is an aerosol containing more than 4000 substances; more than 50 known to be carcinogenic. These include polonium 210, benzene, formaldehyde, lead and cadmium. Hazards of tobacco use are the following:

#### A) Health

Tobacco causes at least sixteen different types of cancer. Tobacco use is known to cause several cancers of the oral cavity, throat, lungs, stomach and kidney. Smokeless tobacco causes hypertension and heart disease. Smoking is an independent risk factor for diabetes. Smoking in pregnancy is associated with a number of conditions that are hazardous to the health of both mother and child and they include:

- Ectopic Pregnancy
- Miscarriages
- Preterm Delivery
- Low Birth Weight
- Sudden Infant Death Syndrome

Workers engaged in tobacco cultivation suffer from an occupational illness known as green tobacco sickness (GTS), an acute form of nicotine toxicity resulting from absorption of nicotine through the skin.

#### B) Environment

Tobacco cultivation leads to clearing of forests, cutting of fuel wood for curing and use of forest resources for packaging; thus damaging the environment. Tobacco depletes soil nutrients at a very fast rate and displaces the indigenous

flora and fauna; thus making the soil a source of pests for other crops.

#### C) Passive Smoking (Second Hand Smoke)

Tobacco imperils the health of active smokers and those around them who breathe the smoke. Second Hand Smoke is responsible for at least 600,000 deaths a year among non-smokers, with more than six in ten deaths due to heart disease. Although only about 20% of the world's estimated 1 billion smokers are women, nearly half of deaths from Second Hand Smoke occur among adult women and over a quarter, among children under the age of five. Children and infants are especially vulnerable to the effects of Second Hand Smoke.

The toxins present in the smoke coat the surfaces of the rooms, materials and the smoker's belongings and are sometimes referred to as **Third-Hand Smoke**.

#### Initial Screening and Diagnosis of Cancer

Cancer screening aims at detecting cancer before symptoms appear in both tobacco users and non-tobacco users. These include blood and urine tests, in addition to various medical imaging techniques like Computed Tomography from the skull base to diaphragm and many more. Screening can be of the following types like universal screening, mass screening or population screening and selective screening.

These tests must be effective, safe, well tolerated with acceptably low rates of false positive and false negative tests. Dentists and ENT Specialists accidentally come across such precancerous lesions when the patients approach them

**Smokeless tobacco causes hypertension and heart disease**

seeking relief for some other diseases.

#### Signs and symptoms of oral precancer /cancer

- ⊙ A mouth sore that fails to heal or that bleeds easily.
- ⊙ White / red patch in the mouth that persists.
- ⊙ A lump / thickening or soreness in mouth, throat and tongue.
- ⊙ Difficulty in chewing or swallowing food.

#### Diagnostic aids for initial screening are:

- Vital Staining
- Oral Brush Biopsy
- Velscope
- Light-Induced Fluorescence Endoscopy (LIFE)
- Optical Spectroscopy
- Diffuse Reflectance Spectroscopy
- Chemiluminescent Light
- Molecularly Targeted Optical Contrast

#### Treatment of Cancer and Associated Problems

Most treatment plans include surgery, radiation therapy and chemotherapy. Other modalities involve biological therapy (a treatment that helps your immune system fight cancer). Some cancers respond best to a single type of treatment while others respond better to a combination of treatments.

Quitting smoking improves the prognosis for people with cancer. Within five years of quitting, the chances of one getting cancer of the mouth, throat and oesophagus reduces by half, whereas after ten years of quitting, the risk of mortality from cancer drops again by half. People who continue smoking after diagnosis raise their risk for future cancers and death.

#### Prevention is Better than Cure

Individual based abstinence plays a vital role which includes pharmacotherapies and they are:



- a. Agents that appear to decrease craving – Bupropion, *Selegiline*, *Nortriptyline* etc.
- b. Agents that are used to substitute the nicotine – nicotine gum, nicotine patch, nicotine inhaler, nicotine nasal spray etc.


Nicotine Replacement Therapy (NRT) provides a slow and steady supply of nicotine in order to relieve craving and withdrawal symptoms and is associated with quit rates of about 23% as against 13% with placebo.

#### Conclusion

Quitting tobacco smoking for one to four years reduces the risk of developing head and neck cancer, with further risk reduction at 20 years or more. For alcohol use, a beneficial effect was seen only after 20 years or more of quitting.

A meta-analysis study found that smoke-free legislation was associated with a lower rate of hospitalizations for cardiac, cerebrovascular and respiratory diseases, besides the reduction in preterm births and hospital attendance for asthma.

The cessation of tobacco use has led to a substantial fall in the incidence of leukoplakia and other precancerous lesions implying a reduced risk for oral cancer. India should aim at achieving at least a 30% reduction in the prevalence of tobacco consumption by 2020 and a 25% reduction in tobacco-related mortality by 2050.

However, a comprehensive tobacco control program which combines high levels of passion, planning, performance and perseverance has a good chance of accomplishing these goals or even bettering them. 



# Be active and healthy lads!

**Y**outh is the inspiration of today and the promise of tomorrow. Hence, they occupy a pivotal position in this new era. Empowering today's youth will pave the way for a more sustainable future for generations to come.

The youth being vibrant and dynamic, needs more stamina and concentration than other age group. Youngsters tend to have more stress and tension in this competitive world. To overcome these challenges, keen attention is required.

As there is a saying "a healthy mind in a healthy body", all young people should give importance to their health. Many studies have revealed that young people eat more fast food than any other age group. This eating habit has developed into an addiction for them, which unfortunately fades away their health gradually.

An important factor behind fast food addiction is skipping meals, especially breakfast or lunch, which tempts one to choose unhealthy food.

Another fact is today's life style. The youth cannot lead a life without smart gadgets which, in turn has made every important thing in their life vanish, mainly family relationships and healthy habits.

## Measures to improve the quality of life

- ⇒ Never skip your meals.
- ⇒ Include fruits and vegetables in your diet.
- ⇒ Drink 2 liters of water daily for detoxification.
- ⇒ Avoid junk food.
- ⇒ Minimize sugar intake.
- ⇒ Reduce the consumption of beverages.
- ⇒ Use the social media wisely.
- ⇒ Exercise regularly.
- ⇒ Maintain a positive attitude and punctuality in life.

**Being healthy and fit is not a fad or a trend. Instead, it is a lifestyle.** 

# Retreatment in Endodontics



**Dr. Ruchika Jindal**  
Consultant Endodontist  
Bengaluru, Karnataka, India

**R**oot canal treatment (RCT) has gained popularity over the years as a safe and conservative alternative to extraction. This may be attributed to better training of the dentist in addition to the availability of necessary advanced equipments and materials required.

RCT has been successful in meeting patient expectations since the procedure involves minimal / no pain, complete infection control and rehabilitation of one's own tooth to last a lifetime.

RCT may be performed either by a general dentist or by an Endodontist.

RCT has a success rate of 85% to 97%. In my clinical practice as an Endodontist, I have come across 20% to 25% cases that require re-treatment (Re-RCT) due to failure of RCTs that have been performed elsewhere.

## Why does RCT fail?

The reasons for failure of RCT may be categorized as follows:

### Inadequate technical knowledge

- ⊙ Lack of thorough knowledge of the pulp chamber, root canal anatomy and its possible variations.
- ⊙ Improper reading of the radiograph and failure to detect an extra root / canal (radix paramolaris or radix entomolaris).





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## Practice, precision and usage of right tools and equipment are important factors for successful RCT

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An experienced dentist can easily locate a second mesiobuccal canal in the upper first molar; a middle mesial canal in the lower first molar; and a third canal in the upper first premolar with their practiced "endo-eye". After all, one can only see what one knows!

### Procedural errors

1. Failure to estimate correct working length.
2. Perforation, Deviation from the glide-path, Canal transportation, Instrument separation or Ledge formation typically due to usage of large or inflexible instruments during the initial stages of treatment.
3. Insufficient canal preparation (enlargement and irrigation) resulting in residual tissue.
4. Vertical root fracture due to
  - Excessive dentin removal during coronal enlargement or post placement.
  - Preparing an oval canal to round shape.
  - Calcium hydroxide dressing left for a long time in the canal.
5. Incomplete obturation or underfilling leading to bacterial leakage and reinfection.
6. Post treatment bacterial leakage due to:
  - Absence or late placement of permanent filling / crown after the RCT procedure.



- Bad sealing of canal orifices.
- Bad sealing of distal and the mesial margins in proximal cavities.

Practice, precision and usage of right tools and equipment are important factors for successful RCT.

### Hygiene factors

- ⊙ Non-isolation (salivary bacterial contamination) of the tooth.
- ⊙ Use of improperly sterilized instruments.

Either cotton rolls or rubber dam should be used for isolation. Instruments should be sterilized using a standard autoclave procedure.

Irrigants, such as sodium hypochlorite, saline and chlorhexidine should be used for adequate cleaning and disinfection of the canal. The most effective irrigation regimen is 5.25% NaOCl (freshly

prepared) for 40 minutes. Irrigation with 1.3% NaOCl (Sodium hypochlorite) or 2.5% NaOCl for the same duration is ineffective in removing *Enterococcus faecalis* from infected dentin cylinders.

Using 17% EDTA (Ethylenediaminetetraacetic acid) as a chelating agent efficiently removes smear layer (which may contain bacteria and their by-products) from the root canal walls. 2% Chlorhexidine (liquid and gel) is effective against most endodontic pathogens. Antibacterial intracanal medicaments like calcium hydroxide should be used wherever indicated.

### Environmental Factors

1. Lack of good quality or standardized instruments.
2. Failure to do routine check-up for cyclic fatigue / due to "wear and tear" of the instruments.

3. Not using fine or appropriate instruments.
4. Unable to practice four-handed dentistry due to untrained assistants.
5. Focus on "quick fix" treatments / cost recovery.
6. Poor cooperation from the patient resulting in poor prognosis.

A good clinical set up and working environment along with a skilled dentist and trained assistants play an important role in making the treatment successful.

### Classification of Retreatment Cases

Depending on the symptoms, Retreatment cases can be classified as:

1. Asymptomatic cases (with or without peri-apical pathology): These are generally diagnosed during routine check-up or X-ray examination.
2. Symptomatic cases (with or without peri-apical pathology):

In such cases, patients complain of discomfort, sensitivity, pain or pus discharge.

### Treatment Protocol

Not all failed cases are ideal candidates for retreatment. Before taking up a case for retreatment, one must consider the following factors:

1. Patient assessment / Case selection: It is important to consider the symptoms, peri-apical pathology, strategic positioning of the tooth and post-endodontic rehabilitation of the tooth.
2. Communication to the patient: Patient should be informed about the difficulty involved, stepwise procedure of disassembly of the restoration / post / crown, renegotiating the canals, mid-treatment complications, the time involved in treatment and prognosis.
3. Reference to another specialist: If a periodontal or a prosthodontic involvement is anticipated, a specialist dentist should be consulted


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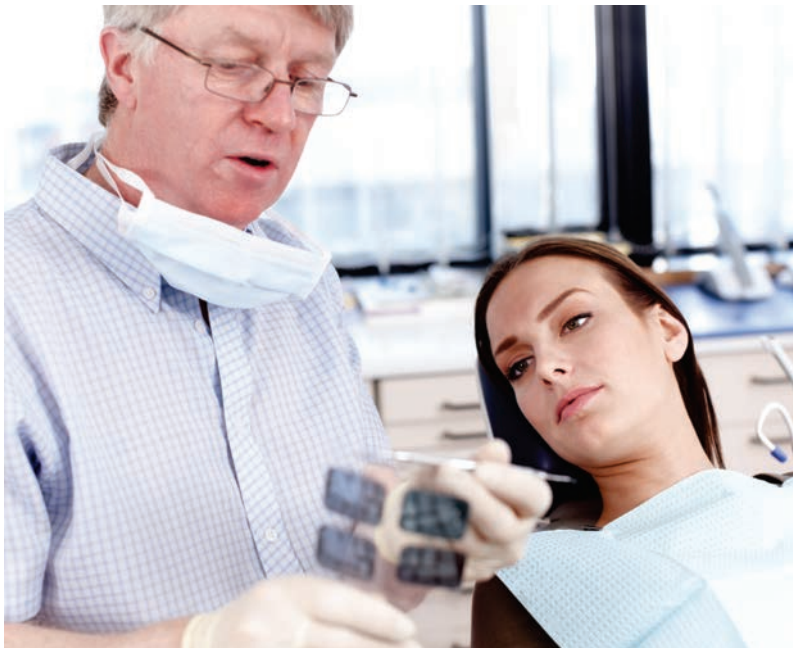
**If a periodontal or a prosthodontic involvement is anticipated, a specialist dentist should be consulted before beginning the treatment**

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before beginning the treatment.

4. Treatment Charges and Alternative treatment plan: Retreatment must be performed by an experienced and a skilled endodontist with proper armamentarium. Charges should be based on the skill, the chair-side time and the instruments required during the treatment. An alternative line of treatment should also be discussed with the patient, especially if the patient is unwilling for retreatment. The treatment plan should be such that there is minimal risk of short term failure.

Above all, the priority of the dentist should always be to provide comfortable and convenient treatment, which has long term benefit to the patient. 



# My Experience With Dentcare



**Dr. Ronin Abraham**  
Dental Practitioner  
Kannur, Kerala, India

Dental Practitioners and Dental Labs are two sides of the same coin. They are complementary and coexist. Dental Practitioners can lead a successful professional life if they obtain standard prosthetics readily and the dental lab can thrive well if their prostheses are vended out rightly.

I got to know about DentCare from my father. He, being a dental practitioner, entrusted prosthetic work with DentCare. He was really satisfied with their quality as well as timely service.

When I started my practice, I had many a doubt about crowns and bridges. To erase skepticism, I resolved to visit DentCare. Accordingly, a day was fixed for my trip to Muvattupuzha. On arriving at the Lab, I was ushered in cordially. I was escorted to the lab and a well versed technician elucidated myriads of manufacturing processes and showed me sophisticated devices; 3D scanners and printers; sintering and

‘*DentCare has created an identity in service rendering and in quality, using world-class materials and state-of-the-art manufacturing process*’

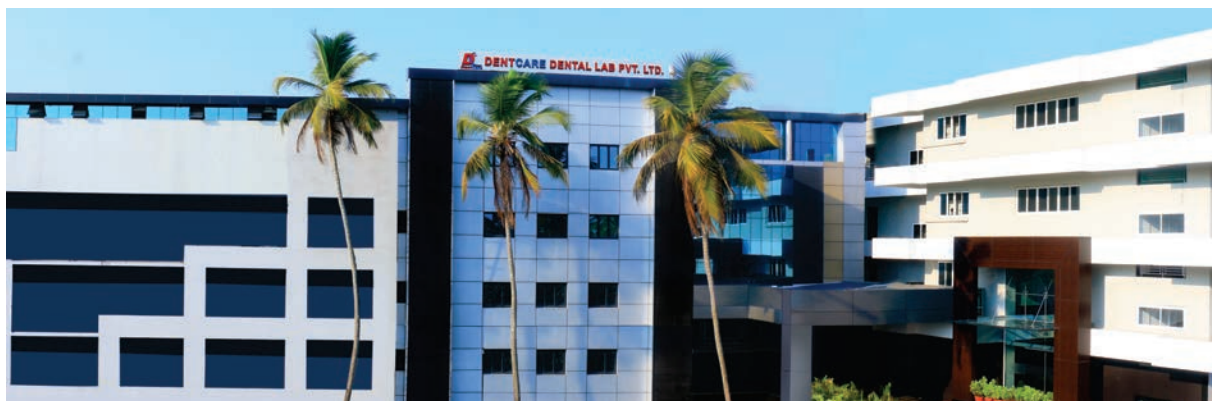
milling machines. On completion of the visit, I returned home, after being provided with a sumptuous meal.

My perception about Dentcare changed drastically with the visit.

Dentcare is well refined and well defined, striding neck and neck with the best dental labs in the world; maintaining professional expertise and propriety; setting own standards in precision and quality management; keeping themselves abreast with evolution, adopting new technology and innovation.

Success of a dental practitioner depends on the quality of dental prosthetics and their timely receipt. DentCare has created an identity in service rendering and in quality, using world-class materials and state-of-the-art manufacturing process.

As a dental practitioner, I am really obliged to DentCare. 



# DENTCARE CLEAR ALIGNERS

*DentCare Clear Aligner is unique as it is customized for the patient's teeth*

## PRODUCT PROFILE



**D**ental braces are now entering a brave new world of comfort and ease with DentCare Clear Aligners – a series of transparent aligners to realign teeth.

DentCare Clear Aligners make the cut as they serve as invisible, removable splints born out of thin, transparent plastic. They can be easily changed every two weeks, sparing users the tedious task of heavy maintenance.

### **Comfort Ensured – Quality Guaranteed**

We have put forward the most sought after treatment solution to counter the drawbacks of dental braces!

Each DentCare Clear Aligner is unique as it is customized for the patient's teeth.

Remove them while eating or drinking. They permit pursuit of

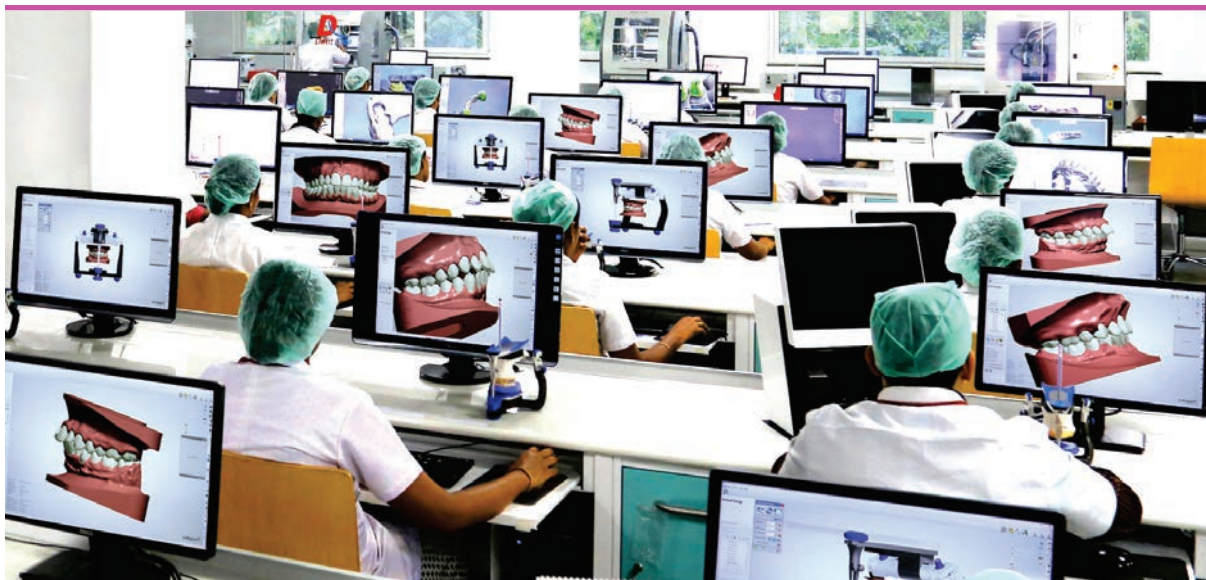
one's own regimen of oral hygiene measures. There is absolutely no need to spend long hours at the clinic negotiating conventional brackets and wire adjustments.

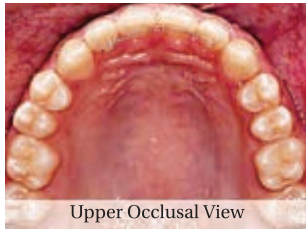
Patients and dental clinicians stand to gain numerous valuable hours. Consequently, the dental clinician also gets to spend quality, value-added time with each patient.

During treatment, each DentCare Clear Aligner is replaced following the prescribed sequence as the teeth move – little by little, week by week – until they have gradually straightened to their final position.

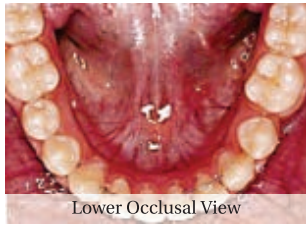
With DentCare Clear Aligners, the final outcome of the treatment may be visualized with the aid of 3D virtual simulation and a treatment plan can be formulated accordingly.

DentCare has on board a panel of expert Orthodontists who are proficient to guide us through the toughest of cases. The panel would





Upper Occlusal View



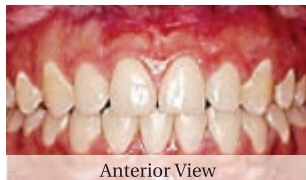
Lower Occlusal View



Left Lateral View



Right Lateral View



Anterior View

“Intraoral scans of upper and lower teeth may be emailed to [aligner@dentcare dental.com](mailto:aligner@dentcare dental.com) with details of the patient and name of the doctor”

verify and ensure correctness during the plan formulation stages itself and thus ensure that the required result is achieved.

The product also comes with clear cut instructions for both the clinician as well as the patient.

### Advantages for the patient

- ✦ No metal brackets or wires which may cause irritation or friction inside mouth
- ✦ Almost invisible and transparent splints
- ✦ Hygienic as it can be taken off easily to clean
- ✦ Easily removable—does not affect eating habits
- ✦ Simple and precise planning process
- ✦ Highly biocompatible
- ✦ Hassle free speech and smile
- ✦ Blends with lips and cheeks
- ✦ Final result can be visualized in 3D before treatment starts
- ✦ Fewer and shorter appointments required
- ✦ Time saving correction of misplaced teeth
- ✦ Replacement aligners at minimal cost

### Indications

- ✦ For diastema closure
- ✦ For correction of minor to moderate front teeth crowding
- ✦ To correct deep bite
- ✦ To correct over jet
- ✦ To correct open bite

**Prior to beginning the process of planning and designing a DentCare Clear Aligner, a perfect understanding of the patient's chief**

***complaint and the proposed treatment plan is absolutely necessary.***

For better treatment planning and optimal clinical result, detailed information is critical. Complete evaluation is provided by DentCare to help achieve better execution of cases.

### Acceptable Impressions

To proceed with the CAD / CAM procedure for processing an order of a custom made DentCare Clear Aligner, both upper and lower models of the patient's dental arches along with bite registration are required.

Intraoral scans of upper and lower teeth may be emailed to [aligner@dentcaredental.com](mailto:aligner@dentcaredental.com) with details of the patient and name of the doctor.

You may also choose to send impressions with Polyether but impressions with Polyvinyl Siloxane (PVS) are preferred. A one-step heavy/light body impression is the most efficient option for a DentCare Clear Aligner case.

### Acceptable Bite Registration

Bite registration is absolutely necessary to reproduce the inter-arch relationship. This would help to establish the patient's occlusion in the laboratory and ensures that the treatment is carried out within the parameters of the initial occlusion.

A bite registration silicone is the material of choice for bite registration as it gives excellent details of the occlusal contacts without rebound effect.

### Digital Case Records

In order to proceed with the designing, it is mandatory to send us digital records of the patient. Ideally, a CBCT or CT is preferred. However, an Ortho pantomogram (OPG) along with Lateral Cephalograph would suffice.

## Photographs

Photographs as mentioned below are mandatory.

### Intraoral

1. Upper occlusal view
2. Lower occlusal view
3. Left Lateral view
4. Right Lateral view
5. Anterior view

### Extraoral

1. Lateral view
2. Anterior view

## How does it work?

The treatment consists of a revolutionary system which integrates the latest software and 3D CAD / CAM technology.

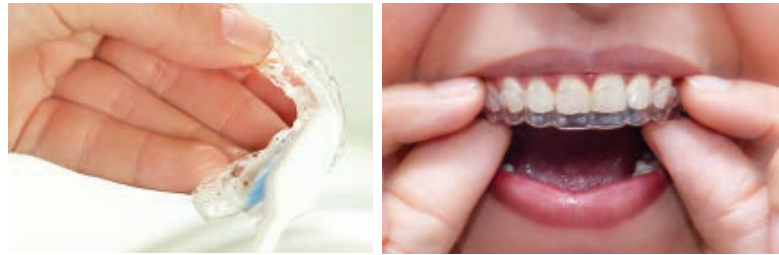
The patient models are scanned with a high-tech 3D digital scanner. The software assists in analyzing the treatment requirements and thus supports in planning and mapping out all intermediate stages necessary to reach the predetermined goal.

The number of aligners required is ascertained. At each transitional stage, only minor tooth movement is effected and assists to progressively reposition the teeth. After two weeks, the next set of aligners should be used. The treatment process thus advances accordingly.

Each DentCare Clear Aligner must be put on for at least 20 hours a day for two weeks. This slowly pushes the teeth into positions planned by the dentist. Treatment time varies based on the complexity of the tooth movement planned.

## When should you wear it?

We recommend wear of a DentCare Clear Aligner everyday



as per the dental clinician's instructions or as instructed in the DentCare Clear Aligner schedule. Remove it only when you eat, drink or brush / clean your teeth. When you are not wearing the Aligner, place them in the case provided.

## How do you wear them?

- ☞ Soap-wash your hands thoroughly before handling the Aligners.
- ☞ Handle only one Aligner at a time.
- ☞ Never bite the appliance into place. Bites can distort or break your Aligner. Always use fingers to place the Aligners in your mouth.
- ☞ When inserting, gently push the Aligners over your front teeth. Then apply pressure with your fingers, on top of the

left and right molars until they snap into place.

- ☞ Make sure each Aligner is fully seated. There should not be any space between the edge of the tooth and that of the Aligner. If the Aligner is not settled in place, teeth will not move properly and the next Aligner will be even further off. This can waste many weeks of treatment.

## How do you remove them?


To remove DentCare Clear Aligners, pull them off simultaneously on both sides of the back teeth first and then gently lift from the front teeth.

## How do you clean them?

Clean the Aligners prior to each insertion using the soft brush provided and rinse them with water.

## Things to remember

- ☞ Never expose the Aligners to heat; they will get distorted and become loose fitting.
- ☞ Never forcefully bend or twist the Aligners to adjust or get them off.
- ☞ Never boil to clean or sterilize the Aligners.
- ☞ Never remove the Aligners unless it is very necessary.
- ☞ Never use any sharp object to remove the Aligners.
- ☞ Never use denture cleaners to clean your Aligners.
- ☞ Never soak the Aligners in mouthwash.

With DentCare Clear Aligners, you have on board with you, an innovative product from the lab partner most trusted by thousands of dental clinicians worldwide. 

# Laparoscopy – A Solution for Infertility

**I**nfertility is an alarming problem in the world. A huge number of couples suffer from infertility. A lot of reasons contribute to the problem, including medical conditions and lifestyle changes. Most of these conditions can be diagnosed and treated.

The space for a baby amidst the wedlock is splendid! Arrival of a baby adds meaning and color to the life. But today, a lot of couples wait in stress for such a boon. Infertility problems are increasing now-a-days than in the past. It is found in both genders.

Lifestyle as well as food habits promote infertility. Heredity also has a role, in many cases. Both physical and mental problems cause a chance for the same. Diabetes, Heart disease, problems with blood vessels, sexual inability including impotency etc. can contribute to the hike. Hormonal disorders, liver and kidney diseases, alcohol consumption, smoking, sequel of some medicines etc.

may also lead to infertility.

Males as well as Females could be the victims of infertility. Endometriosis, ovulation disorders, low quality ovum, Polycystic Ovary Syndrome, fallopian tube abnormalities, hormone imbalance etc. are the problems pertaining to women. Impotency, Priapism, absence of ejaculation, Metabolic Syndrome, low quality sperm etc. are the common disabilities found in men.

## **Solution for Infertility through Laparoscopy**


Laparoscopy is a modern surgical procedure. This is performed by putting one, two or three incisions through which the laparoscope and other instruments are inserted into the abdomen. Laparoscope is a light weight optic fiber tube attached with a light and camera. While performing laparoscopy the doctor can visualize the internal organs and can correct the abnormalities inside through surgery.



**Dr. Cyriac Pappachan**  
Consultant Fertility Specialist  
and Laparoscopic Surgeon  
Pathanamthitta, Kerala, India

The doctor recommends laparoscopy only if it is determined that infertility could only be corrected through surgery. Endometriosis, fibroid tumors, ovarian cyst etc. can be corrected by this method. Ectopic pregnancy is another problem which could also be corrected, through laparoscopic surgery. The patient is able to return home on the same day after surgery. The patient can indulge in normal daily routines and work after a very few days of rest.

Laparoscopy is comparatively cheaper. Most modern treatment technologies like In vitro fertilization (IVF), Intracytoplasmic sperm injection (ICSI), Micro – Tesa, Vitrification and Laser Hatching are some of the options available for infertility treatments.

Other than these, the facility to store ovum, sperm and even, the embryo is also available to overcome the stress and worries of becoming late from this bliss. 





making work easy



## LAY: ART PRACTICALLY PERFECT

I am fascinated every time I use my lay:art style brush. The brush tip has remained pointed for more than a year already, which allows me to do different kinds of ceramic work with just one brush size.

To begin with I layer the complete dentin and incisal tooth area. After setting up an enamel wall I can layer thin mamelons, secondary dentin and fine enamel crack lines, as well as transparent layering variations. When layering the posterior tooth, the pointed brush tip of the lay:art style brush Nr.4 allows a nice

occlusal layering with all anatomical cusps and their dependents.

Therefore it is possible to work quickly and easily with just one brush. As the fine brush tip of the lay:art style brush stays pointed and thin for over a year, I see no competition to this brush on the market. I have had to replace other brushes after only one month!

For my daily work, as well as for my work as a dental course trainer I use the ceramic mixing tray lay:art tropic pro xl. With its 17 mixing wells



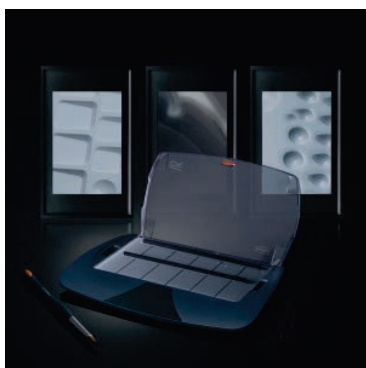


it has enough space for opaque dentin and dentin materials, various incisal and transparent materials, as well as effect materials, in addition I have a great overview of all ceramic materials on my mixing tray. The two glazed mixing wells that I use for mixing liquids are also very useful.

Together with the lid ceramic materials stay moist for several days.

The re-writable foil in the lid of the mixing trays is very useful for the courses I give. By labelling in the lid all course participants can easily follow what ceramic materials I am layering with. The ergonomic design of the lay:art mixing tray casing is also very convenient to rest your hand on while working. Additionally the integrated brush compartment is a well thought through feature.

All in all the lay:art tropic pro is ideal for daily use and the main advantages of both the lay:art brushes and mixing trays are equally important for the ceramic courses that I teach.



Find out more @ [www.lay-art.de](http://www.lay-art.de)

**Renfert**  
**WORKFLOW GUARANTEE**  
 3 year guarantee  
 10 year spare parts service  
 Activity guarantee



*Carola Wohlgenannt was born in 1975, she completed her education as a dental technician in 1995 after 3 years as an apprentice at the Dental Studio Selke in Stuttgart/Germany. In 2002 she completed her MDT in Freiburg/Germany with the best results of her year. She specialized in metal and full ceramic restorations as part of the dental lab "oral design Thilo Vock" in Stuttgart/Germany until 2004, before working with Jogi Kern in Beverly Hills/Los Angeles. Since 2005 Carola Wohlgenannt has been working independently as a Master Dental Technician with her Team Wohlgenannt Zahntechnik in Dornbirn/Austria.*

# My Experience with DentCare Clear Aligners



**Dr. Sam Paul**  
Consultant Orthodontist and  
DentCare Clear Aligner Advisor  
Kalpetta, Kerala, India

As an Orthodontist, I am especially interested in Orthodontic correction of facial deformities besides full mouth implant therapy, soft tissue lasers and smile designing. I was really complacent with my profession. Since aligners were not marketed well enough, I had only superficial know-how about aligner therapy during my initial stage of practice. Therefore, the imperativeness of aligner therapy was unheeded. But, my perception about this therapy changed drastically due to an incident that took place way back in 2008.

At that time when I was practising in Bombay, a lady of fame came to my office who asked for different options for correcting her malaligned upper front teeth. Without thinking further, I told her about the options in vogue; conventional orthodontic braces, ceramic braces and lingual orthodontics in addition to cosmetic treatment.

To my surprise, she asked me, whether I do aligners. Since, I was not so acquainted with aligner therapy; I casually started talking about aligner, highlighting its drawbacks. I felt that I could inculcate and convince her with my explanations. But, what amazed me is that I saw the same lady after one year wearing aligners.

Speaking honestly, this incident was an eye-opener. We cannot take the patient for granted. Time has gone when the doctor says something and patients believe in the same. If I do not provide the therapy, someone else will do it. Therefore, I made up my mind to learn more about Aligners.

I burnt the midnight oil and attended training courses on aligners in India and even abroad. After mastering the art, I started doing aligner therapy, somewhere around 2009. At that time, aligner therapy was very monotonous and cumbersome, as 3D technology was not associated with it and as a result, I had to do the procedure manually. For example, if a patient needed a series of 25 aligners, 25 models have to be duplicated manually.

Around 2014, when DentCare came up with Clear Aligners, I was really amazed and happy about it because I knew that, as in the case of any other product, Clear aligners from DentCare - which is the best and largest dental lab in Asia - will also be excellent. Since my visit to DentCare, I have the perception that they are highly professional and completely transparent. Their doors are open to perceive state-of-the-art manufacturing at any time and also to witness whatever material they are using and whatever procedure they are going around with.





Wearing DentCare Clear Aligners

So far, I have done around 20 to 23 cases using Clear Aligners from DentCare. From my limited experience, I can tell you frankly that aligner is an excellent orthodontic tool and an alternative for patients who want to do orthodontic treatment but do not want conventional braces.


With aligners, we have to remember two things. One is case selection. We cannot do all cases with aligners. For example, if a patient comes with a complaint of missing tooth, different treatment options—Removable Partial Dentures, Fixed Partial Dentures or Implants are suggested. All these given options will not be suitable for every case. For instance, implant therapy which may be good for one but may not be suitable for another patient. In a similar way, aligner therapy cannot be done in every case.

Always seek the advice of the Orthodontist whether the case is suitable for aligner therapy or not. Only a specialist will be able to guide and help for proper case selection. After that, take the impression, photos and Orthopantomogram (OPG) of the patient and send it to the lab. Then, it will be very easy to find out the treatment plan and also to provide the aligner precisely as expected. Therefore, case selection is most important and an inevitable part of aligner therapy.

Another thing about aligners is that, we should ensure that the patient is wearing them. Usually, during the conventional orthodontic treatment, after completing the case, we give retainers to wear. 90% of patients do not wear them. The patient is supposed to wear it for achieving the expected result. Similarly, for clear aligners, the patient should wear them as recommended by the dental practitioner or else the expected end result cannot be achieved.

DentCare Clear Aligners have special advantage compared to the aligners of other companies. They are being manufactured using the 3Shape Scanner—the best Model Scanner in the world apart from utilising the best Designing Software along with the best 3D model Printing System. More than that, DentCare Clear Aligners are manufactured with materials imported from Germany. DentCare sends the 3D model along with the aligners, free of cost. This enables the practitioner and the patient to see the transition of the tooth, in each stage and even the end result in advance.

DentCare also provides a kit along with aligner, containing: Wear Schedule— instructions for wearing the aligner, Patient Manual as well as a Cleaning Brush and Box for keeping the aligner when it is not in use.

DentCare Clear Aligner is manufactured after taking the opinion of a panel of Orthodontists from India and abroad. 



# Dental Implants:

## The Best Choice for Tooth Replacement??



**Dr. Benley George**  
Vice Principal  
Pushpagiri College of  
Dental Sciences  
Thiruvalla, Kerala, India

A dental implant is an artificial tooth root that is placed into your jaw bone to hold a replacement tooth or bridge. Dental implants may be an option for people who have lost a tooth or teeth due to periodontal disease, an injury or any other reason.

Like tooth roots, dental implants are secured in to the jawbone and are not visible once surgically placed. They are used to secure crowns (the parts of teeth seen in the mouth), bridgework or dentures by a variety of means. They are made of titanium which is lightweight, strong and biocompatible.

### Types of dental implants

1. **Endosteal** (in the bone): This is the most commonly used type of implant. The variants include screws, cylinders or blades which are surgically placed into the jawbone. Each implant holds one or more prosthetic teeth. This type of implant is generally used as an alternative to bridges or removable dentures.

2. **Subperiosteal** (on the bone): They are placed on top of the jaw with the post of metal framework protruding through the gum to hold the prosthesis. These types of implants are used for patients who are unable to wear conventional dentures or having minimum bone height.

### The Best Candidates

Adequate jaw bone is needed to support the implant and the best candidates should have healthy gum tissues that are free from periodontal disease.

### The Worst Candidates

Dental implants are not indicated in patients with

- Heart diseases affecting the valves (valvulopathy).
- Recent infarcts.
- Severe cardiac insufficiency; cardiomyopathy.
- Active cancer.
- Certain bone diseases (Osteomalacia, Paget's disease, Brittle bones syndrome etc.).
- Certain immunological diseases, immunosuppressant treatments, clinical AIDS, awaiting organ transplantation.
- Certain mental diseases.
- Strongly irradiated jaw bones (radiotherapy treatment).
- Treatment of osteoporosis or some cancers by bisphosphonates.
- Children: not before the jaw bones have stopped growing (generally 17-18 years).



### **Examination**

Dental implants are intimately connected with gum tissues and underlying bone in the mouth. Initially a dentist will take X-rays of your jaw, paying special attention to the area which is to be treated. A general review of these X-rays will enable the dentist to know whether additional teeth or areas require treatment (whether for implants or otherwise).

Many dentists will use a panoramic radiograph, which shows all the bone and teeth in the upper and lower jaws, to diagnose other dental and bone pathology. These can also be used to assess the height of available bone and the relation

and position of other anatomic structures; all are considered as part of the overall analysis for implants.

### **CT scan**

The most accurate form of X-ray imaging currently available is CT (Computed Tomography) scan, commonly known as a CAT (Computerized Axial Tomography) scan. Medical CT scanners are often used by dentists to diagnose, analyse and devise treatment plans for implant surgery; so you may be referred to a radiologist during diagnostic process.

There are other types of CT scanners known as Cone Beam CT scanners (CBCT) that can

provide similar images and can be converted to the many commonly used software programs available for analysis by your dentist. CBCT scanners emit significantly less radiation.

Both types of CT scanners provide very detailed, three-dimensional images that can accurately measure the height and width of available bone, as well as locate the nearby anatomic structures (such as the maxillary sinuses and mandibular nerves) that the surgeon should be mindful of during surgery.

Other diagnostic studies are required to proceed properly with implant treatment. A full periodontal examination is

required to determine if gum disease is present and, if so, devise an effective treatment plan. A complete tooth-by-tooth examination is also necessary to identify and treat properly, any active cavities or other dental pathology.

Dental impressions are needed at various stages of treatment to assess the status of your bite and proceed with proper restoration of the implant(s) in coordination with the rest of your entire dentition.

Photographs may also be used to help plan your treatment as well as record your progress.

### Replacement of lost tooth using implants

**Single Tooth Replacement:** Immediately after an implant is placed or after a period of healing, an abutment is attached to the implant. This is a device that “abuts” or joins the implant to a tooth form called a crown, which replaces the tooth part you see in the mouth. It will hold a custom-made crown that

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If all your upper teeth are missing, a minimum of four implants may be used to support an upper denture

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is fabricated by a dental laboratory to match your existing teeth. The custom crown is cemented or screwed onto the abutment to keep it in place permanently. Once the crown is in place, it will be indistinguishable from your natural teeth.

**Multiple Tooth Replacement:** As in the case of single tooth replacement, temporary healing caps or abutments may be placed on multiple implants until the healing phase is complete. After healing, permanent abutments are attached to the implants. They can be attached to custom-made crowns or bridgework fabricated by a dental laboratory to match your existing teeth. Finally, the custom bridge, which will replace multiple teeth, is cemented or screwed onto the abutments. The teeth have been replaced without

disturbing the healthy teeth adjacent to them and bone loss has been halted.

**Removable Implant-Supported Tooth Replacement:** If all your lower teeth are missing, depending on the design of the removable restoration, two to six implants may be used to support a lower denture. If all your upper teeth are missing, a minimum of four implants may be used to support an upper denture. Removable dentures are often used to replace bone and gum-tissue loss thus providing support for the facial skeleton, lip and cheeks.

A new denture can have attachments that snap or clip it into place on the implants or a custom made, milled bar can be fabricated to create additional strength and support for the restoration. Design variations are often related to your bone density and number of implants present; your dentist will discuss these options during your consultation. A significant advantage of a removable denture is that it facilitates cleaning of the dental implants.

### Maintenance of Implants

Proper care of your implants is important for their continued function and good health. Though they are not subject to cavities like our natural teeth, they can be causative of developing gum inflammation and even infection and bone loss, if not properly maintained.

Whereas localized inflammation and infection around your teeth is known as periodontal disease, a similar process can occur around implants and is known



as peri-implantitis. Routine tooth brushing and flossing should be done to maintain a good oral hygiene.

### **Dental Check-ups**

Your "new teeth" will require periodic check-up by your dentist to ensure that the surrounding gums and bone are maintained and kept healthy. For this, periodic X-rays are required to evaluate the level of bone around your implants. The dental restorations attached to your implants will also require periodic check-ups by your dentist to verify whether they are secure and function properly.

It is not uncommon for the screws that attach your restoration to the implants or abutments to loosen from time to time. This usually entails removal and cleaning of the dental restoration and its replacement with new or re-tightened screws.

Similarly, if your dental restoration is cemented to the underlying implant, it may also loosen periodically. If this happens, your dentist will need to remove the restoration, clean it, ensure that it is fitting as designed and re-cement it to the implant.

While these are minor complications, even though inconvenient, they should not be ignored. Allowing the restoration to remain in place when it is not properly attached to the implant can create more significant problems.

Implant crowns and other prosthetic (false) tooth replacements are to be made remarkably in fail-safe systems. They are removable and replaceable (only by your dentist), so that if damage or wear necessitates replacement, this can be accomplished




without affecting the implant or attachment to the bone.

Nevertheless, implants do require maintenance. It is important to practice good daily oral hygiene, including brushing and flossing, to control bacterial biofilm. It is also important to see your dentist and dental hygienist. Special instruments are necessary to clean dental implants that will not damage their metal surface beneath the gum tissues. Your dentist will need to monitor your implants to make sure the integrity of the osseointegration is stable and that the implant crowns, bridgework, or dentures are functioning adequately.

### **Success rate of dental implants**

Despite decades of clinical and

scientific research, dental implants do not have a 100% success rate. However, the success rates have improved dramatically since the introduction of dental implant surgery and the dental profession can proudly report success rates of dental implants well above 90%.

Dental implants have brought a great revolution in dental care which has resulted in dental replacement equivalent to a natural tooth. They are a long-term solution. Traditional, tooth-supported dental bridges usually last for five to seven years or with proper care, for more than 10 years; but at some point they may need to be replaced. While dental implants may need periodic adjustments, they can last a lifetime if properly placed and cared for well. 

# Decisions Make Life...







**Binu Joseph Vadasserikara**  
Motivational Speaker  
Pathanamthitta, Kerala, India

**D**ecision making is the process of choosing one out of two or more options. The decisions we make today determine our tomorrow. The right decision leads us to victory and the wrong one leads us to failure. We need to know how to choose what is right.

Life decisions can be divided into:

1. Short term decisions
2. Long term decisions

Let us discuss more about these.

### Short term decisions

Every day we take so many decisions. But we forget that these decisions are the ones which lead us. Situations occurring as a result of short term decisions might finish off within a few moments but its results will linger on in our lives for long. We should be careful in making short term decisions as they affect our life.

The decision to eat something special for a meal is a short term decision but what will happen if we eat poison for that meal?

Our short term decisions include our day to day steps. We do each thing after deciding. But many a time we regret when we land in trouble due to our wrong decisions. This can include the

use of wrong words, situations arising from phone calls/ journeys, relationship with our friends etc.

One day Danny met his friend unexpectedly. They were meeting after so many days. So, they decided to make the moment enjoyable. They chose to go to a wine shop to have some drinks. But after some time Danny felt that something was wrong, his eyes went blank and he felt some uneasiness in the body and soon became unconscious. They were soon taken to a hospital. On examination, it was found that they had consumed poisoned alcohol. After some time both of them succumbed to their medical condition.

What went wrong? Meeting his friend after so many days or consuming alcohol in a wine shop? Danny could have decided to enjoy the moment in some other way than entering a wine shop. What to do, the short term decision in his life became a long term decision.

Two types of short term decisions

1. Decision on self
2. Decision on others

Many fail to take right decisions about themselves. Some short term decisions that we take can impact others' lives too. For example, the pleasure of a person can gift AIDS to someone else.

What do you need to be careful about?

- ☞ Be careful while taking hasty decisions.
- ☞ Have a clear conscience while taking each step.
- ☞ Do not take decisions emotionally.
- ☞ Know God's will.
- ☞ Know the ultimate result of your decision.

### Long term decisions

The decision taken after thinking for years and months is called long term decision and such decisions will have results lasting for a long term or a life time.

Many fail to take right decisions about themselves. Some short term decisions that we take can impact others' lives too





Some of these are

1. Education
2. Work
3. Friends

### **Education**

If you think that education is only for students, then you are wrong. Education is something people will have to obtain till the end of their lives. Some gain knowledge out of education while others just learn for the sake of learning.

The ultimate aim of education is to gain knowledge. In olden days, people were not aware of post graduate degrees; for they were available only in faraway places. Now children are learning computer even from the first grade.

Only those who have set their goals will be able to go further. There are people who move in a wrong direction due to their

belated decision making. Though education will not make a man perfect, it is a step towards perfection.

To Sum up

- ✦ Choose a subject which you enjoy.
- ✦ Choose a subject or field in which jobs are easily available.
- ✦ Make sure to gain expertise in a skill.
- ✦ Take help from others too.

### **Work**

The work that one chooses is an important decision. Those who have more than one skill set should concentrate on one work. If you try to concentrate on more than one work, there are chances of failure. Instead of doing many things, do one in an excellent way. Be an expert in what you do.

Choose a work according to your interest and area of studies. One of the major crises that we face now is joblessness. But more than joblessness, the confusion to choose a right job is the real problem. So choose a job according to your interest which will avoid all the confusion.

Hard work is necessary in every type of work. Every work has its advantages and disadvantages. We usually feel that the other side is greener and running after green pastures will end up in trouble. It is always better to stick on to what we do. But if you feel that your decision was wrong, then considering your age, health and time, you can try for a new field.

Things to be taken care of while selecting a job

- ✦ Understand the work.
- ✦ Be proud of your work.
- ✦ Concentrate on one work.



Many times we do not choose friends, but as time passes by they become our friends. A true friend will stand along in times of troubles and struggles

- ✦ Choose the work according to your knowledge and taste.
- ✦ Work faithfully and punctually.
- ✦ Do not be trapped in others' persistence.
- ✦ Take expert help before you decide.

### Friends

Friends are an asset. People those who do not have friends are like animals. Everyone dreams to have a friend who will understand and stand along. But the question is how we can find a good friend. Many times

we do not choose friends, but as time passes by they become our friends. A true friend will stand along in times of troubles and struggles.

If we had such friends then we would have a society without defects. But we forget that friendship has different faces. Many people fall into a deep pit due to friendship. When a friend falls into a pit, what should we do? Do we not help him? But, today our society easily cheats their friends for selfish motives.

Friends may change as we grow old or according to the

circumstances. We might have so many friends in our life. They might cheat and desert you.

While you choose your friends

- ✦ Think well before you choose your friends.
- ✦ A good friend will agree with you and guide you.
- ✦ Do not disclose your secrets without understanding your friends well.
- ✦ The attitude of big and small is not good in a friendship. Accept each other.
- ✦ The condition in friendship is integrity; not wealth and beauty. **DC**



# Conduct Disorder: The Seeds Of Crime

Conduct disorder in children is characterized by repetitive and persistent patterns of behavior that involve violation of the basic rights of others or severely breaking social norms/ rules



**Sarath Sundar**  
Clinical Psychologist and Hypnotherapist  
Government District Hospital  
Palakkad, Kerala, India

**C**onduct disorder in children is characterized by repetitive and persistent patterns of behavior that involve violation of the basic rights of others or severely breaking social norms / rules.

Children and their character formation, including education, is always a very serious concern of many parents. Sending children to the top ranked schools and admitting them to a curriculum that guarantees success, despite the financial difficulties, have all shown how important the children are to their parents. Parents are even ready to take their children to anybody who claims that he / she can set every problem of their children right, from faith / magical healers to professional / scientific healers.

In the prolonged fight for bringing up kids into ever-shining and successful individuals, most parents are likely to face many threatening hinderances from health to wealth. Conduct disorder is such a difficult condition that definitely impedes the strategies and struggles of parents in making their kids as successful beings.

### Conduct disorder

Yes as the term indicates, conduct disorder includes a set of behavioral and emotional problems which often begins during childhood. Children and teenagers with conduct disorder are most often found as having lower fear levels. They may appear to highly disobey rules and behave in a socially unacceptable way. They may express aggressive, destructive and deceitful behaviors that result in violation of the rights of others. Parents and adults may consider these behavior issues as “bad” or delinquent, rather than regarding it as a psychological or psychiatric illness.

### Case vignette

John, a 12 year old boy, whose parents are well educated and employed, is the elder of two brothers. He is six years older than his brother and frequently engages in fights with the latter. He often yells out that he does not like his brother and has lost every

pleasure after this brother was born.

For the last four to five years he has been highly hostile to his parents especially to his mother as she always interferes with and tries to rectify him. He never likes his mother advising him and thinks that he is correct and others are at fault. He never admits his mistake; rather blames others that it is their mistake. He has started showing a sharp decline in studies since his fourth standard and teachers started complaining about his fights and adjustment problems with his classmates. His class teacher also warned his parents about his playing truant (stay away from school without permission) with some boys older than him.

Following this, his mother started to observe him more closely and found that he smokes and sometimes had the smell of liquor. He became less fearful of and quite negligent towards others. Similarly his arguments and quarrels with mother started increasing; besides, him showing no concern for his father.

More than that, one day his mother got a phone call from the nearby police station informing that her son was caught by Shadow Police Officers for roaming around the streets during school hours with some





older group of boys with notorious background. Learning about his nature at home and in school, the police officers suspected a conduct disorder in him and advised the parents to take him to a clinical psychologist.

### Symptoms of Conduct Disorder

Based on age and severity of the illness, the symptoms of conduct disorder do vary. If your child is persistently displaying one or more of the following behavioral patterns, he / she may be having conduct disorder.

- Aggressive behavior: behavior that threatens or causes physical harm including fighting, bullying, cruelty to others or animals, using weapons and forcing another into sexual activity.
- Destructive behavior: involves intentional destruction of property such as arson (deliberate fire-setting) and vandalism (harming another person's property).
- Deceitful behavior: includes repeated lying, shoplifting or stealing.
- Violation of rules.

Along with this, most children with conduct disorder are irritable, have low self-esteem and throw temper tantrums. Some may use illicit drugs and alcohol. They are unable to sense how their behavior can hurt others and generally have little guilt or remorse. These behaviors are often referred to as antisocial behaviors and is often seen as the precursor to

antisocial personality disorder, which cannot be diagnosed until the individual is 18 years of age.


### What are the causes?

The exact cause is still unknown, but research findings do support the role of both biological and environmental factors contributing to the development of conduct disorder. When we focus on the family of majority of children with conduct disorder, we can find some or other forms of pathological family dynamics, such as parental disputes, alcohol or other drug abuse in the family, a dysfunctional family setting, child abuse etc.

### Treatment

Treating conduct disorder is a very difficult task as the drop out rate is very high and the poor support system and pathological family dynamics often creates a block in the course of intervention.

Many factors, such as the age of the child, the severity of symptoms, the child's cooperation etc. are to be taken into account to initiate any kind of treatment for conduct disorder. The combination of psychotherapy including behavior therapy and medication are often considered as the best method for treating conduct disorder like any other mental health problems.

Remember: If Conduct disorder in children is left untreated, they will gradually begin to engage in more serious violations like running away from home or skipping school, in addition to developing aggressive behavior. 

# Magical Black Garlic



**G**arlic is one of the most commonly used ingredients in Indian cuisine.

But have you heard of Black Garlic?

It is a uniquely tasty food with a soft texture, almost like a jelly. The sweet and tangy taste makes it exceptional in every sense. The smell of garlic is stinky, but this is not the case with black garlic.

### **How is it made?**

Black garlic is aged by fermenting fresh garlic bulbs under a humidity controlled high temperature environment that has a range from 140 to 170 degrees Fahrenheit (60 - 77°C) for 14 to 40 days. The most interesting fact is that there is no microbial action involved in this process.

This process will convert the stinking sulfurous compounds to odorless substances which do not have the unpleasant smell of garlic.

### **What is its Secret?**


The aging is purely natural, i.e. by enzymatic

reaction. The unstable compounds of garlic, such as Alliin are converted to stable ones through aging. The black color is due to the production of dark pigments—Melanoidins.

### **Impressive health benefits**

Black garlic has remarkably greater antioxidant load including **S-Ally cysteine** which is a proven factor for cancer prevention.

The oxidative stress caused by increased blood sugar levels in those suffering from type 2 Diabetes can be reduced with black garlic. It also does good to strengthen the immune system, thereby reducing nasal or skin allergies.

Studies conducted at Chonbuk National University Hospital in South Korea revealed that those who ingested black garlic extract have a reduced risk of heart attack. It can help reduce inflammation and even help reverse the damage of alcohol on the liver as well as remove fat that is accumulated in the liver, thanks to its potent antioxidant properties. 

# BEYOND THE DRILLS







**Dr. Sailee Bhambere**  
Dental Surgeon  
Pune, Maharashtra, India

**D**entists in developing countries often complain that the public at large is not adequately aware about their dental health and hygiene and this in fact, is not a lie. With the healthcare field becoming more of a combined stratagem, we need to ask ourselves, “Are we ready to don the role of a new age dentist?”

As a fellow Dentist, I totally understand the responsibilities and burdens of keeping our knowledge abreast as well as our practical skills updated; unlike, physicians who generally have to keep up with only one of these. However, as we have taken up this difficult task, it makes sense only if we recognize and utilize our potential to the fullest. Taking care of certain things like these will help us in the long run.

### **1** Come out of the notion that our arena extends only up to the “teeth”

For years, we have been treating those 32 members and maybe, it has got us and our patients to believe that “we are here only for those teeth”.

Dentists play a far more important role than just treating those cavities.

### **2** Look at the adjoining areas too

When we examine our patients, do not look only at their teeth or areas of concern. Take an extra minute to observe other parts of their mouth, the throat and the lymph nodes.

Keen observation of a dentist might help diagnose a number of harmful conditions and diseases like oral cancer or sometimes even HIV infection at an early stage. This would ultimately prove to be of great help to patients.

### **3** Gain Management skills

This is 2017 and we are no more the geeky doctors sticking to our chairs and performing treatment. The practice today involves multitasking and we need to

do more than a few roles flawlessly.

For our Dental office, we are the founder, the chairperson, the manager, the operator, the staff head and sometimes the electrician and plumber too. So, we have got to learn all of these apart from management skills as well. Managing and extracting the best out of our staff requires skill.

### **4** Keep whetting your Dental skills


This has been told to us time and again. But, somehow, over a period of time, as our practice becomes older and successful, we tend to slacken, forgetting that like every other professional skill, our dental skills and technology too, needs to be continuously upgraded. So, let us whet our dental skills keeping in pace with the advancements in the field.

### **5** Look at our practice as more than just a practice

Whether we agree to it or not, our practice is just like a business. There will be “profit” or “loss”. We should market ourselves and also look at our human resources. So, we really have to broaden our perspectives beyond just the clinical zone. All these will make a difference between a “practice” and “a thriving practice”. More than that, the one part we need to be careful about is doing it all ethically and without harming the patient.

### **6** Finally, take a breather!

Probably the most underrated part of dentistry today is the “stress”. With growing competition and high work stress, it has become even more important to relax often. Take vacations; spend time with your family; adopt hobbies, meditate, exercise and do whatever that keeps you at bay from any type of unhappy feelings/ environment.

All these will help alleviate our stress and rekindle enthusiasm to perform dental treatment in a better way. 



# Can Difficulty in Urination in Men Lead to Renal Disease?



**Dr. Harigovind Pothiyadath**  
Consultant Urologist  
(Transplant, Lap, Laser, Robotic Surgeon)  
Kozhikode, Kerala, India

**M**en above 50 years of age should think twice before ignoring urinary problems. The symptoms of prostate gland problems may have links to cancer or non-cancerous conditions. However, both are curable in the early stages.


As men aged age, a basic reflex such as urination can start causing problems. The prostate gland slowly grows bigger with age and puts pressure on the urethra, which may slow down the urine flow. The common symptoms include interrupted sleep because of the need to urinate at night and an extreme urge to urinate. Men may have trouble in urinating apart from the urge to go more frequently, yet find the flow to be weak.

Prostate gland problems that increase with age are often called as Benign Prostatic Hyperplasia (BPH); an enlargement of the prostate. It is one of the most common non-cancerous swellings of the prostate.

The prostate, which is derived from the ancient Greek word – prostates (the word means “one who stands before”, “protector” or “guardian”), is a

**Prostate gland problems that increase with age are often called as Benign Prostatic Hyperplasia (BPH); an enlargement of the prostate. It is one of the most common non-cancerous swellings of the prostate**

walnut sized gland that surrounds the urethra (the tube through which urine passes) located between the bladder and the penis. Severe BPH can cause serious problems over time, including urinary tract infections, bladder or kidney damage, bladder stones and incontinence. An enlarged prostate can also cause sudden and complete bladder blockage. Catheterization and further treatment are required, if you are unable to urinate at all.

The evolution of Holmium Laser Enucleation of Prostate (HoLEP) surgery using 100W laser has revolutionized the treatment of BPH. Previously, electrosurgery – Transurethral resection of the prostate (TURP) was the treatment of choice for BPH. The only limitation of laser prostate surgery is lack of technical experts in this procedure. This procedure can be done in cardiac patients without stopping blood thinning agents like aspirin; thereby reducing the cardiac risk for surgeries. Prostatic obstructions can lead to renal failure called obstructive uropathy. So check your prostate; treat your prostate and save your kidneys. 



**A**nxiety is an emotion felt by everyone at one time or another. It is a condition that is usually forged over time, through a combination of experiences and genetics. But in certain cases, it is possible for something other than your life history to cause the development of anxiety.

Stress is how the body reacts to and handles harmful situations. Stress, whether physical or emotional, affects many people. Though our bodies are designed to handle small amounts of stress, ongoing or prolonged exposure to stressful situations can be harmful to us.

Temporomandibular Joint (TMJ), commonly known as the jaw joint is one of the most complex joints in the body. Controlled by an intricate network of muscles, ligaments and other soft tissue, these joints can become misaligned and result in muscle spasm and nerve pain.

Stress and anxiety are thought to be a factor in Temporomandibular Disorder (TMD). Even strenuous physical tasks, such as lifting a heavy object or facing stressful situations, can aggravate TMD due to overuse of jaw muscles; especially clenching or grinding teeth (bruxism).

Something that affects a jaw joint can lead to anxiety. TMD is actually a fascinating disorder that causes a host of different symptoms which may lead to the development of anxiety. However, it should be noted that TMD does not often cause anxiety; instead it makes anxiety worse.

## STRESS, ANXIETY AND TMJ: Are they all Linked???

TMJ disorder causes anxiety, as a result of many different unique symptoms. They are:

⊙ **Dizziness:** TMJ disorder causes many unusual neurological symptoms and affects the nerves and blood vessels that go through the back of the jaw. One symptom is dizziness, which can come suddenly bringing a considerable amount of distress.

⊙ **Headaches:** Morning headaches have a similar symptom. It is not just the headache that causes stress, but the fact that you commence

your day with a headache. Studies show that poor commencement of a day can actually create anxiety over time.

⊙ **Pain:** TMD causes various types of pain in the jaw and the face. Long term symptoms of pain seem to be associated with development of anxiety due to the way your body responds to the stress of consistent pain.

⊙ **Clicking:** TMJ disorder can also cause a clicking feeling in the jaw. These are unrelated symptoms: those who are not



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aware of having TMJ disorder may find them surprising and frightening.

⊙ **Bruxism / Clenching:** TMD may also cause excessive clenching of teeth during day or at night. Many patients present with occlusal wear of facets of teeth which is a classical symptom of bruxism. Besides, it can also be caused by muscular hypertrophy.

⊙ **Tinnitus:** Tinnitus is a ringing in the ear which most people overlook; in certain cases, it can be loud enough to disrupt sleep or cause distractions. Many people with tinnitus appear to have anxiety; although scientists are unclear why.

⊙ **Other Neurological Symptoms:** TMJ disorder, due to stress on the nerves, can also cause numbness in the arms or in the legs, tingling in the fingers and involuntary muscle movements, besides impaired thinking.

Arguably these are the most troublesome symptoms of TMJ disorder; but not everyone experiences them. These are just some of the symptoms that may lead to the development of anxiety.

In fact, the greatest risk is not anxiety, but anxiety attacks. Panic attacks are an anxiety disorder, often caused by unknown physical sensations. So those with TMJ disorder who experience unknown dizziness and other symptoms may also develop panic attacks. If a single attack is experienced once, you are at far more risk for future panic attacks.

### What should you do?

For effective treatment, proper diagnosis is important. If the exact causes and symptoms of TMD are not clear, diagnosis of these disorders can be confusing. At present, there is no widely accepted standard test available to identify TMD correctly. Other dental


**Panic attacks are an anxiety disorder, often caused by unknown physical sensations**

conditions, such as a toothache or sinus problems can cause similar symptoms. Scientists are also exploring how behavioral, psychological and physical factors combine to cause TMD.

In about 90 percent of the cases, the description of symptoms combined with a simple physical examination of the face and the jaw helps provide useful information for diagnosing these disorders.

Your dentist may also take X-rays and make a cast of your teeth to see how your bite fits together or may request specialized X-rays for the TMJ. Your complete medical history may also be reviewed.

The dentist will recommend the type of treatment needed for your particular problem or refer you to a Specialist, such as Maxillofacial Surgeons or Facial Pain Experts. You may also want to check with your physician about TMD-type symptoms.

Most of the time, patients are diagnosed with both stress and TMJ. In such cases, one treatment plan is not enough: the doctor may come up with different options. Usually a patient has to go through physiotherapy sessions – massages and other chiropractic treatments – along with psychological therapy. One of the best therapies is behavioral therapy. This not only helps relieve stress, but also helps get rid of clenching or bruxism. Surgery is only recommended in severe cases. 


A Hypnosis and mindfulness training session will help reduce acute pain in patients, according to a study report published in the *Journal of General Internal Medicine*, the official journal of the Society of General Internal Medicine.

Researchers at the University of Utah, USA, have conducted a study on hospital patients who were suffering from intolerable pain or “inadequate pain control” due to illness, disease or surgical procedures. The patients were assigned to one of the three mind-body therapies: mindfulness, hypnotic suggestion or pain coping education.

After a single session of mind-body therapy, there was reduction in patients' pain and anxiety, in addition to increasing their feelings of relaxation. Besides, patients' desire for pain killers/opioid medication decreased significantly.

Multi-week mindfulness training sessions are an effective way of reducing chronic pain.

The new study added a new dimension, as brief mind-body therapies can give immediate relief to people suffering from acute pain.

“These brief mind-body therapies could be cost-effectively and feasibly integrated into standard medical care as useful adjuncts to pain management,” said Eric Garland, lead Author of the study and Associate Dean for Research at the University of Utah's College of Social Work. 

# Therapy That Relieves Pain




## HIGH HEADACHE FREQUENCY: A CONTRIBUTOR TO EXCESSIVE DAYTIME SLEEPINESS?



A study report recently published in *Cephalgia*, an International Magazine of Headache, reveals the fact that there is an association between Excessive Daytime Sleepiness and High Frequency of Headache.

Espen S. Kristoffersen, PhD from Akershus University Hospital in Norway and his colleagues conducted a cross-sectional survey and established the fact

that high frequency of headache contributes to excessive daytime sleepiness and that the burden of severe pain, not the specific condition, is associated with excessive daytime sleepiness.

The researchers could however, not establish, any association between excessive daytime sleepiness and Chronic Migraine or Chronic tension-type Headache. 

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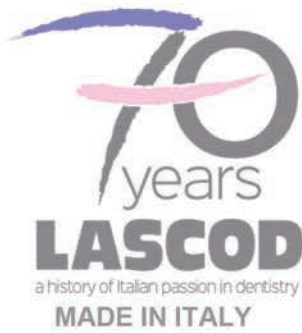
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19 - 20 August <b>Suntec, Singapore</b>	4 <sup>th</sup> Asia-Pacific CAD/CAM and Digital Dentistry Conference and Exhibition <b>Suntec Singapore International Convention and Exhibition Centre</b>	☎ + 65 6392 2806 💻 <a href="http://www.cappmea.com">www.cappmea.com</a>
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21 - 23 September <b>Zagreb, Croatia</b>	14 <sup>th</sup> Annual Meeting of European Society of Cosmetic Dentistry <b>Sheraton Zagreb Hotel</b>	☎ + 3851 4886 729 💻 <a href="http://www.heartofesthetics.eu">www.heartofesthetics.eu</a>
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