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# THE DENTCARE

Your Monthly Health Care Magazine

*Brightening smile the world over*



**Back to  
School**

**Dark Days of  
Dentistry**

**Special Interview with  
Mr. Rishi Raj Singh IPS**

**Nipah Virus:**  
A Deadly Zoonotic Disease





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**DentCare Dental Lab Pvt. Ltd.**

Muvattupuzha, Kerala, India

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*for over*

# 30 years,

*The World smiles  
through us...*

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**Dear Reader,**

Green is the resounding tune of June.

Not without ample cause. Our Environment is gasping for breath everyday even as the menace of plastic continues to extend its vicious grip on every sphere of our existence.

Literally, life is turning immensely plastic too!!! We have only ourselves to blame for bleeding our souls and continuing to chase matters that truly deserve less significance.

There is real reason to smile though. Dentcare is yours for the last thirty beautiful years. And hence you can trust us with the responsibility of brightening your smile.

Yet another profound one is the dawn of a new academic calendar. The air is filled with the exuberance of the 'back to school' excitement for many, and a bit of reluctance for a few, if I may add. Discover pertinent homework within our leaves for your priceless ones as they turn a new leaf in their lives. God be with them.

We still have our exclusive and defining part to play in their larger interest. Moral values deserve more focussed attention as the options for 'losing oil in the spoon' are alarmingly on the rise.

As Oral care providers, lasting measures to create better avenues for generating awareness and providing greater access in screening, treating and maintaining oral health needs of the less privileged must be a priority. The world of smiles must not lack because we are slack.

No doubt, tooth loss needs to be addressed without dawdling. It would have a discerning role to play in meeting nutritional needs of the populace, including 'would be' mothers, provided there is applied thought to eating what is right!!

Let us remain compelled to search for the relevant answers to these pressing questions by assuming the right posture in the days to come.

The Dentcare reserves its warmest greetings of the season for you.

Yours truly,

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

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डॉ. हर्ष वर्धन  
DR. HARSH VARDHAN



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**MESSAGE**

I am glad to know that M/s DentCare Dental Lab Pvt Ltd is publishing a monthly Health Magazine "The DentCare" in English and Malayalam language to spread awareness on oral care and other health related information.

I extend my greetings to the management and staff of DentCare for a successful publication of the magazine.

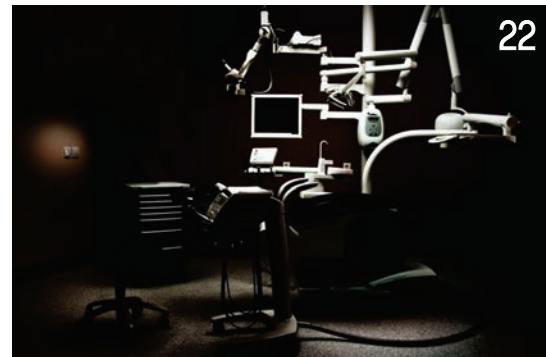
  
(Dr Harsh Vardhan)

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# Inscribing Moral Values in Children

**Mr. John Kuriakose**

*Managing Director, DentCare Dental Lab Pvt. Ltd.*

**A** new academic year solemnly starts.

Education has played a pivotal role in the total development of our country. Though India has excelled in the field of education, criminal tendencies and antisocial activities have also increased in unprecedented proportions. It is deplorable that we have lost our moral values beyond measure.

Instead of instilling moral values in children, are our families, teachers and spiritual centres not bracing them up for unhealthy competition? The kids are tutored only to be successful.

When failures happen, they are scolded immensely, leading to incurable emotional wounds in their little minds. All these make our tiny tots plunge headlong in to the bottomless pool of despair. We opportunely ignore the maxim, **“Failure is the stepping stone to success”**.

When failures happen, rather than taunting them, they should be comforted and encouraged to do better in the ensuing examinations. The Bible tells, “Train up a child in the way he should go, and when he grows old, he will not depart from it”.

There is a noteworthy narrative in the novel, **‘The Alchemist’** written by Paulo Coelho, the famous Brazilian author. A merchant sends his son to a sage to learn the secret to happiness, i.e., the secret to a fulfilling life. After traversing for forty days, the boy arrived at the luxurious palace of the sage, atop a hillock. He had to wait for two hours before seeing the polymath.

‘Do you want to know the secret to happiness?’ asked the sage. “I am too busy to explain it right now. Go round the mansion to see the myriads of things there and come to me after two hours. While you saunter around the castle, make sure that the oil is not lost”, the old man said, after handing over a spoon with

two drops of oil over to the boy.

The boy strolled around the manor for two hours, but all his attention was on the spoon. After two hours, he presented himself before the wise man.

“Did you not see everything?” the old man asked. “I could not watch everything clearly”, he told the truth. “Never mind, go around and relish the beauty of this edifice anew”, the old squire said.

The boy felt elated. He set out to enjoy the elegance of the manor in a new way, holding the spoon containing two drops of oil. He admired the murals and frescoes on the ceiling, luxuriant gardens, captivating landscapes and panorama of the mountain ranges beyond all measure. Again, he appeared before the sagacious man and made an account of what he had seen.

“What happened to the two drops of oil?” the mentor asked. Only then did the boy realize that the spoon had been empty. “The secret of happiness is to see all the marvels of the world, and never forget the drops of oil in the spoon” the old man spoke very prudently; here the ‘oil’ stands for moral values while the ‘spoon’ for life.

If we lose moral values, our family bond will break up, society will disintegrate and people will become misanthropists. It is high time to wake up from our lethargy. Let us brace up ourselves to spread the light of love and morality. Parents, teachers and elders should continue to instil moral values in children. Let our children grow up in love, virtues and good expectations.

Instead of taxing our children to outshine in studies, let us make every effort possible by relying on Almighty in order to cultivate comity and empathy in our children. The cultivation of values will indeed help them stay on the track in becoming virtuous human beings and ideal citizens. ☐

# Causes and Consequences of **TOOTH LOSS**

**T**eeth are crucial structures in the mouth. They are thirty two in number and have a wide range of crucial roles to play.



**Dr. Eric Mario Shailander A.**  
Consultant Periodontist  
Bengaluru, Karnataka, India



## Various Functions of Teeth

- 1 Chewing**  
The anterior teeth help cut and tear food while the posterior ones help grind and mash food.
- 2 Aesthetics**  
The position, shape and the size of teeth, especially in the visible area of the mouth (anterior), play a pivotal role in the way a person appears. Perfectly aligned and proportionally shaped teeth helps an individual appear more pleasing. They also help give definition and fullness to the face.
- 3 Speech**  
Teeth have a significant role in pronunciation and phonetics.
- 4 Maintenance of physiologic dimensions**  
Teeth help maintain a balance between the jaws and the musculature. The presence of teeth with their roots in the alveolar bone (jawbone) helps maintain the dimensions of the bone and helps prevent them from thinning out (resorption).



Tooth Loss in children which is commonly referred to as exfoliation is most often a physiologic process unless there is a corresponding pathology involved. This process helps remove the transitional milk teeth and provide space for the permanent teeth that are bigger in size.

Tooth Loss in adults is a global concern, more often affecting the older population. However, a good proportion of younger people also tend to lose their teeth. Tooth Loss can occur due to congenital reasons. They present as **Hypodontia**, an inherited condition characterized by the absence of a part of the dentition or as **Anodontia**, a rare genetic disorder characterized by the congenital absence of all primary or permanent teeth.

## Pathology of Tooth Loss

### Unchecked Tooth Decay

Dental plaque will form on the tooth surface when oral hygiene is not properly maintained. A host of bacteria thrive in such environments and can cause many complications. Food particles stuck in teeth become the center where bacteria colonize and thrive. When left unchecked, this may lead to dental caries on the tooth surface which gradually progresses onto their roots. Once the supporting root becomes weak, the tooth may either break or fall out entirely.

### Gum Disease

Another leading cause of Tooth Decay is periodontal disease. If it is not treated in the early stages, this may culminate in Tooth Loss. Poor oral hygiene and the associated bacterial plaque cause a drastic and rapid destruction of the gums, affecting the periodontal ligament and the surrounding bone. Eventually, the tooth loses its support and falls out.

### Smoking

Smoking reduces the healing capacity of the body, as oxygen concentration in the blood becomes less. The salivary flow rate in smokers will be also less than normal. Since saliva naturally has an antimicrobial effect, reduced saliva causes an increased and unchecked growth of bacteria. The efficacy of the white blood cells that combat bacteria also gets reduced. This puts smokers at a higher risk of developing gum disease.

### Nutrition

Sugary food increases the risk of developing dental caries. Acidic foods and fruits, aerated

drinks, alcohols, pickles, etc., can cause erosion of the enamel and weaken the teeth.

### Eating Disorders

Eating disorders like bulimia and anorexia can cause vomiting or acid reflux. This forces powerful acids from the stomach to come back into the mouth. This can cause erosion of teeth and weaken the enamel, making teeth more susceptible to caries and fractures.

### Chronic health Conditions

Chronic uncontrolled diabetes results in increased glucose levels in the saliva, which act as a source of nutrition for bacteria.

Chronic hyperglycemia causes a delay in wound healing and increases the risk of infections, especially fungal infection and gum diseases.

Rheumatoid arthritis is a systemic inflammatory autoimmune condition that can increase the systemic inflammatory burden and damage the supporting structures of teeth and salivary glands.

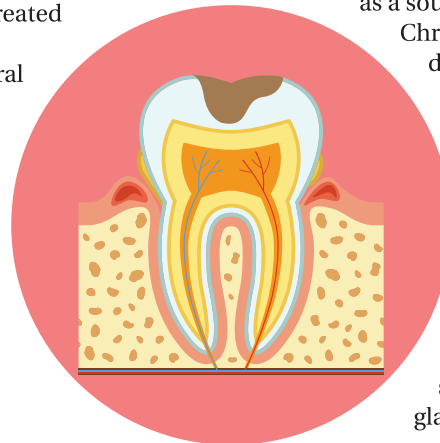
Tooth Loss has also been associated with menopause, hypertension and acid-reflux disease.

### Medications and Drugs

Certain medications and drugs have deleterious effects on teeth.

### Trauma

Trauma to the tooth and its supporting structures can occur when an injury of high magnitude happens to the mouth.



### **Excessive occlusal forces**

Excessive occlusal forces can also cause the weakening of the supporting structures of teeth, which can eventually result in Tooth Loss. It can also cause cracking of teeth. Habits, such as nail-biting, cracking nuts, chewing paan etc. can also

cause damage to the tooth.

### **Impacted Teeth**

Most often, fully impacted teeth may not be visible in the mouth. Partially impacted teeth are usually extracted when they become infected.

## **Consequences of not replacing Missing Teeth**

### **Altered Aesthetics**

This condition may lead to distorted facial features.

### **Drifting of adjacent Teeth**

The neighboring / adjacent teeth may either drift into or tilt towards the edentulous space. This may cause a change in the physiologic occlusal balance and cause it to become traumatic occlusion. The drifted teeth may also seem to become loose. The opposing tooth may supra-erupt due to the absence of its antagonist. This can cause an increase in the interdental embrasures and result in food lodgment.

### **Food Impaction**

Due to drifting or tilting of teeth, food can get forcefully wedged into the interdental areas. This condition is called food impaction and can cause a great deal of discomfort and pain in the gums.

### **Bone resorption at the edentulous site**

The roots of the teeth help maintain the dimensions and integrity of the bone. Muscles undergo atrophy due to its non use. Similarly, without functional forces transmitted through the teeth, bone remodeling process tips towards bone resorption. The bone flattens over time and gradually loses its height as well.

### **Excess forces on remaining Teeth**

With the loss of teeth, the remaining ones have to take up the forces of the missing teeth as well. Normal forces of occlusion can also become traumatic in such situations and may lead to food impaction and discomfort.

### **Speech Alterations**

Phonetics and speech characteristics may be significantly altered with the loss of teeth.

### **Sinus Expansion**

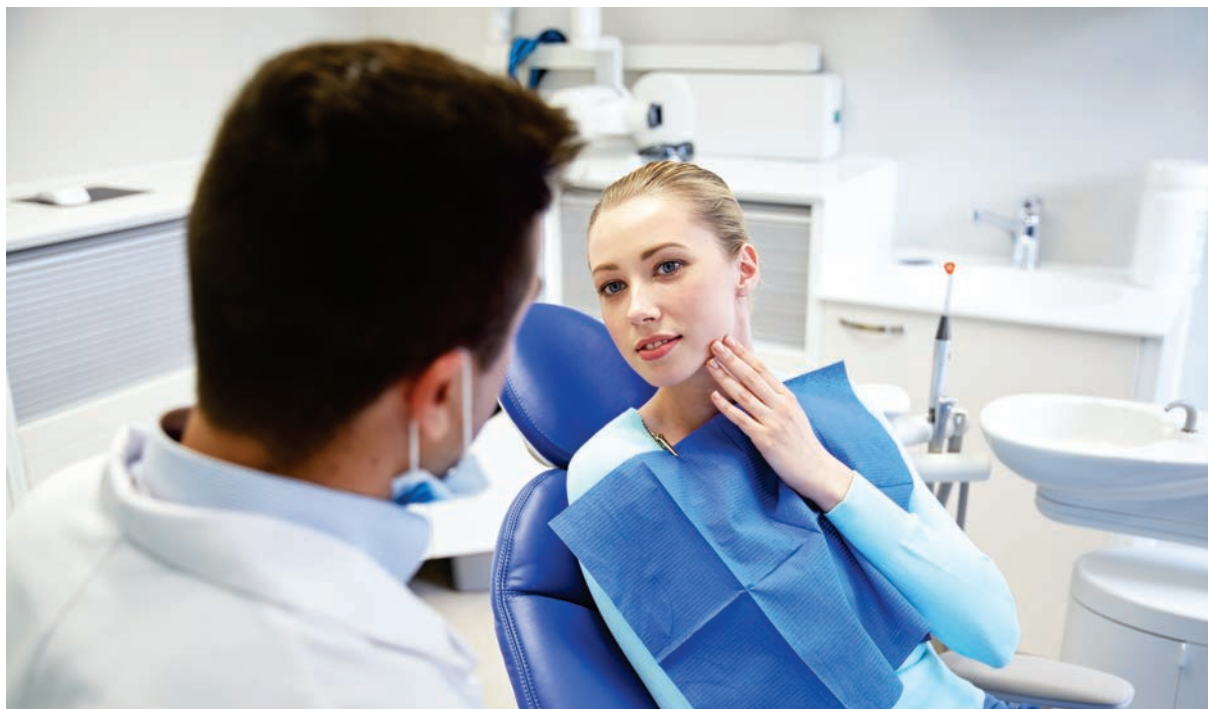
Once resorption of bone occurs after the loss of a tooth, the maxillary sinus may expand and erode the jawbone.

### **Nutritional Inadequacy**

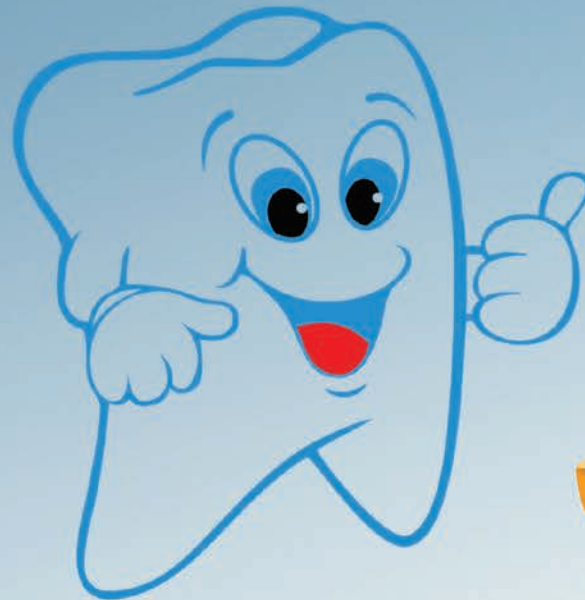
Edentulous individuals have a very restricted diet, as they cannot chew their food properly. They will be restricted to eating only soft foods. Therefore, they may not get necessary dietary nutrients in the required quantities.

## **Conclusion**

Though it may not seem important, replacing missing teeth is an integral part of a comprehensive dental treatment plan. Ignoring this aspect can have long-term complications and unfavorable outcomes. These things should be borne in mind, while addressing and drawing a treatment plan. ☒







**KEDDA**

**DENTAL DEALERS ASSOCIATION (KERALA)**

**Invites**

**ALL DENTISTS**  
**DENTAL EXPO-2018**  
**10TH Edition**

**Venue: Adlux Convention Center, Angamaly**

**Date: 11th Saturday (11 AM - 7 PM)**

**12th Sunday (10 AM - 6 PM) August 2018**

# It is Time to Go Back to School

Whether their summer was jam-packed with activities or filled with complaints about being bored with nothing to do, or they were nagging their parents for different things, children often have a tough time making the 'back to school' transition.

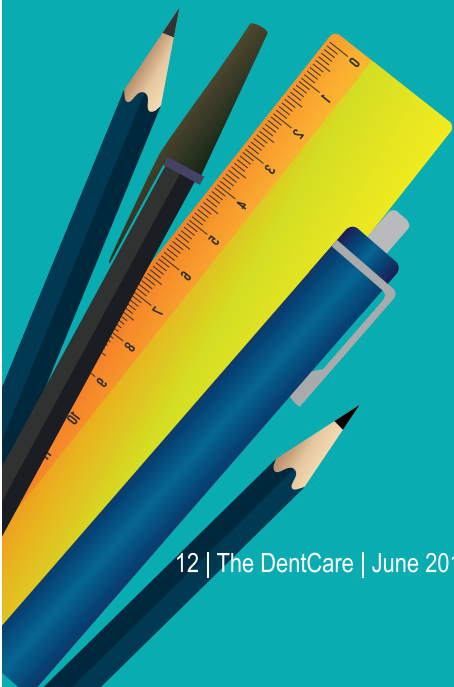
As with any new or potentially unsettling situation like starting school for the first time, entering a new grade or new school, children need their own time to settle into the regular school routine. It may require efforts from their parents to help them get accustomed to this transition.

What parents need to do is to remind them that everyone feels a little nervous and anxious about the first day of school and that this restlessness will go away as soon as they get used to the routine.

You can also turn their anxiety into excitement by emphasizing the positive things about going back to school, such as hanging out with friends, meeting new classmates, buying cool school supplies, getting involved in sports and other activities and showing off the new school supplies.

It is also important to talk to your kids about what worries them and offer reassurance. Are they afraid of not getting new friends or not getting along with their teachers? Is the stress of schoolwork weighing them down? Are they worried about being bullied at school?

Usually we end up advising our children to study well and help them cover their books and buy them new stuff for school, but there are many creative ways that help your child prepare for the new school year. A few suggestions are:



**Ms. Sandhya Varma**  
Entrepreneur, Writer and Columnist  
Kozhikode, Kerala, India



## 1. 'School night' routine

To help ease 'back-to-school butterflies', transform your children into a consistent school-night routine a few weeks before school opens. Also make sure that they:



- ⦿ Get enough sleep (establish a reasonable bedtime so that they can get better sleep and will be ready to learn in the morning).
- ⦿ Eat a healthy breakfast (they will be more alert and perform better in school if they eat a good breakfast every day).
- ⦿ Write down the 'need-to-know' information to help them remember the details, such as at what time classes and lunch break start and end, their classroom number and the names of their teachers, bus drivers etc.
- ⦿ Use a wall calendar or personal planner to record when assignments are due, tests are conducted, extracurricular practices and rehearsals are being held, etc. You should help your kids develop the habit of planning from the beginning.
- ⦿ Help them organize and set up what they need the day before school starts (books should be put in their backpacks and clothes should be laid out in their bedrooms).

Although, it is normal to be anxious in any new situation, a few kids may develop real physical symptoms, such as headaches or stomachaches, associated with start of school. If you are concerned that your child's worries go beyond the normal back to school jitters, talk to your child's doctor, teacher, or school counselor.

## 2. Planning for After-school Classes

Figuring out where the kids will go after school time can be a challenge, especially if both parents are working. Depending on a child's age and maturity, you may need to arrange for after-school transportation and care. It is better for younger kids and preteens to have some sort of supervision from a responsible adult.

If you cannot be there as soon as 'school's out', ask a reliable, responsible relative, friend, or neighbor to help you out. If your kids should be picked up after-school, make sure that they know where to meet you or the caregiver. Although it may be right that the children through approaching adolescence may be mature enough to start watching themselves after school, but the kids up to 11 or 12 may not be left alone.

The best suggestion is that you should consider adjusting your own schedule to make the transition smoother. If possible, it will be really beneficial for both parents and kids to be at home at the end of school day, at least during the first week. But many working mothers and fathers may not have that flexibility. If it is not possible, arrange your evenings so that you can give kids as much time as they need, especially during those first few days.

### **If your kids or teens are home alone in the afternoon, it is important to establish clear rules**

- ⦿ Set a time for them to reach home from school.
- ⦿ Have them check in with you or a neighbor as soon as they get home.
- ⦿ Specify who is / are allowed in your home when you are not there.
- ⦿ Make sure that they do not open the door for strangers.
- ⦿ Make sure that they know what to do in an emergency.

### **Getting involved in after-school activities**

- ⦿ Offer your kids a productive alternative to watching Television or playing video games.
- ⦿ Help develop your kids' interests and talents.
- ⦿ Encourage them to interact socially to help them develop their social skills.
- ⦿ Help them involve in activities other than academics.
- ⦿ Take steps to keep kids out of trouble.

### 3. Back to School To: Do's for Parents

As Parents, you might also get a little nervous about the first day of school, especially if you are seeing your little one off for the first time or if your child is attending a new school.

To help make 'going to school' a little easier, here is a handy list of questions to have a check on yourself:

#### What to wear, bring, and eat

- ⦿ Does the school have a dress code? Are there certain types of dress students should not wear?
- ⦿ Will kids need a change of clothes for physical education or art class?
- ⦿ Do your kids have a safe backpack that is lightweight, with two wide, padded shoulder straps, a waist belt, a padded back, and multiple compartments? Just make sure that the overload of books does not harm your child's back.
- ⦿ Do kids know not to overload their backpacks and stow them safely in school and at home?
- ⦿ Will your kids buy lunch at school or bring it from home? If they buy a school lunch, how much will it cost per day or week? Do you have a weekly or monthly menu of what to be served?
- ⦿ Have you stocked up all of the necessary school supplies? (Letting kids pick out a new lunchbox and a set of pens, pencils, binders, etc., help them get geared up for going back to school).

#### Medical issues

- ⦿ Have your kids received all necessary immunizations?
- ⦿ Do the teachers know about any conditions that may affect your kids learning skills? For example,

kids with Attention-deficit / hyperactivity disorder (ADHD) should be seated in the front of the classroom, and a child with vision problems should also be seated in the front row.

#### Transportation and safety

- ⦿ Do you know what time school starts and how your kids will get there?
- ⦿ If they are riding the bus, do you know where the bus stop is and what time they will be picked up and dropped off?
- ⦿ Do you know the designated drop-off and pick-up area in the school premises?
- ⦿ Are there any regulations on using bicycles or other vehicles, such as scooters?
- ⦿ Have you gone over traffic safety information, stressing the importance of crossing at the crosswalk (never between parked cars or in front of the school bus) and understanding traffic signals and signs?
- ⦿ If your child walks or bikes to school, have you mapped out a safe route? Does your child understand that it is never OK to accept rides, candies, or any type of 'invitation' from strangers?



### 4. Eating Habits during the School Day

Eating habits of your children are very important for their holistic development. Though all of us know this fact very clearly, but as our children get fussy and we run short of time to be behind them, we may succumb to their whims and fancies. Studies show that children who eat a nutritious breakfast perform better at school. They have better concentration and more energy. Make sure that they eat a breakfast that contains enough Protein.

One 12-ounce of soft drink contains approximately 10 teaspoons of sugar and 150 calories. Drinking just one can of soda a day will increase a child's risk of obesity by 60%. Hence, choose healthier options for your children and make sure that they are always away from junk foods.

## 5. Helping Homework

Whether you love it or hate it, homework is a very important part of school, as this helps your kids get back into the scholastic swing of things.

- Make sure that there is a quiet place that is free of distractions to do homework.
- Do not let kids watch television when they are doing homework or studying. Set a schedule for doing homework / studying and when to turn on and turn off television. It is better to limit their screen time, especially on school days.
- If your kids are involved in social media, make sure to limit the time spent on these activities during the time for homework.
- Never do their homework or projects yourself. Instead, make it clear that you are always available to help or answer any questions.
- Review homework assignments daily, not necessarily to check up, but to make sure that they understand everything.

### Encourage kids

- To develop good work habits from 'the get-go', like taking notes, writing down assignments, and doing homework on time.
- Take their time with schoolwork.



- Ask the teacher if your kids do not understand something.

To ensure that kids get the most out of school, maintain an open channel of communication with the teachers by e-mailing or talking with them throughout the school year to discuss your kids' academic strengths as well as weaknesses.

## 6. Bullying

Bullying or cyberbullying is when one child picks on another child repeatedly. Bullying can be physical, verbal, or social. It can happen at school, on the playground, on the school bus, in the neighborhood, over the Internet, or cell phones.

### When Your Child Is Bullied

- Alert school authorities to the problems and work with them on solutions.
- Teach your child to be comfortable with, when they ask a trusted adult for help. Help them identify the person whose help can be sought for.



- Teach your child when to say "No" in a firm voice. For example:

1. "I do not like what you are doing"
2. "Please do not talk to me like that"

- Monitor your child's social media or texting interactions, so as to identify problems, if any, before getting out of hand.

Most of all, whether it is the first day of school or the last, make sure that your kids know you are there to listen to their feelings and concerns and that you do not expect perfection, but want them to try their best. ☺



# Accessibility to Oral Health Care Services In India

There is huge difference in dentist to population ratio as it is 1:10,000 in urban areas and it drastically falls to 1 : 150,000 in rural areas



“Once we accept our limits, we go beyond them”.

These words of Albert Einstein, the German Physicist who developed the Theory of Relativity, have inspired me to develop a new approach to oral healthcare services.

“Change is the need of a society.”

Since the society has changed drastically, the healthcare system also needs to be improved to cater to the needs of the society to the fullest. Dental healthcare system is still an alien term in some parts of India, even today.

Healthcare system is the backbone of any nation. The system needs to stay healthy to deliver the services smartly and effectively. To achieve this, it requires to be vaccinated / immunized on a regular basis to make it foolproof.

But the question is, 'Do we really need it or What is the need of such a modulation?'

India has approximately 300 Dental Colleges; from where around 26,000 graduates pass out every year. Still, India is deprived of the basic oral health care services in rural areas. There is a huge difference in the Dentist-to-Population ratio. It is 1:10000 in urban areas while it drastically falls to 1:150000 in rural areas.

Dental care services are now available only at the primary healthcare level, in some States. Another important fact is that dentistry per se is not covered under any type of Insurance, so people from both public and private sectors have to pay out of their pockets for their dental treatment.

The concept of 'access to dental care' has changed over a period of time, as it has now reached far beyond its traditional meaning.

**“Change is the need of a society.” Since the society has changed drastically, the healthcare system also needs to be improved to cater to the needs of the society to the fullest**



**Dr. Bhuvan Nagpal**  
Consultant Oral and  
Maxillofacial Pathologist  
Hisar, Haryana, India

The newer concept has developed the solutions to clear up the misunderstandings occurring in the oral healthcare sector.

In the past, the patients' ability to obtain or make use of dental care was the only deciding factor to the concept of access to dental care. Certain other factors like adequacy of dental workforce and ability to pay for dental care services were also the primary determinants of access to dental care.

All these factors were related mostly to the supply side of the dental care system and were primarily based on the economic condition. In the present scenario, the access to oral care should include the factors, such as the need for care, cultural preferences and so forth. Some of these factors may operate independently, as they are patient based.

The availability of dental care and the willingness of patient to seek this care are considered in the present concept of access to dental care. Although, there are several justifications to each side of this equation but, it is still based on supply-demand consideration.

The one reason for this situation is due to the enormous number of population to be catered to and the other is poor accessibility to and awareness about oral healthcare. To improve the accessibility to dental care, first thing needed is to spread the message on the importance of oral healthcare by targeting the regular needs of people.

The aim of medicine is to prevent disease so as to eliminate the need of medicine / physician. But as a matter of fact, it seems quite unrealistic, as medicines / doctors are required as long as there are human beings on the Earth. Therefore, the dentist and chemists should work towards a constructive approach to make dental services more accessible to all classes of people rather than looking at this association for achieving other gains.

The availability of dental care and the willingness of patient to seek this care are considered in the present concept of access to dental care



Next, we should devise a plan to focus mainly on the population of middle and lower classes. The idea behind this concept is that a large chunk of Indian population belongs to middle class and a number of people from lower classes are working in their houses.

Every dental college should organize a camp quarterly not just to bring patient to colleges but also to sensitize people through free treatment camps. In these camps, it must be ensured that the women of the family are sensitized, as it is rightly said, “If you educate a man, you educate a person: If you educate a woman, you educate a family.”

Like dental camps, colleges should also ensure that they are organizing oral healthcare initiatives, tobacco-cessation programs and anti-drug campaigns, especially for teenage students because they are easily addicted to unhealthy habits due to hormonal and behavioral changes, since they are the nation builders of tomorrow.

Next, we should aim at bridging the gap between 'haves and have-nots', as “health for all” should be

**Dental insurance is the burning need of our country. This is critical as most of the patients may need special financial arrangements or care management services to overcome obstacles, especially those individuals with physical disabilities or mental health challenges**

our watchword. To accomplish the basic dental requirements of Indian population, especially the underprivileged, Dental Council of India (DCI) and Indian Dental Association (IDA) should work together to devise appropriate plans.

The challenges of accessibility to healthcare also include difficulty in getting access to a dental office, prioritizing dental care among other health issues and basic needs of living, financial burdens etc.

Dental insurance is the burning need of our country. This is critical as most of the patients may need special financial arrangements or care management services to overcome obstacles, especially those individuals with physical disabilities or mental health challenges.

A major impeding factor is the limited availability of treatment facilities due to the shortage of dental professionals, especially in rural areas. Another factor behind this is that only a few skilled / qualified doctors are passing out every year. There is one simple solution to it. A minor change in curriculum may help solve the entire problem. Most of the dentists are not able to deliver quality services, as they did not get enough patients while they were at dental colleges.

In dental colleges, practical tasks should be started from first year onwards, so that by the time they are well-versed with all the basic procedures, they should be posted in rural areas for internship. By doing this, there would be enough doctors in rural areas and that they will get lot of patients to learn more effectively. It should also be ensured that, the interns from different dental colleges should be sent in groups to a particular rural area, so that they can







share their skills and ideas to bring out revolutionary changes.

Government should formulate suitable policies to make dental health facilities available in rural areas also. Every clinician should ensure that no patient leaves the clinic without fixing another appointment, even if it is only after 6 months, just for a routine check-up. We also need to reject the programs and policies that marginalize oral healthcare and support those ones which recognize that oral health is an integral part of overall health. The effort in this regard should come from the sides of both government and clinicians.

For the fulfillment of this, following points should be considered:

1. Emphasis should be placed on preventive healthcare, as it helps reduce the quantum of treatment requirements by improving and increasing the public dental healthcare system, including health education, counseling, and health promotion.
2. There are 11,000 sanctioned posts of dental doctors under the Ministry of Health and Family Welfare, Government of India. The irony is that only 5,500 posts are filled as on date and the remaining are still lying vacant. To begin with, these vacancies should be filled by the concerned authorities.
3. Control the Dentist-to-Population ratio by

### **When both clinician and patient realize and appreciate the beauty of dental health, the aim of “health for all”, will be achieved in the true sense**

reducing the number of dental colleges, similar to that of in America and China. Further all academic dental institutions should invariably meet the quality standards established by the Dental Council of India. Besides, Dentists should be encouraged to establish practices in rural areas.

In this world, no system is ideal or foolproof, as there would be loopholes and lacunae at different entities. But we should aspire to overcome all these hurdles, so that we can build this fraternity and make our country a more beautiful place for everyone.

In a nutshell, I may emphasize that awareness of dental care services is directly linked to their accessibility. These two things go hand in hand. As a clinician, we should not just focus on increasing accessibility, as it would only be a passive communication. When both clinician and patient realize and appreciate the beauty of dental health, the aim of “health for all”, will be achieved in the true sense. ☺

# Importance of Nutrition During Pregnancy



**P**regnancy is a period of great physiological as well as psychological stress for a woman. There is a high demand for nutrition for a pregnant woman, as she has to maintain her health at an optimum level to provide adequate nutrition for the development of the fetus and also to prepare her for delivery as well as lactation. Adequate nutrition is very important for the long-term health of a woman.

A woman, who has been well nourished before conception, begins her pregnancy with the reserves of several nutrients, which can be utilized to meet the needs of the growing fetus, without affecting her healthy adversely.

The infants, who are well nourished in the womb, have an enhanced chance of having good health in life. The Mother's diet should provide adequate nutrients so as to produce sufficient milk to nourish her child after birth, without depleting her nutrition stores.

The daily diet of a woman should contain an additional 350 calories. It should contain at least 0.5 gram of Protein during the first trimester, 6.9 grams during the second trimester and 22.7 grams during the third trimester of pregnancy.

Certain types of micronutrients are specially required in extra amount to meet the fast changing physiology of a woman during pregnancy.

Folic acid, when taken throughout pregnancy, can reduce the risk of congenital malformations and increase the birth weight of babies. Calcium is essential during pregnancy as well as lactation for the proper formation of bones and teeth of the offspring and for the secretion of breast milk rich in calcium, along with preventing osteoporosis of the mother. Similarly, Iodine intake ensures proper mental health of the growing fetus / infant.



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A pregnant woman should eat a wide variety of foods to make sure that her own nutritional needs as well as those of the growing fetus are met. There is no particular need to modify her usual dietary pattern. However, the quantity and frequency of the intake of different kinds of foods should be increased. She will get maximum amount of energy (about 60%) from rice, wheat and millets.

Cooking oil is a concentrated source of both energy and polyunsaturated fatty acids. A good quality of protein is derived from milk, fish, meat, poultry and eggs. But a proper combination of cereals, pulses and nuts can also provide adequate proteins.

Mineral and Vitamin requirements of a pregnant woman can be met by consuming a variety of seasonal vegetables, particularly green leafy vegetables, milk and fresh fruits. Bioavailability of iron can be improved with the intake of fermented and sprouted grams as well as foods rich in Vitamin C, such as citrus fruits. Milk is the best biological source of Calcium.

If a mother is undernourished, the baby is at an increased risk of being premature with low birth weight and developmental irregularities. Intrauterine nutrition is highly important for the proper growth of the central nervous system and kidneys of the fetus, which mature during the latter part of pregnancy.

In the first trimester, the rate of growth of the fetus is slow. The mother may not be able to take much food during this period, due to nausea and vomiting which are common at this time. During the next two trimesters, the fetus grows rapidly and hence, the nutritional needs for the formation of new tissues are high. Therefore, the diet of a pregnant woman should be well balanced to meet the additional requirements.

Accretion of nutrients in a fetus takes place during the last trimester of pregnancy. This has to be

supplied by the mother either from her diet or from her nutritional reserves. A 'term neonate' will have adequate stores of Iron, Protein, Vitamin C and other Vitamins. If the diet of a pregnant woman lacks sufficient nutrients, the fetus will not get enough nutrients and as a result, this may lead to intra uterine growth restriction (IUGR).

The deficiencies of Folic acid and Zinc have been implicated as the preventable cause of congenital anomaly of nerve tissue like Meningocele (neural tube defect in which the bones of the spine do not completely form). Taking Folic acid supplementation six weeks prior to pregnancy can help prevent this condition. Foods high in Folic acid are liver, kidney, green leafy vegetables and pulses and foods rich in Zinc are seafood, wheat, bajra, pulses, pumpkin and nuts.

Centers for Disease Control and Prevention (CDS) of the United States of America (USA) recommends that all women of childbearing age, who are capable of becoming pregnant, should consume 0.4 milligrams of Folic acid per day to prevent Neural tube defects.

Intake of Vitamins and Minerals is very essential. Certain mineral like Calcium is particularly important for the calcification of fetal bones and teeth and also for keeping it as reserve to meet the high demands during lactation. Use of Vitamin D and Calcium helps reduce muscular cramps during pregnancy.

Dairy products, fish and green leafy vegetables are rich sources of Calcium. Iron requirement during pregnancy is also very high. It is required for the fetus and also for the mother, due to increased production of hemoglobin and for recouping its loss during parturition. This increased demand can be met by eating plenty of iron rich foods, such as meat, liver, fish, eggs, green leafy vegetables and dried fruits.

Iron absorption can be improved by taking foods rich in Vitamin C, such as citrus fruits / juices. Ensuring a healthy balanced diet during pregnancy will help prepare your baby for a healthy start in life.

A well balanced diet that is high in fiber, carbohydrates, proteins, vitamins, minerals and low in saturated fats will help a mother stay healthy and help supply the fetus with all the essential nutrients for its healthy development. [E]



Mineral and Vitamin requirements of a pregnant woman can be met by consuming a variety of seasonal vegetables, particularly green leafy vegetables, milk and fresh fruits



**D**entistry is going through a major transitional phase. The range of dental services and the dental practitioners, who provide these services, have changed dramatically over the era. We are also now experiencing a major hike in the number of dental care providers.

What will be the future of dental practices? I believe that the Dark Days of Dentistry are fast approaching.

Gone are the days when the dental profession was considered 'elite' and 'luxurious'. It is now considered 'backbreaking' and a 'pain in the neck' (pun intended).

Dentistry is actually a very competitive market. People often scoff at the dentist as the one who wets his hands in saliva all day.

Time has ripened to address the current situation of dentistry. If we do not seriously consider the facts and react appropriately, sooner or later, dentistry as a profession will have no standing in the world!

### Why the Dark Days?

- ❑ The present scenario is very bleak, as a greater number of dental colleges are mushrooming up. But they are devoid of the much needed infrastructure or dexterity to pilot enthusiastic and skilled dental graduates efficaciously.
- ❑ More than 30000 dental graduates are added to this profession every year. On one hand, the gradual increase in the number of dentists is a boon for the overall health services of a country, but on the other, this will lead to the growing number of dissatisfied dental graduates, due to low prospects of job opportunity.
- ❑ Dental graduates are facing serious financial constraints. Because of this, unemployed dentists are left with no choice other than leaving their much glorified profession and taking up other career options, which have no connection to dentistry.

# Dark Days of Dentistry

Dental graduates are facing serious financial constraints. Because of this, unemployed dentists are left with no choice other than leaving their much glorified profession and taking up other career options, which have no connection to dentistry





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- ❑ It takes years of dedication and perseverance to get a Bachelor of Dental Surgery (BDS). However, even after such painstaking efforts, the dental graduates are often greeted with the ridiculous question “How much did you pay to buy your degree?”
- ❑ Lack of interest in dental practice. This may be due to surplus manpower and underemployment. This is becoming a vicious cycle.

A fledgling dentist has very limited scope to survive on his own, especially immediately after graduation



- ❑ A fledgling dentist has very limited scope to survive on his own, especially immediately after graduation. The cut-throat competition among fellow dentists has escalated to unprecedented proportions and as a result, a sense of insecurity has seeped into the fresh graduates.
- ❑ The recent surge of 'corporate dentistry' and the blistering pace at which they thrive and multiply make it almost impossible for a fresh graduate to make a living.
- ❑ With the growing number of dentists who prefer working in urban areas, there is an imbalance in the number of skilled dentists in the rural areas. Therefore, this may give rise to quacks.
- ❑ This may result in stark disparity in the treatment costs.
- ❑ A shortcut does not have a place in dentistry. Using shortcuts to make an extra buck or two will not pay off in the long run.

- ❑ As dental students, we all have studied the chapter on 'Dental Ethics'. But as soon as we step out of the college, this professional ethics is thrown into oblivion.

In childhood, through fairy tales, we have heard that dentistry was a 'great profession' but it has lost all its greatness.

But I believe that not all its greatness is lost. Though many people consider us as 'just glorified tooth scrubbers', the truth is just the opposite and that is what makes the profession different.

**Probable Solutions**

- ❑ All dental professionals must engage socially and professionally to take stock of the issues plaguing dental practices.
- ❑ We must academically and socially educate ourselves through various journals and Study Clubs.

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- ❑ We must denounce quackery at all levels.
- ❑ Above all, as a dental fraternity, there should be no ill-will amongst us.
- ❑ The Indian Dental Association (IDA) should lay down regulatory norms to ensure that 'ideal practices' are performed at all dental clinics. A vigilant check can curb the malpractices.

I am writing about the Dark Days of Dentistry, not because I enjoy them, but because it is an unfortunate but concrete reality. Like all fairy tales have silver linings and morals, let us take the moral of the Dark Days of Dentistry as:

'How we can devise a plan to change the practices and what all steps can be taken to ameliorate Dentistry?'

So, let us take the 'Dark Days of Dentistry' positively! ☺



If you take a stroll along the street, you will be enticed by fancy restaurants at every corner. Our senses will easily get ignited with the pungent aromas and colors of foods there. Now, with lifestyle disorders reigning across the world, it is high time to ask yourself whether you are eating right.

Food is essential for the body to produce energy, build new tissues and repair the worn-out ones and regulate body functions. Food plays a major role in maintaining the physical and emotional well-being of an individual.

### **A few tips to choose the right food in Ayurveda**

According to Ayurveda, all materials in the universe are made up of the 'Panchamahabhutas' (5 basic elements): Prithvi (Earth), Jala (Water), Agni (Fire), Vayu (Air) and Akash (Ether).

The Tridoshas or three dynamic natural forces (Vata, Pitta, and Kapha) are also made up of the 'Panchamahabhutas'.



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Basically, there are six tastes of food: Sweet, Sour, Salty, Bitter, Pungent and Astringent. Each taste has got its own 'Panchamahabhuta' predominance.

'Sweet / sour / salty' taste helps alleviate Vata dosha, 'astringent / bitter / sweet' taste helps alleviate Pitta dosha and 'pungent / bitter / astringent' taste helps reduce Kapha dosha.

Each food helps increase / decrease / balance the Tridoshas in the body. A wholesome or balanced diet is the one which helps maintain the homeostasis of the Tridoshas in the body.

Food should be consumed as per a person's age, body constitution, physical activity, the climatic condition under which he lives etc. Wrong food combinations, faulty cooking procedures, use of wrong cooking utensils, untimely eating patterns etc. can contribute to the building up of toxins in the body, which, in the long run, can lead to various kinds of diseases. Diet plays an important role in keeping our body and mind healthy.



Based on the effect on the mind, foods are classified into three: **Saatvic Diet, Rajasic Diet and Tamasic Diet.**

Sattvic diet is vegetarian food rich in 'life-force'. Sattvic food primarily contains cellulose, roughage, water, vitamins and high quantity of minerals.



Foods that decrease the energy of the body are considered Tamasic. Tamasic foods are poor in cellulose, roughage, water, vitamins and minerals.



Foods that increase the energy of the body are considered Rajasic. Rajasic foods are poor in minerals, vitamins and other essential nutrients.



### Do's and Dont's of healthy eating

- Take food only when you are hungry, when the meals that you have taken earlier has completely digested
- Food should be light, warm and unctuous (oily)
- Fully concentrate on food while eating
- Do not consume food too fast or too slow
- It is not good to talk or laugh while eating / drinking
- Heavy foods should be taken in three-quarters of your stomach
- Include the six basic tastes in your diet
- Take food in a good sitting posture, in a pleasant surrounding
- Do not take food when you are emotionally upset
- The excessive use of any particular taste is not good
- Half of the stomach should be filled with food, one fourth with fluids and the remaining part should be left free for the easy movement of Doshas

### Virudh Ahara (Unwholesome / Contradictory foods)

In Ayurveda, certain food combinations are bad and the continuous use of these foods can

result in a variety of diseases. Such foods are called Virudh Ahara.

### A few Virudh Ahara

- Certain food are not to be taken in equal quantities e.g. Ghee and Honey
- Some tastes are not to be mixed together e.g. milk (sweet) and salt
- Foods with hot and cold potencies should not be consumed together e.g. fish and milk / chicken and milk
- It is not right to use foods with properties similar to that of a particular climate: e.g. cold food in cold climate
- Sour food should not be mixed in milk e.g. fruit salad
- Curd and Honey should not be heated / mixed with hot food / consumed in hot climate or when body is warm
- Do not mix old and new foods together
- It is not right to take bath in cold water or consume cold water after staying in the sun for a long time
- Undercooked, overcooked or burnt foods should not be eaten
- Do not take curd at night

Improper Dietary habit is the primary reason for the increased trend of health issues in the current era. Every human being has a unique body constitution along with varied digestion power. So diet should be always specific for every individual. Food when taken in proper quantity at the proper time following the guide lines contribute to health. In short, choose the right food that suits your constitution and stay healthy. ☒



# Posture in Everyday Activities

- Part I







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A great deal of chronic or recurring back pain is due to poor Posture. Factors which affect our Posture from birth onwards include illness and injuries, fitness, nutrition and physical activities along with our personality and outlook on life.

A Posture that has been developed over years tends to remain fixed; but with perseverance, you can alter the muscular pattern which will help bring mental as well as physical rewards.

### How to improve your Posture?

For improving your posture, it is necessary to make appropriate changes in your everyday life, to help protect your spine and prevent or improve your back problems.

### Standing posture

In a good standing Posture, your muscles will be relaxed without being slack and spine itself will be gently "S" shaped. However, there is no single ideal Posture, since people come in all shapes and sizes. The ideal Posture is the one in which your back is put under the least strain and your spine is curved naturally and gracefully.

The essence of good Posture is fitness. If you can keep your muscles well-toned and supple, there is a good chance of achieving correct posture for yourself. This is especially true, if you can reinforce your Posture with a relaxed mental and emotional state.



### How to avoid bad Posture?

If you suffer from back pain, bad Posture is the one that aggravates the condition and puts your spine under unnecessary strain. Similarly, an excessively rigid Posture can be equally as bad for the back as bad Posture. This results in tense muscles and may even restrict your breathing. Therefore, it is not surprising that soldiers may faint when they stand in attention for a given length of time.

If you suffer from an aching shoulder and neck, relax these muscles and do not adopt a rigid stance. If you carry a lot of weight in front of your body, your pelvis will be tilted forward unnaturally and your center of gravity will be moved further forward. This will increase the stress on your spine and as a result, the back muscles will have to work harder, leading to an increase in the compression in the lower back.

It is important to strengthen your abdominal muscles and take steps to lose your weight. If you are overweight and cannot easily go on a diet, increase the volume of your exercise, perhaps by walking or cycling to the workplace rather than driving. You should never use a corset, as it is not a substitute for exercise.

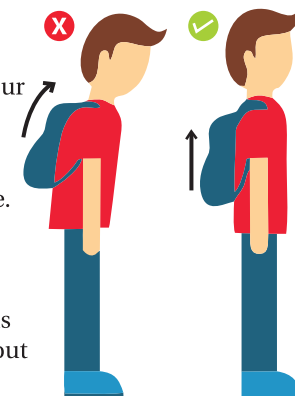
If you are pregnant, try to hold yourself as well as possible and make sure that the surface where you work is adjusted to the right height so that you do not have to stoop. Avoid wearing high heels, as they can lead to a hollow back.

**If you are overweight and cannot easily go on a diet, increase the volume of your exercise, perhaps by walking or cycling to the workplace rather than driving. You should never use a corset, as it is not a substitute for exercise**

### How to stand correctly?

Due to overweight or swayback Posture, the pelvis will tilt forward, leading to a hollow back. Try to 'hold your stomach in' at every possible opportunity. This movement involves consciously setting your pelvis at the correct angle, so that your lower back has a normal slight curve rather than an unnatural hollowed out appearance, which may put the lower back under stress.

When you are busy or distracted, you may forget to tuck in your pelvis all the time. When you are standing, place one of your feet on a low stool or footrest, which is about 10 to 15 centimeters (4 to 6 inches) above the floor. This helps relax the Psoas muscle that stretches from the lower back over the pelvis to the thigh and helps alter the angle between the lower back and the pelvis. You can easily use this simple technique both at work and at home and this helps relieve the stress without undue muscular effort.





## Sitting Posture

You may tend to increase the stress on your back, if you spend long hours in sitting posture every day.

Sitting Posture imposes more strain on the spine than standing or walking Posture. If you lean forward more than a few degrees, the pressure on the spine will increase dramatically. If you want to sit down for a long time, use a comfortable, well designed chair to reduce the risk of developing either back / neck pain or headache.

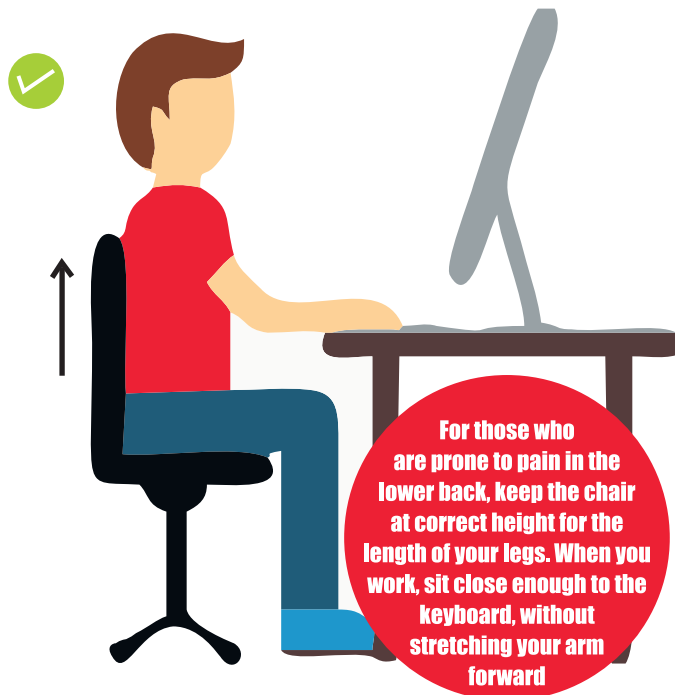
For many people, a forward-leaning Posture will be more comfortable for their low back, provided they lean on their hands.

## Sitting at a Desk

If you work at a computer keyboard, keep your seat horizontal, with support for your lower back. To avoid stress to the shoulders and neck, the height of the desk or table should be adjusted appropriately to allow your fingers to touch the keys with your arms bent, just slightly below the horizontal position. Alternatively, adjust the height of your chair to that of the desk, so as to place your hands in horizontal position.

For those who are prone to pain in the lower back, keep the chair at correct height for the length of your legs. When you work, sit close enough to the keyboard, without stretching your arm forward. Finally change position regularly and take breaks at fixed intervals.

An ergonomically designed chair, which allows adjusting the height and letting you lean backward and forward, is very effective in reducing back pain. The backrest should be adjustable. The best ones automatically tilt forward or backward according to the angle of the seat.



## Head and Neck Alignment

If your back is rounded or you work leaning over a work surface with your head bent forward, the muscles in your upper back, shoulders and neck can become easily fatigued. This condition may lead to a painful neck or headaches, induced by chronic neck tension.

Whenever your neck feels tense or you hold your head forward with your chin out, reduce the curves in your neck by pulling your chin back and making the crown or your head straight, to the highest point. The neck retraction exercise helps reduce tension by bringing the weight of your head more directly on your spine, so that your neck muscles have less work to do.



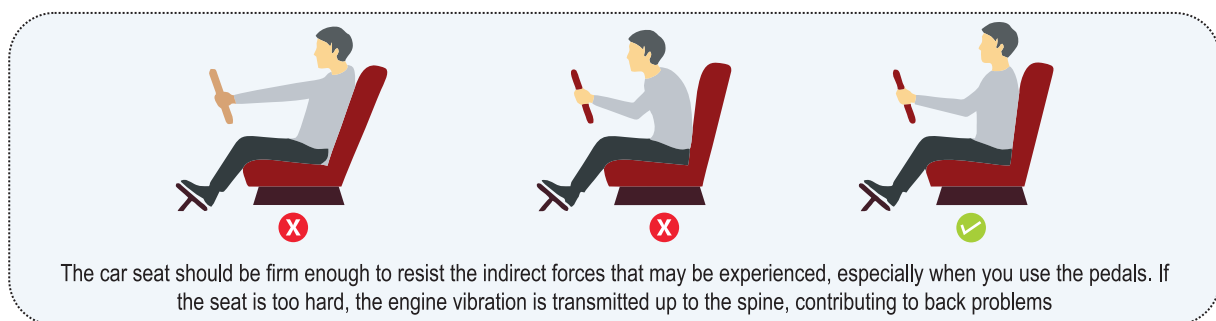
## Driving

If you suffer from a back or neck problem, driving a car can be an agonizing experience, unless your car is equipped with a good seat that helps you sit in a correct driving position. While you are driving, get into the habit of relaxing your neck, as your shoulder muscles may fatigue soon.

The car seat should be firm enough to resist the indirect forces that may be experienced, especially when you use the pedals. If the seat is too hard, the engine vibration is transmitted up to the spine, contributing to back problems. The pedals should not be too stiff (especially the clutch), too high off the floor or set to the side of the driver.

If you are a woman of small or average height, the 'foot controls' may be too far apart or incorrectly angled for your feet; the strain of operating them, particularly in heavy traffic, can lead to back pain. The backrest should give good support to your low back.

Most car seats now have an adjustable lumbar bar which can be positioned to suit your back. Alternatively, you can also use a cushion for the lower back and this can be attached to the backrest with a strap. The head will give rest to the neck and shoulder muscles, if you can rest your head comfortably on the headrest. The top of the headrest should be on an equal level with your eyebrow at all times, to effectively reduce whiplash strain.



## Proper Posture while lying down

Many people who suffer from back problems think that they lie down most comfortably in bed. When you lie down, you relieve your spine of much of your body weight, as this helps reduce the compression on a protruding disc. But there is no need to lie flat; you can try to find the most restful position that suits you the most.

## The Bed

If your back pain is worst in the morning, you may need to change your bed, especially if this is the only time when your back aches or this pain has developed only after you bought a new bed. But often, back pain and stiffness is due to inactivity and therefore, it may not be a matter of which surface you lie on.

Make sure that the spring mattress you use is at least 15 centimeters (6 inch) longer than you, to allow freedom of movement. Stick to the position that is most comfortable for you. You know yourself whether your bed is hurting your back or not. A good mattress should be firm enough to provide contour for your body.

A sagging mattress or a bed that has lost its spring can hurt your back. Therefore, use the best beds to lie on.

## Best Positions to lie in

Lying on your front (prone position) helps increase the curve in the lower back and hence, this will aggravate the backache that is caused by facet joint problems. However, this position will not probably hurt your back, if your pain is caused by a prolapsed disc. For most people, lying flat on their back (supine position) with their legs straight out may also tend to increase the curve in the lower back and can lead to backache.

The Fowler's position ( a standard patient position in which the patient is seated in a semi-upright sitting position ) with your legs supported, so that your knees are bent, helps flatten out the excessive curve and also helps relax the Psoas muscles, which run from the lower back to the thighs. If you have acute back pain, you may need several pillows under your knees. Otherwise a rolled-up towel may be enough.

To avoid neck pain, make sure that your head rests fairly square on your shoulders so that the strain can be minimized. You may need one pillow, if you lie on your back. If you sleep in your side, the width of your shoulders will help determine whether you require one or two pillows to support your head. ©



To be continued...

# The Role of Saliva in Maintaining Oral Health



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Saliva, a watery substance formed in the mouth of human beings and some animals, is secreted by the salivary glands.

The uses of Saliva are extensive and diverse. For a reptile, Saliva, being venomous, helps incapacitate its prey and for ruminants, it helps digest a day's grazing.

Human beings can live without Saliva. Though its loss is not life-threatening in the initial stage, gradually, it accounts for a variety of difficulties and conditions.

Saliva is the first fluid that comes into contact with food during oral processing. Saliva is the medium that bathes the taste receptors, through which taste and aroma compounds are released into the oral cavity and are mixed continuously with food during bolus formation. It is an essential actor in chemosensory perception.

## The Functions of Saliva

The functions of Saliva include maintaining a moist oral mucosa which is less susceptible to abrasion and removal of microorganisms, desquamated epithelial cells, leucocytes and food debris by swallowing. The mucins form a slimy coating on all surfaces in the mouth and act as a lubricant during

the process of mastication, formation of food bolus, swallowing and speaking.

Saliva provides the fluid in which solid tastants may dissolve and get distributed around the mouth to the locations of the taste buds. The hypotonic unstimulated Saliva facilitates taste recognition. Salivary amylase is involved in the digestion of starch.

Saliva acts as a buffer to protect oral, pharyngeal and oropharyngeal mucosa from acidic foods / drinks or acid regurgitated from the stomach. Saliva contains many antibacterial, antiviral and antifungal agents which help modulate the oral microbial flora in different ways. It also facilitates the healing of oral wounds.

Saliva in the mouth forms a thin film and its velocity varies greatly at different sites. This variation appears to account for the site specificity of smooth surface caries and supragingival calculus deposition. This also protects against dental caries, erosion, attrition, abrasion, candidiasis and abrasive mucosal lesions, which are seen in patients with hyposalivation. Clearly, Saliva has many functions which are needed for the proper protection and functioning of the human body.

Saliva is secreted by the major and minor Salivary glands. There are a number of physiological factors that can reduce its secretion, such as age, sex, body weight, time of the day and number of teeth present in the mouth.

The secretion of Saliva can decrease due to the use of certain medications, such as Anticoagulants, Antidepressants, Antihypertensives, Antiretrovirals, Hypoglycemics, Levothyroxine, Multivitamins and Supplements, non-steroidal anti-inflammatory drugs and steroid inhalers.



Certain medications like diuretics may cause Xerostomia without decreasing Salivary output. Chronic rheumatic diseases, such as Sjogren's syndrome can destroy Salivary glands while other systemic disorders like Diabetes mellitus can cause Hyposalivation.

Radiation therapy for the treatment of head and neck cancers can damage Salivary glands permanently. Infectious agents, such as Mycobacteria, Epstein-Barr virus and various oral bacteria can also infect human Salivary glands. Diminished Salivary output can lead to serious oral sequelae. Rapidly progressing dental caries and oral candidiasis are found more in geriatric patients.

Topical lubricants, coating agents, Saliva substitutes or lozenges can provide transient relief from Xerostomia. Cholinergic stimulants, such as Pilocarpine will improve Salivary flow.

Advanced radiotherapy techniques, such as intensity-modulated radiation therapy, will cause increased delivery of therapeutic doses of radiation to tumors, while limiting its exposure to normal tissues, and help reduce the incidence, duration and severity of Xerostomia in some patients with head and neck cancers.

Hypersalivation (also called Ptyalism) is excessive production of Saliva. It has also been defined as increased amount of Saliva in the mouth, which may also be due to the decreased clearance of Saliva.

The conditions that can cause Saliva overproduction include Gastroesophageal reflux disease, Rabies, Pellagra (Niacin, or Vitamin B3 deficiency), Gastroparesis (main symptoms are nausea, vomiting and reflux disease), pregnancy, excessive starch intake, anxiety, pancreatitis, liver disease, serotonin syndrome, mouth ulcers and oral infections.

The medications that can cause the overproduction of Saliva include Aripiprazole, Clozapine, Pilocarpine, Ketamine, Potassium Chlorate, Risperidone, Pyridostigmine etc.

The toxins that can cause Hypersalivation include Mercury, Copper, Organophosphates, Arsenic, Nicotine etc. Hypersalivation can be optimally controlled by addressing or avoiding the underlying causes. Mouthwashes and tooth brushing may have drying effects. In palliative care, Anticholinergics and similar drugs, which would normally reduce the production of Saliva and cause dry mouth, could be considered for the management of Hypersalivation.

For optimal oral health, people should keep food and liquids in the mouth as briefly as possible. It is also important to brush your teeth before bedtime. Salivary flow is negligible during sleep and hence, its protective effects are also almost nil at this time.

Chewing sugar-free gum or sucking on sugar-free candies helps stimulate Salivary flow, which helps benefit hard and soft oral tissues in many ways. ☒





# A Dauntless and Conscientious Officer

**M**r. Rishiraj Singh, hailing from Bikaner, Rajasthan, India, is an **Indian Police Service (IPS) officer** of Kerala Cadre. He is currently the Excise Commissioner of Kerala, known for his rigid principles, and as one who has always carried a positive image in everyone's mind.

He is an officer who has proved his caliber, sincerity and fearless dedication to duty in whichever posts he has been assigned. Mr. Singh is known for his adamant and often uncompromising approach to duty and has a reputation for instilling discipline.

His short stint as the Chief Vigilance Officer of Kerala State Electricity Board (KSEB) was noteworthy, as he could unearth countless cases of pilfering of 'electricity power'.

When posted as the Transport Commissioner, he took initiatives to reduce road traffic accidents that took place in large numbers in Kerala and made 'Speed control devices' mandatory on public transport, especially passenger buses.

Rishiraj Singh's stint as the Joint Commissioner of Central Bureau of Investigation (CBI) in Mumbai, Maharashtra, India was eventful. He uncovered a recruitment racket in the National Defence Academy and graft in Canteen Store Department under Ministry of Defence, Government of India, while supervising the probe into 'Adarsh Housing Society Scam' (Adarsh Housing Society is a posh 31-storey building constructed in Mumbai for the welfare of war widows and personnel of the Indian Armed Forces).

Being known to be a disciplinarian, Rishiraj Singh has found a place on the list of officers eligible for Director-General Posts in various Departments of Government of India, like Central Reserve Police Force (CRPF), Border Security Force (BSF), Intelligence Bureau (IB), Research and Analysis Wing (RAW), National Investigation Agency (NIA) and Central Bureau of Investigation (CBI).

**Q** *A person who has always been dear to the public, due to bold decisions and actions and the one who has created a positive image in everyone's mind. What are the instinctual factors behind the creation of such an image?*

The three things behind this are: hard work, consistency in discharging the duties entrusted upon me and the relentless effort to see that the set targets are achieved on time.

**Q** *What are the measures taken by the Government of Kerala to curb the menace of Drug Addiction and Illicit Trafficking?*

The Excise Department of the Government of Kerala is the Nodal Agency to implement Anti-Drug Awareness Campaign – **Vimukthi** – in the State. An amount of Rs.100 crores has been set apart for the Scheme, for 5 years. Every year, the Department is conducting anti-drug awareness classes at Panchayat, Block Panchayat and district levels including schools, colleges and libraries, for making the youth properly aware of the dangers involved in the abuse of drugs and the harmful effects of new psychoactive substances.

The Excise Department has eight drama teams and several short films to showcase the long-standing ill effects of drug abuse. Radio messages are also being telecast to propagate awareness. Strengthening anti-narcotic clubs in schools and colleges and conducting awareness classes, seminars, street plays and video screenings are also coming under these programs.

The Department has launched a determined drive to nab drug abusers and traffickers and also to root out the abuse of drugs, alcohol, tobacco and other psychoactive substances.

**Q** *What are the contributing factors for the rise in Drug abuse among young people?*

Parents are curriculum-oriented and do not promote cultural arts, hobbies and interests of their children. They should know their child's will in life rather than imposing the will of theirs. If parents' interests are imposed upon, the children

**Compulsion from parents and teachers to achieve higher grade in studies is one of the triggering factors for tension in students, which make them turn towards drugs for solace. I think that parents should deter from taxing their children for higher grades in academics**

will lose interest in studies and may be drawn to psychoactive substances.

If the parents or teachers detect that their children/ students are addicted to these substances, sometimes, they may have the tendency to keep the matter as a secret, as this may tarnish the image of themselves or the school.

Many factors contribute to driving children / students to drug addiction like curiosity, tension, peer pressure etc.

Compulsion from parents and teachers to achieve higher grade in studies is one of the triggering factors for tension in students, which make them turn towards drugs for solace. I think that parents should deter from taxing their children for higher grades in academics.

Parents may often fail to notice behavioral changes in their children linked to drug addiction. But teachers, with a bit of a probing eye; can easily spot such changes in the students. The visible signs are playing truants, sudden mood changes, uncharacteristic isolation and suddenly becoming lethargic towards studies.

When such students are spotted out, their parents should be immediately informed of it. Drug addiction is a chronic disease and requires medical attention. Teachers and parents should interact more with their children to identify whether they are drug addicted.

**Q** *The International Day against Drug Abuse and Illicit Trafficking is observed on 26 June every year. What is its relevance?*

The day is a key plank in the United Nations' war on drugs. The United Nation Office on Drugs and Crime (UNODC) spearheads the initiatives to




highlight the hazards of drug abuse and their illegal trade and provides educational material to teachers and public officials across the world to help spread the detrimental effects of drug abuse and addiction.

The Excise Department plans to conduct a program at Kochi (Marine Drive), Kerala, India on 26 June 2018, where the Chief Minister of Kerala will officially inaugurate the setting up of 10 more De-Addiction Centers in Kerala.

**Q** *Are there effective Treatments for Drug Addiction? Where can we find the information about Addiction Treatment Programs?*

Addiction is a chronic disease that affects both the brain and behavior. The path to drug addiction

begins with the voluntary act of taking drugs. But over time, a person's ability to 'abstain from drug use' is compromised. Seeking and taking of drugs becomes compulsive. Those who are addicted to drugs can be deterred from the use, only if you take them for de-addiction treatment and requisite follow-ups.

For getting details / help, you can contact Excise or Police personnel. There are 84 De-Addiction Centers in Kerala; out of which 70 are in private sector and 14 in Government Sector. Apart from this, steps are being taken to establish 10 more Centers under Government Sector. 

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



## Dent Cartoon

**Mr. Harikumar**  
Professional Cartoonist  
Thiruvananthapuram, Kerala, India





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# Oral Health of the Blind: A Forgotten Need

Oral health is an essential component of the overall health of an individual, which in turn, promotes his well-being and quality of life

**“The best and the most beautiful things in the world cannot be seen or even touched: they must be felt with the heart.” – These are the words of Helen Keller, a blind-deaf American author, political activist and lecturer.**

The birth of a child ushers in lots of joy and happiness to the whole family. But on certain occasions, it may be replaced with emotions of grief, resentment and depression. At times, a family may not be even ready to accept the situation, when it becomes apparent that the child is born with a disability.

Children with special healthcare needs (SHCN) are those children with chronic physical, developmental, behavioral or emotional conditions, who require health and related services, beyond those required by children generally.

During the early years of life, a child understands and interprets his environment with the help of his Primary Senses, of which Vision is the most important one. But when Vision is impaired or absent in a child, it can have detrimental effects on his physical, neurological, cognitive and emotional development.

Blindness always indicates a condition with vision. Individuals with this condition may not be able to distinguish images, light and colors, but, in certain cases, they may be able to read large prints.

## **Oral Health: An Unmet Need**

Oral health is an essential component of the overall health of an individual, which in turn, promotes his well-being and quality of life. It is invariably important for children with special healthcare needs,





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as their dental needs are often overlooked, due to their compromised general health.

Many studies have revealed that the children with visual impairments often have poor oral hygiene regimen. The primary reason is that these children cannot visualize the early signs of dental disease. They often rely on tactile or kinesthetic sensation to detect the signs of oral disease. These children more often detect caries through the presence of a hole in their tooth or from the pain in the affected tooth. Hence, early intervention of the condition may not be possible and as a result, extensive treatment becomes mandatory.

### **Dental Health Care: Prevention and Intervention**

The practice of caring for your teeth to keep them healthy is very important, as this helps prevent the

onset of oral disease.

Education / training of the parents or caregivers of these children is critical for ensuring appropriate or regular supervision of their daily oral hygiene practices. The children should brush their teeth and gingival surfaces with a suitable or modified toothbrush and fluoride toothpaste. They should also resort to daily tongue cleaning and flossing practices. An effective home care program can help reduce the burden of oral diseases, to a great extent.

The treatment of dental diseases for children with visual impairment is not different from that of an otherwise healthy child. It is often carried out in a relaxed environment and the child is explained about every instrument and procedure before performing the treatment. Regular dental consultation and care should be emphasized for every child.



### **Take Care of Your Teeth...**

#### **Conclusion**

Visually impaired children deserve the same opportunities for dental treatment as those who are otherwise healthy. Unfortunately, their oral health needs are often unattended to. These children can be best managed by a multidisciplinary team including a pediatric dentist, to evaluate the oral findings and deliver appropriate oral care, which helps improve their overall quality of life. [1]

# Why Ayurveda?

**T**housands of years before the rise of modern medicine, the sages of India developed Ayurveda, which has helped provide the scientific evidence of the mind-body connection. This ancient system still continues to be one of the most sophisticated and powerful mind-body health systems in the world.

Ayurveda is based on **Quantum Physics!** More than a system of merely treating illness, Ayurveda is a science of life (Ayur = life, Veda = science or knowledge). It offers a body of wisdom to help people stay vibrant and healthy after realizing their full human potential.

## How do People become ill?

It all begins with the 'subtle energy' (according to Ayurveda, it is the consciousness running in each human body) in your body. Although humans do not generally feel it, this energy can be felt by people who meditate and have reached a higher realm. When the subtle energy in your body is weak, the eliminative channels of your system will start getting blocked.





**Mr. Siddhartha Sengupta**  
Founder  
Samskrt Natural Wellbeing Pvt. Ltd.  
Mumbai, Maharashtra, India

As a result, you will suffer from physical or mental stress (due to weakened subtle energy).

Due to continuous stress, your endocrine system will become weak (this will lead to blocking the channels).

Continuous hormonal malfunctions will adversely affect your immune system (here the channels are blocked due to toxins).

When your immune system is compromised, you will be more prone to many diseases.

Eventually, your body will be out of balance that it cannot absorb 'Universal energy' (All human beings in the universe is like a small object vibrating at a frequency of the universe. When the frequency of these vibrations change, we fall sick; that is when you are not in tandem with the universal energy). In Ayurveda, this is the root cause of any disease.

According to Ayurveda, there are 6 stages of diseases. They are :

Accumulation of Doshas  
Aggravation of Doshas  
Dissemination of Doshas  
Localisation of Doshas  
Manifestation of the disease  
Chronicity of the disease

Allopathy starts working only when you have a disease in the 4<sup>th</sup> or 5<sup>th</sup> stage. At this stage, the symptoms of a disease will be visible.

An Allopathic doctor prescribes medicine to suppress the symptoms alone rather than addressing the root cause of the disease. The doctors of Modern System have no idea of what it could be and as a result, the root cause of a disease is unattended to.

In Ayurveda, after identifying the root causes of a disease, steps are taken to reverse the root cause to help your body repair them itself, enabling you to stay disease-free / healthy. So in what way is Allopathic medicine superior to other systems of medicine? In fact, the truth is just the other way round.

In Ayurveda, the disease is reversed and the immune and endocrine systems are repaired. The cause of the

stress is also addressed with meditations and this ancient system helps keep your body healthy by detoxing it regularly.

## The Guiding Principles of Ayurveda

The two main guiding principles of Ayurveda are:

1. The mind and the body are inextricably connected
2. Nothing has more power to heal and transform the body than the mind and the body itself

Freedom from illness depends upon expanding your awareness, bringing it into balance, and then extending this balance to the body. This process is not as complicated as it seems to be. In fact, it is very simple. All you need to do is to open the 'channels of your body'. This can be done only through appropriate medications and detoxes (removing the toxins) and by regulating the flow of consciousness or 'universal energy' through your body. Also when you meditate, you effortlessly enter a state of expanded awareness and inner quietness that helps refresh the mind and restores the balance.

Since the mind and body are inseparable, the body can be naturally balanced through the practice of meditation. If you create the state of restful awareness through meditation, your heart and breathing rates will become slow and your body will reduce the production of "stress" hormones, such as Cortisol And Adrenaline, and will increase the production of neurotransmitters, including Serotonin, Dopamine, Oxytocin, And Endorphins, which help enhance your well-being.

Meditation is just one of the most powerful tools that the ancient Ayurvedic physicians prescribed for balancing the mind and body. Ayurveda also offers many other practices for expanding self-awareness and cultivating your innate state of balance. ☐





# Dental Study Clubs

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A Dental Study Club is a group of dental professionals typically from a specific geographic area who have banded together to a network to enhance their dental expertise through continuing education, and provide community services through their group effort

A Dental Study Club is an informal organization unified by dental professionals with like-minded interests. The Club represents a membership-based continuing education in Dentistry. The benefits of Study Clubs are well known in the academic world.

The advantages of Study Groups are knowledge sharing, brainstorming, debating, and exploring questions with peers in a comfortable environment, which help increase the likelihood of mastering skills and knowledge. Study Groups also provide encouragement and social interaction.

In dentistry, social support is less unlikely, once you are in the professional field. Until the development of 'Group Practices',





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dentists practiced privately and independently; usually alone with an assistant, a hygienist, and / or receptionist. In the past, Dentists could experience little to no interaction with their colleagues. This issue, however, was resolved with the formation of Dental Study Clubs.

Traditionally, a Study Club has been viewed as a group of individuals who meet on a regular basis to better their understanding of the art and science of dentistry. The meetings are usually held in the evening with the addition of occasional full-day workshops. The theory behind this conventional model of learning was based on the notion that knowledge of a technique or treatment could be created through visual and verbal descriptions.

Dental Study Clubs have become a popular venue for dentists to broaden the understanding of their professional techniques and topics, develop

friendships, and share effective skills and expertise. These Clubs provide information about new concepts, materials, techniques, devices, and innovative technologies, besides enabling dentists to make valuable and long-lasting professional and social connections.

Dentistry is consistently evolving / changing, with continuous research into every aspect of this field, including enhanced techniques and innovative technologies and materials. It is almost impossible for a busy practitioner to master himself, without a reliable and trustworthy background to help him through. Dental Study Clubs provide a medium for learning and sharing of 'information continuum'.

In the Study Clubs, there may be generalists or specialists from different areas. Really what makes it so important is that a group of dental professionals assemble in the Club to freely exchange their experiences, knowledge, challenges, support, resources, networking etc. to help enhance expertise and solve the problems being faced by them.

Rather than struggling to cope with each new development in dentistry individually, dentists should gather together at Study Clubs, where they and their team members get ample opportunity to share their experiences, anxieties and aspirations.



A Dental Study Club is an informal organization unified by dental professionals with like-minded interests. The Club represents a membership-based continuing education in Dentistry

## The Concept of a Dental Study Club

A Study Club has certain criteria for membership. Many Dental Study Clubs encourage all dentists in their area / specialty to become a member. Most Groups begin with 10 to 20 members. Smaller groups have the option of offering 'hands-on' and clinical operating sessions. Besides, depending on the amount of time involved, each member can accomplish his chosen clinical procedure by end of the meeting.

Small groups have a better chance of securing office space, a clinic, school, or other location with an adequate number of operatories. They also have the option of inviting local or regional clinicians for demonstrations or lectures.

Dental Study Clubs provide opportunities for older dentists to mend the budding dental practitioners in a safe environment and they can teach and encourage the fledgling and help them resolve problems that they are being faced with. In the Study Clubs, members will be willing to share not only their successful experiences, but also those that are unsuccessful.

The Dental Study Clubs provide an opportunity for dentists to commiserate with their problems, in addition to providing a strong local and national referral network. The Club members will feel more comfortable in referring patients to experts in the profession. They know that they are members of the same or other Study Clubs and, therefore, they will be more committed to learning / educational process. Being committed to an educational process helps many dentists differentiate the type of practice they are doing.

## Indian Society of Oral Implantologists (ISOI) Hyderabad Study Club

The 'ISOI Hyderabad Study Club' provides its members, Oral Implantologists with a turnkey operation, including scientific seminars and hands-on sessions in Hyderabad, India. The Club selects three to four learning modules every year, which cover a wide variety of topics. The Study Club will pick the ones that help address the problem that plague them the most.

Members from general practitioners to specialist can discuss the different aspects of the topic from their own perspectives. The learning modules are integrated with the ISOI Hyderabad Study Club's curriculum and hence, the messages / discussions in the Study Clubs are always consistent.

One of the important benefits of becoming a member of ISOI Hyderabad Study Club is that each one can set his own learning timeline in a safe and non-threatening environment. Although, lectures are an important part of the program, the power of the Study Club lies in its ability to attract the greatest resources available. Study Clubs will be more successful when each member gets a chance to learn more from the others.

ISOI Hyderabad Study Club provides a system that is easy to implement. It reflects

A group of dental professionals assemble in the Club to freely exchange their experiences, knowledge, challenges, support, resources, networking etc. to help enhance their expertise and solve the problems being faced by them

an understanding of how small learning groups work and tries to incorporate a clinical curriculum that is highly essential. The Study Clubs and hands-on / courses are designed in such a way as to enable dentists at any stage of their career or any level of competence can benefit immensely from each get together / hands-on.

### Socializing in Study Club

A Dental Study Club is a group of dental professionals typically from a specific geographic area who have banded together to a network to enhance their dental expertise through continuing education, and provide community services through their group effort.

Dental Study Clubs allow their members to socialize and network with their peers to work together to serve their community in a better way. The coursework of Study Clubs should be coupled with helping the underserved; for example, like performing dental implant surgeries for a minimum of cost under the supervision of experienced Oral Implantologists.

### Conclusion

Conducting classes / discourses of the experts / greatest speakers are an integral and essential part of Study Clubs, as they help a practitioner continue to advance in his practice and encourage him to learn more. [16]





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# CHEWING GUM:

## Helpful or Harmful?



**Dr. Dinah Kamellin**  
Dental Practitioner  
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In 2015, 'Happydent Palace', an advertisement on Chewing Gums had been rated by the Gunn report (the global index of excellence in advertising) as one among the 20 best advertisements of this century. It is the only Indian advertisement to get named as the advertising industry's most awarded work. The advertisement portrays the pros and cons of a Chewing Gum.

It is high time to know why you should or should not chew a Gum. It is the type of Gum you chew that makes a difference in whether it is helpful or harmful to your teeth. The sugar contained in a Chewing Gum may actually increase your chances of developing a cavity. There is clinical evidence that recommends sugar-free Gum.

### Benefits of Chewing Gum

#### Nicorette Chewing Gum

A Nicorette Chewing Gum can help chain smokers quit smoking. This Gum releases a controlled amount of Nicotine which helps reduce the nicotine craving of smokers. In spite of not being a definitive approach, it is used as an adjunct with other lifestyle modifications.

#### Fresh breath

A Chewing Gum helps mask the malodor that can be caused by various reasons, such as systemic disorders, habits like smoking or consumption of food with strong flavoring agents.

#### Stimulates the Production of Saliva

A Chewing Gum can stimulate the production of saliva ten times more than the resting rate and as a result, it is helpful for patients with Xerostomia.

#### Reduces the risk of Gastroesophageal reflux disease (GERD)

A Chewing Gum stimulates the production of saliva which helps maintain the alkalinity of the digestive system. This also helps prevent acid reflux. However, flavors like spearmint and peppermint can aggravate the acidic *pouvoir hydrogène* (pH) and hence, patients with Gastroesophageal reflux disease (GERD) should avoid these drinks.

### Effects of Chewing Gum

#### Cannot resolve dental conditions

Chewing Gum only helps mask bad breath; it cannot resolve the conditions that cause halitosis. A patient may have developed bad breath due to various reasons, such

as poor levels of glucose, poor oral hygiene regimens, acid regurgitation or ingestion of foods of strong flavors. Therefore, popping a Gum cannot help correct these conditions.

#### A Chewing Gum can pull out dental fillings

The sticky consistency of a Chewing Gum, over a period of time, may tend to pull out dental fillings, despite it being retentive. The forces of chewing can leave fine cracks on the tooth, making dental fillings ineffective in providing a good seal from oral fluids.

#### Temporomandibular Joint (TMJ) Disorders

The continuous use of Chewing Gums can lead to Temporomandibular Joint (TMJ) disorders, due to the over use of certain set of muscles, leading to contracted muscles. A Chewing Gum can also lead to associated pains, such as headache, toothache or earache, which in turn, contribute to chronic painful conditions, mainly due to jaw muscle imbalance.

#### Irritable bowel syndrome (IBS)

While chewing, a lot of air is also swallowed, which may lead to abdominal pain and bloating of stomach. This can also result in the excessive production of acidic enzymes that can cause adverse gastrointestinal symptoms.

#### Contains Artificial Sweeteners

Most Chewing Gums contain artificial sweeteners. Titanium dioxide is added to give a smooth and consistent texture to a Chewing Gum. This ingredient may lead to slower metabolism, inflamed intestines, blocked nutrient absorption, and a weakened immune system.

Aspartame, which is used in sugar-free Chewing Gums, gets metabolized to alcohol and formaldehyde. This is a carcinogen which is also linked with birth defects, brain tumors, male infertility and weight gain, due to distortions in the biochemistry of the body.

### To chew or not to chew

Chewing Gum got commercialized and patented back in the 1860s. This interesting substance has come a long way with various flavors and promises. In fact, a Chewing Gum is a double-edged sword. Although chewing of sugar-free Gum can be beneficial in most instances, it is not recommended for persons who suffer from certain conditions like Temporomandibular Joint disorders.

For most people, chewing sugar-free Gum can be a good preventive measure in situations when tooth brushing and flossing are not practical, but whether sugar-free or not, Chewing Gums should never be used as an adjunct to good dental hygiene practices.

I would encourage the readers to choose wisely based on these facts. ☒

It is the type of Gum you chew that makes a difference in whether it is helpful or harmful to your teeth



# **OBESITY** **in Adolescents**





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Senior Consultant  
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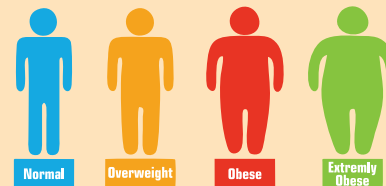
**C**hildhood Obesity is the most common chronic disease amongst children the world over. A study published in 'The Lancet' (A global health journal of the United States of America) reveals that the number of obese children / adolescents rose from 11 million in 1975 to 124 million in 2016, i.e., there is a more than tenfold increase. An additional 216 million children were found to be overweight.

Adolescent Obesity is associated with an increased risk of morbidity and early mortality and affects children across all socioeconomic groups and ethnicities. The percentage of children who are overweight and obese has doubled over the past two decades in the developed and developing countries, including India with an increased prevalence of Diabetes. In India, over 14.4 million children are overweight.

Adolescent Obesity maybe defined as a long-term imbalance between energy intake and energy expenditure. Gauging the level of Obesity in children and adolescents requires the calculation of their percentile Body Mass Indexes (BMI) to record the degree of Obesity on the age and gender charts:



1. > 85<sup>th</sup> percentile – overweight
2. > 95<sup>th</sup> percentile – obese
3. > 99<sup>th</sup> percentile – severely obese



The prevalence of Obesity varies among regions. In developing countries, it is seen at <10% and in developed continents, it is at > 20%. There is also a difference in the socioeconomic groups affected by this condition, with Asia showing a higher prevalence in the higher socioeconomic strata while the United States of America (USA) having increased Obesity in the lower socioeconomic strata.

Childhood Obesity increases the risk of Adult Obesity as well as chronic health problems, such as Type II Diabetes, Hypertension and Cardiovascular disease. Often, these children are found to have high Serum Insulin levels, which mark the development of Insulin resistance.

This condition is a precursor to Diabetes, especially in overweight children. Other health risks associated with adolescent overweight children include respiratory disease, several orthopedic disorders, elevated serum lipid concentrations (Dyslipidemia) and polycystic ovarian disease.

Obesity has physical and psychological implications on adolescents. Apart from cardiovascular, renal,



musculoskeletal, neurological and endocrine complications, this group of population is typically prone to depression, social isolation and poor self-esteem. This often results in a self-sustained vicious cycle often resulting in school dropout, substance abuse and delinquency. This condition also accounts for the reduction in life expectancy.

The marked rise in childhood Obesity is attributed partly to the aggressive marketing of high-caloric foods and the predisposition to a sedentary or less active lifestyle.

**Childhood Obesity increases the risk of Adult Obesity as well as chronic health problems, such as Type II Diabetes, Hypertension and Cardiovascular disease**

**Management of Adolescent Obesity**

The management of Adolescent Obesity revolves around two principles. They are:

**a. Social and Environmental control**

This involves nutritive counseling, change in school policies, education and public awareness and formulation of environmentally friendly laws. This is undoubtedly a long-term solution to this problem; however, it is a slow process, often taking generations to get the result.

**b. Direct patient care**

This involves care of each Obese patient through dietary and behavioral modifications, pharmacotherapy and surgery.

For dietary and behavioral modifications, counseling of

parents, especially mothers is necessary to help children adopt healthy food habits.

Educating the caregiver about healthy food options, regular mealtimes and optimum physical activity will help curb the tendency for weight gain in children. Along with this, they should be given medications like Metformin, Orlistat, Sibutramine and Liraglutide; however, Anti-obesity medications have a limited period of effectiveness and cannot be taken lifelong due to its associated side effects.

Over the past decade, there has been an increase in the number of adolescent bariatric surgeries performed worldwide. The need has arisen as a result of:

1. The sickness / morbidity of obese population, which requires immediate intervention.
2. High degree of recidivism (relapse to the previous condition) which is seen in patients who try non-surgical options for weight loss.





**The basic principles for achieving weight loss in these patients are:**

- Long- term behavioral changes
- Dietary modifications
- Increased physical activity
- Support from family members to adopt a healthier lifestyle

**Indications**

Adolescents undergoing bariatric surgery should meet the following criteria:

- Have a BMI of > 40 in the absence of co-morbidities and > 35 kilograms (kg) / meter square (m<sup>2</sup>) in the presence of existing co-morbidities
- Have attained majority of skeletal maturity (age ≥13 for girls and ≥15 for boys)
- Have experienced failure after repeated attempts at organized weight loss regimens (at least 6 months)
- Ready to make necessary lifestyle modifications
- Adolescents and their family members should be well aware of the seriousness of this procedure

- Consent of the parent / guardian

**Contraindications**

Bariatric surgery is contraindicated in patients with a history of substance abuse, psychiatric illness or those who are unwilling to undergo lifelong medical surveillance. All patients should undergo a comprehensive psychological assessment by an Adolescent Psychiatrist / Psychologist who has a significant experience in Adolescent Obesity.

The commonly performed bariatric procedures in obese adolescent patients are Laparoscopic adjustable gastric banding (LAGB), Laparoscopic sleeve gastrectomy (LSG) and Laparoscopic Roux- en-Y gastric bypass (LRYGB).



**The ideal Pediatric Bariatric Procedure should conform to the following criteria**

1. Should have good possibility of substantial and durable weight loss
2. Have minimal procedural complications
3. Should not result in nutritional deficiencies
4. Should not impact physical growth
5. Should not present with mechanical problems

Adolescent patients, who undergo the surgery, require careful and lifelong medical supervision to optimize the surgical outcomes and prevent complications. The multidisciplinary team approach should be continued postoperatively. The Nutritionist should assess the nutritional status of the patient at



each follow-up and identify and manage any nutritional deficiencies that may develop. Supplementation of Multivitamins, Calcium, Vitamin B12 and Iron (especially in menstruating females) must be provided after LAGB.

Patients should also get the help of a Physiotherapist / Exercise specialist to help them follow routine exercise. Psychological assessment should be continued in the postoperative period, as these patients are more prone to develop psychological disorders.

**Conclusion**

Childhood Obesity is a serious problem needing urgent attention and a proactive management approach. The approach needs to be multipronged at the national, state and individual levels.

Bariatric surgery is today an underutilized tool. The benefits accrued with regard to the risks involved divert patients to no-surgical procedures for weight loss. As on now, only 2% of morbidly obese children undergo bariatric surgery. [6]

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QUALITY CERTIFICATIONS





# FROM TOPDENT SHOW



Participation of DentCare in Topdent show held at Vijayawada Andhra Pradesh, India





# A few DentCare Products at a Glance



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

Over the past 30 years we have dedicated ourselves in contributing to healthy, confident smiles for over 30 million patients and for the delight of more than 30 thousand dentists around the globe.

The range of services DentCare has to offer is unique and comprehensive; its product portfolio comprises individual Dental Crowns and Bridges, Implant restorations and Partial / Full denture prostheses. The company strongly believes that technology, hand in hand with art, fused with latest know-how, results in dental restorations with greater precision, aesthetics and functionality.

## Dental Implant Prostheses

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

Different variants of Implant Prostheses are offered by DentCare and may be made available as Screw Retained or Cement Retained crowns / bridges.





### Screw-Retained Hybrid Dentures

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

The variants available are:

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

### Implant-supported Overdentures

*They are available as Bar Attachment / Ball Attachment Overdentures.*

Implant-supported Overdentures are offered in various material options namely

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

### CAD / CAM Dentures: An Excellent Digital Solution for Dentures

DentCare has come up with a future oriented mechanism – CAD / CAM Technology – for the design and fabrication of complete dentures, which ensures good accuracy of fit and high patient satisfaction.

The most fascinating fact about CAD/CAM technology is that it allows patients to experience aesthetics and function of their future dentures in the first appointment itself. Dentures manufactured from a milling block features high material safety and predictable result.

The advantages of this innovative concept include:

- 1) Predictable results
- 2) High quality materials and reproducibility
- 3) Reduced allergenic potential

#### Benefits


- ✦ Only 2 dentist appointments
- ✦ Perfect fit and perfect bite
- ✦ Predictable masticatory function
- ✦ Lowest allergy potential
- ✦ Plaque-free surface
- ✦ Dentures of highest quality
- ✦ Made in Germany

It is the digital work flow that ensures high accuracy and a perfect fit!



#### 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 consequence of our passion in improving dental care. And this keeps us at the forefront of innovation. Our dental prostheses experts are passionate about exploring new ways to address challenges in enhancing the smile. All the materials we use in production have proven scientific quality and excellence. 



# *World Environment Day*



**Dr. Salom Gnana Thanga V.**  
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**W**orld Environment Day (WED) is celebrated every year on June 5<sup>th</sup> to raise global awareness towards positive environmental action for protecting Nature and planet Earth. It is run by the United Nations Environment Program (UNEP).

World Environment Day is a United Nations Environment-led global event. It is the single largest celebration of our Environment and is observed by thousands of communities worldwide. Since its inception in 1972, it has grown to become a global platform for public outreach, which is widely celebrated across the globe.

The theme for World Environment 2018 is “**Beat Plastic Pollution**”, which urges governments, industrialists, communities, and individuals to come together and explore sustainable alternatives and urgently reduce the production and excessive use of single-use plastics that pollute the oceans, damage marine life and threaten human health.

India will serve as the global host of World Environment Day 2018. The Government of India has committed to organizing and promoting the World Environment Day celebrations, through a series of engaging activities and events, generating strong public interest and participation.

From 'Pan-Indian plastic clean-up drives' in public areas, national reserves and forests to simultaneous beach clean-up activities, India will lead the initiative by setting an example.

Plastic is everywhere. A lot of it ends up in the oceans. Most plastics in the ocean break up into very small particles. These small plastic bits are called

“**microplastics.**” Some plastics are intentionally designed to be small and are called “**microbeads**”, which are commonly used in many health and beauty products.

Microplastics come from a variety of sources, including from larger plastic debris that degrades into smaller and smaller pieces. Microbeads are very tiny pieces of manufactured polyethylene plastic that are added as exfoliants to health and beauty products. These tiny particles easily pass through water filtration systems and end up in the rivers and oceans, posing a potential threat to aquatic life.



**Facts about Plastic Pollution**

- Every year the world uses 500 billion plastic bags
- Each year, at least 8 million tons of plastics end up in the oceans; which is equivalent to a full garbage truck of plastics every minute
- Over the last decade, we produced more plastics than during the previous nine decades
- 50 percent of the plastics we use are 'single-use plastics'
- We buy one million plastic bottles every minute
- Plastic waste constitutes 10% of all the waste generated in the world



Dr. Harsh Vardhan, Union Minister of Environment, Forest and Climate Change. Government of India remarked, “If each and every one of us does at least one 'green good deed' daily towards our Green Social Responsibility, there will be billions of green good deeds daily on the planet.”

World Environment Day is a day for everyone around the world to take ownership of their environment and take active steps for the protection of our Earth, not just for ourselves, but for the generations to come. 🌍





# NIPAH VIRUS:

## A Deadly Zoonotic Disease Part -1

**N**ipah Virus (NiV) infection is a newly emerging zoonosis that causes severe disease in both animals and human beings. The natural host of this Virus is fruit bats of the Pteropodidae family. Nipah Virus infection in human beings characteristically causes severe encephalitis. Up to 73% of infected persons die of this zoonotic infection (an infection that can be transmitted from animals to people).

The wildlife reservoir of Nipah Virus is bats of the genus Pteropus. This Virus attaches to the Ephrin B-2 and B-3 receptors, which are widely distributed on mammalian epithelial cells. This Virus can infect a wide range of hosts.

The outbreak of this disease in human beings has occurred in Malaysia, Bangladesh, and India. Nipah infection can be acquired by the consumption of bat-contaminated food and from the passage of contaminated saliva from a sick animal / person to a susceptible one. Nipah Virus is a recently-recognised

zoonotic Paramyxovirus that causes severe disease and high fatality in human beings.

### History

Nipah Virus was first identified during an outbreak of disease that took place in Kampung Sungai Nipah, Malaysia, in 1998. It was named after the village in Malaysia called Kampung Sungai Nipah where the zoonotic infection was first identified. At that time, pigs were the intermediate hosts. However, in subsequent NiV outbreaks, there were no intermediate hosts.

In Bangladesh in 2004, human beings were infected with NiV, after consuming date palm sap that had been contaminated by infected fruit bats. Human-to-human transmission has also been documented in many places, including in hospital settings in India. The outbreak of the disease was also reported in Philippines.



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Recently, an alarming situation has occurred in Kozhikode and Malappuram districts, Kerala, India, where more than 12 people have lost their lives and around 25 people have been quarantined (someone suspected of carrying an infectious agent is kept in isolation in an effort to prevent the disease from spreading).

### What is Nipah Virus?

Paramyxoviruses are a group of negative-sense, single stranded Ribonucleic acid (RNA) viruses in the family Paramyxoviridae (order Mononegavirales), which can cause a considerable global human and animal health burden. Paramyxoviruses are classified into two subfamilies: Paramyxovirinae and Pneumovirinae. Both of them are having a number of viruses that have been recognised as significant agents of human disease.

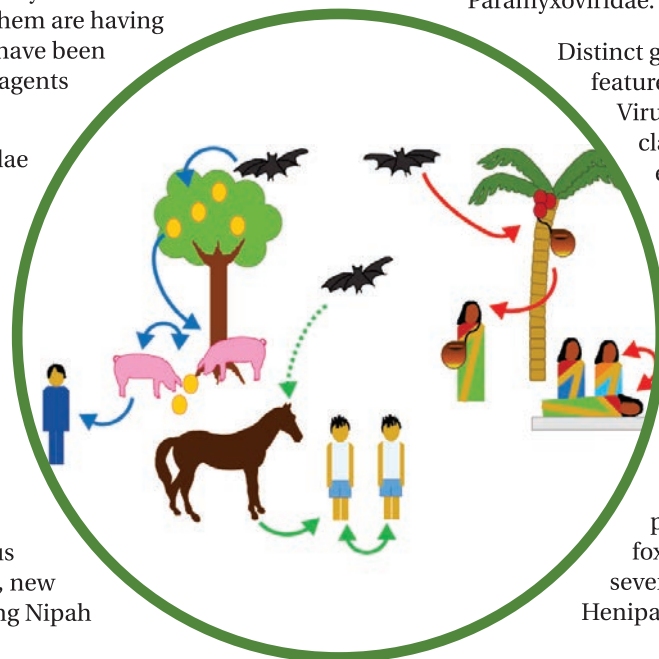
The family Paramyxoviridae has been traditionally associated with a group of viruses that have a narrow host range and that typically cause outbreaks of diseases with low mortality rates (the “old” paramyxoviruses;) i.e. Menangle Virus, Tioman Virus, Avian paramyxovirus-1, and Human Metapneumovirus (HMPV). Contrary to this, new paramyxoviruses including Nipah

(NiV) and Hendra (HeV) Viruses are causing epidemics which disquiet national and international authorities, due to the high mortality and morbidity rates in affected animals and human beings.

Many such viruses have been effectively mitigated by vaccines and consequently, the impact of human paramyxoviral diseases, such as measles and mumps have been considerably reduced in many parts of the world. Vaccination has also been developed for the eradication of Rinderpest, a paramyxovirus of enormous significance to livestock health.

However, over the past 30 years, there has seen an increased identification of diverse and novel paramyxoviruses that circulate in wildlife reservoir species, which periodically spill over to other terrestrial mammals, including human beings. For example, bats are a natural reservoir of a number of zoonotic pathogens. Several severe outbreaks in human beings (e.g. Nipah Virus outbreak in Malaysia in 1998) were caused by bat-borne Viruses that were transmitted to human beings, mainly after virus adaptation (e.g. in intermediate animal hosts). This shows that human beings can be easily affected by wildlife reservoir species i.e. bats.

In some cases, human infection with novel zoonotic paramyxoviruses has been associated with or without mild disease. In others, the infection causes severe disease with high fatality rates. It was the emergence of two such highly pathogenic viruses – Hendra Virus and the closely-related Nipah Virus, which have ushered in this changing landscape of Paramyxoviridae.



Distinct genetic and molecular features of Hendra and Nipah Viruses prompted their classification in a newly-established paramyxovirus genus, Henipavirus. Henipavirus is a genus of RNA viruses in the family Paramyxoviridae containing five established species. Henipaviruses are naturally harboured by pteropid fruit bats (flying foxes) and microbats of several species. Henipaviruses are characterised

*Nipah virus transmission. Major pathways of human Nipah virus infection are summarised for Malaysia (blue arrows), Bangladesh (red arrows), and the Philippines (green arrows)*

## Symptoms



Fever



Drowsiness



Mental  
confusion



Headache



Disorientation



Coma

by long genomes and a wide host range. Their recent emergence as zoonotic pathogens capable of causing illness and death in domestic animals and humans is a cause of concern.

Nipah Virus (NiV) is an emerging infectious disease which first appeared in domestic pigs in Malaysia and Singapore in 1998 and 1999. There is evidence of Nipah infection among several species of domestic animals, including dogs, cats, goats, and horses. Sheep may also be affected. However, since the initial outbreak, it has primarily affected human beings in different parts of the world. In pigs, this disease causes respiratory as well as occasional nervous signs. It has a devastating zoonotic potential.

### Where is the Disease found?

There has been Nipah Virus infection in animals, particularly in fruit bats or flying foxes and pigs mainly in Malaysia and Singapore, and human beings in Malaysia, Singapore, India, and Bangladesh. Evidence of the Virus without clinical manifestations has also been found in fruit bats in Cambodia, Thailand and Madagascar.

### How are Nipah Viruses transmitted and spread?

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

Perhaps, as a result of deforestation, the pig farms in Malaysia, where the disease was first discovered, had fruit trees which attracted the bats from the tropical forest, leading to exposure of the domestic pigs to bat urine and droppings.

It is thought that these excretions and secretions initiated the infection in pigs, which was then followed by a rapid spread through domestic pigs. Furthermore, transmission of the Virus between farms may be due to fomites or other media.

### Public health risk associated with this Disease

Nipah Virus infection is a zoonotic disease. In

Malaysia and Singapore, the transmission of the Virus to human beings was mainly through the direct contact with the excretions or secretions of infected pigs. The report of the infection in Bangladesh shows that the transmission of Virus from bats to human beings was direct, without an intermediate host: i.e., by drinking raw palm sap contaminated with bat excrement.

In Bangladesh and India, there have been reports of possible human-to-human transmission of the disease; so precautions are necessary for hospital workers who care for infected patients.

Precautions should also be taken when submitting and handling laboratory samples. Typically, the human infection presents with an encephalitic syndrome marked by fever, headache, drowsiness, disorientation, mental confusion, coma, and death.

During the outbreak in Malaysia, up to 50% of clinically manifested patients died. There is no specific treatment for Nipah Virus. 'Supportive care' is the general treatment for this disease.

### What are the clinical signs of Nipah Virus?

Nipah Virus in pigs affects their respiratory and nervous systems. It is known by other names, such as Porcine respiratory and neurologic syndrome, Porcine respiratory and encephalitic syndrome (PRES), and Barking pig syndrome (BPS). It is a highly contagious disease in pigs; however, the clinical signs vary depending on the age and the response of each animal to the Virus. Generally, the mortality (death due to the disease) rate is low, except in piglets. However, morbidity (illness from the disease) rate is high in all age groups.

Most pigs infected with NiV developed a febrile respiratory disease with severe cough and breathing difficulty. While the respiratory signs predominate, encephalitis has been found in animals, particularly in sows and boars, with nervous signs, including twitching, trembling, muscle fasciculation, spasms, muscle weakness, convulsions, and death. Some animals, however, remain asymptomatic.

Natural infection of dogs was common, since they commensally lived with both pigs and human beings, particularly with the infected ones and even



the transmission of the Virus between the dogs was also common. Hence, the infection with NiV in dogs causes distemper-like symptoms with a high mortality (death) rate.

### How is the disease diagnosed?


It is very difficult to diagnose the disease, except through clinical signs. However, its confirmation can be made only through prescribed laboratory tests. Laboratory diagnosis of a patient with a clinical history of NiV can be made during the acute and convalescent phases of the disease by using a combination of tests.

For diagnosis, 'Virus isolation attempts' and Real-time polymerase chain reaction (RT-PCR) from throat and nasal swabs, cerebrospinal fluid, urine, and blood can be performed in the early stages of the disease. Antibody detection by Enzyme-linked immune sorbent assay (ELISA) or OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals can also be resorted to (OIE - Office International des Epizooties, is a World Organization for Animal Health).

In fatal cases, immunohistochemistry on tissue collected during autopsy may be the only option to

confirm a diagnosis.

The tests for the diagnosis of NiV are:

- Virus isolation
- Immunohistochemistry
- Electron microscopy
- Polymerase chain reaction (PCR) and sequencing
- Serum neutralization tests
- ELISA tests 



### Prevention

- Do not eat partly consumed fruits
- Maintain personal hygiene
- Make sure that your household well is properly covered

To be continued...



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# Brain Tumors - A Simplified Approach

**T**here are numerous individual Tumor entities which come under the umbrella term, '**Brain tumor**'.

Brain tumors account for the most cancer deaths in pediatric population, though Leukemia is the most common malignancy. Many of these Tumors are very hard to detect before the onset of the symptoms. Once it is identified, rapid referral to an appropriate Specialist for treatment is often critical to obtaining an optimal outcome.

The incidence of all Primary Brain and Central Nervous System (CNS) Tumors in children aged 0-19 years is 5.3 per 100000 persons. The malignancies most commonly found among toddlers (2-3 years old) are Supratentorial Tumors (Supratentorial is the region of the brain located above the tentorium cerebelli). Among children aged 4-10 years, Infratentorial Tumors (Infratentorial is the region of the brain located below the tentorium cerebelli) are the most common.

In children older than 10 years, Supratentorial and Infratentorial Tumors occur at equal frequency. The

'differential diagnosis' can be effectively carried out by classifying Tumors based on its location and also after assessing the appearance of the lesion on conventional and advanced Magnetic resonance imaging (MRI) techniques.

## **Brain Tumor – a dreaded thought**

A person having headache may often be afraid of having Brain tumor. Not everyone with headache will have Brain tumor or not all with Brain tumor will have headache. Only 1% of patients having headache will have Brain tumor. However, certain features of headache may be a pointer for Brain tumor.

## **Warning signs of Head pain**

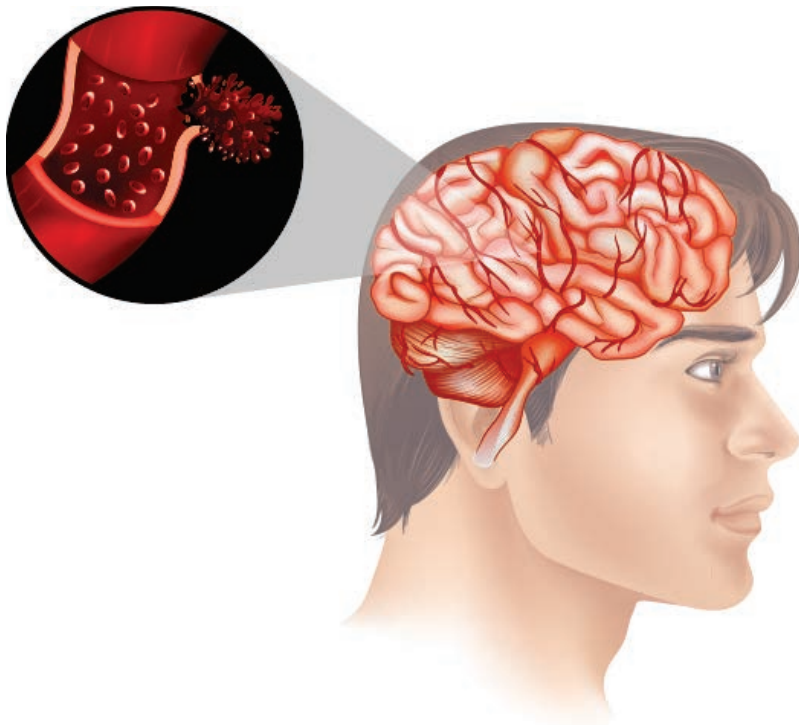
- ⊙ Change in the character of pain
- ⊙ Cognitive dysfunction – behavioral changes / poor school performance
- ⊙ Neurological disturbance – clumsiness or weakness
- ⊙ Pain always on one side



## Ten Silent Signs of a Brain Tumor

1. Persistent headache
2. A subtle loss of vision
3. Weakness and lethargy
4. Difficulty in forming words
5. Moody feelings, risky behavior or cognitive decline
6. Loss of hearing or ringing in the ears
7. Infertility
8. Loss of balance
9. Double vision
10. Seizures

**The treatment for Tumors include surgery, followed by radiation therapy and / or chemotherapy. A brain biopsy can help determine the genetic make-up and biomarkers in the Tumor**



**Prof. (Dr.) P. A. M. Kunju**  
Professor and Head  
Department of Pediatric Neurology  
Government Medical College  
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### Treatment and outcomes

A single Tumor may contain several grades of cells. The highest or most cancerous types of cells will help determine the grade of Tumor. Brain tumor treatments are not always the same for different types of Tumors. They depend on the type and grade of Brain tumor, its size, shape, and location in the brain.

The treatment for Tumors include surgery, followed by radiation therapy and / or chemotherapy. A brain biopsy can help determine the genetic make-up and biomarkers in the Tumor.

A biomarker is a characteristic that is objectively measured and evaluated as an indicator of biological or pathogenic processes. Biomarkers can help predict the response and sensitivity of the Tumor cells to certain treatment. If there is visible Tumor remaining after surgery, radiation therapy and chemotherapy can be used.

### How treatable is a Brain tumor?

#### Grade I (low-grade)

Grade I Tumor cells look more like normal cells under a microscope and grow and spread more slowly than Grade II, III, and IV Tumor cells. They rarely spread into nearby tissue. Grade I Brain tumors can be cured, if they can be completely removed by surgery.


#### Grade II

Grade II Tumor cells grow and spread more slowly than Grade III and IV Tumor cells. They may spread into nearby tissue and may recur (come back). Some Tumors may become a higher-grade Tumor.

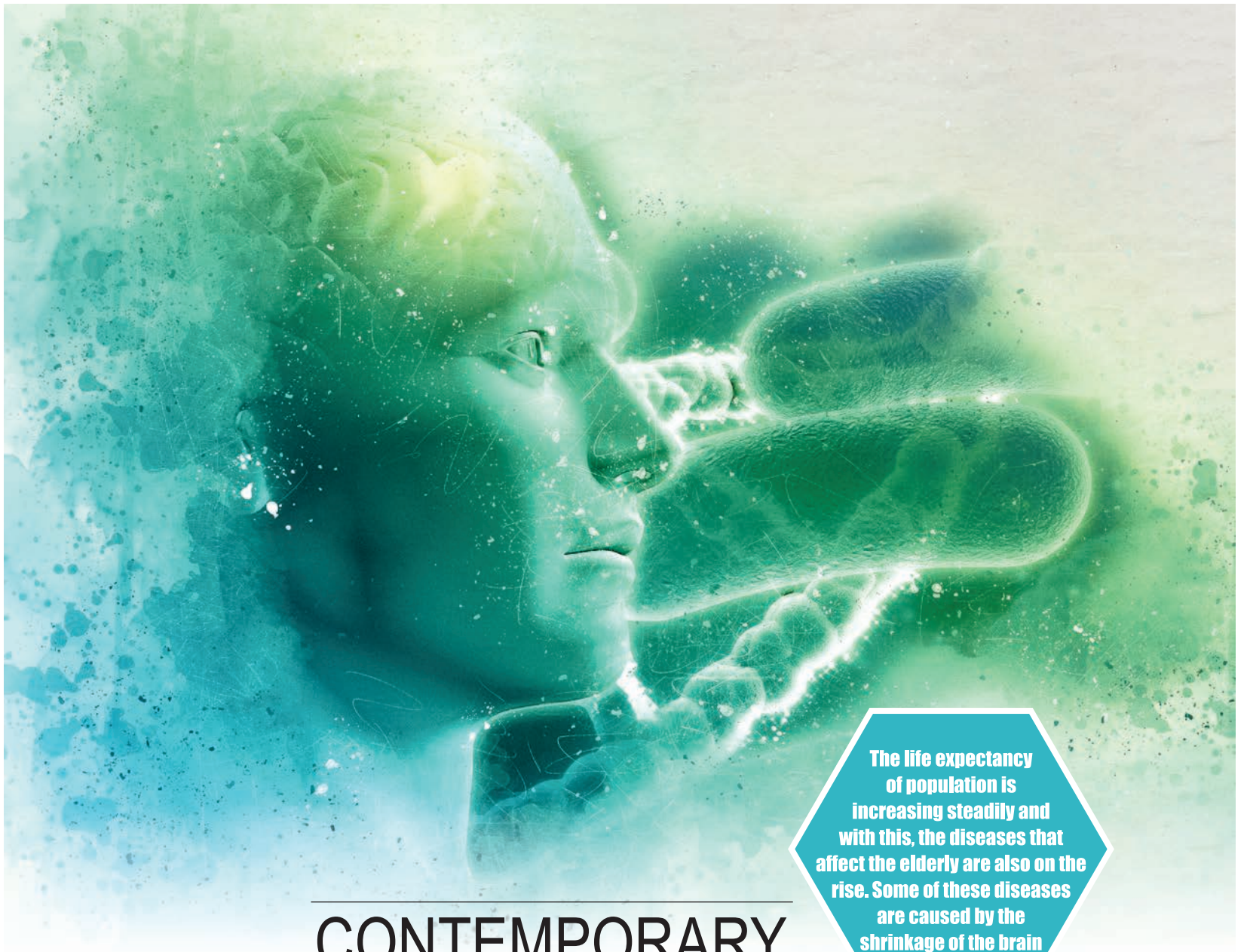
#### Grade III

Grade III Tumor cells look very different from normal cells under a microscope and grow more quickly than Grade I and II Tumor cells. They are likely to spread into nearby tissue.

#### Grade IV (high-grade)

Grade IV Tumor cells do not look like normal cells under a microscope and grow and spread very quickly. Grade IV Tumors cannot usually be cured. 





**The life expectancy of population is increasing steadily and with this, the diseases that affect the elderly are also on the rise. Some of these diseases are caused by the shrinkage of the brain**

---

## CONTEMPORARY NEUROSCIENCE

**V**arious functions of our body are integrated and coordinated in the different regions of the Brain. But this organ may be affected by a wide array of diseases. Stroke, Amnesia, Epilepsy, Parkinson's disease, Neuropathy as well as infection of the brain are a few of the major diseases that affect the nervous system.

Stroke is one of the three major fatal diseases that affect human beings. In Stroke, the symptoms depend on the region of the brain affected by it. Stroke may hinder some of the body functions. This may affect our vision and limb movements, besides our senses of touch, taste and smell, including the behavioral pattern of the person.

Stroke occurs when there is reduced blood supply to a part of the brain, causing irreversible damage to the brain cells. The cells may stop functioning, once the blood flow to the brain (oxygen and nutrient supply) is inadequate. Once the cells are damaged, they cannot be revived or revitalized with medication / treatment. Millions of people across the globe take Aspirin to prevent blood from clotting, as this may lead to brain damage. This medicine also helps prevent heart attack.

The life expectancy of population is increasing steadily and with this, the diseases that affect the elderly are also on the rise. Some of these diseases are caused by the shrinkage of the brain (reduction



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in the functioning of the brain). One of the most common medical conditions that affect older population is Amnesia or loss of memory.

### Memory

Memory can be divided into three:

- Remote memory (old memory)
- Recent memory ( new memory )
- Immediate memory (very recent memory)

Brain injuries / diseases of the brain may cause the retention of old memories and the loss of the most recent ones.

Congenital anomalies, infection, trauma and conditions resulting in the degeneration of nerve tissue (in the brain) adversely affect the functioning of the brain. Brain damage accounts for Epilepsy. Epilepsy or seizures cause loss of consciousness and behavioral change, apart from convulsive-like movements.

With timely treatment, this disease can be brought under control and before long the patient can resume his normal life. This disease can affect anyone from a newborn baby to an elderly person, at any time. Though it is rarely hereditary, sleep deprivation and low levels of sodium and calcium in blood can provoke an attack in a patient.

Another Neurological disease is pain, numbness and a burning sensation which are often felt in the lower limbs or finger tips. This results from the damage or illness affecting the nerves going to the brain from the affected part. Diabetes is a common cause for this kind of neuropathy (pain, numbness or burning sensation). Today, appropriate interventions / medications are available to treat and control these conditions.



**Brain injuries / diseases of the brain may cause the retention of old memories and the loss of the most recent ones**

If you see people walking slowly with a forward stoop / short steps, often with shuffling feet, it may be due to the conditions that affect the deeper parts of the brain, such as Parkinson's disease. Tremors of the limbs and slow movements are associated with the people who suffer from this disease.

This is a treatable condition. With proper treatment and timely medications, those who are affected by this condition can lead a near-normal life. ☑

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# DentCare in My Experience



**Dr. Ganesh Kamath**  
President  
Indian Dental Association - Udupi Branch  
Udupi, Karnataka, India

**I**t was a great privilege for me to visit DentCare Dental Lab. Their hospitality was too good to describe.

All the staff including technicians displayed a good sense of decorum and professional etiquette. The tidy and well-kept amenities of the lab created an enduring impression in my mind. I was truly amazed at the unity and dedication of all the employees there. They work together as a family.

I convey my best regards to DentCare and the whole team for providing an excellent lab service network and also for maintaining good rapport with dental surgeons within the country and outside.

I take pride in telling that all the prostheses of DentCare Dental Lab are of superb quality at par with international standards. They have created a matchless identity in 'service rendering' and 'quality maintenance'.

I wish all the best to the lab and the whole crew. ☺



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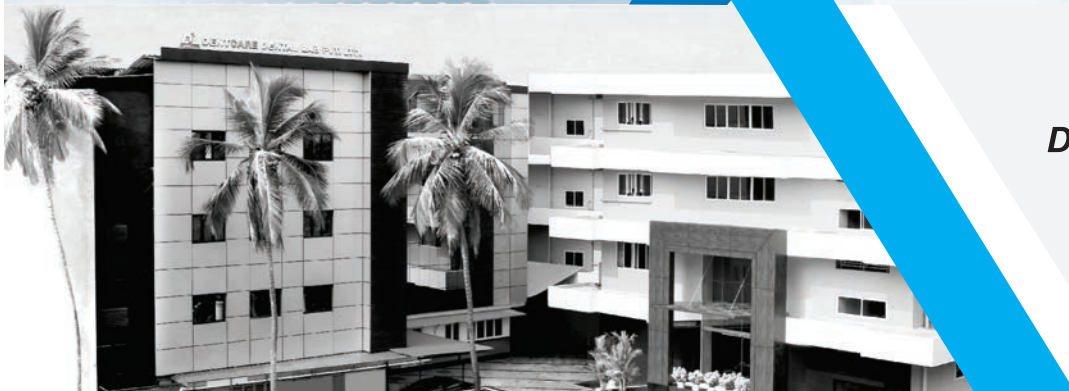
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