

Vol: 05. Issue: 11. August 2019

INDIA ₹50, EUROPE €4, US \$5  
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# THE DENTCARE

Your Monthly Health Care Magazine

*Brightening smile the world over*

**A Heart-Healthy Diet**

**Can Teeth Reveal  
your Age?**

**Tooth Whitening**

**Daring to be the Best**

An Exclusive Interview with

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# THE DENTCARE

Your Monthly Health Care Magazine

Brightening Smile the World Over

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EDPRESS

INTERNATIONAL  
YOUTH  
Day

*Dear Reader,*

How does August augur for you?

This remains to be seen given the complexities and uncertainties that accompany modern day living. Unpredictable would be the key word to describe life in general, in the present context.

We decided to infuse the Spirit of Youth into The DentCare this season, with the intention of adding more than just a mouthful, to invigorate the sluggishness that is gradually 'finding home' in our mindsets.

I am sure you will agree that the latter holds poor promise for the wellbeing of the human soul.

The Teeth could reveal your age, though.

On offer are a plethora of options available to brighten your smile @ DentCare. That is our guarantee to retain your youthful disposition provided you keep oral health optimal.

The Dental Assistant deserves ample tribute for adding wealth to dental health. Unsung heroes they remain!!

Keep a check on your diet to remain heart-healthy and ward off the threat of Cancer, as well.

Ignore all of these at your own peril.

A thought that deserves introspection, if I may express,

"How prepared are you to create Heaven on Earth?"

You could be, if you Dare to become the Best.

Yours truly,

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

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**CAUTION:** When viewing the techniques / procedures, theories and materials that are presented, you must make your own decisions about specific treatment for patients and exercise personal professional judgment regarding the need for further clinical testing or education and your own clinical expertise before trying to implement new procedures.

Printed and published by Mr. John Kuriakose on behalf of DentCare Dental Lab Pvt. Ltd. and printed at Fivestar offset Printers, Nettoor, Cochin - 40 and published at DentCare Dental Lab Pvt. Ltd., Nas Road, 130 Junction, Muvattupuzha, Ernakulam, Kerala, India - 686661. Edited by Prof. (Dr.) George P. John.



# CREATING HEAVEN ON EARTH



**A** family with the rhythmic anthem of unity and togetherness is the institution that helps mould and bring out great and exemplary personalities. The first environment where a child wakes up to consciousness is that of the home.

The personality and behaviour of the parents play a vital role in moulding the cognitive skills, ethical values, and social behaviour of a child. A child learns essential life lessons from the family and hence, every parent should set a positive example to enable their child to inculcate noble virtues in life.

It has been found that children from broken families are prone to psychotic break down and often engage in immoral activities. On the other hand, a child coming from a family full of love and mutual respect for one another will always be an asset to the family and society.

When a person violates the moral and ethical principles of a society or when the immoral action of a person offends social conscience, the root cause of this depraved behavior points towards poor upbringing and a disintegrated family background.

We are living in an era where the love, faith, and bond between husband and wife have been challenged due to many reasons, including emotional upheaval. The increasing number of divorces witnessed in today's world points to an ever-increasing disharmony in married life.

Let me take you to a story of a successful couple who have practiced some secrets like moral restraint to make their relationship stronger and enduring.

Richard and Clara had been married for more than 60 years. They had shared everything and kept no secrets from each other, except one. Clara had a money chest in her cupboard and cautioned her husband never to open or ask her about it. For all their years of togetherness, he had never asked her about the box.

One day Clara got seriously ill and the doctor said there was little hope for her recovery. She thought that it was the right time to let him know what was in the box and asked him to fetch it. Richard took out the box and brought it to her bedside. When he opened it, he found two knitted dolls and a stack of money amounting to \$95000.

He could not believe his eyes. He curiously asked her, "How did you get the dolls and this large sum of money?"

She answered quietly, "Just before our marriage, my grandmother told me that the secret of a happy marriage

was to never argue and added that if I ever got angry with you, I should just keep quiet and knit a doll."

Richard was too moved to fight back the tears. There were only two precious dolls in the box. He burst out with joy thinking that his wife had been angry with him only twice in all those years of conjugal life.

"Darling," he said, "What about the money? Where did it come from?"

"Oh Dear?", she said, "That is the money I made from selling the knitted dolls."

Discord in married life is not a rare phenomenon. When there is a war of words, it is better to face the situation with patience and tolerance. All these years, Clara could successfully control her anger. Whenever she felt annoyed, she gave vent to her anger by knitting a beautiful doll.

A family should be an abode of happiness and love. Every couple should maintain a deeper level of commitment and understanding between themselves. Often, minor changes in approach, attitude, and action can make the biggest difference in one's married life.

Bear in mind that you are born into your family and your family into you. As your child is emotionally attached to both parents, any marital discord will ultimately affect him emotionally and may even scar him for life. Hence, allow your children to grow as ideal individuals, fruitful to both the family and world.

May the Almighty pour out His blessings on your family to make it a Heaven on earth. ☺

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**Mr. John Kuriakose**

Managing Director

DentCare Dental Lab Pvt. Ltd.

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# Management of Oro-Craniofacial Abnormalities



Speech and Language Specialist, Otolaryngologist (Ear, Nose, and Throat Specialist), Audiologist, Anesthetist, Psychiatrist, and Counsellor.

Diagnostic modalities include Whole Body Computed Tomography (WBCT), Three-Dimensional Computed Tomography (3D-CT), Orthopantomogram, Cephalogram (an X-ray of the craniofacial area), Occlusal Radiograph, and Intraoral Periapical Radiograph.

Treatment to correct these abnormalities starts from Nasoalveolar Moulding (NAM) at birth; Cleft Lip Repair at 3 months of age and Palate Repair at 6 months; Primary Rhinoplasty (plastic surgery for correcting or reconstructing the nose) at 4 years; Speech Therapy from 5 years; Naso-Palato-Alveolar Bone Grafting at 9 years; Orthodontia from 13 years, Distraction Osteogenesis (a technique of inducing new bone formation by dividing a bone and applying tension through an external fixation device to lengthen the bone) at 14 years; Orthognathic Surgery (correction of occlusal abnormalities by surgical repositioning of the segments of the mandible or maxilla, containing one to several teeth) at 18 years; Final Rhinoplasty at 23 years; Cosmetic Corrections at 24 years, and Pharyngoplasty (Plastic surgery of the pharynx) at 25 years of age.

## Conclusion

Enormous literature is available on the different types of treatment modalities for the management of various types of Oro-Craniofacial abnormalities. The treatment usually starts at birth and ends in adulthood. The etiology, incidence and prevalence, diagnosis and treatment planning, including its modifications, vary in different parts of the world.

The most important aspect of the treatment is that it helps increase the level of confidence and quality of life of a patient. More than that, it will help him achieve better aesthetics as well as psychological and psychosocial well-being. ©

**I**ncidence of Oro-Craniofacial abnormalities has drastically increased over the past few decades. These abnormalities affect the physical, psychological and psychosocial well-being of a patient. Various strategies have been developed to diagnose and treat these deformities, which usually starts at birth and can extend even up to 25 years of age.

A multidisciplinary team approach; i.e., the involvement of experts from multiple medical and surgical specialties (disciplines) is a basic prerequisite for managing Oro-Craniofacial abnormalities.

The team comprises of a General Surgeon, Plastic and Reconstructive Surgeon, Oral and Maxillofacial Surgeon, Orthodontist, Pediatrician, Pedodontist,



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# How Prepared are you for Knee Replacement Surgery?





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**K**nee Replacement Surgery, also known as Knee Arthroplasty, is a surgical procedure to replace a damaged Knee. Since this surgical procedure can considerably impact your life, you should be emotionally and physically prepared for the procedure and its possible postoperative side effects.

A few things that should be kept in mind before setting a date for Knee Replacement Surgery are

### **Building your muscles and Range of motion**

Before Knee Replacement Surgery, a person is expected to do homework, such as

- ☑ Strengthening the muscles around the Knees to achieve faster, easier recovery after the surgical procedure
- ☑ Riding a bicycle a few months or weeks before the surgery or working with a Physical Therapist to expand the range of motion of the Knee joints

### **Building up the vital capacity of the lungs**

Increasing the vital capacity of the lungs is important, as it helps the body get an adequate amount of oxygen

it needs. A few simple strategies are

- ☑ Deep breathing exercises like Pranayama
- ☑ Breathing through an incentive spirometer, a medical device to improve the functioning of the lungs, to keep the lungs as healthy as possible

### **Maintain good personal hygiene**

Good personal hygiene practices can prevent the development and spread of various health problems and speed up recovery after the surgical procedure.

### **Health conditions to be considered before undergoing the surgery**

Some patients may have health conditions, such as Human Immunodeficiency Virus (HIV), Diabetes, High Blood Pressure, Hemophilia, Cancer, Bleeding/ Enzyme Disorders, etc., that require specialty consultations. They should consult a Physician / Specialist to keep the conditions under control so as ensure a smooth recovery after the surgery.

### **Building endurance**

Do simple endurance-building exercises as much as possible, as they can improve your recovery time after the surgical procedure.

### **Can exercise before the surgery improve recovery time?**

Strengthening the thigh and leg muscles before the operation will improve recovery time and return to routine, with less suffering, struggle, depression, and mood swings. Consultation with a Physical Therapist before surgery can be useful for a person.



### **Conclusion**

A visit to an Orthopedic Surgeon a couple of months before undergoing Knee Replacement Surgery, will help in becoming emotionally and physically prepared for the surgery, besides minimizing the possible side effects of the procedure. ©



# VERTICAL TOOTH FRACTURE: AN OVERVIEW

**V**ertical Tooth Fracture is the longitudinal fracture of a tooth, extending from the crown of a tooth towards its root. It may or may not extend onto the root.

Based on the severity, tooth fractures are generally classified into three: those confined to the enamel, those extending beyond the cemento-enamel junction into the dentine but not into the pulpal chamber, and those extending beyond the dentin-enamel junction into the pulp chamber involving all the three layers of the tooth.

Vertical Tooth Fractures may be further classified based on their extension from the crown towards the apical part of the root.

## Causes

Vertical Tooth Fracture may be caused by excessive force placed on the tooth, such as during the obturation phase of a Root canal treatment and compaction of dental fillings. Vertical Tooth Fractures most commonly occur in endodontically-treated or compromised teeth in the presence of excessive occlusal forces or dental trauma. In some cases, chewing down on hard food or objects can also cause Vertical Tooth Fractures.

## Clinical Presentation

Clinical presentation can vary to a very significant extent, depending on the site of the fracture and the time elapsed since its occurrence. Poor periodontal condition can also aggravate the symptoms associated with a cracked tooth.

All Vertical Tooth Fractures extending into the root are symptomatic and are accompanied by pain and sensitivity which is exacerbated while chewing. Sometimes, cold fluids or even a cold environment can make tooth sensitivity or pain worse. Patients commonly give a history of an unpleasant taste in the mouth or a foul smell emanating from a specific tooth or region of the mouth.

## Clinical Diagnosis

The diagnosis of a Vertical Tooth Fracture may be challenging. Most often, the clinical findings have to be correlated with the radiographic findings to draw a definitive conclusion. Sometimes, when the fracture extends onto the root, there may usually be a swelling associated with a narrow and deep pocket in the periodontium.

However, when the fracture is more towards the longitudinal centre of the tooth, there may not be any obvious clinical signs. In such a situation, the identification of a Vertical Tooth Fracture can be a challenge.





**Dr. Eric Mario Shailander A.**  
Consultant Periodontist  
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Clinical examination of a fractured tooth involves a thorough visual analysis to identify the fracture or rule out other possible conditions that can cause similar symptoms. Deep Dental Caries and an acute infection can also cause the symptoms similar to those of a Vertical Tooth Fracture.

Running a Periodontal probe along the surface of the tooth may help a Dentist detect a crack. When there is a crack, the sharp tip of the Periodontal probe may lock into the crack line of the tooth.

A Vertical Tooth Fracture can also be detected with Transillumination (a test to identify abnormalities in an organ or the body using a light). When the light is focussed from the opposite side of the tooth, it will be transmitted through the tooth. But, when there is a fracture, the tooth will not transmit the light.

If a patient is asked to bite onto a roll of cotton, the cracked tooth will wedge, which may cause pain in the fractured tooth, enabling a Clinician to identify the crack in the tooth. But, a periapical infection can also elicit a similar response; however, the nature and intensity of the pain may vary.

Applying and curing a coat of bonding agent or a bit of flowable composite may help momentarily seal the crack. If the patient is again asked to bite onto a roll of cotton, the cracked tooth will not elicit a painful response, helping to verify if the fracture line is sealed properly.

A more definitive diagnostic method to identify a cracked tooth is using a radiograph. However, it may not be always possible to draw a conclusive diagnosis using radiographs. In such a case,



**All Vertical Tooth Fractures extending into the root are symptomatic and are accompanied by pain and sensitivity which is exacerbated while chewing**

Cone Beam Computed Tomography (CBCT) may become necessary to arrive at a conclusive diagnosis.

### **Prognosis**

The prognosis of a vertically fractured tooth depends primarily on the extent of the fracture. The prognosis worsens as the fracture extends from the enamel into the dentine and pulp chamber. There are other factors that can determine the prognosis. An endodontically treated tooth, a partially impacted tooth, tooth with severe attrition, periodontally compromised tooth, and a tooth with extensive Dental Caries usually do not have a very favourable prognosis.

### **Management**

If the prognosis is unfavourable, a vertically fractured tooth is usually extracted. It is the best approach, as it can immediately alleviate the symptoms and prevent further complications.

When the prognosis is favourable, restoring the tooth to fully eradicate the fracture line would be sufficient. However, an endodontic intervention may become necessary when the fracture is severe or extensive.

### **Conclusion**

Diagnosing and treating a Vertically Fractured Tooth can be challenging and requires a lot of experience and a broad perspective. Patient counselling can go a long way in educating them about how to avoid such a situation. @



## FIBROMYALGIA

**F**ibromyalgia (FM) is a common and chronic syndrome that causes widespread pain and mental distress. It is estimated to affect 2.8% of people, with a female to male incidence ratio of approximately 9:1.

The exact cause of Fibromyalgia is unknown; however, it is believed to involve a combination of psychological, genetic, neurobiological and environmental factors. The genes causing Fibromyalgia are also associated with Functional Somatic Syndromes and Depressive Disorders.

The main symptom of Fibromyalgia is a widespread pain, which appears to result from a neurochemical imbalance, including the activation of inflammatory pathways in the brain, leading to abnormalities in pain processing. Other symptoms include debilitating fatigue, sleep disturbances, and joint stiffness.

Some people also report difficulty with swallowing, bowel and bladder dysfunction, numbness, and cognitive dysfunction. The pain may be localized, especially in the areas like the shoulders, neck, low

back, hips, etc. Not all people with Fibromyalgia experience all these symptoms.

A patient with Fibromyalgia has a lower threshold of pain because of the increased reactivity of the pain-sensitive nerve cells in the spinal cord or brain. Fibromyalgia is frequently considered to be a Stress-related Disorder. Chronic Fatigue Syndrome, Post-traumatic Stress Disorder, Irritable Bowel Syndrome, and Depression are the common stress-related conditions experienced by a person with Fibromyalgia.

A systematic review has revealed that there is a significant association between Fibromyalgia and physical and sexual abuse in both childhood and adulthood, Poor lifestyles, including smoking, lack of physical activity, and Obesity may increase the risk of developing Fibromyalgia.

### Diagnosis

There is no single laboratory test that can fully diagnose Fibromyalgia. To rule out the presence of

**Fibromyalgia is frequently considered to be a Stress-related Disorder**



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the other conditions that may mimic the symptoms of Fibromyalgia, a Doctor may recommend blood tests like

- ⇒ Complete blood count
- ⇒ Erythrocyte sedimentation rate
- ⇒ Thyroid function tests
- ⇒ Vitamin D levels

A person with Fibromyalgia may have tender points or sensitive areas on the body that can become painful when pressure is applied. Fibromyalgia can be diagnosed when a person has had widespread pain for more than three months with no underlying medical condition that can cause the pain. A Doctor will check 18 specific points on a person's body to see how many of them are painful when pressed firmly.

### Treatment

There is no universally accepted treatment approach for Fibromyalgia. Moreover, the response of a patient to treatment is most often inconsistent or poor. A treatment plan that incorporates medication, patient education, aerobic exercise, and Cognitive Behavioral



**A patient with Fibromyalgia has a lower threshold of pain because of the increased reactivity of the pain-sensitive nerve cells in the spinal cord or brain**

### Conclusion

Fibromyalgia is a long-term or chronic disorder associated with widespread pain in the muscles and bones, along with general fatigue. There is no cure for the disease. A combination of medications, exercise, lifestyle changes, and stress management may ease the symptoms associated with Fibromyalgia. ®



Therapy is shown to be effective in alleviating the pain and other symptoms related to Fibromyalgia.

### Cognitive Behavioral Therapy

Psychological and Behavioral as well as Cognitive Behavioral Therapies have a small to moderate effect in reducing the symptoms of Fibromyalgia. A combination of Cognitive Behavioral Therapy and exercise is found to produce a positive treatment outcome.

### Pharmacotherapy

Medications to treat Fibromyalgia include Anti-depressants like Duloxetine and Milnacipran; Tricyclic Antidepressants like Amitriptyline, and Anti-seizure medications like Gabapentin and Pregabalin.

A combination of Tramadol and Paracetamol is found to be efficacious in treating the disease. The use of Nonsteroidal Anti-inflammatory Drugs (NSAIDs) is not recommended as first-line therapy. A combination of Antidepressants and Antiepileptics has to be taken for a period of 3 – 6 months to produce a noticeable improvement in the symptoms.

### Exercise

Exercise may help with depression and sleep disorders, besides reducing the pain and fatigue in some people with Fibromyalgia. Cardiovascular and aquatic-based exercises are also found to be effective in improving the symptoms associated with the disease.





# Tooth Whitening

**A**lmost everyone wants to make their smile as bright as possible and is ready to spend any amount of money to achieve this goal. Cosmetic Dentistry can go a long way in helping a person achieve the beautiful smile of their dreams.

Cosmetic or Esthetic Dentistry primarily focuses on improving the appearance of a person's teeth, gums, and smile. Bleaching is the process of whitening the teeth through the application of a chemical agent to oxidize the pigmentation seen on the teeth.

Tooth discoloration can be due to either Intrinsic factors, such as excessive fluoride intake, dental trauma, or aging of the teeth or Extrinsic factors,

such as intake of certain medications, tobacco consumption, smoking, drinking coffee / tea / aerated drinks, or red wine.

## Indications for Tooth Bleaching

- Discoloration of a tooth due to ageing or taking medication
- Discoloration of anterior teeth following Root canal treatment

## Contraindications for Tooth Bleaching

- Patients allergic to substances in tooth bleaching products



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- A tooth that shows abrasion or enamel cracks
- Severe tooth malformations
- Teeth with extensive dental fillings

Bleaching agents commonly used for this procedure are Sodium perborate, Carbamide peroxide, and Hydrogen peroxide.

### How does a Bleaching agent work?

When Carbamide peroxide (Bleaching agent) comes in contact with saliva, it gets converted into Hydrogen peroxide and Urea. Hydrogen peroxide typically generates Hydroxyl radicals which enter the enamel as well as dentine and diffuse to the areas of discoloration and break down the stained compounds through oxidation-reduction (a chemical reaction) process. This process helps the teeth get a whiter appearance.

### Bleaching Techniques

- Internal Bleaching
- External Bleaching



### Internal Bleaching

Internal Bleaching is an in-office technique done on a non-vital tooth. There are two types of Internal Bleaching:

- Walking bleach technique
- Thermocatalytic technique

#### Walking bleach technique

This technique is used to whiten a tooth that has had a Root canal treatment. The evaluation of tooth discoloration is done through the radiographic assessment of the periapical tissues and endodontic obturation. After isolating the tooth, the restorative material is removed from the access cavity and the pulp chamber is packed with Carbamide peroxide and sealed with Intermediate Restorative Material (IRM).

After one or two weeks, the patient is recalled for a review. If he is satisfied with the result, the Bleaching agent is removed and filled with a temporary filling; subsequently, it is replaced with a permanent filling.

#### Thermocatalytic technique

This technique is similar to Walking bleach technique, but the only difference is that it uses a thermal light to activate the Bleaching agent.

### External Bleaching

External Bleaching is done only on vital teeth and can be done by either a Dentist or the patient himself. There are two types of External Bleaching:

- In-office Bleaching
- Home Bleaching

#### In-office Bleaching

In this method, the extent of discoloration of the teeth is evaluated through radiographic assessment and clinical photographs of the teeth. After the tooth is isolated and its surface is air-dried, a Bleaching agent, which contains Carbamide or Hydrogen Peroxide, is applied onto the tooth surface which is activated by a strong laser light. After 15 – 20 minutes, the Bleaching gel is rinsed off. The patient may need 1 – 3 appointments to complete the treatment, depending on how severe the stains are and how much brighter the patient wants the teeth to be.

#### Home Bleaching

It is a simple and cost-effective method to whiten the teeth at home. The Nightguard method (tray method), Whitening toothpaste, Whitening mouthwashes, Dental Varnishes, and over-the-counter Tooth whitening strips and gels are the commonly used whitening products.



☑ **Nightguard method**

In this method, the Dentist will make a tray for loading the Bleaching agent from the impression of the patient's dental arch. Before the procedure, the patient is instructed to brush his teeth. The Bleaching agent is loaded on the tray and placed over the teeth for 2 – 3 hours or overnight. The procedure is repeated every two weeks until the desired outcome is achieved.

☑ **Whitening toothpaste**

It contains an increased amount of abrasives and detergents, in addition to a Bleaching agent that aid in removing stains and gradually improving the color of the teeth. But it cannot change the color of the underlying dentine.

☑ **Whitening mouthwash**

Whitening mouthwashes, contain Hydrogen peroxide, which comes in contact with stained teeth and bleaches them, gradually improving their color. A Whitening mouthwash is used twice a day for 30

seconds for 3 months to get a significant outcome.

☑ **Dental Varnishes**

It is a newer method to whiten the tooth. After brushing and flossing, the teeth are isolated and Varnish is applied directly onto the tooth surface with a toothbrush. Then, it is allowed to dry for 30 seconds. When Varnish gets dry, it is removed with a toothbrush. This process is repeated for 14 days to achieve a noticeable outcome.

☑ **Over-the-counter Tooth whitening strips**

Tooth whitening strips are significantly less expensive than an In-office Bleaching procedure. Whitening strips are used twice a day for 30 minutes for 14 days to achieve the expected outcome.

☑ **Over-the-counter Tooth whitening gels**

It is applied directly onto the tooth surface with a toothbrush. A Tooth whitening gel is used twice a day for 20 – 30 minutes for 14 days to get a better treatment outcome.

**Advantages of Tooth Whitening**

- ☑ Improved facial appearance
- ☑ Improved self-confidence
- ☑ Painless method

**Disadvantages of Tooth Whitening**

- ☒ Tooth Sensitivity
- ☒ Allergy in the oral cavity
- ☒ Trauma to the teeth
- ☒ Treatment is expensive

**Conclusion**

Though there are certain disadvantages, the use of a Bleaching agent is an effective approach to remove stains and discoloration on the surface of the teeth. As with all therapeutic modalities, proper diagnosis and treatment planning are essential to achieve a successful treatment outcome. ©





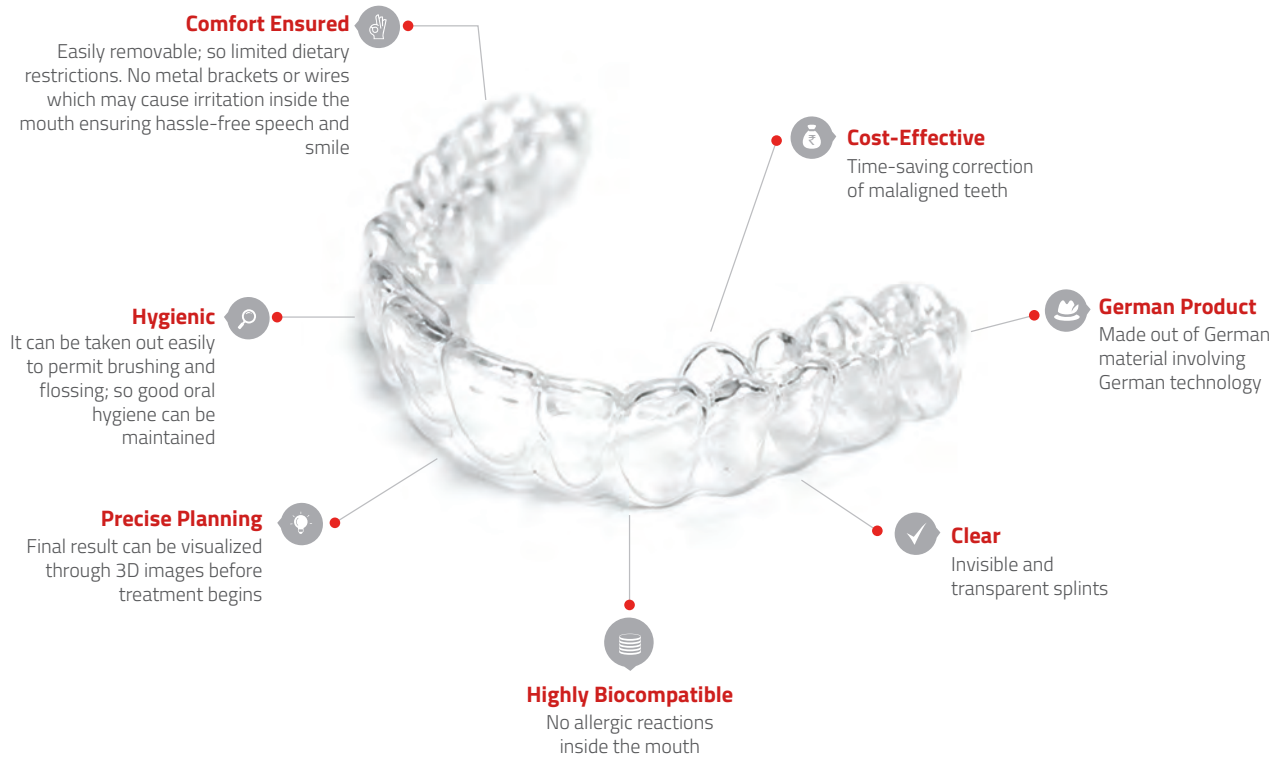
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Before

After



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# Keeping Away from **WATERBORNE DISEASES**

**D**uring the monsoon season, the risk of contracting various diseases is extremely high, especially in the underdeveloped and developing countries due to many factors, including unhygienic conditions and unwillingness to follow basic preventive measures.

It is important to increase the awareness of the various Waterborne Diseases so that people can take adequate measures to arrest the spread of these diseases.

Waterborne Diseases can be caused by Virus, Bacterium, Protozoa, or Fungus. The most common Waterborne Diseases include Cholera, Viral Hepatitis A and E, Typhoid Fever, and Leptospirosis (Rat Fever). Rarely occurring Waterborne Diseases are, Dysentery, Giardia Infection, and Guinea-worm Disease.

## **Common Waterborne Diseases**

### **Hepatitis A and E**

Hepatitis A is a disease caused by a virus that infects liver cells, which is mainly spread when a person consumes food or water that is contaminated with the faeces of an infected person. In India, about one

million people are affected with Hepatitis A every year.

There is no specific treatment for Hepatitis A. Hence, it is important to reduce the risk of spreading or catching Hepatitis A infection. Isolation of patients with the disease, effective waste disposal, and proper sanitation and personal hygiene practices coupled with the use of boiled water, are effective in preventing the spread of Hepatitis A virus.

Hepatitis A vaccine is included in the vaccination schedule recommended by the Center for Disease Control and Prevention (CDC), the leading national public health institute of the United States of America. But there is no vaccination against Hepatitis E. Usually, it does not cause any long-term illness, but it can be dangerous for a pregnant woman or a person with a weak immune system.

### **Cholera**

Cholera is a bacterial disease mostly spread when a person consumes food and water contaminated with human faeces containing *Vibrio cholerae* (the bacterium that causes Cholera). The common



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symptoms of this disease include Vomiting, Watery Diarrhea, and Dehydration. Cholera can quickly become fatal. In severe cases, there will be a rapid loss of a substantial amount of fluids and electrolytes and if the loss of fluid is not compensated, Cholera can cause death.

World Health Organization (WHO) labels India as a breeding centre for Cholera. Every year nearly 100000 people are affected with Cholera in the country. Recently, there have been two outbreaks in India; one in Odisha, where three deaths have been reported, and the other in Hyderabad, Telangana, where 36 deaths have been reported. The outbreak of Cholera in Odisha was due to the consumption of a special ceremonial drink prepared with the water from a pond contaminated with *Vibrio cholerae*.

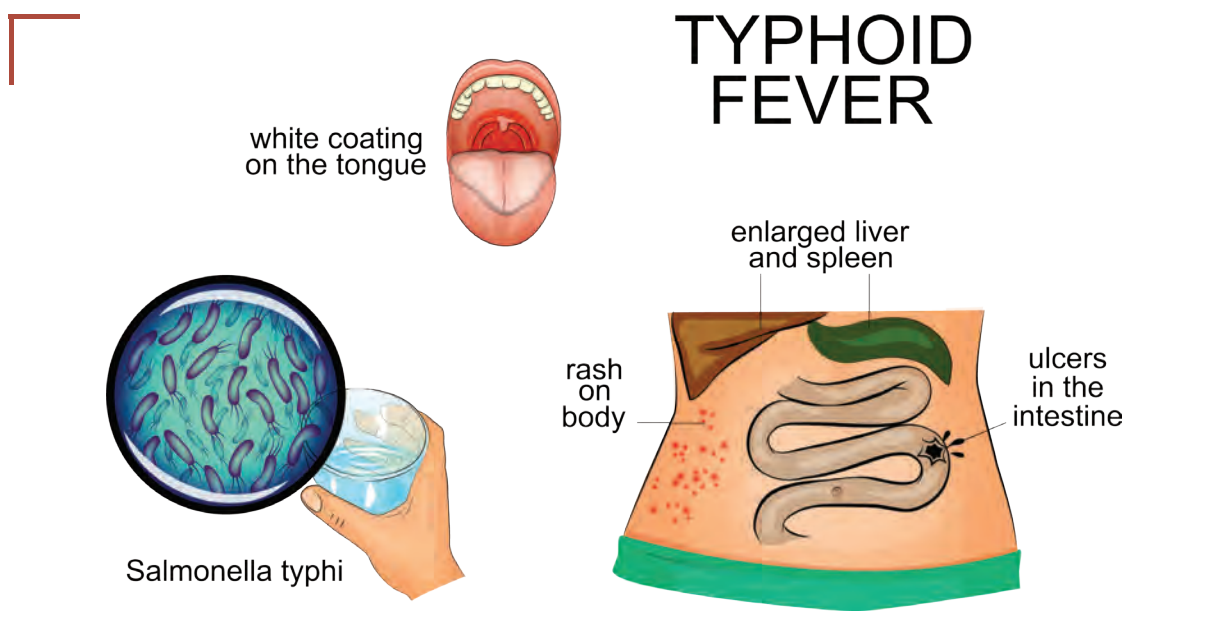
### Leptospirosis (Rat Fever)

Leptospirosis is a bacterial infection that affects both people and animals. It can pass from animals to humans when a person comes in contact with water or soil contaminated with the urine, blood, or tissue of an infected rodent or animal.

Leptospirosis is considered to be the most widespread zoonotic disease in the world. If left untreated, Leptospirosis can lead to Kidney Failure and other complications, including death. Though vaccination is available for Leptospirosis, it is not widely used in India. Doxycycline, an antibiotic, is used for the prevention and treatment of Leptospirosis.

### Typhoid Fever

Typhoid Fever (Enteric Fever), which is caused by *Salmonella typhi*, a bacterium, is usually transmitted through contaminated food or water. During the past 25 years, the incidence of Typhoid Fever has come down in the world. Most probably, it is due to the vaccination schedule among children, along with proper sanitation and hygiene practices. Oral and intramuscular vaccines exist for Typhoid Fever. Antibiotics are also available for the effective treatment of Typhoid Fever.



**Typhoid Fever (Enteric Fever), which is caused by *Salmonella typhi*, a bacterium, is usually transmitted through contaminated food or water**

### Conclusion

Effective modalities are now available for the prevention and treatment of different types of Waterborne Diseases. Preventive measures like proper sanitation, effective disposal of waste, efficient sewage systems, and drinking boiled water are some of the expedient steps to check the transmission of Waterborne Diseases. ©



# Dental Implants are for Everyone



**O**ver the last two decades, Dental Implants have revolutionized dentistry. A Dental Implant, also known as an Endosseous Implant, acts as a substitute for a missing tooth. It is anchored into the jawbone and allows a Dentist to place a replacement tooth or bridge without any visible difference to the adjacent natural teeth.

A Dental Implant is made up of Titanium alloy and is available in different shapes, sizes, and designs. Depending on the number of teeth to be replaced, one or more Implants are required to be placed into the jawbone.



**Dr. J. Bindra**  
Consultant Implantologist  
Ludhiana, Punjab, India

A Dental Implant provides stable support to an artificial tooth, denture, and / or dental bridge. It provides better comfort and functionality than a dental bridge or denture.

An important advantage of a Dental Implant is that no adjacent tooth or teeth need to be prepared or ground down to hold a new tooth replacement in place. Besides, it looks and feels like a natural tooth.

The basic prerequisite for a Dental Implant is that a patient should have healthy gums and adequate bone support. Meticulous oral hygiene and regular dental visits are critical for the long-term success of a Dental Implant.

Dental Implant Surgery is a procedure performed on a dental chair. Since it is performed under local anesthesia, a patient does not feel pain during this procedure.

The healing time after the surgical placement of a Dental Implant varies from person to person, which largely depends on the density of the bone; that is, if the bone is denser, the process of Osseointegration will be quicker. In most cases, a Dental Implant osseointegrates perfectly with the bone within a period of 2 – 6 months.

After successful Osseointegration, a dental crown, which simulates the patient's normal tooth, both in form and function, is fabricated and placed.

#### Immediate Implant Placement

Immediate Implant Placement is defined as the placement of a Dental Implant into an extraction socket immediately after a tooth is taken out. It is a well-accepted treatment modality that can reduce

An important advantage of a Dental Implant is that no adjacent tooth or teeth need to be prepared or ground down to hold a new tooth replacement in place. Besides, it looks and feels like a natural tooth



treatment time and potentially increase patient satisfaction. But this procedure is not recommended for all patients.

#### Implant-based Overdentures

An Implant-supported overdenture is a removable denture that is supported by and attached to a Dental Implant. An Implant-supported overdenture is recommended when a person does not have teeth in the jaw but has enough bone in the jaw to support a Dental Implant. All patients may not opt for an Implant-supported overdenture, as it is a time-consuming and cost-intensive procedure.

#### The right age for Dental Implant Placement

Age is not an important factor for the placement of a Dental Implant, as it can be successfully placed in both young and elderly patients alike. However, just as in other medical procedures, the health and healing power of a patient are important to achieve a better treatment outcome.

#### Is a Dental Implant durable?

Dental Implants are durable and will last for 15 – 20 years. With the most recent techniques and materials, they may even last longer.

#### Cost Factor

The procedure for Dental Implant Placement is more expensive than that of the other methods for tooth replacement. However, a Dental Implant usually lasts longer than a partial denture or dental bridge.

#### Conclusion

A Dental Implant is designed to look and function like a natural tooth. More than that, it can improve a patient's appearance and ability to chew / eat, besides helping him engage in social activities confidently. Though a Dental Implant is more expensive than a dental bridge or denture, the advantages outweigh the cost. ©



# A Heart-Healthy Diet





**Ms. Swati Dhingra Chawla**  
Clinical Dietitian and Wellness Coach  
Mumbai, Maharashtra, India

A heart-healthy diet is a well-balanced diet that helps maintain healthy weight and normal blood pressure as well as cholesterol levels. Even if you do not have a chance to develop a Cardiovascular problem, sticking to a heart-healthy diet is important, as it can reduce the risk for Heart Disease in future.

Cardiovascular Disease is the leading cause of premature death worldwide. The choice of food can make your health better or worse. The key factor for preventing and reducing the risk for Heart Disease is lowering Cholesterol levels and Saturated Fat in the body. Once you know the types of food to eat more and / or less, you will be on the way towards a heart-healthy diet.

### Guidelines to choose a heart-healthy diet

#### Avoid Processed and Refined Food

Eating a diet high in Refined Carbohydrates (white flour, pasta, bread, and sugar) can elevate the levels of Triglycerides, Cholesterol, Insulin, and Blood Pressure and may gradually make a person susceptible to developing Cardiovascular Disease. Hence, avoid / limit the intake of refined and processed food.

Choose whole grains that are high in proteins and fibre to help promote health. The American Heart Association suggests that at least half of your servings of grains should be whole grains.



Include oats in the diet, as it is packed with Beta-Glucans, a type of fibre that can lower Low-Density Lipoproteins (Bad Cholesterol) levels and promote heart health.

#### Focus on Traditional Fats and good quality Proteins

Limit Saturated Fat and Trans Fat or replace them with Monounsaturated and Polyunsaturated Fats, as they can lower the risk for Cardiovascular Disease. Avocado, Almonds, Canola Oil, Olive Oil, Groundnut Oil, Soybean Oil, Rice Bran Oil, Sunflower Oil, Sesame Oil, Safflower Oil (Safflower seed oil is nutritionally similar to Sunflower oil); Chia Seeds, Pine Nuts, Walnuts, And Brazil Nuts contain a high amount of good quality proteins.

Cold-water fish like Salmon, Tuna, Mackerel,



Halibut, Sardines, etc. are a rich source of omega-3 essential fatty acids; they aid in lowering Bad Cholesterol as well as Triglycerides levels and decreasing inflammation in the body.

### Fruits and Vegetables

Consumption of fruits and vegetables can reduce the risk of developing Heart Disease. The Dietary Recommendations of the United States Department of Agriculture (USDA) suggest that a person consume 2 ½ cups of fruits and vegetables a day to reduce the risk of developing chronic diseases. Fruits and vegetables are an excellent source of Vitamins and Minerals and contain thousands of biologically active phytochemicals that play a role in minimizing the risk for Heart Disease.

### Red Wine

Red wine has heart-healthy potential. The antioxidants in red wine may significantly increase High-density Lipoprotein (HDL) Cholesterol levels; reduce blood clotting or coagulation, and increase the enzymes that help dissolve clots, in addition to reducing the risk for a Heart Attack.

### Chocolate

Dark chocolate is high in the phytochemicals called Flavanols. They are antioxidants that can reduce the risk for Heart Disease; lower blood pressure levels and improve the health of the arteries.



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**Fruits and vegetables are an excellent source of Vitamins and Minerals and contain thousands of biologically active phytochemicals that play a role in minimizing the risk for Heart Disease**

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### Portion control

Eating large portions or eating until you feel full leads to consuming an increased amount of Calories, Fats, and Cholesterol. Knowing the recommended portion size of different types of food is the first step to eat a balanced diet.

### Reduce Sodium intake

A diet that is high in sodium is linked to high blood pressure, a risk factor for Cardiovascular Disease. The American Heart Association recommends that healthy adults should consume less than 2,300 milligrams (mg) of sodium a day. People over 50 years of age and those with Hypertension, Diabetes, or Kidney Disease should reduce the intake of sodium to 1,500 mg a day.

### Conclusion

To get a healthy heart, the diet should contain plenty of fruits, vegetables, whole grains and a variety of healthy proteins and Fats, including lean meat, poultry, legumes, nuts, seeds, fish, and seafood. A heart-healthy diet combined with exercise and lifestyle changes will help a person stay healthy and fit, in addition to helping keep Cardiovascular and other Diseases at bay. ©



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# Can Teeth Reveal your Age?

A tooth can serve as a tool for assessing the chronological age (the number of years a person lived in this world) of an individual who lived hundreds of thousands of years ago

**A**ge estimation has now become increasingly important in a living individual for a variety of reasons, such as identification of a person involved in a crime. A Tooth can also serve as a tool to identify the dead, especially when the body is decomposed or mutilated beyond recognition.

## Methods of Age Estimation

There are many methods for Age Estimation, such as chronological age, bone age, dental age, etc. Among them, Dental age estimation is considered to be an important method, as tooth development shows less variability than other developmental features in the body.



**Dr. Mayuri Ganguly Soni**  
Dental Practitioner and Forensic Odontologist  
Khorda, Orissa, India

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Dental age estimation seems to be more accurate than other methods, as the tooth is one of the hardest and most resilient parts of the skeleton system, having the power to withstand severe drought, extreme cold, prolonged immersion in water, and even temperature above 1000° Fahrenheit (F).

There are two methods of Dental age assessment; radiographic assessment and clinical visualization. The clinical visualization method is based on the emergence of teeth in the mouth. This method is more feasible as it does not require any sophisticated equipment or expertise; besides, it is very economical.

A Dentist can estimate the age of a patient in a simple way even when he is reluctant to disclose his age. Age estimation can also be used in clinical practice for accurate treatment planning.

A tooth can serve as a tool for assessing the chronological age (the number of years a person lived in this world) of an individual who lived hundreds of thousands of years ago.

A tooth can be used as a valid proof identity. When there is a mass disaster caused by natural events such as severe flooding, volcanic eruptions, earthquakes or any manmade disasters such as aviation accidents, or massive fires, there are chances of the loss of our belongings and even our loved ones. We become helpless when our loved ones are missing.

We await the mortal remains of our loved ones to perform the last rites and hence, we make an attempt to identify them from the heaps of rotten, decayed, or burnt dead bodies. Since facial identification



appears to be nearly impossible in such a situation, a tooth emerges as an effective tool to identify a dead body.

### Conclusion

Dental age estimation is one of the accepted methods of age determination. More than that, this method seems to be more accurate than other methods of age estimation, as tooth development shows less variability than other developmental features in the body.®



# Wealth of Health for Working Women







**Ms. Urmi Hariya**  
Sports Nutritionist and Yoga Instructor  
Mumbai, Maharashtra, India

Women across the globe incessantly seek gender equality and economic independence. There is a radical increase in the number of women who seek equal participation with men in all spheres of life or activities.

But, do they really give equal importance to their health, be it physical or mental?

Most women continue to ignore their health due to the busy schedule, including the household chores like cooking, cleaning, taking care of the kids and the entire family, along with the added pressure of life in this competitive world.

If a woman's health is compromised, how can she properly manage the family?

Let us understand the common health problems affecting Working Women and what causes them.

### Obesity

This is one of the biggest metabolic epidemics affecting a



Most women continue to ignore their health due to the busy schedule, including the household chores like cooking, cleaning, taking care of the kids and the entire family, along with the added pressure of life in this competitive world



large number of women due to stress at work and of housekeeping, apart from a sedentary lifestyle, and unhealthy eating habits.

### Polycystic Ovarian Syndrome or Disease

Polycystic Ovarian Syndrome or Disease (PCOS / PCOD) is caused due to hormonal imbalance and / or excessive deposition of Fat in a woman of reproductive age, which adversely affects her fertility.

### Insomnia

Women are more likely to experience Insomnia — the inability to fall asleep and stay asleep, than men. It is mainly due to mood disorders and hormonal changes in a woman.

### Musculoskeletal problems

Most women tend to maintain the same posture over long working hours with very little rest and hence, they are more prone to developing musculoskeletal problems like back or neck pain.

Though all women may not develop musculoskeletal problems, there are chances that women may suffer from one or another kind of health issue if they do not take care of their health and work towards better health. These problems can be solved when they bring about necessary changes in their lifestyle and adopt healthy eating habits.

### Healthy Lifestyle changes

#### Sleep

It is most important because adequate sleep is vital to keep a woman healthy, helping ensure the proper functioning of the body and enabling her to be active throughout the day.

So, a woman should get a good sleep for 6 to 8 hours a day to ensure better health and mental well-being.

### Exercise and Meditation

Do some simple exercises like walking, jogging, Yoga, etc. on a daily basis. With all the roles a woman has to play, it may be difficult for her to get enough time for exercise, but no one is too busy to take out at least 30 to 40 minutes of their time for their own health.

Exercise is important for the health of both the body and the mind, helping release stress and making you feel good and fresh throughout the day. The other benefits of exercise include weight management and

improved fitness / strength.

Meditation helps reduce stress and improves emotional health, besides helping with addictions and improving sleep.

### Nutrition

Women need more iron than men to make up for the amount of iron they lose during their menstrual period. Hormonal changes associated with menstruation, child-bearing, and menopause pose a higher risk for Anaemia, and Osteoporosis, requiring a higher intake of nutrients, such as Iron, Calcium, Magnesium, Vitamin D and Vitamin B9 (Folic acid).



### Healthy eating tips

- ☑ Have a well-balanced diet with food from all food groups
- ☑ Incorporate foods rich in Carbohydrates and Fiber like whole grains, fruits, and vegetables. More than that, avoid the use of refined and processed food, sugar, strained fruit juices, biscuits, etc. as they are high in simple sugar, which may easily increase the level of blood sugar in the body, leading to weight gain
- ☑ Include food rich in high-quality proteins like eggs, meat, chicken, milk and milk products, nuts, pulses, etc. The recommended dietary allowance of protein is 0.8 to 1 gram per kilogram (kg) of body weight for a woman who leads a sedentary lifestyle
- ☑ Incorporate food or oils rich in Monounsaturated / Polyunsaturated Fats like groundnut oil, soybean oil, mustard oil, or olive oil (4 to 5 spoons a day)
- ☑ Last but not least, consume 2 to 3 liters of water a day, as it helps keep you hydrated and refreshed throughout the day



### Conclusion

Keeping Working Women healthy has both short- and long-term health benefits. Healthy lifestyle and eating habits can reduce the risk of developing conditions like Diabetes, Cardiovascular Disease, Osteoporosis, and Obesity, besides improving physical and mental health, as well as boosting the energy levels.

One step towards better health is one step towards a better future. Hence, consult a qualified Dietitian / Nutritionist to keep you healthy for a lifetime. ®

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# DENTAL ASSISTANTS

## The Unsung Heroes of Dentistry

**A** Dental Assistant, the real Unsung Hero of Dentistry, is a dental care professional who works under the supervision of or closely with a Dentist. A Dental Assistant is a member of the operator, who helps provide an aseptic and sterile or germ-free working environment to the Dentist. Besides this, they support a Dental Practitioner to provide efficient and time-bound oral health care to the clientele.

### Role of Dental Assistants in a Dental Office

The responsibilities of a Dental Operating Room Assistant are

1. Receiving the patient
2. Keeping and updating medical records
3. Monitoring patients' vital statistics during each dental visit
4. Taking informed consent from the patient
5. Preparing a patient for the dental procedure
6. Arranging the various types of dental instruments for a procedure, anticipating the need beforehand
7. Assisting to provide anesthesia / sedation
8. Explaining the procedure to a patient and making them feel comfortable before, during, and after a procedure
9. Taking and developing X-rays
10. Pouring an impression for making a study model
11. Providing postoperative instructions to a patient
12. Taking the used tray and instruments away after a procedure
13. Sterilization of the equipment
14. Scheduling an appointment for a patient
15. Educating a patient to follow healthy oral hygiene practices
16. Making a list of items required in the operatory each month
17. Communicating with dental suppliers



**Dr. Sunil Kumar Abbot**  
Dental Practitioner



**Mr. Prasanth K. J.**  
Dental Hygienist

Hyderabad, Telangana, India

18. Ensuring the overall upkeep of the dental office

### Skills required for a Dental Assistant

#### Listening Skills with Strong Attention to detail

- ✓ Must be a good listener and should have strong attention to detail (ability to achieve thoroughness and accuracy) when accomplishing a task.

#### Communication Skills

- ✓ Must have excellent communication skills, especially to instill confidence in a patient before, during, or after a surgical procedure.

#### Organizational Skills

- ✓ Needs to have good organizational skills.
- ✓ Should ensure the availability of the right instruments in the operatory at the right time.
- ✓ Must stay organized and focused on the task at hand.

#### Computer Skills

- ✓ Should have a basic knowledge of word processing and data collection software for recording and maintaining dental records and scheduling appointments.



#### Dexterity

- ✓ It is important for a Dental Assistant, as he works closely with a Dentist and uses various tools and instruments during an examination and / or a surgical procedure.

#### Updation of Knowledge

- ✓ Must always keep his knowledge updated, especially with the latest technological advancement across the world.

#### Familiar with the working style of a Dentist

- ✓ A Dental Assistant must be thoroughly familiar with the working style of the Dentist.



### Conclusion

It is worth mentioning that a Dental Assistant is the pride of a dental office, who helps keep a dental office running smoothly and ensures delivery of high-quality patient care.®

# A Mouthful for the Youthful



## Healthy Ragi Pizza

### Ingredients

#### Sauce

Ketchup (preferably Organic)	100 grams
Sugar, Dark Brown	50 grams
Pineapple Juice with no added Sugar	100 milliliters
Water	200 milliliters
Apple Cider Vinegar	1 teaspoon
Worcestershire Sauce	2 teaspoons
Chili Flake	2 teaspoons
Mustard Powder	2 teaspoons
Garlic, Chopped, Finely, Fried	½ teaspoon
Chili Powder	½ teaspoon
Black Pepper Powder	½ teaspoon
Salt to taste	

#### Pizza Dough

Water, Warm	200 milliliters
Olive Oil	2 tablespoons
Honey	1 tablespoon
Active Dry Yeast	6 – 8 grams
Ragi Flour	400 grams
Split Urad Dal Flour	50 grams
Sea Salt	5 grams

#### Pizza Toppings

Cheddar Cheese	100 grams
Mozzarella Cheese	100 grams
Sausage	200 grams



### Preparation

Combine all the ingredients for the sauce in a saucepan and place it over medium heat. Cook the mix for 4 – 5 minutes, or until it is thickened to the desired consistency of a sauce. Taste it and adjust the level of salt, if necessary. Allow it to cool.

To prepare the pizza dough, add warm water, Olive Oil, Honey, and Yeast to a bowl and stir well. Set the mixture aside. Add Ragi Flour, Split Urad Dal Flour, and Salt to a large bowl and mix them together. Pour the prepared mixture into the Flour mix and knead well until it becomes a soft dough. Keep the mix in a warm place for an hour.

Gently punch the dough to press out the air and then press dough evenly at the bottom of a Round Cake Tin to form a Pizza Crust. Pour 3 – 4 spoons of sauce on it and put the sausage on the top. Sprinkle both the cheese and bake it for 15 – 20 minutes or until it becomes golden brown.

Serve it hot.





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

## Grain Dosa with Tomato Chickpea Masala

### Ingredients

#### Tomato Chickpea Masala Mix

Coconut, Grated	100 grams
Coconut Oil	50 milliliters
Onion, Thickly Chopped	1
Garlic, Chopped	3 cloves
Ginger, Chopped	1 tablespoon
Curry Powder, Spicy	1 tablespoon
Garam Masala	1 teaspoon
Chickpea, Cooked	200 grams
Cherry Tomato	100 grams
Coconut Milk	50 milliliters
Coriander powder	20 – 30 grams
Cumin Seeds	1 tablespoon
Green Onion, Chopped	2 – 4
Cilantro, Chopped	A sprig



#### Grain Dosa

Ragi Flour	½ cup
Bajra Flour	½ cup
Urad Dal Flour	¼ cup
Salt and Pepper	A Pinch



### Preparation

Heat a heavy-bottomed pan and toast the Grated Coconut over medium flame; stir occasionally until it becomes golden brown. Keep it aside.

Add Coconut Oil to another pan on medium heat and when the oil becomes hot, add Onion, Garlic, and Ginger and cook for 3 – 5 minutes. Add Coriander Powder, Curry Powder, Garam Masala, and a pinch of Salt and Pepper. Add Chickpea, Tomato, and 1 cup of water. Bring the mix to a boil; then reduce the heat and simmer it for 10 – 15 minutes or until it becomes thick. Stir in Coconut Milk to the mix. Remove from the heat and strew chopped Cilantro and toasted Coconut.

Then take a bowl and add Ragi Flour, Bajra Flour, Urad Dal, Green Onion, Cumin Seeds, Salt, Pepper, and 2 cups of water and blend them well. Add some more water, if the mix is thick. Generously brush a non-stick pan with Coconut Oil and heat over medium-high heat until shimmering.

Stir the batter well and pour it into a large frying pan in a circular motion starting from the outside and going in, filling the gaps as you continue to pour in a circular motion. While cooking, drizzle Coconut Oil onto the Dosa. Cook until Dosa is set and its edges are golden brown. Flip the Dosa using a spatula and cook it until its bottom side is golden.

Serve hot with Tomato Chickpea Masala Mix. ©



## Preventing Cross-Infection in a Dental Practice

**I**nfectious Diseases are caused by microorganisms, such as Bacteria, Viruses, Parasites, or Fungi and are transmitted through a variety of ways, which include physical contact with an infected person or a contaminated surface, food, or water; a bite of an infected insect or animal; or through airborne contact.

To ward off Infectious Diseases, everyone should follow a proper immunization schedule, along with adhering to good hygiene practices and taking adequate preventive measures, including prophylactic treatment.

The dental team is highly vulnerable to cross-infection, as they directly or indirectly come in contact with microorganisms, contaminated objects or droplets. Hence, the surface of the operatory is highly vulnerable to contamination during treatment. This can pose a risk for the spread of many Infectious Diseases.

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### Transmission of microorganisms in a dental setting

- » Contact with the blood, saliva, or other body fluids of an infected patient
- » Contact with contaminated objects
- » Aerosol infection

### Precautions

All dental settings, regardless of the level of care provided, must take the measures for the prevention of infection and should maintain Standard Precautions, in addition to following the guidelines of the Centres for Disease Control and Prevention (CDC), a leading national public health institute of the United States of America, so as to prevent infection in a dental healthcare setting.

### A few recommended precautions

- » Avoid close contact with an infected patient
- » Cover the doors and windows with a wire mesh / screen
- » Use a mosquito repellent or net, as the mosquito that transmits Dengue Virus usually bites during the day time; either early in the morning or late in the evening
- » Keep wet / soggy clothes or shoes away from the operatory
- » Take vaccination to reduce the risk of infection
- » Use of a Micro-filter or Membrane filter to trap microorganisms suspended in water
- » Adopt Protective Barrier Techniques: all dental professionals must utilize personal protective equipment to protect themselves from infection or cross infection
- » Take Post-exposure Prophylaxis, a preventive



medical treatment started after an exposure to a pathogen to prevent the occurrence of infection

- » Keep hand hygiene, as it is one of the most important measures to prevent the spread of infection
- » Safe handling of sharps and needles
- » All dental units should use treated water to avoid the transmission of pathogens
- » Referral for medical evaluation whenever necessary
- » Follow the guidelines for infection control in healthcare facilities
- » Pre-procedural mouth rinsing for a patient

### Management of infected patients

- » Provide tissue paper and encourage a patient with a cough to cover his mouth and nose while coughing or sneezing
- » Provide hygiene material to patients to maintain hand hygiene

### Conclusion

The dental setting is greatly susceptible to infection or cross-infection. All dental practices must implement various control measures to prevent the transmission of pathogens or Infectious Diseases. The best way to ward off Infectious Diseases is by increasing awareness about them and following healthy personal, domestic, and community hygiene practices, including universal precautions.

An ounce of prevention is worth a pound of cure. ®





## Food that Can Fight Cancer



**Dr. Mumtaz Khalid Ismail**  
Consultant Clinical Nutritionist  
Kochi, Kerala, India

Cancer is a group of diseases characterized by an abnormal growth of cells, with the potential to spread to other parts of the body. It is the most dreaded disease and is one of the leading causes of death all over the world. This is a major health problem even in developing countries like India.

Prognosis and progression of Cancer largely depend on the type of organ affected, cells involved, and the rate of multiplication of the cells, along with the time of diagnosis. Cancer can affect all the organs and live tissues in the body. The most common types of Cancers include Lung, Skin, Blood, Cervix, Breast, Brain, Gastrointestinal, and Liver Cancers.

Many dietary factors are implicated as causative factors of different types of Cancers. A few of them are

### Calories

Excessive intake of calories is associated with an increased risk of developing Endometrial and Breast Cancers.

### Fats

High intake of Fat, especially Saturated Fat can lead to Obesity. Too much Fat in the body can also increase the risk of developing Cancers of the Uterus, Gall Bladder, and Breast.

A healthy diet should contain an adequate amount of Vitamins A, C, and E. These Antioxidant Vitamins can mop up harmful free radicals

### Other factors

- ⇒ When food is charred during roasting, grilling or barbecuing can produce a large amount of potentially carcinogenic substances in the burnt areas
- ⇒ Among food contaminants, Aflatoxins (a class of mycotoxins produced mainly by fungal species) are linked to Liver Cancer. Food items, such as groundnuts, corn, coconut, and pepper may get contaminated with Aflatoxins before and during harvest as a result of fungal contamination
- ⇒ Intake of pickles, or dried salted fish containing nitrites as a preservative may be linked to the development of Stomach Cancer
- ⇒ Containers made of polyvinyl chloride used for packaging and storing food are known to be carcinogenic
- ⇒ High intake of red or processed meat is implicated in the development of Bowel Cancer

### Dietary modifications for the prevention of Cancer

Avoid too much intake of Fat, especially Saturated Fat, as it can increase the incidence of Cancers of the Breast, Uterus, Ovary, Prostate, Pancreas, Colon, and Rectum. A higher intake of fiber-rich food, such as whole-grain cereals, pulses, fruits, and vegetables can protect against Colon Cancer.

A healthy diet should contain an adequate amount of Vitamins A, C, and E. These Antioxidant Vitamins can mop up harmful free radicals. Vitamin A has a special antitumor property. Recent studies have revealed that the intake of plenty of vegetables and fruits will help reduce the incidence of Cancers of the Lungs, Bladder, Breast, Cervix, and lining of the Womb.







Selenium found in cereals, leafy vegetables, pulses, seafood, fruits, and vegetables is a potent antioxidant, which works in harmony with Vitamins A, C, and E, along with the soluble fiber found in fruits and vegetables. This plays an important role in the process of digestion and elimination of waste from the body. In the process, Selenium helps carry toxins and carcinogens out of the body.

Intake of Vitamin D and Calcium can reduce the risk of developing Colon Cancer. Another trace element believed to have a protective action against Cancer is Copper. This element can reduce the risk of developing Tumours of the Liver and Lungs.



### Tips to reduce the risk for Cancer

- ⇒ Maintain an ideal body weight
- ⇒ Consumption of green juice extracted from wheatgrass, coriander, spinach, mint leaves, which is rich in Chlorophyll and Antioxidants
- ⇒ Organically grown fresh vegetables and fruits should be consumed in plenty
- ⇒ Intake of Soya beans will help slow down the growth of certain types of Cancer cells, as they contain Phytoestrogen, a natural compound that can prevent Breast Cancer

### Conclusion

Nutritional supplementation and dietary modification can lower the chance of developing Cancer. Also, appropriate Nutritional Therapy is required to minimize weight loss and correct nutritional imbalances and deficiencies. ©



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## Ignore Oral Health at your Own Peril

**I**n ancient times, Oral Health was not a major concern for people, as they were unaware of its importance. Even in the modern era, people tend to ignore Oral Health despite awareness having been created through television, newspapers, and social media.

Around 95% of people in rural areas neglect their oral and dental problems unless and until some kind of pathological problem develops in the oral cavity. People in India generally approach a Dentist when they are faced with a severe dental problem; most often only after the condition has become much worse.

Even now, 65% of the urban population 'follow suit', though the majority of them are aware of the importance of Oral Health. Poor dental hygiene can lead to many oral and dental diseases, the common ones being:

### Dental Caries

Dental Caries or Tooth Decay is the destruction of the outer surface of the tooth due to bacterial acid attack. If detected early, Tooth Decay can be managed with a simple filling. However, if left untreated, it may spread deeper into the tooth, involving the pulp. Eventually, the tooth may require a Root canal treatment or even an extraction.

### Gingivitis

Gingivitis, an inflammation of the gums, or gingiva, is the earliest stage of Gum Disease. The symptoms include Halitosis and red, swollen, and tender gums that bleed easily while brushing or flossing.

### Periodontitis

It is a more advanced form of Gum Disease and the most common cause of tooth loss among adults. The symptoms include swollen and bleeding gums, persistent bad breath, loose teeth, and pain when biting down on food.



**Dr. Iram Fatima**  
Dental Practitioner  
South Delhi, New Delhi, India

### Oral Thrush

Oral Thrush, also known as Oral Candidiasis, is a fungal infection that develops on the mucous membrane of the mouth.

### Bruxism

Bruxism is involuntary gnashing or clenching of teeth and is often associated with emotional stress. Bruxism can cause permanent damage to the teeth and may trigger other symptoms like jaw pain.

### Mouth Sores

Common Mouth Sores include Canker Sores (Aphthous Ulcers) that develop on the soft tissues in the mouth. They are not contagious and can be triggered by many factors. They will become a concern only when they do not go away on their own after two weeks.

### Tooth Erosion

It is the loss of tooth enamel caused by acid attack. The signs and symptoms of Tooth Erosion can range from Tooth Sensitivity to a Cracked Tooth.



**Brush  
and floss  
the teeth  
regularly**



### Tooth Sensitivity

Tooth Sensitivity is a common problem. Basically, Tooth Sensitivity involves experiencing pain or discomfort when the teeth are exposed to cold / hot fluids or sweet / acidic food. Some people may experience Tooth Sensitivity while brushing or flossing their teeth.

### Oral Cancer

Oral Cancer is a growth or sore in the mouth that does not go away on its own. It usually develops on the lips, tongue, cheeks, the floor of the mouth, hard and soft palate, sinuses, and pharynx.

#### Prevention of oral and dental problems

- ✓ Maintain good oral hygiene practices
- ✓ Brush and floss the teeth regularly
- ✓ Visit the Dentist every six months to do a routine dental check-up and oral prophylaxis
- ✓ Prevent early Childhood Caries by not letting the baby sleep with a feeding bottle
- ✓ Replace your toothbrush every three months or sooner if the bristles are frayed
- ✓ Brush your tongue to remove the dead cells, debris, and bacteria
- ✓ Consult the Dentist if there is any patch or discoloration in the oral cavity

### Conclusion

Practicing good dental health is important to maintaining good overall health. A regular dental visit at least every six months will help you maintain a healthy mouth as the Dentist will be able to address all the dental problems. ©





## DARING TO BE THE BEST

**Mr. Yatish Chandra** is a young **Indian Police Service (IPS) Officer** who is currently the **City Police Commissioner (Thrissur, Kerala, India)**. He was born and brought up in Davangere district of Karnataka. He is a Youth icon who made a name for himself as a daring Police Officer and is liked by everyone. He opens his mind to **The DentCare** on the occasion of **International Youth Day**.

### **1.** *What motivated you to quit the job of a Software Engineer and write the Civil Service examination?*

I was working with a Multinational Telecommunication Company in the Research and Development Department. Though it was a highly paid job, I had an irresistible urge to study further and pass either Graduate Aptitude Test Engineering (GATE), a national level engineering entrance examination; Graduate Record Examinations (GRE), a standardized test required for getting admission in Engineering colleges in the United States of America or go abroad and settle down there with my parents. I never thought of the Civil Service until a colleague in my office told me about the Civil Service Examination (CSE) conducted by the Union Public Service

Commission (UPSC). He also told me that there was an age limit for this exam and added that I could do something to the society if I gave it a try.

I collected the requisite information from the internet and decided to try for CSE. In 2008, I cleared the preliminary examination in the first attempt. Then I took it seriously and passed the final examination by securing the 211<sup>th</sup> rank in 2010. I can certainly say that it is a coveted job for anyone.

### **2.** *Civil Service provides a person with a higher position and responsibilities at a much younger age. Is this an advantage or a challenge?*

It is definitely an advantage. In all kinds of sport / arts or similar fields, the Youth are the ones who often bring laurels to their country. They are filled with abundant energy and fresh ideas and are always ready to take a calculated amount of risks and work hard to achieve their goals.

Yes, I agree that it is good to get experience in the respective fields but I can unequivocally say that younger people are capable of excelling anywhere and have proved themselves by reaching greater

heights in every field, even after having started their job at a much younger age. They always have a new approach to finding solutions for every problem.

Gone are the days when the Chief Executive Officers (CEOs) or Directors of business were above 40 years of age. There are a host of young entrepreneurs and youngsters who are successfully leading even international companies. If younger people can manage a multi-million Dollar business globally, why cannot a young IPS Officer who has put in hard work and received training for 4 years in one of the best institutions of the country manage a district.

### 3. *What is your impression about the Youth of today?*

My perception about the Youth is that whoever has the potential and determination to work meticulously hard for the development and progress of the country can be considered as the Youth.

They are the ones who drive the nation to success and prosperity. The Youth of today are sharper, quicker and faster than those in the previous decades. Unrestrained access to technology / the Internet has opened a lot of advantages as well as disadvantages in the life of young people; whoever uses it in a good way will succeed fantastically, whereas the misuse of Digital technology by the Youngsters can cause problems in their personal and professional life.

### 4. *What piece of advice do you like to give to youngsters on the occasion of International Youth Day?*

The Youth have a lot of untapped potential. It is important to identify the right potential for setting goals in life and to achieve greater levels of success.

Add some passion to it and then they will excel in their field. Besides, they should have the capability to take risks. Most often, youngsters do not have a clear cut idea how to channelize their potential efficaciously.



## “ The Youth of today are sharper, quicker and faster than those in the previous decades

They have to be guided accurately to get the best out of them.

### 5. *What are your dreams and aspirations?*

My dreams change with the times; they can be only shared when they turn into reality.

### 6. *You are a strong and dedicated IPS officer who has attracted the ire of various political parties at different stages of your career for penchant decisions and actions. What made you so bold?*

I have faced neither any problems nor departmental action in my professional life so far. Many a time I have received appreciation letters from my higher officers denoting that what I had done was right or fell within the purview of the law.

I do not have any problem with any political parties or do not think that they have any towards me. I will do everything within the rules. I am committed to doing my duty and have always stood and will stand on the right side of the law and legal system.

### 7. *Would you share with us the most fulfilling or defining moments in your life as an IPS Officer?*

Fulfilling moments are just momentary but changes are permanent. Every moment is fulfilling when I solve the problems of genuinely needy people; I will be satisfied when I see the happiness in their face after justice is meted out to them.☺

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



# Blissful Moments



A Big Salute to the most revered personalities from the Federation of Senior Citizens Association of Kerala (FOSCAK) who visited DentCare on 22 June 2019





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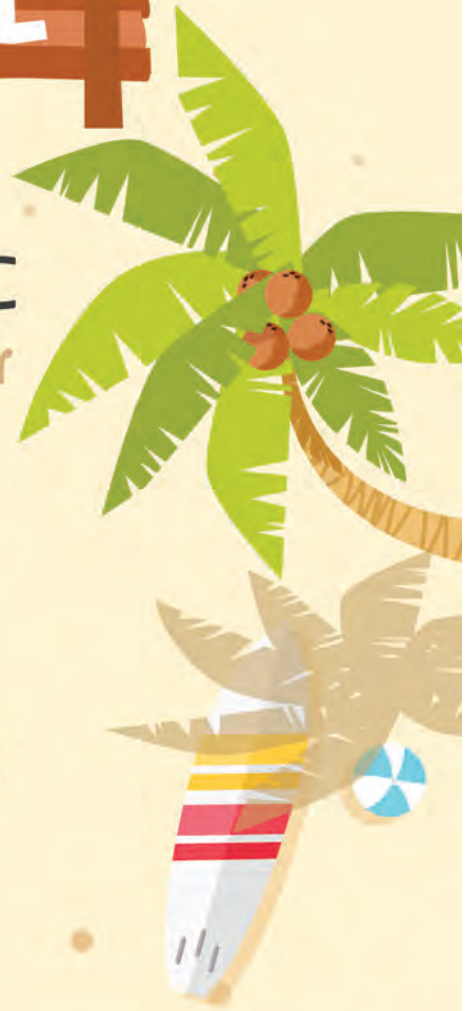
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# Physiotherapy for Temporomandibular Disorders

**T**he Temporomandibular Joints (TMJ) connect the lower jaw, called the mandible, to the temporal bone of the skull. When a person places the fingers just in front of the ears and opens the mouth, the joints can be felt. Being flexible, the Temporomandibular Joints allow the mandible to move up and down and from side to side, enabling a person to talk, chew, and yawn.

A very important aspect of the TMJ is a small cartilage disc, which keeps the temporal bone and the jawbone from rubbing against each

other. The disc allows the Temporomandibular joints to glide smoothly when a person opens or closes the mouth.

During opening of the mouth, the mandible hinges downward and at the same time is pulled anteriorly, causing both the condyle and the articular disc to glide forward from the mandibular fossa (depression in the temporal bone that articulates with the mandible) onto the downward projecting articular tubercle (bony eminence on the temporal bone in the skull). The net result is a forward and downward motion of the condyle and mandibular depression.

The Temporomandibular joints are held in place by the muscles and ligaments. The muscles attached to and surrounding the TMJ control its position and movement.

## Temporomandibular Disorders (TMD)

Temporomandibular Disorders (TMD) are a group of conditions that cause pain in and around the jaw joint and the adjacent muscles. TMD is characterized by craniofacial pain involving the jaw joints and masticatory muscles. It is a major cause of non-dental pain in the orofacial region.

### Causes

A number of factors contribute to TMD. More often than not, it is a combination of many factors rather than one. The most common factors are

- Overactivity of the jaw muscles. This can occur due to the continuous clenching or grinding of the teeth
- Wear and tear of the cartilage inside the joints
- Arthritis



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### Signs and Symptoms

A person with TMD may experience pain in the jaw joints and facial muscles while talking, yawning, or chewing, especially hard food. Other symptoms experienced include Headache, Dizziness, Ear pain, Tinnitus (ringing in the ears), and Hearing loss.

### Management

Most Temporomandibular Disorders (TMD) are self-limiting and do not usually get worse. Simple treatment approaches like self-care practices and rehabilitation aimed at eliminating muscle spasms may help reduce the symptoms associated with TMD. Nonsteroidal Anti-inflammatory Analgesics (NSAIDs) may be helpful in relieving the pain and inflammation in the TMJ.

Diagnosis and treatment of chronic TMD can be difficult in most cases. This condition is best managed by a multidisciplinary team, including a Primary Care Physician, Dentist, Physiotherapist, Psychologist, Pharmacologist, and in few cases, a Surgeon. The common treatment approaches include patient education, self-care practices, medication, splints, relaxation technique, biofeedback, Counselling, Physiotherapy, Hypnotherapy, and Acupuncture.

### Management with Physiotherapy

#### Aims

- Relieve the pain associated with TMD
- Minimize stiffness of the TMJ
- Restore normal function and mobility of the joints

#### Do's

- Do the exercise for the jaws regularly, as advised by the Physiotherapist
- Change to a soft diet and avoid hard as well as chewy food
- Cut tough food into small pieces before eating

#### Don'ts

- Excessive chewing
- Excessive opening of the mouth

- Resting the jaw on the hand
- Holding a telephone between the ear and shoulder
- Sleeping face down, as it can put a strain on the neck

**TMD is characterized by craniofacial pain involving the jaw joints and masticatory muscles. It is a major cause of non-dental pain in the orofacial region**

### Posture Correction

A poor posture, especially when a person stands, lies, or sits can cause overstretching of the ligaments and surrounding tissues, including those of the jaws. Since the Temporomandibular Joints are delicately balanced, poor posture can lead to pain in the joints. Therefore, it is important to keep a good posture so as to prevent or relieve neck and jaw pain.

### Conclusion

The symptoms of TMJ Disorders often go away on their own. Simple self-care practices are often effective in easing the symptoms. If treatment is needed, it should be based on a proper diagnosis. Consult a Medical Practitioner, who is well-versed in Musculoskeletal Disorders, especially in the treatment of TMJ Disorders, to ensure a better treatment outcome. ®





# DENTCARE: WELL-EQUIPPED WITH VERSATILE PRODUCTS

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

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

## **DentCare Clear Aligners: Comfort Ensured and Quality Guaranteed**

Dental Braces are now entering a brave new world of comfort and ease. DentCare has put forward the most sought after treatment solution to counter the drawbacks of dental braces with DentCare Clear Aligners – a series of transparent aligners to realign teeth.

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.

Each DentCare Clear Aligner is unique as it is customized for the patient's teeth. They can be easily changed every two weeks, sparing users the tedious task of heavy maintenance. DentCare Clear Aligners permit the pursuit of one's own regimen of oral hygiene measures as they can be removed while eating or drinking.

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 provide guidance through the toughest of cases. The panel would 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 the 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
- The final result can be visualized in 3D before the 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 a deep bite
- To correct over jet
- To correct an 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 an optimal clinical result, detailed information is critical. A complete evaluation which is provided by DentCare helps achieve better execution of cases.

### Accurate Impressions

To proceed with the CAD / CAM procedure for processing an order of custom made DentCare Clear Aligners, 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 a rebound effect.

### Digital Case Records

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



OPG/Panorex

Lateral Cephalograph

## 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

### 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's 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. The treatment time varies based on the complexity of the tooth movement planned.

### When should you wear them?

We recommend wearing a DentCare Clear Aligner every day 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. This 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 not be effective. 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

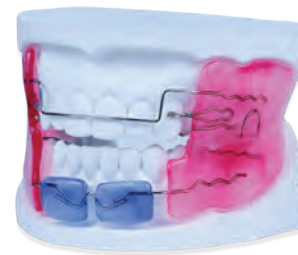


- ⇒ Never soak the Aligners in mouthwash

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.

### DentCare Orthodontic and Pedodontic Appliances

DentCare has put forward a number of amazing Orthodontic and Pedodontic Solutions – Removable, Habit Breaking, Fixed and Functional Orthodontic Appliances of highest perfection and optimal precision; manufactured with high-end technologies as well as Medical Grade and CE marked materials from Germany; available at affordable rates and living up to the expectations of all classes of customers alike. These appliances assist in correcting malocclusion and help resolve various aspects that could make a patient's face and mouth aesthetically pleasing.



### Conclusion

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

World-class products are the outcome of our incessant passion for improving the standards of dental care. And this helps to keep us at the forefront of innovation. Our dental prostheses

experts are constantly exploring new ways to address challenges in enhancing smiles.

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

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**Traumatic Brain Injury is a major cause of chronic disability. Severe TBI can have wide-ranging physical and psychological effects**

# Traumatic Brain Injury: Can it be Managed?

**T**raumatic Brain Injury (TBI) is the leading cause of disability and death, especially among young people in developing countries. It can cause a permanent neurological deficit with long-term sequelae, severely affecting the quality of life of a victim.

All Traumatic Brain Injuries are unique. Some TBIs are relatively minor, causing only short-term symptoms while others produce massive brain damage, leading to coma and death.

Depending on the force and severity of the trauma, a TBI can cause damage to the brain tissue or a tear in the blood vessels. Traumatic Brain Injuries may occur at the site or diagonally opposite to the site of impact, causing bleeding in the brain or outside. Small to moderate hematomas (a localized collection of extravasated blood, usually clotted) are usually not life-threatening but can cause a Seizure, Headache, or Vomiting.



**Dr. Ajith R. Nair**  
Senior Consultant  
Neurosurgeon



**Dr. Sneha Chitra B.**  
Consultant Neurosurgeon

Sree Uthradom Thirunal Hospital  
Thiruvananthapuram, Kerala, India



A Severe Traumatic Brain Injury can cause a decreased level of consciousness, cranial nerve dysfunction, and weakness in the limbs. When a hematoma increases in size, it can cause an increase in intracranial pressure, brain herniation (an abnormal protrusion of the brain tissue through an opening when there is an increased intracranial pressure), and an altered sensorium (a part of the brain that receives, processes and interprets sensory stimuli), leading to breathing and circulatory disturbances.

An emergency surgical procedure is most often needed to evacuate the extravasated blood and reduce the intracranial pressure. Unless the problem is surgically corrected, it can lead to the permanent damage of the brain.

Sometimes, the fractured skull may become depressed and compress the underlying brain, causing a Seizure, Neurological Deficit, or an Infection. In such a case, a surgical procedure may become necessary to remove the fractured bone compressing the brain.

A victim of TBI with symptoms, such as Loss of Consciousness, Headache, Seizure, Vomiting, Bleeding from the nose, mouth, or ear, or a wound in the scalp requires immediate clinical or radiological examination to rule out or assess the extent of brain injury and skull fracture.

Computed Tomography (CT) of the brain is a mandatory investigation to identify bleeding in the brain or fracture of the skull. Magnetic Resonance Imaging (MRI) may be needed when a Diffuse Axonal Injury (DAI) (a shear and stretch of the nerve cells) is suspected or when a CT scan fails to locate / identify the suspected defects.

A patient suspected to have a head injury should be immediately shifted to the nearest hospital with trauma care facilities. A head injury should be detected in the first golden hour (the first sixty minutes after trauma) and treated accordingly or else the condition of the victim may become worse, reducing the chance of survival.

In the case of a TBI victim with a brain haemorrhage requiring surgery, the best result can be achieved when the surgery is performed in the golden hour. Anticonvulsant drugs are often required to be administered to a TBI victim to avoid a Seizure and may have to be continued for up to a year, depending on the severity of the brain injury. Minor bleeding in the brain usually resolves in 1 to 6 weeks and a patient can resume work or routine activities thereafter.

Rehabilitation, including Physiotherapy, Speech therapy, and supportive care is required for a patient with a severe brain injury.



## Conclusion

Traumatic Brain Injury is a major cause of chronic disability. Severe TBI can have wide-ranging physical and psychological effects. More than that, it can cause serious complications, including an increased risk of Dementia and Neurological as well as Neurodegenerative Disorders. These complications can even be life-threatening or irreversible.

Avoiding reckless and drunken driving; wearing a helmet or seat belt; driving at a moderate speed and obeying traffic rules; avoiding the use of phones while driving are a few simple steps that can go a long way in reducing the incidence of traffic accidents and Trauma Brain Injuries. ©

# EXPERIENCE DENTCARE

## Meeting Expectations

**Dr.** Rema J., Professor and Head, Department of Oral Medicine and Radiology, Al Azhar Dental College, and myself are really happy that we got a chance to visit DentCare. No sooner had we arrived at the lab, we were cordially welcomed by the ever-enthusiastic staff at DentCare.

In spite of being Oral Radiologists, we were explained each and every step in detail with great enthusiasm. Even as we moved around and witnessed the colossal infrastructure facilities with great amazement, thousands of fingers were steadily and silently working to fabricate prostheses par excellence.

I admire the commitment and dedication of both the Management and Staff in providing flawless work to their clientele. I appreciate the fact that even the water used for routine lab purposes is being recycled and reused.

The visit was truly an awe-inspiring experience. I would definitely recommend my friends and colleagues to make a trip to DentCare.

Let the lab keep soaring higher. Wishing the entire team, the very best. ☺



**Dr. Jayesh J. Unnithan**  
Associate Professor  
Department of Oral Medicine and Radiology  
Al Azhar Dental College  
Thodupuzha, Kerala, India

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## Journey to Excellence

**I** was truly impressed with the systematic functioning of the lab and the high priority being given by them to maintain the quality of the prostheses.

The serenity and tranquility of the lab together with the fraternity and unison of the staff are unique and beyond words.

I will always cherish the memories of my visit to DentCare forever. May God bestow His blessings upon them to take this lab to even greater heights. ☺



**Dr. Selva Libin**  
Dental Practitioner  
Kanyakumari, Tamil Nadu, India

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