

# Medical Messenger

Official Publication of KH Nursing Home



**KH NURSING HOME**



**Smile Care**  
The Complete Oral  
Rehabilitation Centre

## From the Editorial

Dear Readers, My warmest welcome to the 12th edition of our newsletter - February 2024 Medical Messenger.

As we mark the culmination of a fulfilling journey spanning 12 months, the editorial team of Medical Messenger extends heartfelt gratitude.

Our sincere thanks to Dr. K Hariharan for his unwavering support and invaluable contributions.

We are indebted to the esteemed doctors and well-wishers who enriched our newsletter with insightful articles.

And to our cherished readers, your unwavering support fuels our commitment to knowledge sharing.

Join us in anticipation for our upcoming Anniversary edition, promising even more twists and surprises.

Together, let's continue this enriching journey. Keep supporting, keep exploring.



## Wipe Out Cervical Cancer: The Power of CERVASA Dr K Hariharan

**World Cancer Day** was observed on **3rd February**.

**CANCER** The six-letter word is scary; if told in the face, the patient dies 50% immediately. We do not know the causes of various cancers.

However, one cancer we know is the cervix –the most common and dangerous cancer of women and is caused by the human papillomavirus.

In multiparous women, this virus causes chronic cervicitis and later cancer. Because of the asymptomatic nature, diagnosis is made late.

So, WHO has successfully synthesised a human papillomaviral vaccine, CERVASA, produced by the Serum Institute of India.

It is economical. 2 doses can be done for women from 9 to 26 years.

If all women are given these, this disease can be completely wiped out from the phase of earth.



## Harnessing the Power of Millets: A Revolution in Nutrition and Health

**Dr K Hariharan**

Millets, the ancient grains that sustained civilizations for centuries, are making a remarkable comeback in modern times due to their exceptional nutritional and health benefits.

Traditionally staple diets in Asia and sub-Saharan Africa, millets were overshadowed by high-yield rice and wheat during the Green Revolution in the 1960s.

However, recent recognition of the importance of boosting immunity, particularly during the COVID-19 pandemic, has propelled millets back into the spotlight.

Commonly used millets include cholam (sorghum), kambu (pearl millet), kezhvaragu (finger millet), varagu (kodo millet), panivaragu (proso millet), chamai (little millet), thinai (foxtail millet), and kuthiraivali (barnyard millet).

These superfoods are packed with a plethora of micronutrients, amino acids, fibre, iron, antioxidants, flavonoids, and immune boosters.

Millets play a crucial role in improving gut health by enhancing bacterial flora and preventing infections caused by harmful bacteria like E. coli, Enterococcus, and bacteroids.

Environmentally friendly, millets require less water, fertilizers, and machinery for cultivation compared to rice and wheat.

Additionally, they are gluten-free and have a low glycemic index, making them apt for individuals with diabetes and those following a low-Fermentable oligosaccharides, Disaccharides, Monosaccharides and Polyols (FODMAPs) diet.



**a - Sorghum | b - Pearl millet | c - Proso millet | d - Little millet | e - Finger millet | f - Kodo millet | g - Foxtail millet | h - Barnyard millet**

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Millets are incredibly resilient, withstanding adverse weather conditions and requiring 26% less water than rice and wheat. They also support biodiversity and sustainable land restoration efforts.

Rich in bioactive phytochemicals such as lignans, flavonoids, phenolics, beta-glucans, sterols, inulin, pigments, fibre, and phytates, millets promote intestinal health and help prevent certain cancers and celiac disease.

Recognizing their nutritional superiority, the World Health Organization declared 2023 as the World Millet Year.

With a glycemic index 36% lower than rice and wheat, millets are endorsed by the World Diabetic Association, which recommends incorporating millets exclusively into one meal.

By embracing the power of millets, we can revolutionize our approach to nutrition and health, paving the way for a healthier and more sustainable future.

## Awareness Corner:



### WALK FASTER, LIVE LONGER: HOW WALKING SPEED AFFECTS DIABETES RISK

- Recent research in the British Medical Journal reveals a link between walking speed and Type 2 diabetes risk.
- A systematic review and meta-analysis by Jayedi et al. (2023) found that faster walkers have a lower risk of developing Type 2 diabetes.
- Walking at speeds of 4.8-6.4 km/hr reduces the risk by 24%, while speeds exceeding 6.4 km/hr decrease it by 39%.
- The slowest walking speed associated with reduced diabetes risk is 87 steps/min for men and 100 steps/min for women.



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## Saturday Night Palsy

### Dr Immanuel Jacob. A

Saturday night palsy refers to a condition where the radial nerve in the arm gets compressed due to pressure against a hard surface, often occurring after a deep sleep on the arm, especially after alcohol consumption.

It is also known as **Honeymoon Palsy**, when one's mate sleeps on and compresses the nerve in your arm overnight.



An object or surface pressing directly onto the upper medial arm or axilla for a prolonged period causes Saturday night palsy, a compressive radial nerve neuropathy.

The radial nerve is formed by nerve roots from C5 to T1, originating from the back part of the brachial nerve plexus.

It begins by running deep to the axillary artery, then passes inferiorly to the teres minor before wrapping down the medial aspect of the humerus and resting in a spiral groove.

### Signs and Symptoms

- Wrist drop.
- Numbness in the hand and wrist.
- Inability to straighten fingers.
- Inability to straighten the wrist due to the loss of function in the forearm muscles.
- Weakness or paralysis in some of the forearm and arm muscles.
- Sharp or burning pain.

### Complaints

- Numbness, weakness, tingling, pain, or any combination of these symptoms may be reported by patients.
- Physical examination may reveal a characteristic wrist drop caused by the loss of extensor muscle function.
- The triceps reflex, controlled by radial nerve innervation, may also be lost in patients.
- Sensory deficits affect the lateral three-and-a-half digits' posterior forearm, posterior hand, and posterolateral aspect.

### Treatment

- Suggest soft wrist splints like dynamic splints and cock up splints to maintain wrist extension and develop movement.
- Transcutaneous Electrical Nerve Stimulation (TENS) reduces neuropathic pain in affected regions.
- Exercise for the radial nerve helps strengthen your arms to avoid the risk of radial nerve injury. It teaches proper balance exercises to prevent falls.
- The correct posture at the workplace and during sleep is also taught to the patient.

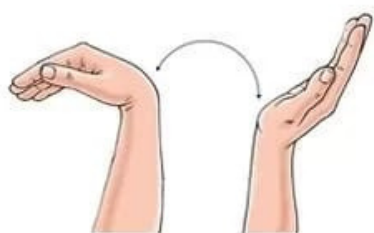


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Wrist active range of motion: Flexion and extension



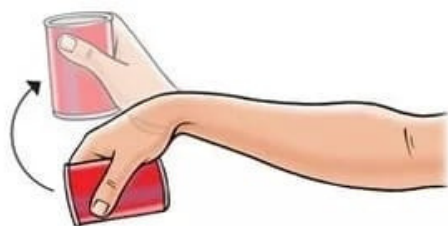
Forearm pronation and supination



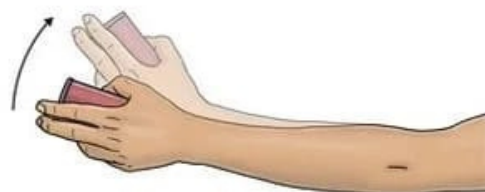
Active elbow flexion and extension



Wrist flexion



Wrist extension



Wrist radial deviation strengthening



Forearm pronation and supination strengthening



Wrist extension (with broom handle)

## Dentine - The Skeleton of a Tooth

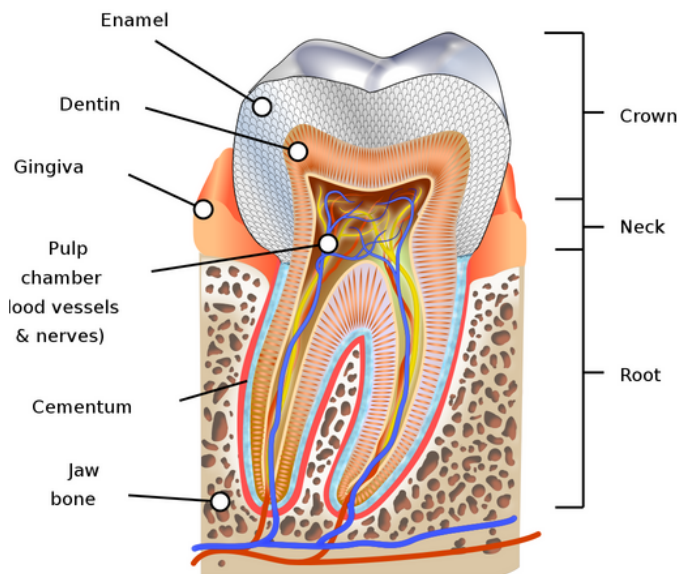
**Dr Subha Hariharan**

Dentin, also known as dentine, is the skeleton of the tooth as it forms the bulk of the tooth.

Dentin is a calcified tissue stronger than bone but weaker than enamel because of its lesser % by volume of crystalline matrix (calcium and phosphate minerals).

Predominantly, dentine comprises 45-50 % inorganic hydroxyapatite crystals, 25-20% organic material like collagen type-1 fibres and proteins, and the remaining 8-10% is water.

The inorganic component of dentin also finds minerals like Carbonates, which play an essential role in cavity formation.



Dentin is technically the second layer, covered outside by the enamel on the crown aspect and Cementum on the roots.

Dentine protects the tooth's core by enclosing the Dental Pulp within itself from the oral environment and microbes.

This bony porous matrix is yellow, which transmits through the translucent enamel to give the tooth its colour.

The Elastic nature of the dentine supports the enamel and prevents the brittle enamel from fracturing.

### Enamel vs Dentine

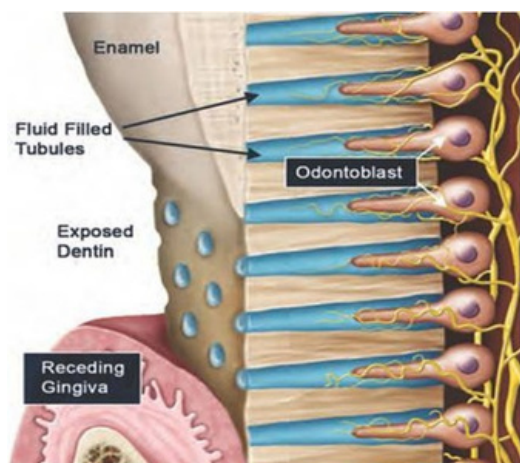
There are two main distinguishing characteristics between the Enamel and Dentine

- Dentine continues to form throughout life; they are classified as
  - Primary Dentine - first formed dentine- Mantle Dentine and circumpulpal dentine.
  - Secondary Dentine - They are formed after root completion.
  - Tertiary Dentine - They are formed in response to external stimuli like decay.
- Dentine is sensitive to temperature; sometimes, it is hyper-sensitive, mimicking "TOOTH PAIN" when exposed due to decay and enamel erosion.

### The Channels

What is inside the dentine that makes it respond to hot and cold stimuli?

- **Dental Tubules** - These are the cylindrical channels/hollow tubes which run the entire length of the dentine from the centre pulp of the tooth towards the junction between enamel and dentine in the crown. In the root, it runs till the dentine and cementum junction.
- **Size** - They are 1-2  $\mu\text{m}$  in diameter. The tubules follow a "s" shaped curvature.
- **Contents** - It houses the odontoblastic process and dentinal fluid.



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## Dentinal Fluid and Dentin Sensitivity

The transudate of plasma from the blood vessels of the pulp forms the Dentinal fluid.

### Hydrodynamic Theory

The movement of the dentinal fluid inside the tubule is the main reason behind "Dentin Sensitivity."

Dentin Sensitivity or Hypersensitivity is described as short, sharp pain responding to a stimulus like "Hot, cold beverages, touch, chemical.

This happens when the dentine gets exposed, damaged by

- Mechanical tooth abrasion due to incorrect/inappropriate tooth brushing.
- Gum recession due to gum disease.
- Frequent consumption of acidic and citrus food /beverages.
- Teeth grinding habits (parafunctional tooth movements).
- Use of abrasive toothpaste and inferior tooth cleaning products.
- Chronic systemic medical conditions lead to gastric issues and frequent vomiting.

The larger surface area of the dentin matrix increases its dissolution when exposed to acids.

This susceptibility is further increased because of the higher carbonate content of the dentin mineral.

Thus, the dentin mineral is dissolved more rapidly than the enamel mineral.

Because there is less total mineral in dentin than in enamel, the acid attack proceeds more quickly in dentin.

The "S" shaped dentin tubules also provide pathways for this dissolution.

## Prevention

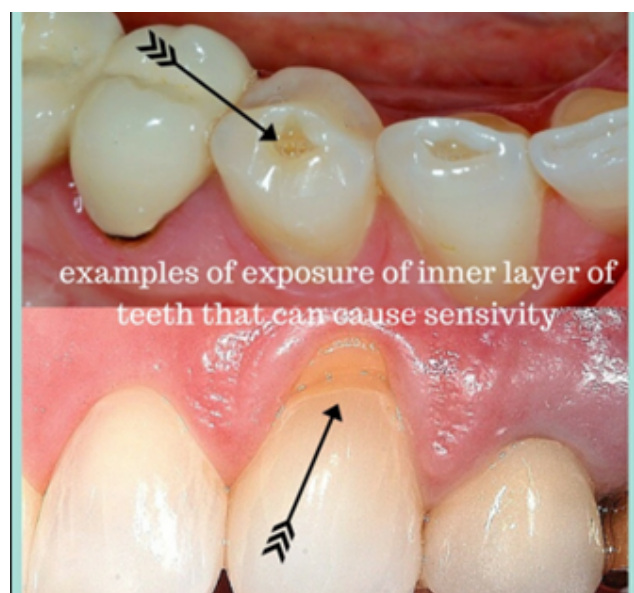
The primary and vital preventive protocols for dentin sensitivity are as follows:

- Following proper tooth brushing methods and toothbrush.
- Use of safe and recommended fluoridated toothpaste.
- Avoid frequent consumption of aerated and deleterious food substances.
- Conscious correction of parafunctional habits, if required, take the help of a counsellor/habit-breaking appliances like "Splints."
- Medications to treat chronic ailments for GI complications.
- Dental caries formed should be treated/restored by a dental filling.
- Last but not least, regular biannual dental checkups.

By following the above, dental sensitivity can be controlled.

This also prevents one from experiencing sudden, rude, and severe toothache in the middle of the night. I hope this article reassures and restores your beautiful smile.

### Pericoronitis







## Fact of the month

# Unlocking the Power of Vitamin C: A Comprehensive Guide

**Dr Arvind Bharani. R. S.**

Discover the vibrant world of Vitamin C and its indispensable role in human health.

From bolstering the immune system to promoting collagen synthesis, this essential nutrient is a cornerstone of wellness. Explore the diverse types of Vitamin C and unleash its full potential for optimal health and vitality.

- Vitamin C, also known as ascorbic acid, is a water-soluble vitamin essential for various bodily functions.
- It acts as a powerful antioxidant, protecting cells from damage caused by free radicals and boosting the immune system.
- Vitamin C enhances the absorption of iron from plant-based foods and is crucial for collagen synthesis, promoting healthy skin, bones, and blood vessels.
- There are two main types of vitamin C: ascorbic acid and sodium ascorbate, both of which are commonly found in dietary supplements.
- Adequate intake of vitamin C-rich foods like citrus fruits, strawberries, bell peppers, and broccoli is vital for overall health and well-being.





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## Lab Corner:

Comprehensive Laboratory Services at **Sai Clinical Laboratory**. Discover a wide range of laboratory services available at Sai Clinical Laboratory, located within K H Nursing Home. From **Biochemistry** to **Haematology**, **Serology** to **Microbiology**, we offer precise diagnostics to support your health journey. Trust our expertise for accurate results and exceptional care. Your well-being is our priority. Visit us today.



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## Camp Corner:




**FREE PROSTATE TESTING CAMP**

Are you experiencing any of the following symptoms? Visit the camp to get tested.

- 50+ Age Group
- Frequent urination during day
- Urinating more than 2 times in night
- No proper flow of urine during urination

**Uroflow clinic**



 Dates will be updated in our social media

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**FREE SPIROMETRY TEST**

**ALLERGY & LUNG FUNCTION DETECTION CAMP**

Every Month Last Wednesday

2.30 PM to 4 PM



**Thyroid Screening & Assessment**

**Tests Offered**

**TSH \***

**T3**

**T4**

**SPECIAL OFFER**

₹ **100** only

**\* NO FASTING REQUIRED**

 16 Feb, 2024, Friday

 09:00 am - 01:00 pm

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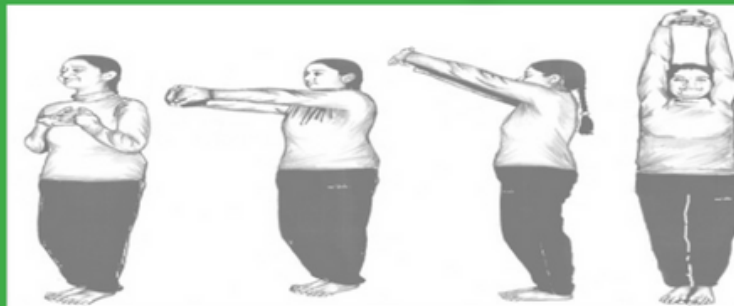


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## Yoga Corner:



### Hands Stretching Breathing



#### Practice:

##### Stage I: (Horizontal)

1. While inhaling, stretch the arms straight out in front of your body so that the arms are at shoulder level.
2. At the same time twist the hands so that the palms face outwards.
3. Fully stretch the arms, but do not strain.
4. While exhaling reverse the process and bring the palms back on to the chest.
5. Collapse the shoulders again.
6. This is one round. Repeat 5 times.

##### Stage II: (At 135)

1. Repeat the same movements now stretching the arms above the forehead at an angle of  $135^\circ$ .
2. Repeat 5 times.

##### Stage III: (Vertical)

1. Again repeat the same movements, this time stretching the arms vertically above the head.
2. While moving up and down the palms close to the nose tip.
3. Repeat 5 times.

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## Medical Marvel of the Month

### SIR THOMAS CLIFFORD ALLBUTT (1836 – 1925)



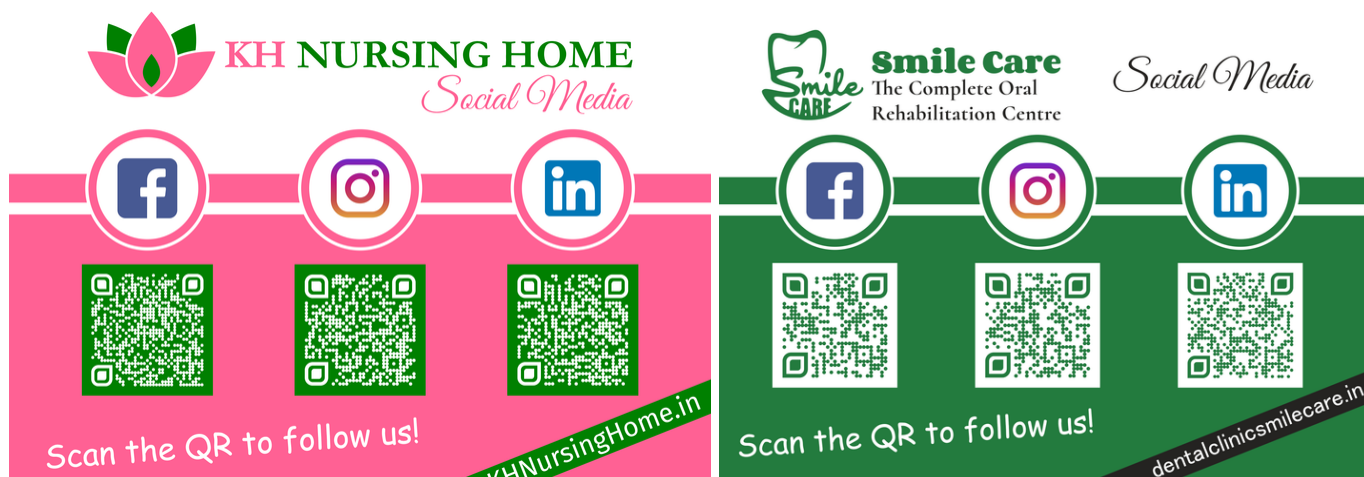
IN 1867, THE THERMOMETER UNDERWENT A REVOLUTIONARY TRANSFORMATION WITH THE INVENTION OF THE FIRST REAL MEDICAL THERMOMETER BY THOMAS ALLBUTT. MEASURING SIX INCHES IN LENGTH, THIS DEVICE MARKED A SIGNIFICANT MILESTONE IN HEALTHCARE BY ALLOWING ACCURATE MEASUREMENT OF HUMAN BODY TEMPERATURE. IT TOOK JUST FIVE MINUTES TO PROVIDE A PRECISE READING, REVOLUTIONIZING THE WAY TEMPERATURE WAS MONITORED IN MEDICAL SETTINGS.

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We thank Shri V. Ramachandran for sharing his personal experience about K H Nursing Home - <https://youtu.be/CoEl8i51FKw>