Oral Biology and Genomic Studies

2014-2016

A.B. Shetty Memorial Institute of Dental Sciences

Nitte University
2014-15

Conferences/Conventions Attended by Individual Staff

International Conference on Oral Health and Well Being
October 2015

Attended by Dr Shahnawaz Khijmatgar, Lecturer ABSMIDS
Meetings

Karnataka State Dental Council (KSDC) 2014

**TITLE**

**RECOMMENDED DAILY ALLOWANCE (RDA) OF FLUORIDE FOR THE POPULATION LIVING IN KARNATAKA STATE**

**Presenter:** Sherin James, Intern and Researcher

**Guide:** Professor Chitta Chowdhury

**Co-investigators:** Dr. Shahnawaz K, Lecturer, Department of Oral Biology & Genomic Studies, ABSMIDS

Professor Edward Lynch, Head Warwick Dentistry

Diviya Kumari P, PhD Researcher, Department of Oral Biology & Genomic Studies, Nitte University AB Shetty Institute of Dental Sciences, Mangalore, India.

**1* Contact.** Professor Chitta Chowdhury, Head, Department of Oral Biology, Lead, Fluoride Research Team.

Professor at The University of Warwick, Coventry, UK. Email. C.R.Chowdhury@warwick.ac.uk

**ABSTRACT**

**PURPOSE:** To determine the Recommended Daily Allowance (RDA) of Fluoride for the population of Karnataka of different age group. The study aims to estimate fluoride from drinking water, diets, cold drinks, mineral water, any beverages and external sources such as, fluoridated dentifrices, external application of Fluoride by dentists etc. This values is validated through the standard method used by National Institute of Nutrition (NIN), Hyderabad, India and Food and Drug Administration (FDA) of USA.
Continuing Development Education Programmes
18th September, Friday, 2015

Fluoride and Health

Facts on Source and Its Quantification for Dental Health and Wellness: A Measured Outcome for Karnataka

Estimated values detected by $F\text{ Ion-selective electrode : Risk Assessment for Population in Karnataka}$

In association with Centre for Advanced Dento-facial and Stomatognathic Sciences (CADSS), Oral Medicine and Public Health Dentistry

Venue

Vimshanthi Bhavan ABSMIDS Nitte University
Managing Medical Emergencies in Dental practice : Real-Time Actions

Half Day Seminar Workshop [9:00AM - 12:45PM]

In association with Department of Oral Surgery, Oral Medicine and Anesthesiology of Nitte University

Date and Venue
Vimshathi Bhaban, 7th Floor of A.B. Shetty Memorial Institute of Dental Sciences

Chief Guest : Professor Raghuveer, Registrar, Yenepoya University

Guests of Honors: Professor Vathsala Head, Department of Oral Medicine & Radiology, A.J. Shetty Institute of Dental Sciences, Mangalore

Dean of ABSMIDS : Professor U.S. Krishna Nayak

Founding Dean : Professor Sridhar Shetty

10:00-10:45 am: Working-paper and Recommendation, Professor Chitta Chowdhury Convener

10:45-11:80 am: Key-note speech: Professor Anand Bangera, Head, Department of Anesthesiology and Critical Care, KS Hegde Medical Academy, Nitte University.
Nicotine Replacement Therapy (NRT) 2015

Nicotine replacement therapy is a treatment to help people stop smoking. It uses products that supply low doses of nicotine. These products do not contain many of the toxins found in smoke. The goal of therapy is to cut down on cravings for nicotine and ease the symptoms of nicotine withdrawal.

We have set up an exclusive unit for this purpose to help smokers and tobacco chewers to quit their habit. It is one of its kinds in India. This programme currently started at Nitte University followed by Swaroj Gupta cancer and research centre. We have developed educational leaflets, book publications and audio-visual educational tools to educate the Indian population.

https://www.youtube.com/watch?v=xBrJ3nHJi40
2015
The theme and contents of this educational film is given by Professor Chitta Ranjan Chowdhury, Head, and Department of Oral Biology & Genomic Studies and created by the Institute of Mass Media and Journalism of Nitte University [Professor Rakesh K, Head of the Institute (edited), Faculty Ramesh D.K (directed) and their team]. Chancellor Vinay Hegde of Nitte University is inspirational to develop NRT services. Professor U.S Krishna Nayak, Principal of Nitte University Dental College, Professor N Sridhar Shetty, founding dean of the college is the advisory support of the unit.

https://www.youtube.com/watch?v=hzV4JPvljRg
ANNOUNCEMENT

DEPARTMENT OF ORAL BIOLOGY & GENOMIC STUDIES
Product & Device Development

AVAILABLE at ORAL BIOLOGY LAB

PS. Therapeutic items have been re-constituted for Supply (subject to volunteer use) from Department of Oral Biology and Genomic Studies

1. Artificial Saliva (Fortified with Sodium Fluoride and with essence of Flavor - Vanilla, Strawberry and Lemon). Instructional Leaflet is available.

2. Fluoride Varnish* 4.91% NaF (2.26%) (with essence of flavor - Strawberry and Lemon). Instructional Leaflet is available.

3. Fluoride Mouth Rinses*
   0.2% NaF fortified with essence of flavors for once a week
   0.05% NaF fortified with essence of flavors for daily use

*Indications, contraindications and instructional leaflets are available

Nitte University
ABS MIDS
Nicotine replacement therapy most widely used pharmacotherapy for treating tobacco addiction. NRT replaces nicotine from tobacco, reducing nicotine withdrawal symptoms and the urge to smoke which makes it easier to quit smoking. NRT is a way of getting nicotine into the bloodstream without smoking. There are nicotine gums, patches, inhalers etc. These help to manage the withdrawal symptoms of nicotine.

In a Recent programme for **oral cancer awareness 2014 conducted between 7-21 November 2014**, 83 patients have undergone NRT counselling and are in follow up.
## Educational Activities

### Undergraduates

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candida Load in COPD patients project</td>
<td>IInd Year Student working on ICMR project</td>
</tr>
<tr>
<td>Curriculum of Oral Biology and Genomic Studies</td>
<td>Undergraduates</td>
</tr>
<tr>
<td>Lecture 1</td>
<td>Swellings and Tumour</td>
</tr>
<tr>
<td>Lecture 2</td>
<td>Dental Caries</td>
</tr>
<tr>
<td>Lecture 3</td>
<td>Oral Mucosa</td>
</tr>
<tr>
<td>Lecture 4</td>
<td>Periodontal Tissues and its pathology</td>
</tr>
<tr>
<td>Lecture 5</td>
<td>Periodontium and Host Response</td>
</tr>
<tr>
<td>Lecture 6</td>
<td>Salivary Glands, Saliva and Salivation</td>
</tr>
<tr>
<td>Lecture 7</td>
<td>MCQ’s Assessment and Feedback</td>
</tr>
<tr>
<td>Students Feedback</td>
<td>Feedback in the form of survey regarding the course and teaching of the tutor by the 2nd year students.</td>
</tr>
</tbody>
</table>

### Interns

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety Survey</td>
<td>Data Entry</td>
</tr>
<tr>
<td>Clinical Discussion Session: BDJ Endodontics 1</td>
<td></td>
</tr>
<tr>
<td>BDJ Endodontics 2</td>
<td></td>
</tr>
<tr>
<td>BDJ Endodontics 3</td>
<td></td>
</tr>
<tr>
<td>BDJ Endodontics 4,5,6</td>
<td></td>
</tr>
<tr>
<td>BDJ Endodontics 7,8,9</td>
<td></td>
</tr>
<tr>
<td>BDJ Endodontics 10</td>
<td></td>
</tr>
<tr>
<td>Literature Search</td>
<td></td>
</tr>
<tr>
<td>Scientific Paper Writing Training</td>
<td></td>
</tr>
</tbody>
</table>
A total batch of 6 nursing students from the department of Psychiatrics, KSHEMA Hospital was posted in the department of oral biology and genomic studies. The students were given theoretical and hands on training on Nicotine Replacement Therapy (NRT). They were assessed at NRT clinical sessions.

<table>
<thead>
<tr>
<th>NURSES</th>
<th>Tasks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch 1</td>
<td>Written Assessment</td>
<td></td>
</tr>
<tr>
<td>Batch 2</td>
<td>Written Assessment</td>
<td></td>
</tr>
<tr>
<td>Batch 3</td>
<td>Essay/Discussion Knowledge Attitude and Practice and Nicotine Replacement Therapy</td>
<td></td>
</tr>
<tr>
<td>Batch 4</td>
<td>Essay/Discussion Knowledge Attitude and Practice and Nicotine Replacement Therapy</td>
<td></td>
</tr>
<tr>
<td>Batch 5</td>
<td>Essay/Discussion Knowledge Attitude and Practice and Nicotine Replacement Therapy</td>
<td></td>
</tr>
<tr>
<td>Batch 6</td>
<td>Essay/Discussion Knowledge Attitude and Practice and Nicotine Replacement Therapy</td>
<td></td>
</tr>
</tbody>
</table>
Situational Analysis of Fluoride endemic Areas:

Pavagada Taluk, Tumkuru District 2014

As per road-map and declaration of Experts’ Work-group meeting (held on 26 August 2014), the Fluoride Research team of the Department of Oral Biology and Genomic Studies of Nitte University proceeded for an intervention.

For this Professor Chitta Chowdhury and his task force visited Pavagada during 16- 18th Sept 2014 in order to tackle Fluorosis (both skeletal and dental).

He and his team conducted oral health survey especially to estimate a disfiguring dental health problem ie., dental Fluorosis is prevailing among the students of high school and pre-university colleges in urban, peri-urban and rural areas of the Pavagada Taluk. The team aimed to understand the underpinning issues of dental fluorosis and that may be considered as an indicator of systemic fluorosis such as musculo- skeletal Fluorosis, and complication in renal (kidney) system including hormonal impairment.

Professor Chowdhury designed a protocol to understand the knowledge of the students regarding ill effect of excessive fluoride in their drinking water. For this three schools were selected to identify sampled population that represents the entire student population of the same age-group and socio-economic background of the Pavagada taluk.

**Fluorosis status**

Among the groups (who are from relatively well-off families) only less than one percent students are free from Dental Fluorosis. Therefore, almost each of students has developed dental fluorosis, although all of them drink de-fluoridated water- claimed by the students. Again the students in a government school in a urban locality (of middle class or lower middle class background) are equally affected with dental Fluorosis with less amount of serity, but all of the students in Pre-University College located in Peri-urban locality is affected with Fluorosis. However Both the boys and girls are equally affected.

**Caries Status**

80% of the students of that age group 9- 15 yrs are free from caries. Therefore, 20% children needs filling in their teeth. Again both the boys and girls are equally affected.

**Awareness about Fluorosis and the knowledge status**

Out of 100 students 84 students do not have knowledge about ill effects of excess fluoride in drinking water. However we have educated them with the necessary information. It would improve their knowledge. No difference of knowledge/awareness between the boys and girls was evident.

**Remedy/treatment**

Fluorosis: Treatment with bleaching or/and restoration in severe cases is recommended.

**Urge from the Fluorosis affected students**

Students to write a petition addressing to Chief Minister of Karnataka, and a copy to health minister and team fluoride. They need immediate attention for treatment of dental fluorosis, and its prevention as well.
Research Projects 2014-16
<table>
<thead>
<tr>
<th>Projects</th>
<th>Collaborating Department</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleft Lip/Palate and Quality of Life</td>
<td>Dr Ravi Department of Orthodontics</td>
<td>Target - 300 Cleft lip and palate cases</td>
</tr>
<tr>
<td></td>
<td>Vikram Shetty Department of Oral and Maxillotactical Surgery</td>
<td>Until till date - 276</td>
</tr>
<tr>
<td></td>
<td>Dr Nanda Kishore Department of Orthodontics</td>
<td></td>
</tr>
<tr>
<td>Candidal Load in Chronic Obstructive Pulmonary Disease (COPD) : ICMR Project</td>
<td>Dr Rajesh Department of Pulmonary Medicine</td>
<td>Target - 100 COPD cases</td>
</tr>
<tr>
<td></td>
<td>Guddu Department of Pulmonary Medicine</td>
<td>Control - 100 cases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>April to Oct 2015 - 109 cases</td>
</tr>
<tr>
<td>Nicotine Replacement Therapy (NRT)</td>
<td>Oral Medicine</td>
<td>N= 164</td>
</tr>
<tr>
<td>Nicotine Replacement Therapy (NRT)</td>
<td>Dr Guddu Pulmonary Medicine</td>
<td>N= 50</td>
</tr>
<tr>
<td>Nicotine Replacement Therapy (NRT)</td>
<td>Dr Rajeev Department of Urology</td>
<td>N= 46</td>
</tr>
<tr>
<td>Fluoride and Anaesthesia</td>
<td>Dr Sangara Department of Anaesthesia</td>
<td>N= 29</td>
</tr>
<tr>
<td>Development of Artificial Saliva</td>
<td></td>
<td>Leaflet ready</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Karnataka State Drug Control Board Approval pending</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In Vitro study is on going</td>
</tr>
<tr>
<td>Development of Atraumatic Restorative Treatment (ART)</td>
<td>Department of Pharmacology</td>
<td>Data generated and manuscript prepared and sent for proof reading</td>
</tr>
<tr>
<td>Solubility of Atraumatic restorative treatment material</td>
<td>Department of Pharmacology</td>
<td>Data generated and manuscript prepared and sent for proof reading</td>
</tr>
<tr>
<td>Project Description</td>
<td>Department/Setting</td>
<td>Progress Notes</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Development of Fluoride Mouth Rinses</td>
<td></td>
<td>Leaflet ready</td>
</tr>
<tr>
<td>Minimum Inhibitory Concentration (MIC) of Newly developed Atraumatic restorative Material (ART)</td>
<td>Department of Microbiology</td>
<td>Data is generated and testing on larger sample size</td>
</tr>
<tr>
<td>AMES Test</td>
<td>Department of Microbiology</td>
<td>Yet to start</td>
</tr>
<tr>
<td>Bone Density and Osteoporosis</td>
<td>Department of Orthopaedics, Department of Pharmacology, Department of Medicine</td>
<td>Ethical Approval has been taken from animal and Institutional ethical committee. DEXA Scan and a small animal bone density measuring software required (Funds Needed). Initial pilot study started with n=6 rat samples</td>
</tr>
<tr>
<td>Recommended Daily Allowance of Fluoride (RDA)</td>
<td></td>
<td>Fluoride in Water is analysed and data is published. Fluoride in food is analysed. Fluoride in various drinks analysed</td>
</tr>
<tr>
<td>Dental Anxiety and Oral health Perception</td>
<td>Departments at different Institutional dental settings</td>
<td>Manuscript has been submitted to Appropriate Journal</td>
</tr>
<tr>
<td>Denture and Quality of Life</td>
<td></td>
<td>Data Collection completed. Analysis of data and manuscript preparation is in progress</td>
</tr>
<tr>
<td>BRONJ and Oral Health and Panoramic Diagnosis of Osteoporosis</td>
<td>Department of Orthopaedics</td>
<td></td>
</tr>
</tbody>
</table>
This is to certify that

Dr. Shahnavaz Khijmatgar

has successfully completed the

Certificate Course in

Cone Beam Computed Tomography

Dean

Manipal College of Dental Sciences
Mangalore
October 2015

Certificate Course in Implants Attended by Individual Staff
Title: Fluoride levels in drinking water in Karnataka, India: A study for further intervention regarding fluoride-related health and disease implications


Objectives
To estimate the concentration of fluoride in drinking water in different districts of the state of Karnataka.
To investigate the variation of fluoride concentration in drinking water from different sources, and its relation to daily temperature and rainfall status in the regional districts.
To develop an updated fluoride concentration intensity of the state of Karnataka.

Materials and Methods
Aqueous standard solutions of 10, 100 and 1,000ppm fluoride (F⁻) were prepared with analytical grade NaF and a buffer; TISAB II was incorporated in both calibration standard and analyte solutions in order to remove the potentially interfering effects of trace metal ions. The analysis was performed using anion-selective electrode (ISE). Mean determination readings for each sample were recorded.

Results
The fluoride concentration in drinking water in Karnataka state was found to be highest in the North-western zone (1.77 ppm), and lowest in the South-western zone (0.29 ppm).

Conclusion
The southern part of Karnataka has low levels of fluoride in its drinking water, and may require fluoridation in order to mitigate for dental caries and further ailments related to fluoride deficiency. In contrast, the districts in the North-western region of this region have contrastingly high levels of fluoride, an observation which has been linked to dental and skeletal fluorosis. This highlights the major requirement for interventional actions in order to ensure maintenance the normal range of fluoride concentrations (0.8 – 1.5 ppm) in Karnataka’s drinking water.
DEPARTMENT OF ORAL BIOLOGY & GENOMIC STUDIES
EDUCATION & DEVELOPMENT
(Continuing Professional Development) - CPD series: 11
A.B. Shetty Memorial Institute of Dental Sciences, Nitte University

Seminar-workshop and Hands-on
Knowledge and Skill Development Through Objective Structured Clinical Examination (OSCE):
Towards Re-shaping of Evidence-Based Clinical Practice in Indian Dentistry

Date: 27th May Friday  |  Time: 10 AM - 12 PM  |  Venue: Vinmohithi Bhavan, 7th Floor, ABMSMIDS

Facilitating Expert: Professor N. Udayakiran, Head, Department of Community Medicine,
K.S. Hegde Medical Academy

Observer: Professor Rajeshkhar M, Director, Staff Development, Nitte University
Professor B Rajendra Prasad, Director, Post Graduate Studies, ABMSMIDS

9:30 AM : Registration (Free)
9:45 AM : Welcome address by Professor US Krishna Nayak,
Dean, A.B. Shetty Memorial Institute of Dental Sciences

9:30 - 10 AM : Introduction and Induction: Professor Chitta Ranjan Chowdhury. Importance of OSCE as
one of the methods of skill development and assessment

10:00 AM : Professor N Sridhar Shetty. Needfulness of OSCE for the Safety of Patients and Clinicians.

10:30 - 12 PM : Chitta Chowdhury: Hands on OSCE practice (10 candidates from among PGs, Interns as
takers, and 10 faculties as trainee examiners will be included)*

12:00 PM : Thanks, End of the session

Chitta Chowdhury
Head, Oral Biology & Genomic Studies
Education and Development
A.B. Shetty Memorial Institute of Dental Sciences

Professor U.S. Krishna Nayak
Dean, A.B. Shetty Memorial Institute of Dental Sciences
Nitte University

*Interested candidates (limit is 10) and trainee examiners (limit is 10) may communicate to Chitta Chowdhury

 crc.ob.cod@gmail.com  P. 0824-22-04-623 | M. 8861315150. Intercom/ext. 225

Copy to: (i) Heads of the Departments, Circulation to staff members, (ii) Interns
(iii) Postgraduate Clinical Students through the respective HoD’s, (IV) Notice Board
(v) Professor (Dr) Nina Shenoy, IOAC Coordinator
Continuing Professional Development
22nd June 2016

A.B. Shetty Memorial Institute of Dental Sciences
Nitte University
Mangalore

Objective Structured Clinical Examination (OSCE)

Medical Emergencies

Education and Development
Date: 22.06.2016
Venue: Vimshanti Bhavan
Fluoride Research: Pavagada
Tackling Pavagada Fluorosis
14th May 2016

Tackling Pavagada Fluorosis
14th May 2016

Fluoride & Health
Department of Oral Biology and Genomic Studies
A.B. Shetty Memorial Institute of Dental Science,
NITTE University
Beralakatte, Mangalore, India

Professor Chitta Chowdhury and Team

In association with Integrated Rural Health Centre Shri Ramakrishna Mission Pavagada, Tumkur
Situational Analysis: Suratkhal Report
26th April, 2016

Category
Community based Assessment and Intervention in an un-deserved community at Suratkal, Karnataka, India

Date of survey and assessment

Co-ordinator and Lead Researcher
Professor Chitta Chowdhury Head Department of Oral Biology and Genomic Studies
Environment and Community
A.B.Shetty Memorial Institute of Dental Sciences (ABSMIDS)
Nitte University, Mangalore, India

Team members
1 Dr Shahnawaz Khijmatgar, Lecturer, Oral Biology, ABSMIDS, Nitte University
2 Dr.Nanjesh Kumar.S, Assistant Professor, Community Medicine, KS Hegde Medical Academy (KSHEMA).
2 Dr. Vinayak, Post Graduate Student, Department of Community Medicine KSHEMA
2 Dr. Shruthi Shetty, Post Graduate Student, Community Medicine, KSHEMA
3 Dr. Mustak M, Assistant Professor, Department of Botany, Mangalore University
1 Ms Bangera Pallavi Chandrakanth, Dental Intern, Department of Oral Biology, ABSMIDS 1 Ms Ayshath Sharmi-na Serin Dental Intern, Department of Oral Biology, ABSMIDS

Collaborator
2 Professor Udayakiran, Head, Department of Community Medicine, K.S.Hegde
Medical Academy, Nitte University, Konaje, Mangalore, India
3 Dr. Mustak M, Lead Genetic Study, Assistant Professor, Department of Botany, Mangalore University, Mangalore, India
MANGALORE: A study under the leadership of Dr Cheetara Ranjan Chowdhary, the Head, Department of Oral Biology and Geriatrica at the Bhat Memorial Institute of Dental Sciences (BMDSDS) of NIIT University has found that the drinking water in the Kollebe Kolar district has less fluoride content.

This was revealed in a press release meeting held on Tuesday at BMDSDS to develop a road map to address the problems of low fluoride content and excess content in drinking water in Kollebe Kolar.

Dr Chowdhary stated that during the one-and-half-month long study by a team, it was found that the water in Kollebe Kolar and Kolar has excess content of fluoride in drinking water.

The desired level of fluoride content in drinking water has been fixed at 0.7 ppm (micrograms) of fluoride to reduce the risk of dental and bone diseases.

Dr Chowdhary elaborated that the fluoride level in the water of Kollebe Kolar is 3.09 ppm in tap water. In Kollebe Kolar, the fluoride level in tap water is 3.18 ppm.

The study observed that the low content of fluoride in the water of Kollebe Kolar is due to the excess amount of the same in the water, which is not suitable for drinking.

Dr Chowdhary also stated that the amount of fluoride in the water of Kollebe Kolar is low and the excess amount in the water of Kollebe Kolar is also low.

Apart from the fluoride level, the water in Kollebe Kolar is also deficient in calcium and magnesium, which is important for bone health.

A press note from the state pollution control board (MCC) stated that the water in Kollebe Kolar is deficient in fluoride and calcium, which are essential for bone health.

DH News Service
Concern over fluoride content

Raviprasad Kamila

MANGALORE: An experts’ working group meeting on fluoride and health at Nitte University on Tuesday expressed concern that manufacturers of some consumer products do not mention the fluoride level in the products though law mandates that it should be mentioned.

Speaking at the meeting Chitta Chowdhury, head of Department of Oral Biology and Genomics Studies at A.B. Shetty Memorial Institute of Dental Sciences, Deralakatte, and leader, Team Fluoride and Health, said some well-known manufacturers of “ayurvedic toothpastes” have not been mentioning the fluoride content in their toothpastes.

The first meeting of Team Fluoride and Health, a private initiative by the university, was convened to discuss various aspects of fluoride, which is both beneficial and harmful to health.

The meeting felt that there should be an instant method of monitoring the fluoride content in drinking water supplied by the civic bodies. It decided to form sub-committees with experts for specific studies.
Kolar, Koppal Have High Fluoride Concentration in Water: Study

WHO recommends that drinking water should contain fluoride concentration between 0.8 ppm and 1.5 ppm.

by Rakesh

Mangalore: The southern parts of the state have lower levels of fluoride in ground water and north-eastern parts have markedly high levels. It is particularly high in Kolar and Koppal districts, reveals an evidence-based study published in a UK-based peer-reviewed journal titled ‘Perspective in Public Health’ (Vol XX, 74 XI).

As drinking water is the main source of fluoride intake for humans, Prof. Chitra S. Choudhary, head of the Department of Oral Biology and Genomic Studies, A.B. Shetty Memorial Institute of Dental Sciences, Manipal, and her co-workers conducted the study to estimate concentrations of fluoride in drinking water across the state.

"By eventually developing an updated fluoride concentration intensity map, interventions can be planned to promote good oral and general health," Prof. Choudhary stressed in an e-mail interview to Express.

New Delhi-based Chemo Enzyme Analytical Instrument Pvt Ltd was engaged to collect samples from five equidistant sites in each of the 29 districts, categorized into four zones. The samples collected were analysed in their laboratory, Prof. Choudhary said.

The results revealed that concentration of fluoride in drinking water ranged between 0.07 ppm (Bawe) and 3.92 ppm (Chitradurga). The mean fluoride level was found to be highest in north western zones (1.6 ppm – Bidar, Gulbarga, Vijayapura, Ballari, Koppal and Bellary). Koppal (5.67 ppm) and Kolar districts (3.40 ppm) had elevated fluoride concentrations.

WHO recommends that drinking water should contain fluoride concentration between 0.8 ppm and 1.5 ppm.

No Response from Health Minister

The mean fluoride concentration of drinking water in south-western zone was lowest at 0.01 ppm (Haveri, Davangere, Shimoga, Udupi, Dakshina Kannada, Chikamagaluru, Hassan and Kodagu).

"While visiting some areas like Tumkur and Pavagada, which have fluoride concentration above 0.8 ppm, we found that 98 per cent of students in the age group of 12 to 15 years had dental fluorosis," he informed.

The study also revealed that water with high fluoride concentration during summer season was unsuitable for human consumption.

Prof. Choudhary and team had offered a solution on setting up de-fluoridation plants to ensure drinking supplies in state had fluoride (0.8-1.5 ppm) instead of fluoride overfertilising and fluoride.

"It has not been very clear from the Chief Minister’s office, Health Minister U.T. Khader or MCC Mayor," Prof. Choudhary informed.
"E-Cig an Emerging Problem"

by Harsha

Mangaluru: Taking cue from countries like Brazil, Singapore, Norway, health experts are urging the Centre not to allow e-cigarettes (electronic cigarettes) in India.

Prof Chitta Ranjan Chowdhury, head of Oral Biology and Genomic Studies of A B Shetty Memorial Institute of Dental Sciences (ABSMIDS), Nitte University, wrote a letter to the director general of the Indian Council of Medical Research (ICMR) Dr V M Katothi stressing on the urgency of banning e-cigarettes in India before lobbyists of the product step up the unregulated trade.

"E-cigarettes despite being expensive are hugely popular in the USA and Europe. Though it is not popular in India, it is an upcoming problem and we need to create awareness about it among the citizens and policy makers," Prof Chowdhury said. Brazil, Singapore, New York and Hanover in Germany have banned e-cigarettes, he added.

"The cost of e-cigarettes, which are available online starts at Rs 2,500. The refill for the battery-operated cigarette is also expensive. The nicotine liquid present in e-cigarettes acts as a teaser and makes the smokers addicted. When smokers cannot afford e-cigarettes, they will switch to normal cigarettes," he explained.

Prof Chowdhury, who has authored books on oral cancer screening and nicotine replacement therapy, denounced the move by supporters of the product to promote e-cigarettes as an agent of Nicotine Replacement Therapy (NRT).

"Tobacco-manufacturing companies are backing the ban as it is lucrative, added Prof Chowdhury, who has been a member of the National Health and Clinical Excellence (NICE), UK, of which Prof Chowdhury is a member. He has decided not to allow e-cigarettes due to the presence of nicotine.

"Nicotine in e-cigarettes is as addictive as the nicotine in normal cigarettes," he added.

"Tobacco-manufacturing companies are backing the ban as it is lucrative, added Prof Chowdhury, who has been a member of the National Health and Clinical Excellence (NICE), UK, of which Prof Chowdhury is a member. He has decided not to allow e-cigarettes due to the presence of nicotine.

"Nicotine in e-cigarettes is as addictive as the nicotine in normal cigarettes," he added.

"Tobacco-manufacturing companies are backing the ban as it is lucrative, added Prof Chowdhury, who has been a member of the National Health and Clinical Excellence (NICE), UK, of which Prof Chowdhury is a member. He has decided not to allow e-cigarettes due to the presence of nicotine."