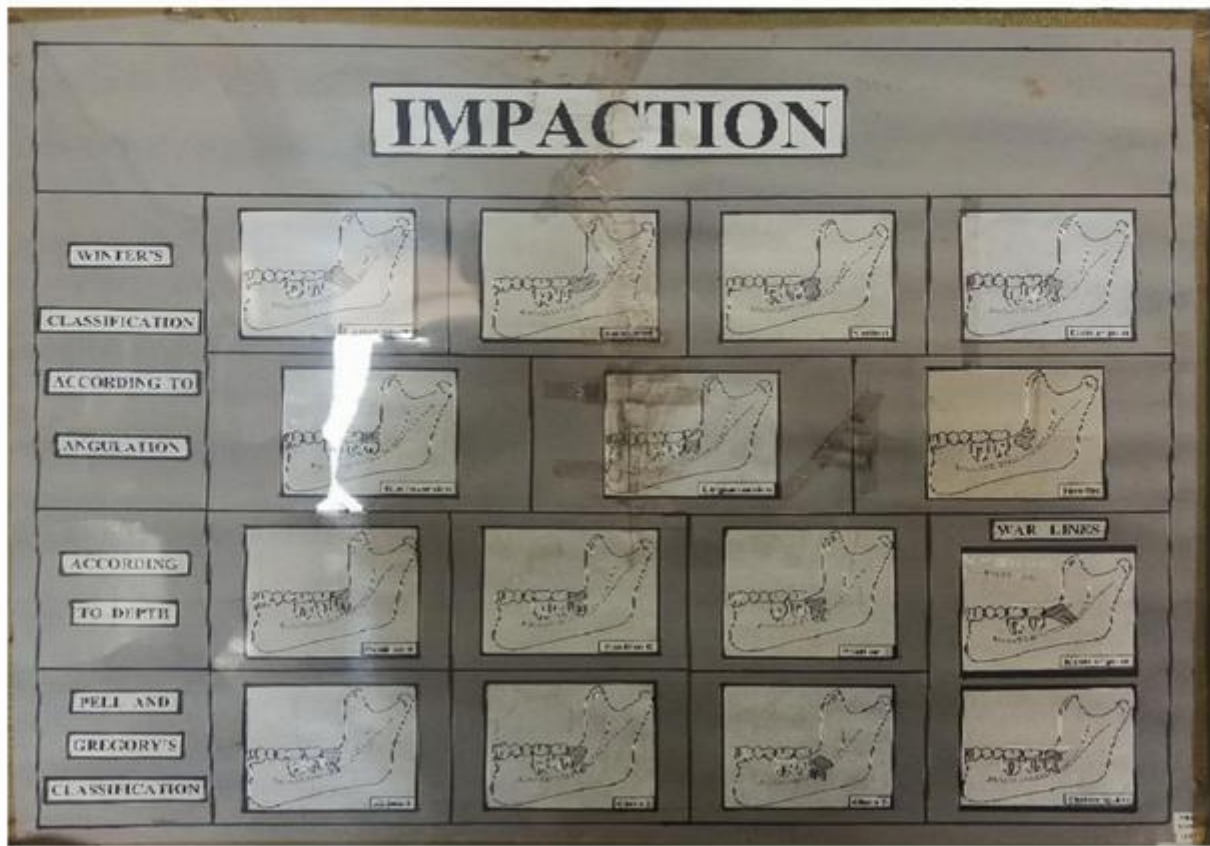


# **PHD POSTERS 2016-2017**

# PATIENTS INSTRUCTION AFTER PERIODONTAL SURGERY

PATIENT'S INSTRUCTIONS AFTER PERIODONTAL SURGERY		પેટાની સર્જરી બાદની સૂચનાઓ
1. After periodontal surgery, for first 24 hours do not spit or brush your teeth.		૧. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક મુંઝવું નહીં તથા ડોંગણ કરવા નહીં.
2. After periodontal surgery, apply ice packs intermittently for first 48 hrs at the surgical site.		૨. પેટાની સર્જરી બાદ, પહેલા ૪૮ કલાક સર્જરી કરેલી જગ્યાએ બાફરથી બાફરની ખાલીય કરવી.
3. Do not worry if pain persists during first 24 hours of surgery.		૩. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક દુખાવો રહે તે ધિક્કા કરવી નહીં.
4. Do not worry if there is mild swelling, it will gradually subside.		૪. પેટાની સર્જરી બાદ, સોજો ઘેરેઘેરે જાણી શકાશે.
5. If pain, swelling or oozing (minor bleeding) persists even after 24 hours of surgery consult your doctor immediately.		૫. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક બાદ જો સોજો, દુખાવો અથવા ઘોલી આવે તો કોન્ટાક્ટ લેવાવું.
6. After periodontal surgery, for first 24 hours eat and drink soft and cold food such as ice cream, milk shake, juice, rice, etc.		૬. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક મૃદુ ભરમ, ઠંડો, ખાણી ખોરાક જેવો દા. ત. આઈસ્ક્રીમ, જ્યુસ, મિલકચોડ, ખીચડી, દાળાના ભંડ પસંદ કરવા.
7. Take medications regularly as per doctor's advice.		૭. કોન્ટાક્ટ લેવાઈ મુજબ દવાઓ નિયમીત રીતે લેવી.
8. During and after treatment avoid consumption of Cigarette, bidi, pan masala and alcohol, it's a good chance to break your habits!		૮. સારવાર ચાલતી હોય તે દરમિયાન તે બાદમાં ધુમ્રપાન (બીડી - પાનખેડ), તમાકુ કે દારૂનું સેવન કરવું નહીં.
9. Come for suture removal as per doctor's advice.		૯. કોન્ટાક્ટની સમય મુજબ સંકલ લેવાવા આવવું.
10. Do not brush at the surgical site where periodontal dressing is given but in rest of places brush properly and maintain oral hygiene.		૧૦. પેટાની સર્જરી બાદ ડ્રેસિંગ આપેલી જગ્યાએ બ્રશ કરવું નહીં અને બાકીની જગ્યાએ યથોચિત બ્રશ કરીને મોંનું સાફ રાખવું.

# IMPACTION



# CLASSIFICATION OF TOOTH PREPARATION

## CLASSIFICATION OF TOOTH PREPARATION.

**Definition:** Tooth preparation is the mechanical alteration of a defective, injured or diseased tooth to receive a restorative material that re-establishes a healthy state for the tooth including esthetic corrections where indicated and normal form and function.

**Introduction:** Classification of tooth preparation according to anatomic areas involved and by the associated type of treatment was presented by Greene Vardiman Black.

And is designed as class-1, class-2, class-3, class-4, class-5, class-6. The altered preparation designs are referred to as

- (1) Beveled conventional preparations
- (2) Modified preparations

**CLASS-1 Restorations-**  
All pit and fissure restorations are class 1 and they are assigned to three groups:  
(1) Restoration on occlusal two thirds of posterior teeth.  
(2) Restoration on occlusal two thirds of the facial and lingual surfaces of molars.  
(3) Restoration on lingual surface of maxillary incisors.



**CLASS-2 Restorations-**  
These are restorations on the proximal surfaces of posterior teeth



**CLASS-3 Restorations-**  
Restorations on the proximal surfaces of anterior teeth that do not involve the incisal angle.



**CLASS-4 Restorations-**  
Restorations on the proximal surfaces of anterior teeth that do involve incisal angle.



**CLASS-5 Restorations-**  
Restorations on the gingival third of the facial or lingual surfaces of all teeth.



**CLASS-6 Restorations-**  
Restorations on the incisal edge of anterior teeth or the occlusal cusp heights of posterior teeth

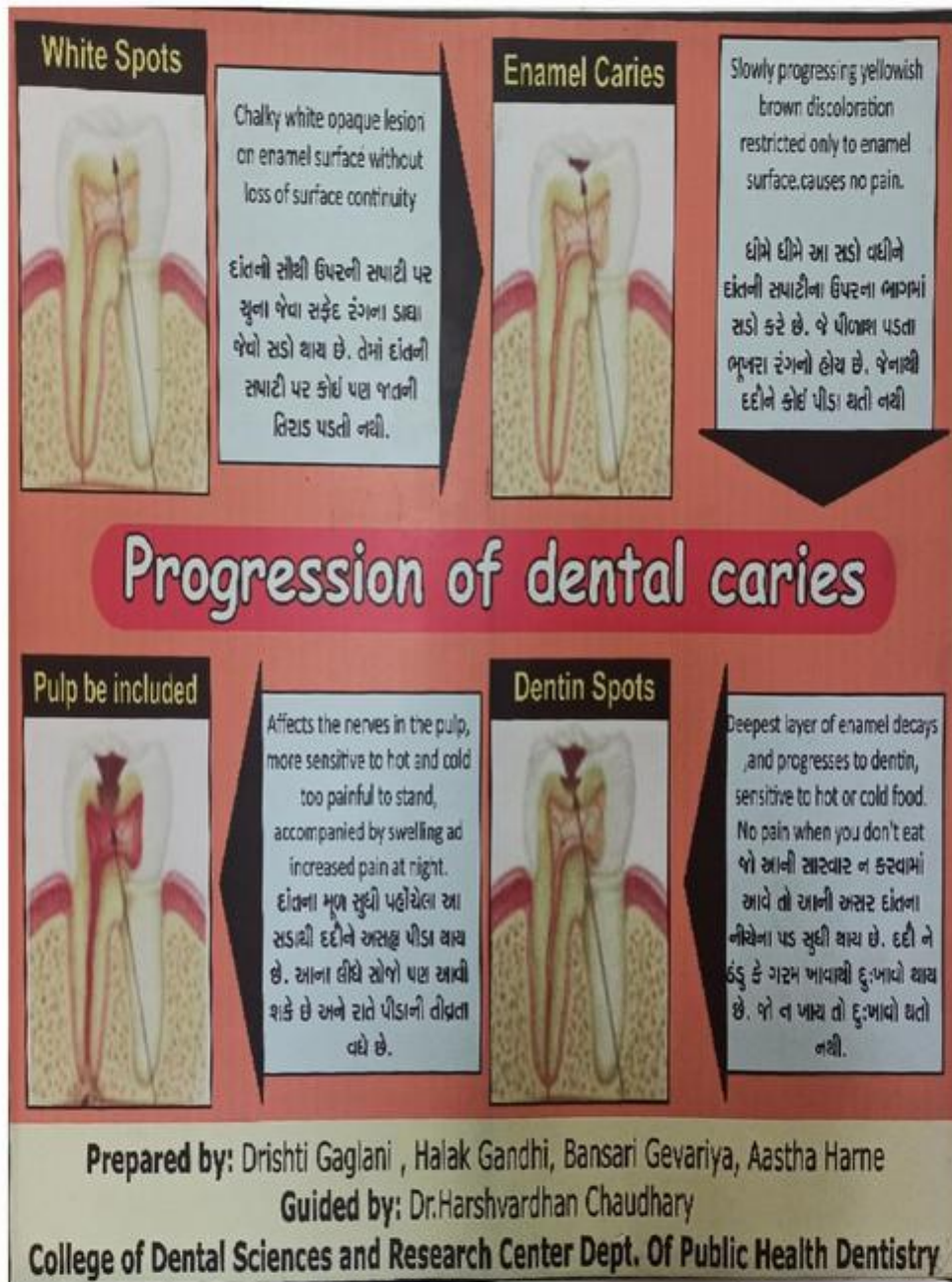
PREPARED BY

POOJA KESARA    RUCHA KAPUR  
SAVITA TALWAR    ZEELEKHA

2nd year (2016-2017)



# PROGRESSION OF DENTAL CARIES



# BIOTERRORISM

## BIOTERRORISM

**Defination :-** The Deliberate, private use of biological agents to harm and frighten the people of a state or society, is related to the military use of biological, chemical and nuclear weapons is known as bioterrorism.

### classification:-



#### CATEGORY A BIOLOGICAL AGENTS

AGENT	DISEASE CAUSED
BACILLUS ANTHRACIS	ANTHRAX
CLOSTRIDIUM BOTULINUM	BOTULISM
YERSINIA PESTIS	PLAGUE
VARIOLA MAJOR	SMALL POX
FRANCISELLA TULARENENSIS	TULAREMIA
VIRUSES	VIRAL HEMORRHAGIC FEVER

#### CATEGORY B BIOLOGICAL AGENTS

AGENT	DISEASE CAUSED
BRUCELLA	BRUCELLOSIS
SALMONELLA	FOOD SAFETY THREATS
CHLYAMIDIA PSITTACI	PSITTACOSIS
COXIELLA BRUNETTI	Q FEVER
RICKETTSIA	TYPHUS FEVER
VIBRIO CHOLERA	WATER THREATS



Category A Biological agents (Microscopic view)

Category B Biological agents (Microscopic view)

### ROLE OF DENTIST IN A BIOTERRORIST ATTACK

AS HOSPITALS BECOME FILLED, ALTERNATE SITES FOR THE PROVISION OF HEALTH CARE MAY BE REQUIRED, AND DENTAL OFFICES COULD FILL THAT NEED.



### PREPARATION BEFORE AN ATTACK



EDUCATION OF DENTAL PROFESSIONAL REGARDING MEDICAL AND ORAL MANIFESTATIONS OF BIOTERRORIST ATTACK IS IMPORTANT.

DENTAL OFFICES SHOULD BE EQUIPPED WITH POTENTIALLY USEFUL EQUIPMENT



### ASSISTANCE DURING AN ATTACK



• PACKAGING OF MEDICINES IN INDIVIDUAL DOGS

• DIAGNOSIS - PROVIDE INDIVIDUAL PT. DIAGNOSIS BY OBSERVING THE PHYSICAL AND BEHAVIORAL SIGNS OF PEOPLE, SALIVARY SWABS MAY BE COLLECTED BY DENTIST FOR LABORATORY TESTING



• IMMUNIZATION - DENTISTS MAY REGISTER IN RAPID IMMUNIZATION OR VACCINATION PROGRAM OF PUBLIC TO PREVENT THE SPREAD OF THE DISEASE

Prof.in Charge :-  
Dr. Viral Patel

Guided By :-  
Dr. Harshvardhan Chaudhary

Made By:- Ruchir Patel  
Pinakin Patel  
Ghanshyam Patel



# DISADVANTAGE OF TOOTH LOSS

DISADVANTAGES OF TOOTH LOSS (દાંત ગુમાવવાથી થતા ગેરફાયદાઓ)		
<p><b>1. LOSS OF MASTICATORY EFFICIENCY:</b> Major function of teeth is mastication. Loss of teeth results in to poor masticatory efficiency.</p>		<p>ચાવવામાં તકલીફ પડવી દાંતનું મુખ્ય કાર્ય ખોરાકને ચાવવું છે. જેમાં દાંત ગુમાવવાથી ઘટી જ તકલીફ પડે છે.</p>
<p><b>2. ESTHETICS:</b> Poor aesthetic appearance due to loss of teeth, especially in anterior teeth.</p>		<p>બાહ્ય દેખાવ અગામી દાંત ગુમાવવાથી થઈ રહેલો બાહ્ય દેખાવ અસાધ્ય દેખાવ લાગે છે.</p>
<p><b>3. PSYCHOLOGICAL DISTURBANCE:</b> Psychologically, depression occurs due to loss of teeth in early age.</p>		<p>માનસિક તકલીફો નબની ઉંમરમાં જ દાંત ગુમાવવા પછી માનસિક તરબતરમાં પરિવર્તન થઈ શકે છે.</p>
<p><b>4. RISK OF CARIES:</b> After losing natural teeth, patient has gap in the lost teeth's place, that causes food lodgement &amp; caries development.</p>		<p>સડે શેવાની સંભાવનાઓ દાંત ગુમાવવા પછી તે દાંતની વચ્ચે જગ્યા પડી જાય છે જેના કારણે ખોરાકનું ભરાય છે જેના કારણે સડાં થઈ શકે છે.</p>
<p><b>5. RESORPTION (LOSS) OF ALVEOLAR BONE:</b> After complete tooth loss, alveolar ridge undergoes resorption, resulting into decreased bone height.</p>		<p>જડબાના હાડકાના ધરાઈને થવો દાંત ગુમાવી દેવાના કારણે દાંતની નીચેના જાડબાનો ભાગ ધરાઈ જાય છે અને હાડકાની ધરાઈ થઈ અને ઊંચાઈ ઘટી જાય છે.</p>
<p><b>5. DRIFTING:</b> Mesial/distal drifting occurs due to loss of tooth causing difficulty in fabrication of denture.</p>		<p>ગુમાવેલા દાંતની જગ્યાએ અગામી અથવા પાછાનો દાંત ઢબી જવો દાંત ગુમાવવાથી તેની અગામી અથવા પાછાનો દાંત ઢબી જાય છે જેના કારણે ચોક્કસ બનાવવામાં તકલીફ પડે છે.</p>
<p><b>7. SUPRAERUPTION:</b> Due to loss of tooth opposite Tooth supraerupts causing difficulty in making of denture.</p>		<p>ઉપરનો દાંત નીચે તરફ અથવા નીચેનો દાંત ઉપર તરફ જવો દાંત ગુમાવી દેવાના કારણે વિરુદ્ધ દિશામાં રહેલો દાંત વધુ ધડતો જડબાની અંદર ચાલી જાય છે જે ચોક્કસ બનાવવામાં તકલીફ પડે છે.</p>
<p><b>8. DIFFICULTY IN SPEECH:</b> Certain pronunciations are Done by touching tongue to teeth, loss of teeth creates Problems in speaking.</p>		<p>બોલવામાં તકલીફ પડવી કેટલાક ઉચ્ચારો કરવા માટે જુલને દાંત ઉપર અડાવી પડે છે. દાંત ગુમાવવાથી બોલવામાં તકલીફ પડે છે.</p>
<p><b>9. JOINT PAIN</b> Long term occlusal disharmony causes pain &amp; discomfort to the TMJ.</p>		<p>જડબાના સાંધાના દુ:ખમાં વધારો લંબા સમયથી ઉપરના અને નીચેના દાંતનો સંપર્ક જતો રહેવાથી જડબાના સાંધાનો દુ:ખાવો થાય છે.</p>
<p><b>10. MAXILLARY SINUS PNEUMATISATION:</b> Due to loss of maxillary teeth, maxillary sinus expands in the space of bone between tooth &amp; increases chances of infection.</p>		<p>ઉપરના દાંત ગુમાવવાથી જડબાની ઉપર રહેતું કુવાનું કુદરતી પોચાણ (માથાના) નીચેનો તરફ ચાલી જાય છે જેથી પોચાણમાં ઊંચુંકાન થવાથી રક્તભર્યો વધી જાય છે.</p>

# DISPOSAL OF BIOMEDICAL WASTE

## DISPOSAL OF BIOMEDICAL WASTE

*"Discarded biological material from teaching, clinical and research laboratories and operations."*



**YELLOW BAGS**

- Infectious waste,
- Bandage
- Gauzes
- Cotton or any other things which contains body fluids, human body parts, placenta.



**RED BAGS**

- Plastic Waste Such As Catheters, injections, Syringes, I V Tubes, bottles



**BLUE BAGS**

- All Types Of Glass Bottles & Broken Glass Articles, Outdated & Discarded Medicines



**BLACK BAGS**

- Needles Without Syringes
- Blades
- Sharpers And All Metal Articles



**AMALGAM DISPOSAL**

- Liquid Consist Of Fixer, Sulfide Powder & Water Used For Amalgam Disposal In Dentistry

Final Disposal Of Waste	
NON HAZARDOUS WASTE	SECURED LANDFILLS
Liquid waste	Chemical disinfection and discharged into sewage system
Human anatomical waste	incinerated and sent into landfill areas
sharps	Needles can be cut by needle cutter and send into landfills for disposal
Microbiology waste	Autoclave, Microwave Incineration
Infectious solid waste	Autoclave, Microwave Incineration
Radioactive waste	Solid waste disposed by concentration & storage Liquid waste disposed by dilution & dispersal
Pressurized containers	Disposed off with general waste to the secured landfills

*Prepared by:* AKHILESH, SHIVANI, JUGALRAJ, PUSHTI, KISHOR PARNASHI (2014-15 BATCH)

*GUIDED BY:* Dr. Harshvarghan Choudhary

**DEPARTMENT OF PUBLIC HEALTH DENTISTRY**



# REMOVEABLE PARTIAL DENTURE

## RPD = REMOVABLE PARTIAL DENTURE

RPD meaning removable partial denture which can be removed at patient's will.

### Indications :

1. Young age group patient (till 17 year of age)
2. Multiple edentulous spaces
3. Teeth with short clinical crowns
4. Long edentulous spaces
5. Patients with emotional problem
6. For economic reason

### Contraindications :

1. Allergy to acrylic material
2. Cannot be used in Handicapped Patients
3. Flabby ridge
4. Patients with large tongue
5. Poor oral hygiene

### Advantages :

1. Prevent migration of adjacent teeth
2. No need to alter adjacent teeth
3. Used in compromised edentulous spaces
4. Provide good vertical support

### Disadvantage :

1. Resorption of underlying mucosa
2. Irritation of underlying mucosa
3. Clasp of denture causes demineralization of enamel of adjacent teeth
4. Allergy of material

### CAST PARTIAL DENTURE



### PEEK DENTURE



### PRECISION ATTACHMENT



### FLEX DENTURE



### CERAMIC CLASP



RPD એટલે દર્દીના અનુસાર કાઢી શકાય એવું અડધું ચોકડું

### ઉપયોગ :

૧. નાની ઉંમરના દર્દી (૧૭ વર્ષ સુધી)
૨. ઘણા બધા ખૂટતાં દાંતની જગ્યા માટે
૩. મોઢામાં રહેલા નાના દાંત માટે
૪. મોઢામાં લાંબી દાંત વગરની જગ્યામાં
૫. દર્દીના મોઢાના સૌંદર્ય માટે
૬. આર્થિક રીતે

### ઉપયોગ ક્યાં ન કરવો.

૧. જેને એકેલીક મટીરીયલ્સની એલર્જી હોય
૨. શારીરિક વિકલાંગ દર્દી તથા માનસિક દર્દી
૩. જે લોકોનું જડબાનું હાડકું ઘસાઈ ગયું હોય
૪. જેને મોટી જીભ હોય
૫. મોઢાની કાળજી જે ન રાખી શકે

### ફાયદો :

૧. બાજુના દાંતને પોતાની જગ્યા પરથી ખસતા રોકે
૨. બાજુના દાંતને ઘસવો ન પડે
૩. તેનો ઉપયોગ વધઘટ થયેલી જગ્યામાં થઈ શકે છે.
૪. ચોકઠાની બરાબર ઉંચાઈ રાખવામાં મદદરૂપ થાય

### ગેરફાયદા :

૧. જડબાના હાડકા ગળાય જાય
૨. મોઢાની અંદર રહેલી ચામડીને નુકશાનદાયક છે
૩. ચોકઠાના રહેલ ક્લેસ્ટ્રા બાજુનાં દાંતના રહેલ ઈનેમલ (દાંતની બહારનું આવરણ)ના તત્વને ઓછું કરે છે.
૪. મટીરીયલ્સની એલર્જી

## COLLEGE OF DENTAL SCIENCES & RESEARCH CENTRE

(DEPARTMENT OF PUBLIC HEALTH DENTISTRY) Guided by : Dr. Harshvardhan Chaudhary

• Valay A. patel • Vishva Y. Patel

• Vishva H. Patel • Shailee Patil

(Final Year B.D.S. - 2016-17)

# RECENT ADVANCEMENT IN DENTISTRY

## Recent Advancements in Dentistry

<h3>Digital Dental Mirror</h3>  <ul style="list-style-type: none"> <li>It has a loupe and a microscope to capture image and videos just like an intracoral camera.</li> <li>It offers operator to work directly using mirror or indirectly using high resolution image</li> </ul>	<h3>Laser</h3>    <p><b>Soft tissue application:</b></p> <ul style="list-style-type: none"> <li>Crown lengthening</li> <li>Removal of excess gingival growth</li> <li>gingivectomy and gingivoplasty</li> <li>Removal of soft tissue from 2<sup>nd</sup> molar area</li> </ul> <p><b>Hard tissue application:</b></p> <ul style="list-style-type: none"> <li>Isolate removal of caries and re-orientation of crystalline structure of enamel</li> </ul> <p><b>Application in dental materials:</b></p> <ul style="list-style-type: none"> <li>Polymerization of resin based materials</li> <li>Increase the bond strength of resin based materials to tooth surface</li> </ul>	<h3>Dental Microscopes</h3>   <ul style="list-style-type: none"> <li>Used to reveal fine details and structure that are invisible to the naked eye</li> <li>Provide accurate diagnosis and new approach to the treatment</li> </ul>	
<h3>Magnification Loupe</h3>  <p>Evidence the vision of the operator by magnifying the objects and increasing the depth of the vision</p>	<h3>Air Abrasion</h3>  <p>It is a powerful and focused narrow beam of 27 microns aluminum oxide particles</p> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>Abrades teeth without producing heat, vibration and noise</li> <li>No fracturing of the enamel or microfracture</li> <li>Can performed without anesthesia</li> <li>No tactile sensation</li> </ul>	<h3>Ultrasonic Handpiece</h3>  <ul style="list-style-type: none"> <li>It will activate an endodontic file resulting in three dimensional cutting</li> <li>Speed 1500-3000 cycle/second</li> <li>Quicker and easier root canal preparation</li> </ul>	<h3>Thermoplastic Gutta Percha</h3>  <ul style="list-style-type: none"> <li>The complexity of the root canal system (lateral canals and accessory canal).</li> <li>Adequate filling of this canal is desirable along with better adaptation of currently used gutta percha to the canal wall.</li> <li>Heating gutta percha is used as it will easily flows into a simplification of the root canal.</li> </ul>
<h3>Nano Dentistry</h3>  <ul style="list-style-type: none"> <li>Fillers found in modern composites are one micrometre in size</li> <li>Nano scale are more than hundred times smaller than traditional fillers</li> <li>Nano fillers have the perfect size to penetrate the typical micro sized key hole etch pattern of enamel and smallest dentin channel.</li> </ul>	<h3>The WAND</h3>  <ul style="list-style-type: none"> <li>The wand uses a micro procedure and an electronically controlled motor to deliver the anesthetic solution at constant slow rate and motor controlled pressure.</li> <li>Delivery of the anesthetic solution is activated with the foot pedal.</li> </ul> <p><b>Advantages:</b></p> <ol style="list-style-type: none"> <li>When used for palatal, nasopalatine and superior alveolar nerve blocks causes less pain and better distribution and possible increase safety</li> <li>The technique of rotating of needle during insertion avoids deflection, resulting in precise injection</li> </ol>	<p style="text-align: center;">-: Prepared by :-  <b>Kashyap Mangulkhya, Vinay Nayakpara</b>          III - B.D.S. (2009-10)</p> <p style="text-align: center;">-: Guided by &gt;  <b>Dr. Rushabh Dagli</b> Senior Lecturer  <b>Dr. Viral Patel</b> Prof. In-Charge</p> <p style="text-align: center;">Department of Preventive and Community Dentistry          CDSRC, Bopal, Ahmedabad.</p>	



# GREEN TEA IN DENTISTRY

## GREEN TEA IN DENTISTRY

**INTRODUCTION:** Widely consumed in china, japan, korea and morocco. it has various health benefits. It has cognitive function and positive impact on bone density, caries, periodontal diseases.

### CLASSIFICATION OF TEA

CONTENT	% DRY WEIGHT
PROTEIN	15-20
AMINO ACID	1-4
FIBER	26
CARBOHYDRATE	7
LIPID	7
PIGMENTS	2
MINERAL	5
PHENOLIC COMPOUND	30
<b>CATECHINS</b>	
EPIGALLOCATECHIN 3 GALLATE	59
EPIGALLOCATECHIN	19
EPICATECHIN 3 GALLATE	13.6
EPICATECHIN	6.4

### ACTION OF CATECHINS

**ANTI OXIDATIVE:** Scavange reactive o<sub>2</sub> and nitrogen species.  
Induces antioxidant enzymes.

**CAPACITY TO MODULATE PHYSICAL STRUCTURES OF CELL MEMBRANE**

**ANTIMICROBIAL ACTIVITY:** Catechin has anti microbial activity against S.aureus, H.pylori, E.coli.

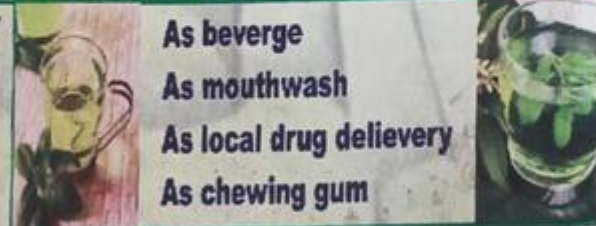
**ANTICARIOGENIC ACTIVITY:** Against S.mutans, Streptococcus sobrinus.

### COMPOSITION OF GREEN TEA

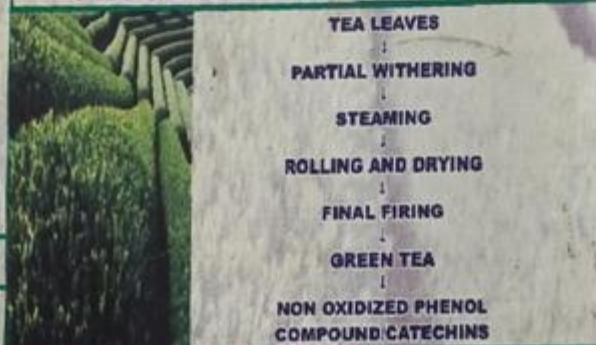
1. Non Fermented Green Tea
2. Semi Fermented Oolong Tea
3. Fermented Black and Red Tea

Department of Public Health Dentistry  
College of Dental Sciences and Research Centre, Ahmedabad

### MODES OF CONSUMPTION



### PROCESSING OF GREEN TEA



### EFFECT OF GREEN TEA ON PERIODONTIUM AND TEETH

1. Inhibiting effect on: P.gingivalis, P.melanogenicus, P.intermedia, Staph aureus, E.coli.
2. Effect on host defense-gingival cell and inflammatory response: Prevent gingival and periodontal inflammation.
3. Effect on bone and bone cell: Inhibit bone resorption by inducing apoptotic cell death of osteoclast and osteoclast like multinucleated giant cell.
4. Effect on collagenase activity: Inhibitory effect on collagenase enzyme.
5. Reduces plaque formation on tooth surfaces.

*Viral*  
Professor Incharge: Dr. Viral Patel, Guided by: Dr. Harshvardhan Chaudhary  
Prepared by: Shah Keval, Shah Palak, Thakkar Nirav [Final B.D.S. (2011-12)]



# RURAL ORAL HEALTH PROGRAMS

## Rural Oral Health Programs

India is predominantly rural, as over 72% population continue to live in rural areas.

More than 90% of dentists are available in urban settings and only 10% available to 72% of rural population. The dentist-population ratio in urban areas is 1:30,000 whereas that in rural areas is 1:3,00,000

Oral health is an integral component of general health.

### Most prevalent conditions

- Dental caries- in children
- Chronic periodontal disease- in adults
- Non-restored edentulous areas

### Reasons for poor oral health seeking in rural areas

- Poverty
- Biological, psychological, social and cultural problems
- High prevalence of tobacco chewing
- Lack of knowledge regarding importance of oral health and systemic effects
- Fear towards dentistry
- Non-availability of oral health care services
- Lack of dental man power
- Lack of required infrastructure
- Lack of political will
- Geographic isolation



DEPARTMENT OF PUBLIC HEALTH DENTISTRY  
CSBRC

PROFESSOR INCHARGE-  
Dr. VIRAL PATEL

GUIDED BY -  
Dr. HARSHVARDHAN CHAUDHARY

PREPARED BY:  
SHAN VAIKHAM  
GOKUL UMADEV

FINAL B.O.S. 2017-18



## PROGRAMS



Educational Program



Mobile Dental Program



Pit & Fissure Sealant Program



Oral Hygiene Maintenance Program



Topical Fluoridation Program



Atraumatic Restorative Program



Prosthetic Outreach Program



Habit Cessation Program

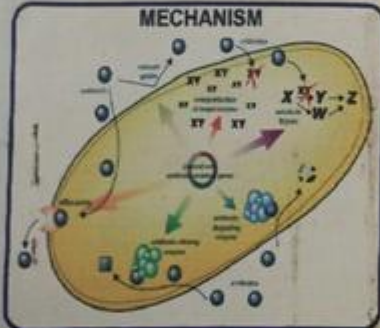


Special Need Community Program

# ANTI MICROBIAL RESISTANCE

## AMR - AntiMicrobial Resistance

AMR is resistance of microorganism to an antimicrobial medicine to which it was previously sensitive.



### CAUSES

- Inadequate national commitment to a comprehensive and coordinated response, ill-defined accountability and insufficient engagement of communities;
- Weak or absent surveillance and monitoring systems;
- Inadequate systems to ensure quality and an interrupted supply of medicines;
- Inappropriate and irrational use of medicines, including in animal husbandry;
- Poor infection prevention and control practices;
- Depleted arsenals of diagnostics, medicines and vaccines as well as insufficient research and development on new products.

### Some Examples of AMR in Dentistry

- Antepectin resistance has been described in *Haemophilus* spp. fusobacteria and *Prevotella* species isolated from root canals.
- Lactobacillus* spp., *Gemella morbillorum* and an isolate of *Akkermansia* isolated associated with odontogenic abscesses are resistant to metronidazole.
- S. haemolyticus* streptococci show high resistance to cephalosporins.
- Resistance to tetracyclines and macrolides is widespread.
- Chlorhexidine resistance is not so much developed but application for more than one week can cause an increased resistance in *S. mutans* and *S. sobrinus*.

### Implications in Dentistry

- Management of active infectious disease
- Use prophylactic antibiotics when there is a clear indication to do so.
- Orofacial infections must be treated with local drainage whenever possible.
- The routine use of antibiotics before or after extractions or endodontics should be avoided.
- In the case of superficial infections, topical antiseptics (e.g. chlorhexidine) or antiseptics should be considered instead of systemic antimicrobial agents.

### AMR IN GENERAL

Resistance to earlier generation antimalarial medicines such as chloroquine and sulfadoxine-pyrimethamine is widespread in most malaria-endemic countries.

About 400 000 new cases of multidrug-resistant tuberculosis (MDR-TB) emerge annually, causing at least 150 000 deaths.

A high percentage of hospital-acquired infections are caused by highly resistant bacteria such as methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci.

### PREVENTION

- Rational use of antibiotics
- Topical dermatological preparations such as those containing tea tree oil and thyme oil may be effective in preventing transmission of CA-MRSA.
- Vaccines
- Cytokines instead of antibiotics to animal feed
- Phage therapy

### GLOBAL CONCERN

- AMR results in prolonged illness and higher risk of death.
- AMR hampers the control of infectious disease.
- AMR threatens a return to the control of preantibiotic era.
- AMR increases the cost of health care.
- AMR jeopardizes health care gain to society.
- AMR threatens health security, & damages trade and economics.

DEPARTMENT OF PUBLIC HEALTH DENTISTRY, CDSRC

Dr. Viral Patel  
Professor Incharge

: Guided by :  
Dr. Harshvardhan Chaudhary

: Prepared By:  
Hirpara Juhi | Engineer Kinjal  
Agarwal Sejal



# BIOMEDICAL WASTE MANAGEMENT

<b>BIOMEDICAL WASTE MANAGEMENT</b>		
<b>Category</b>	<b>Waste Category</b>	<b>Treatment</b>
<b>Category 1</b>	<b>Human anatomical waste</b> (Human tissues, organs, body parts)	Incineration/ Deep burial
<b>Category 2</b>	<b>Animal Waste</b> (Animal tissues, organs, body parts carcasses, bleeding parts, fluids, blood and experimental animals used in research, waste generated by veterinary hospitals colleges, discharge from hospital, animal house)	Incineration/ Deep burial
<b>Category 3</b>	<b>Microbiology and biotechnology waste</b> (Waste from laboratory cultures, stocks or specimens of micro-organisms, live or attenuated vaccines, human and animal cell culture used in research and infectious agents from research and industrial laboratories, waste from production of biologicals, toxins, dishes and devices and for transfer of cultures)	Local autoclaving/ Microwaving/ Incineration
<b>Category 4</b>	<b>Waste sharps</b> (Needles, syringes, scalpels, blades, glass etc. that may cause puncture and cuts. This includes both used and unused sharps)	Disinfection (chemical treatment/ autoclaving/ microwaving and mutilation shredding)
<b>Category 5</b>	<b>Discarded medicine and cytotoxic drugs</b> (Wastes comprising of out dated, contaminated and discarded medicines)	Incineration, destruction and drugs disposal in secured landfills
<b>Category 6</b>	<b>Solid waste</b> (Items contaminated with blood and fluids including cotton, dressings, soiled plaster casts, linen, beddings, other material contaminated with blood)	Incineration autoclaving/ microwaving
<b>Category 7</b>	<b>Solid waste</b> (Waste generated from disposable items other than the waste sharps such as tubing, catheters, intravenous sets etc.)	Disinfection by chemical treatment, autoclaving/ microwaving and mutilation/ shredding
<b>Category 8</b>	<b>Liquid waste</b> (Waste generated from laboratory and washing, cleaning, housekeeping and disinfecting activities)	Disinfection by chemical treatment and discharge into drains
<b>Category 9</b>	<b>Incineration ash</b> (Ash from incineration of any bio-medical waste)	Disposal in municipal landfill
<b>Category 10</b>	<b>Chemicals used in production of biological, chemicals used in disinfection, as insecticides, etc.</b>	Chemical treatment and discharge into drains for liquids and secured landfill for solids

DESIGNED BY:- DR. HARSHVARDNAN CAUDHARY  
 PREPARED BY:- KRISHNA PATEL, KRUSHI PATEL, KRUTARTH PATEL, NIDHI PATEL, POXIJA PATEL  
 (YEAR:- 14-15)  
 COLLEGE OF DENTAL SCIENCE AND RESEARCH CENTRE





# QUACKERY-QUACKS IN DENTISTRY

## QUACKERY-QUACKS IN DENTISTRY

**DENTAL QUACK:** An untrained person who practices dentistry fraudulently.

**QUACKERY:** "A pretender to medical skill, a charlatan and one who talks pretentiously without sound knowledge of the subject discussed."

**REASONS:** High cost of dental treatment, illiteracy, lack of awareness, poor accessibility to dental clinics, insufficient number of qualified dental surgeons.

### TREATMENTS DONE BY QUACKS



Removable partial denture fixed with acrylic resin



Class II acrylic restoration done in first molar



Removable partial denture fixed with acrylic resin & wire



Quack trimming a tooth on a rusty hand file



Denture with a suction disc

### COMPLICATIONS



Quack inserting denture with bare hands causes infection



Nonsterilized instrument kit



Excessive bleeding after extraction



Swelling of cheek & infection after extraction



Scarring of tissue in suction disk region

### SOLUTIONS:

- Mobilization of qualified doctors to the rural areas.
- Constant surveillance.
- Improve infrastructure.
- Make strict anti quackery laws.
- Increase public awareness.

### DEPARTMENT OF PUBLIC HEALTH DENTISTRY

GUIDED BY: DR. HARSHVARDHAN CHAUDHARY

MADE BY: SHARANYA CHANDRASHEKHAR, SIDDHI SHAH,  
RESHMA SAVAT, MAITRI SHAH, SRUSHTI SHAH, MAHAMMED SHAIKH

# TOOTH NUMBERING SYSTEM

## TOOTH NUMBERING SYSTEM

### FDI SYSTEM



- ◆ This is most widely used internationally. It is approved by W.H.O.
- ◆ International Association for Dental Research (IADR) has also accepted it.
- ADVANTAGES:**
- ◆ Used for multinational interaction.
- ◆ Well known to dentists all over the world.
- ◆ E.g. Permanent Right Maxillary First Molar : - 16

### UNIVERSAL SYSTEM



- ◆ This is most widely used in U.S. and approved by A.D.A.
- ADVANTAGES:**
- ◆ Easy to use, understand.
- ◆ No quadrant or side or in type of teeth confusions.
- ◆ It is acceptable to all computer system.
- ◆ E.g. Permanent Right Maxillary First Molar : - 14

### PALMER NOTATION



- ◆ The oldest system found by Zsigmondy and Palmer in 1861
- ◆ In 1947 it was recommended by A.D.A. as a choice of system.
- ADVANTAGES:**
- ◆ Easier to use.
- DISADVANTAGES:**
- ◆ Difficult to understand because of symbolic appearance
- ◆ E.g. Permanent Right Maxillary First Molar : - 16



# CONSEQUENCES OF HIGH AND LOW VERTICAL DIMENSION

## CONSEQUENCES OF HIGH AND LOW VERTICAL DIMENSIONS

### HIGH VERTICAL DIMENSION

- Increased trauma to denture bearing area.



- Check biting.



- Difficulty in swallowing and speech.
- Pain and clicking in the Temporomandibular joint.



- Discomfort and annoyance to the patient.
- Increased volume or cubical space of oral cavity, with increased lower facial height and increased muscle tone.



- Ridge resorption is more.



- Clicking of teeth.
- Rapid wear of acrylic teeth



### LOW VERTICAL DIMENSION

- Comparatively decreased trauma to denture bearing area.



- Angular cheilitis.



- Difficulty in swallowing.
- Pain, clicking, discomfort of Temporomandibular joint accompanied by neuralgia.



- Obstruction of the Eustachian tube due to elevation of soft palate due to elevation of tongue/mandible.
- Decreased volume or cubical space of oral cavity, with decreased lower facial height and loss of muscle tone.



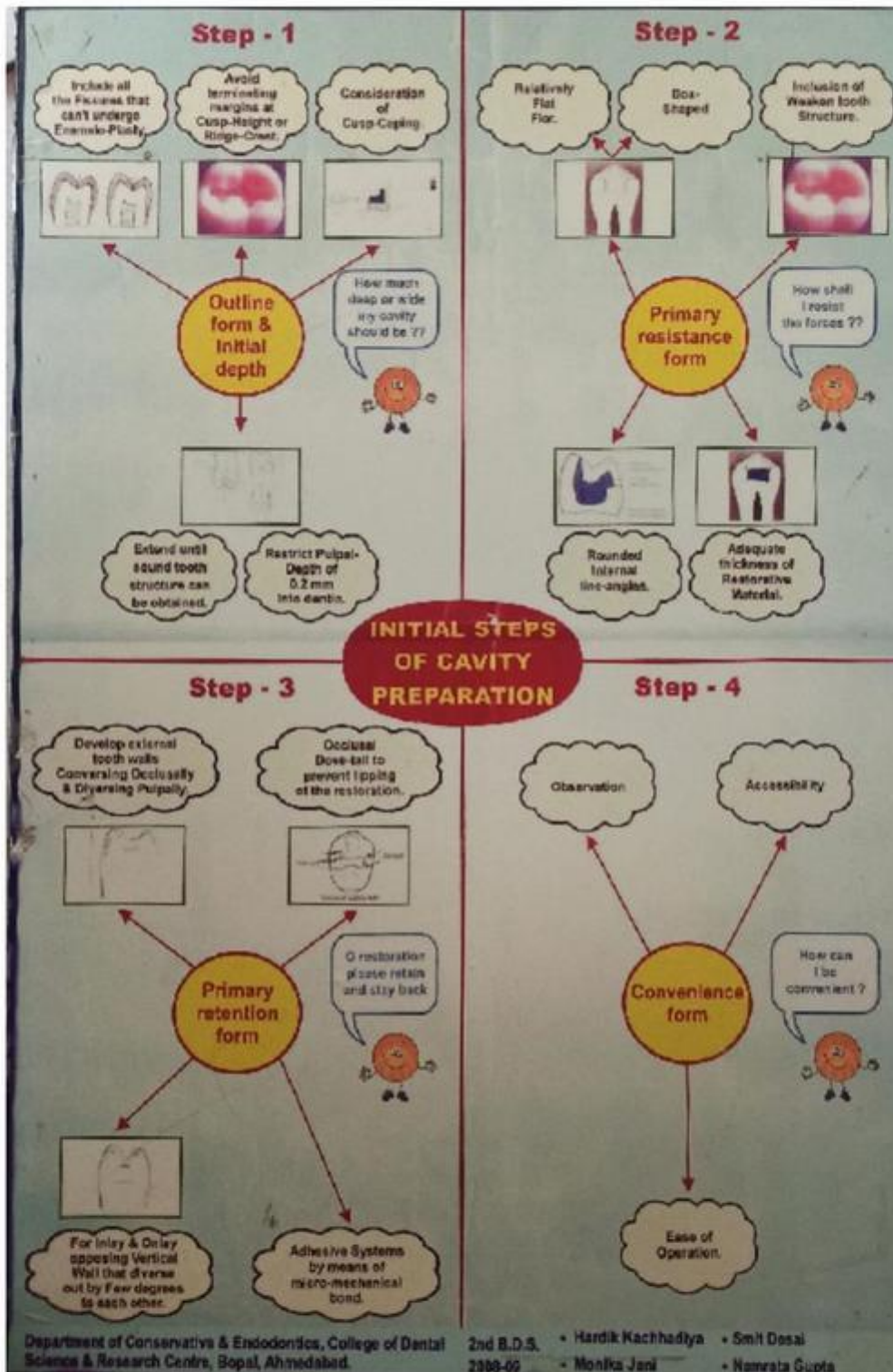
- Loss of lip fullness.



- Corners of mouth are turned down.
- Thinning of the vermilion borders of the lip.



# INITIAL STEPS OF CAVITY PREPARATION





## ULCERATIVE LESIONS OF ORAL CAVITY

### ULCERATIVE LESIONS OF ORAL CAVITY



**RECURRENT  
APTHOUS ULCER**



**MEASLES**



**TUBERCULOUS  
ULCER**



**SYPHYLTIC  
ULCER**



**ALLERGIC  
STOMATITIS**



**HERPETIC GINGIVO  
STOMATITIS**



# DENTAL PRACTICE MARKETING

## DENTAL PRACTICE MARKETING

WHY ???	Marketing Strategies	Key Elements		
<ul style="list-style-type: none"> <li>• Advance marketing techniques gives patients greater range of choice &amp; control over required dental care.</li> <li>• Marketing is the first step in patient's health education to seek dental care.</li> <li>• Dentist today have excellent knowledge but professional knowledge need and additional fertilizer - the marketing skill, in the form of satisfied patient or using marketing strategies.</li> <li>• To market dental practice with high professional &amp; ethical standards to benefit patients as well as dentist.</li> </ul>				
<p><b>Web Marketing</b></p> <p><b>Reward Referrals</b></p>	<p><b>Direct Mail</b></p> <p><b>Send Greeting Cards</b></p>	<p><b>Local Newspapers</b></p> <p><b>Monthly Newsletters</b></p>	<p><b>Informative and Promotional Pamphlets</b></p> <p><b>Posters &amp; Signs</b></p>	<p><b>Create a Pleasant Atmosphere</b></p> <p><b>Dental Logo</b></p>
<p><b>Practice Vision Process</b></p>	<p><b>Value Analysis Wheel</b></p>	<p><b>Marketing Mistakes</b></p> <ul style="list-style-type: none"> <li>• Being generic</li> <li>• Take patient for granted</li> <li>• Stop &amp; go marketing</li> <li>• Not using referral programs</li> <li>• Not leveraging the internet</li> <li>• Not asking for patient feedback</li> </ul>		

Professor Incharge: Dr. Viral Patel  
 Guided by: Dr. Harshvardhan Chaudhary  
 Prepared by: Chintan Parmar, Devdutt Dahiwala

Department of Public Health Dentistry  
 College of Dental Science & Research Centre, Manipal





# COMPOSITE

## COMPOSITE



તુટેલા દાંતની સારવાર માટે  
For the restoration of fractured teeth



દાંતના રંગનો સિમેન્ટ પુરવા  
To fill carious teeth



પીળા થયેલા દાંતને સફેદ કરવા માટે  
To treat discoloration of teeth and for esthetic purpose



દાંતના ઊંડા ખાડામાં સડો થતો અટકાવવા  
For prevention of caries

Prepared by: Devanshi Shah, Jainy Shah, Mauli Shah, Misha Shah  
Guided by: Dr. Harshvardhan Chaudhary

DEPARTMENT OF PUBLIC HEALTH DENTISTRY  
COLLEGE OF DENTAL SCIENCES AND RESEARCH CENTRE



ચાંદી કરતા કમ્પોઝીટ દેખાવમાં દાંતનાં રંગ જેવું ભેવાથી વધારે સારું દેખાવ છે  
Composites are esthetically better than amalgam



દાંતની વચ્ચેની જગ્યા પુરવા  
To cover space between two teeth

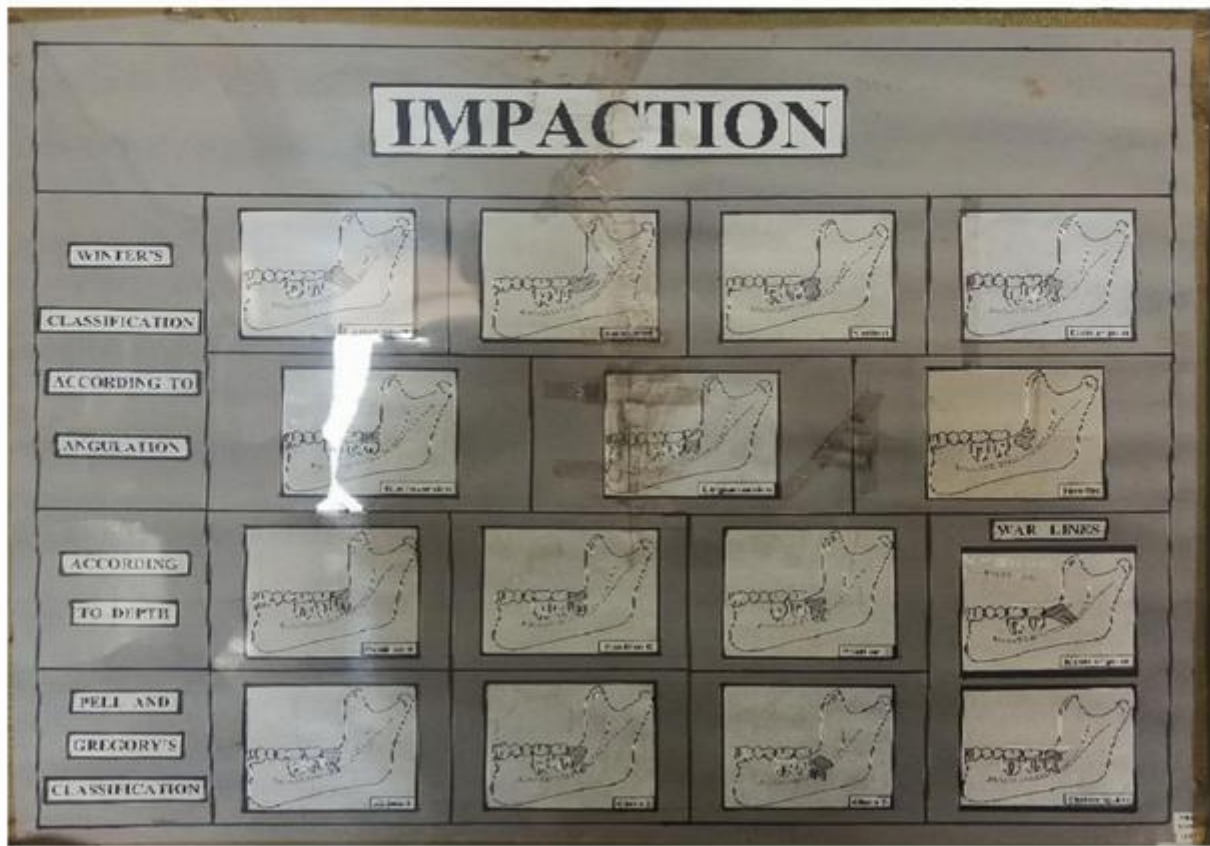


# **PHD POSTERS 2017-2018**

# PATIENTS INSTRUCTION AFTER PERIODONTAL SURGERY

PATIENT'S INSTRUCTIONS AFTER PERIODONTAL SURGERY		પેટાની સર્જરી બાદની સૂચનાઓ
1. After periodontal surgery, for first 24 hours do not spit or brush your teeth.		૧. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક મુંઝવું નહીં તમા કોમળ કરવા નહીં.
2. After periodontal surgery, apply ice packs intermittently for first 48 hrs at the surgical site.		૨. પેટાની સર્જરી બાદ, પહેલા ૪૮ કલાક સર્જરી કરેલી જગ્યાએ બાફરથી બાફરની ખાલીય કરવી.
3. Do not worry if pain persists during first 24 hours of surgery.		૩. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક દુખાવો રહે તે ધિક્કા કરવી નહીં.
4. Do not worry if there is mild swelling, it will gradually subside.		૪. પેટાની સર્જરી બાદ, સોજો ઘેરેઘેરે સોજો થઈ જશે.
5. If pain, swelling or oozing (minor bleeding) persists even after 24 hours of surgery consult your doctor immediately.		૫. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક બાદ જો સોજો, દુખાવો હાલવા ધીરે ધીરે તો કોન્ટ્રોલે બતાવવું.
6. After periodontal surgery, for first 24 hours eat and drink soft and cold food such as ice cream, milk shake, juice, rice, etc.		૬. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક મૃદુ ભરમ, ઠંડો, ખાચી ખોરાકનું લેવો દા. ત. આઈસ્ક્રીમ, જ્યુસ, મિલકચોડ, ખીચડી, દાળાનાં ભંડ પાકાં.
7. Take medications regularly as per doctor's advice.		૭. કોન્ટ્રોલની સલાહ મુજબ દવાઓ નિયમીત રીતે લેવી.
8. During and after treatment avoid consumption of Cigarette, bidi, pan masala and alcohol, it's a good chance to break your habits!		૮. સારવાર ચાલતી હોય તે દરમિયાન તે બાદમાં ધુમ્રપાન (બીડી - પાનખેડ), તમાકુ કે દારૂનું સેવન કરવું નહીં.
9. Come for suture removal as per doctor's advice.		૯. કોન્ટ્રોલની સલાહ મુજબ ઘંઠા તોડવા આવવું.
10. Do not brush at the surgical site where periodontal dressing is given but in rest of places brush properly and maintain oral hygiene.		૧૦. પેટાની સર્જરી બાદ ડ્રેસિંગ આપેલી જગ્યાએ બ્રશ કરવું નહીં અને બાકીની જગ્યાએ યથોચિત બ્રશ કરીને મોંનું સાફ રાખવું.

# IMPACTION





# CLASSIFICATION OF TOOTH PREPARATION

## CLASSIFICATION OF TOOTH PREPARATION.

**Definition:** Tooth preparation is the mechanical alteration of a defective, injured or diseased tooth to receive a restorative material that re-establishes a healthy state for the tooth including esthetic corrections where indicated and normal form and function.

**Introduction:** Classification of tooth preparation according to anatomic areas involved and by the associated type of treatment was presented by Greene Vardiman Black.

And is designed as class-1, class-2, class-3, class-4, class-5, class-6. The altered preparation designs are referred to as

- (1) Beveled conventional preparations
- (2) Modified preparations

### CLASS-1 Restorations-

All pit and fissure restorations are class 1 and they are

assigned to three groups:

(1) Restoration on occlusal two thirds of posterior teeth.

(2) Restoration on occlusal two thirds of the facial and lingual surfaces of molars.

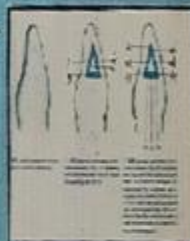
(3) Restoration on lingual surface of maxillary incisors.



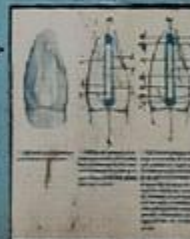
**CLASS-2 Restorations-**  
These are restorations on the proximal surfaces of posterior teeth



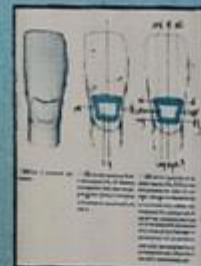
**CLASS-3 Restorations-**  
Restorations on the proximal surfaces of anterior teeth that do not involve the incisal angle.



**CLASS-4 Restorations-**  
Restorations on the proximal surfaces of anterior teeth that do involve incisal angle.



**CLASS-5 Restorations-**  
Restorations on the gingival third of the facial or lingual surfaces of all teeth.



**CLASS-6 Restorations-**  
Restorations on the incisal edge of anterior teeth or the occlusal cusp heights of posterior teeth


PREPARED BY:

POOJA KESSARIA    K JYOTA KANWAR  
RAVANI TILAKYA    ZEEL BENTA

2nd year (2010-2011)

# PROGRESSION OF DENTAL CARIES


**White Spots**



Chalky white opaque lesion on enamel surface without loss of surface continuity

દાંતની સૌથી ઊપરની સપાટી પર ચુના જેવા સફેદ રંગના ડાઘા જેવો સડો થાય છે. તેમાં દાંતની સપાટી પર કોઈ પણ જાતની તિરાડ પડતી નથી.

**Enamel Caries**




Slowly progressing yellowish brown discoloration restricted only to enamel surface, causes no pain.

ધીમે ધીમે આ સડો વધીને દાંતની સપાટીના ઊપરના ભાગમાં સડો કરે છે. જે પીળાશ પડતા ભૂખરા રંગનો હોય છે. જેનાથી દાંતને કોઈ પીડા થતી નથી.

**Progression of dental caries**


**Pulp be included**



Affects the nerves in the pulp, more sensitive to hot and cold too painful to stand, accompanied by swelling and increased pain at night.

દાંતના મૂળ સુધી પહોંચેલા આ સડાથી દાંતને અસહ્ય પીડા થાય છે. આના લીધે સોજો પણ આવી શકે છે અને રાતે પીડાની તીવ્રતા વધે છે.

**Dentin Spots**



Deepest layer of enamel decays and progresses to dentin, sensitive to hot or cold food.

No pain when you don't eat

જો આની સાટવાટ ન કરવામાં આવે તો આની અસર દાંતના નીચેના પડ સુધી થાય છે. દાંતને ઠંડુ કે ગરમ ખાવાથી દુઃખાવો થાય છે. જો ત ખાશ તો દુઃખાવો થતો નથી.

**Prepared by:** Drishti Gagliani , Halak Gandhi, Bansari Gevariya, Aastha Hame  
**Guided by:** Dr. Harshvardhan Chaudhary  
**College of Dental Sciences and Research Center Dept. Of Public Health Dentistry**



# BIOTERRORISM

## BIOTERRORISM

**Defination :-** The Deliberate, private use of biological agents to harm and frighten the people of a state or society, is related to the military use of biological, chemical and nuclear weapons is known as bioterrorism.

### classification:-



#### CATEGORY A BIOLOGICAL AGENTS

AGENT	DISEASE CAUSED
BACILLUS ANTHRACIS	ANTHRAX
CLOSTRIDIUM BOTULINUM	BOTULISM
YERSINIA PESTIS	PLAGUE
VARIOLA MAJOR	SMALL POX
FRANCISELLA TULARENENSIS	TULAREMIA
VIRUSES	VIRAL HEMORRHAGIC FEVER

#### CATEGORY B BIOLOGICAL AGENTS

AGENT	DISEASE CAUSED
BRUCELLA	BRUCELLOSIS
SALMONELLA	FOOD SAFETY THREATS
CHLYAMPIA PSITTACI	PSITTACOSIS
COXIELLA BRUNETTI	Q FEVER
RICKETTSIA	TYPHUS FEVER
VIBRIO CHOLERA	WATER THREATS



Category A Biological agents (Microscopic view)

Category B Biological agents (Microscopic view)

### ROLE OF DENTIST IN A BIOTERRORIST ATTACK

AS HOSPITALS BECOME FILLED, ALTERNATE SITES FOR THE PROVISION OF HEALTH CARE MAY BE REQUIRED, AND DENTAL OFFICES COULD FILL THAT NEED.



### PREPARATION BEFORE AN ATTACK



EDUCATION OF DENTAL PROFESSIONAL REGARDING MEDICAL AND ORAL MANIFESTATIONS OF BIOTERRORIST ATTACK IS IMPORTANT.

DENTAL OFFICES SHOULD BE EQUIPPED WITH POTENTIALLY USEFUL EQUIPMENT



### ASSISTANCE DURING AN ATTACK



• PACKAGING OF MEDICINES IN INDIVIDUAL DOGS

• DIAGNOSIS - PROVIDE INDIVIDUAL PT. DIAGNOSIS BY OBSERVING THE PHYSICAL AND BEHAVIORAL SIGNS OF PEOPLE, SALIVARY SWABS MAY BE COLLECTED BY DENTIST FOR LABORATORY TESTING



• IMMUNIZATION - DENTISTS MAY REGISTER IN RAPID IMMUNIZATION OR VACCINATION PROGRAM OF PUBLIC TO PREVENT THE SPREAD OF THE DISEASE

Prof.in Charge :-  
Dr. Viral Patel

Guided By :-  
Dr. Harshvardhan Chaudhary

Made By:- Ruchir Patel  
Pinakin Patel  
Ghanshyam Patel



# DISADVANTAGE OF TOOTH LOSS

DISADVANTAGES OF TOOTH LOSS (દાંત ગુમાવવાથી થતા ગેરફાયદાઓ)			
<p><b>1. LOSS OF MASTICATORY EFFICIENCY:</b> Major function of teeth is mastication. Loss of teeth results in to poor masticatory efficiency.</p> 	<p>ચાવવામાં તકલીફ પડવી દાંતનું મુખ્ય કાર્ય ખોરાકને ચાવવું છે. જેમાં દાંત ગુમાવવાથી ઘટી જ તકલીફ પડે છે.</p>	<p><b>5. DRIFTING:</b> ગુમાવેલા દાંતની જગ્યાએ આગળનો અથવા પાછલો દાંત ઢબી જવો Mesial/distal drifting occurs due to loss of tooth causing difficulty in fabrication of denture.</p> 	<p>દાંત ગુમાવવાથી તેની આગળ અથવા પાછળનો દાંત ઢબી જાય છે જેના લીધે ચોક્કસ બનાવવામાં તકલીફ પડે છે.</p>
<p><b>2. ESTHETICS:</b> Poor aesthetic appearance due to loss of teeth, especially in anterior teeth.</p> 	<p>બાહ્ય દેખાવ આગળના દાંત ગુમાવવાથી થઈ રહેલો બાહ્ય દેખાવ અસાધ્ય દેખાવ લાગે છે.</p>	<p><b>7. SUPRAERUPTION:</b> ઉપરનો દાંત નીચે તરફ અથવા નીચેનો દાંત ઉપર તરફ જવો Due to loss of tooth opposite Tooth supraerupts causing difficulty in making of denture.</p> 	<p>દાંત ગુમાવી દેવાના કારણે વિરુદ્ધ દિશામાં રહેલો દાંત વધુ પડતો જડાણની બહાર આવે જાય છે જે ચોક્કસ બનાવવામાં પુરોલ્પી સર્જે છે.</p>
<p><b>3. PSYCHOLOGICAL DISTURBANCE:</b> Psychologically, depression occurs due to loss of teeth in early age.</p> 	<p>માનસિક તકલીફો જાનની ઉંમરમાં જ દાંત ગુમાવવા પછી માનસિક તરબતરમાં પરિવર્તન થઈ શકે છે.</p>	<p><b>8. DIFFICULTY IN SPEECH:</b> Certain pronunciations are Done by touching tongue to teeth, loss of teeth creates Problems in speaking.</p> 	<p>બોલવામાં તકલીફ પડવી કેટલાક ઉચ્ચારો કરવા માટે જુલને દાંત ઉપર અડાવી પડે છે. દાંત ગુમાવવાથી બોલવામાં તકલીફ પડે છે.</p>
<p><b>4. RISK OF CARIES:</b> After losing natural teeth, patient has gap in the lost teeth's place, that causes food lodgement &amp; caries development.</p> 	<p>સડે શેવાની સંભાવનાઓ દાંત ગુમાવવા પછી જે દાંતની વચ્ચે જગ્યા પડી જાય છે જેના આસપાસ ખોરાકનું ભરાય છે જેના લીધે સડા અથવા કારીસ થઈ શકે છે.</p>	<p><b>9. JOINT PAIN</b> Long term occlusal disharmony causes pain &amp; discomfort to the TMJ.</p> 	<p>જડાણના સંધાંના દુ:ખમાં વધારો લંબા સમયથી ઉપરના અને નીચેના દાંતનો સંપર્ક જતો રહેવાથી જડાણના સંધાંનો દુ:ખાવો થાય છે.</p>
<p><b>5. RESORPTION (LOSS) OF ALVEOLAR BONE:</b> After complete tooth loss, alveolar ridge undergoes resorption, resulting into decreased bone height.</p> 	<p>જડાણના ઊંચકાના ધરણાં ઘટવા દાંત ગુમાવી દેવાના કારણે દાંતની નીચેના જડાણનો ભાગ ધરણાં ઘટવા છે અને જડાણની પરીમાણ ઓછી થઈ જાય છે.</p>	<p><b>10. MAXILLARY SINUS PNEUMATISATION:</b> Due to loss of maxillary teeth, maxillary sinus expands in the space of bone between tooth &amp; increases chances of infection.</p> 	<p>ઉપરના દાંત ગુમાવવાથી જડાણની ઉપર રહેતું કુવાનું કુદરતી પોલાણ (માક્સિલરી) નીચેનો તરફ આવે જાય છે જેથી પોલાણમાં ઊંચકાનું વધારાની સંભાવના વધી જાય છે.</p>
<p>COLLEGE OF DENTAL SCIENCES &amp; RESEARCH CENTRE DEPARTMENT OF PUBLIC HEALTH DENTISTRY GUIDED BY- DR. HARSHVARDHAN CHAUHANARY PREPARED BY, MADRI PATEL, HETAL PATEL, DHAVAL PATEL, DIPAK PATEL, (YEAR - 2016-2017)</p>			

# DISPOSAL OF BIOMEDICAL WASTE

## DISPOSAL OF BIOMEDICAL WASTE

*"Discarded biological material from teaching, clinical and research laboratories and operations."*



**YELLOW BAGS**

- Infectious waste,
- Bandage
- Gauzes
- Cotton or any other things which contains body fluids, human body parts, placenta.



**RED BAGS**

- Plastic Waste Such As Catheters, injections, Syringes, I V Tubes, bottles



**BLUE BAGS**

- All Types Of Glass Bottles & Broken Glass Articles, Outdated & Discarded Medicines



**BLACK BAGS**

- Needles Without Syringes
- Blades
- Sharpers And All Metal Articles



**AMALGAM DISPOSAL**

- Liquid Consist Of Fixer, Sulfide Powder & Water Used For Amalgam Disposal In Dentistry

Final Disposal Of Waste	
NON HAZARDOUS WASTE	SECURED LANDFILLS
Liquid waste	Chemical disinfection and discharged into sewage system
Human anatomical waste	incinerated and sent into landfill areas
sharps	Needles can be cut by needle cutter and send into landfills for disposal
Microbiology waste	Autoclave, Microwave Incineration
Infectious solid waste	Autoclave, Microwave Incineration
Radioactive waste	Solid waste disposed by concentration & storage Liquid waste disposed by dilution & dispersal
Pressurized containers	Disposed off with general waste to the secured landfills

*Prepared by:* AKHILESH, SHIVANI, JUGALRAJ, PUSHTI, KISHOR PARNASHI (2014-15 BATCH)  
**GUIDED BY:** Dr. Harshvarghan Choudhary

**DEPARTMENT OF PUBLIC HEALTH DENTISTRY**



# REMOVEABLE PARTIAL DENTURE

## RPD = REMOVABLE PARTIAL DENTURE

RPD meaning removable partial denture which can be removed at patient's will.

### Indications :

1. Young age group patient (till 17 year of age)
2. Multiple edentulous spaces
3. Teeth with short clinical crowns
4. Long edentulous spaces
5. Patients with emotional problem
6. For economic reason

### Contraindications :

1. Allergy to acrylic material
2. Cannot be used in Handicapped Patients
3. Flabby ridge
4. Patients with large tongue
5. Poor oral hygiene

### Advantages :

1. Prevent migration of adjacent teeth
2. No need to alter adjacent teeth
3. Used in compromised edentulous spaces
4. Provide good vertical support

### Disadvantage :

1. Resorption of underlying mucosa
2. Irritation of underlying mucosa
3. Clasp of denture causes demineralization of enamel of adjacent teeth
4. Allergy of material

### CAST PARTIAL DENTURE



### PEEK DENTURE



### PRECISION ATTACHMENT



### FLEX DENTURE



### CERAMIC CLASP



RPD એટલે દર્દીના અનુસાર કાઢી શકાય એવું અડધું ચોકડું

### ઉપયોગ :

૧. નાની ઉંમરના દર્દી (૧૭ વર્ષ સુધી)
૨. ઘણા બધા ખૂટતાં દાંતની જગ્યા માટે
૩. મોઢામાં રહેલા નાના દાંત માટે
૪. મોઢામાં લાંબી દાંત વગરની જગ્યામાં
૫. દર્દીના મોઢાના સૌંદર્ય માટે
૬. આર્થિક રીતે

### ઉપયોગ ક્યાં ન કરવો.

૧. જેને એકેલીક મટીરીયલ્સની એલર્જી હોય
૨. શારિરીક વિકલાંગ દર્દી તથા માનસિક દર્દી
૩. જે લોકોનું જડબાનું હાડકું ઘસાઈ ગયું હોય
૪. જેને મોટી જીભ હોય
૫. મોઢાની કાળજી જે ન રાખી શકે

### ફાયદો :

૧. બાજુના દાંતને પોતાની જગ્યા પરથી ખસતા રોકે
૨. બાજુના દાંતને ઘસવો ન પડે
૩. તેનો ઉપયોગ વધઘટ થયેલી જગ્યામાં થઈ શકે છે.
૪. ચોકઠાની બરાબર ઉંચાઈ રાખવામાં મદદરૂપ થાય

### ગેરફાયદા :

૧. જડબાના હાડકા ગળાય જાય
૨. મોઢાની અંદર રહેલી ચામડીને નુકશાનદાયક છે
૩. ચોકઠાના રહેલ ક્લેસ્ટ્રા બાજુનાં દાંતના રહેલ ઈનેમલ (દાંતની બહારનું આવરણ)ના તત્વને ઓછું કરે છે.
૪. મટીરીયલ્સની એલર્જી

## COLLEGE OF DENTAL SCIENCES & RESEARCH CENTRE

(DEPARTMENT OF PUBLIC HEALTH DENTISTRY) Guided by : Dr. Harshvardhan Chaudhary

• Valay A. patel • Vishva Y. Patel

• Vishva H. Patel • Shailee Patil

(Final Year B.D.S. - 2016-17)



# RECENT ADVANCEMENT IN DENTISTRY

## Recent Advancements in Dentistry

<h3>Digital Dental Mirror</h3>  <ul style="list-style-type: none"> <li>It has a loupe and a microscope to capture image and videos just like an intracoral camera.</li> <li>It offers operator to work directly using mirror or indirectly using high resolution image</li> </ul>	<h3>Laser</h3>    <p><b>Soft tissue application:</b></p> <ul style="list-style-type: none"> <li>Crown lengthening</li> <li>Removal of excess gingival growth</li> <li>gingivectomy and gingivoplasty</li> <li>Removal of soft tissue from 2<sup>nd</sup> molar area</li> </ul> <p><b>Hard tissue application:</b></p> <ul style="list-style-type: none"> <li>Isolate removal of caries and re-orientation of crystalline structure of enamel</li> </ul> <p><b>Application in dental materials:</b></p> <ul style="list-style-type: none"> <li>Polymerization of resin based materials</li> <li>Increase the bond strength of resin based materials to tooth surface</li> </ul>	<h3>Dental Microscopes</h3>   <ul style="list-style-type: none"> <li>Used to reveal fine details and structure that are invisible to the naked eye</li> <li>Provide accurate diagnosis and new approach to the treatment</li> </ul>	
<h3>Magnification Loupe</h3>  <p>Evidence the vision of the operator by magnifying the objects and increasing the depth of the vision</p>	<h3>Air Abrasion</h3>  <p>It is a powerful and focused narrow beam of 27 microns aluminum oxide particles</p> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>Abrades teeth without producing heat, vibration and noise</li> <li>No fracturing of the enamel or microfracture</li> <li>Can performed without anesthesia</li> <li>No tactile sensation</li> </ul>	<h3>Ultrasonic Handpiece</h3>  <ul style="list-style-type: none"> <li>It will activate an endodontic file resulting in three dimensional cutting</li> <li>Speed 1500-3000 cycle/second</li> <li>Quicker and easier root canal preparation</li> </ul>	<h3>Thermoplastic Gutta Percha</h3>  <ul style="list-style-type: none"> <li>The complexity of the root canal system (lateral canals and accessory canal).</li> <li>Adequate filling of this canal is desirable along with better adaptation of currently used gutta percha to the canal wall.</li> <li>Heating gutta percha is used as it will easily flows into a sanitification of the root canal.</li> </ul>
<h3>Nano Dentistry</h3>  <ul style="list-style-type: none"> <li>Fillers found in modern composites are one micrometre in size</li> <li>Nano scale are more than hundred times smaller than traditional fillers</li> <li>Nano fillers have the perfect size to penetrate the typical micro sized key hole etch pattern of enamel and smallest dentin channel.</li> </ul>	<h3>The WAND</h3>  <ul style="list-style-type: none"> <li>The wand uses a micro procedure and an electronically controlled motor to deliver the anesthetic solution at constant slow rate and motor controlled pressure.</li> <li>Delivery of the anesthetic solution is activated with the foot pedal.</li> </ul> <p><b>Advantages:</b></p> <ol style="list-style-type: none"> <li>When used for palatal, nasopalatine and superior alveolar nerve blocks causes less pain and better distribution and possible increase safety</li> <li>The technique of rotating of needle during insertion avoids deflection, resulting in precise injection</li> </ol>	<p style="text-align: center;">-: Prepared by :- Kashyap Mangulkhya, Vinay Nayakpara III - B.D.S. (2009-10)</p> <p style="text-align: center;">-: Guided by :- Dr. Rushabh Dagli Senior Lecturer</p> <p style="text-align: center;">Dr. Viral Patel Prof. In-Charge</p> <p style="text-align: center;">Department of Preventive and Community Dentistry CDSRC, Bopal, Ahmedabad.</p>	

# GREEN TEA IN DENTISTRY

## GREEN TEA IN DENTISTRY

**INTRODUCTION:** Widely consumed in china, japan, korea and morocco. it has various health benefits. It has cognitive function and positive impact on bone density, caries, periodontal diseases.

### CLASSIFICATION OF TEA

CONTENT	% DRY WEIGHT
PROTEIN	15-20
AMINO ACID	1-4
FIBER	26
CARBOHYDRATE	7
LIPID	7
PIGMENTS	2
MINERAL	5
PHENOLIC COMPOUND	30
<b>CATECHINS</b>	
EPIGALLOCATECHIN 3 GALLATE	59
EPIGALLOCATECHIN	19
EPICATECHIN 3 GALLATE	13.6
EPICATECHIN	6.4

### ACTION OF CATECHINS

**ANTI OXIDATIVE:** Scavange reactive o<sub>2</sub> and nitrogen species.  
Induces antioxidant enzymes.

**CAPACITY TO MODULATE PHYSICAL STRUCTURES OF CELL MEMBRANE**

**ANTIMICROBIAL ACTIVITY:** Catechin has anti microbial activity against S.aureus, H.pylori, E.coli.

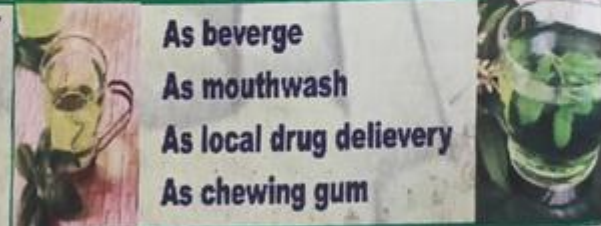
**ANTICARIOGENIC ACTIVITY:** Against S.mutans, Streptococcus sobrinus.

### COMPOSITION OF GREEN TEA

1. Non Fermented Green Tea
2. Semi Fermented Oolong Tea
3. Fermented Black and Red Tea

Department of Public Health Dentistry  
College of Dental Sciences and Research Centre, Ahmedabad

### MODES OF CONSUMPTION



### PROCESSING OF GREEN TEA



### EFFECT OF GREEN TEA ON PERIODONTIUM AND TEETH

1. Inhibiting effect on: P.gingivalis, P.melanogenicus, P.intermedia, Staph aureus, E.coli.
2. Effect on host defense-gingival cell and inflammatory response: Prevent gingival and periodontal inflammation.
3. Effect on bone and bone cell: Inhibit bone resorption by inducing apoptotic cell death of osteoclast and osteoclast like multinucleated giant cell.
4. Effect on collagenase activity: Inhibitory effect on collagenase enzyme.
5. Reduces plaque formation on tooth surfaces.

*Viral*  
Professor Incharge: Dr. Viral Patel, Guided by: Dr. Harshvardhan Chaudhary  
Prepared by: Shah Keval, Shah Palak, Thakkar Nirav [Final B.D.S. (2011-12)]



# RURAL ORAL HEALTH PROGRAMS

## Rural Oral Health Programs

India is predominantly rural, as over 72% population continue to live in rural areas.

More than 90% of dentists are available in urban settings and only 10% available to 72% of rural population. The dentist-population ratio in urban areas is 1:30,000 whereas that in rural areas is 1:3,00,000

Oral health is an integral component of general health.

### Most prevalent conditions

- Dental caries- in children
- Chronic periodontal disease- in adults
- Non-restored edentulous areas

### Reasons for poor oral health seeking in rural areas

- Poverty
- Biological, psychological, social and cultural problems
- High prevalence of tobacco chewing
- Lack of knowledge regarding importance of oral health and systemic effects
- Fear towards dentistry
- Non-availability of oral health care services
- Lack of dental man power
- Lack of required infrastructure
- Lack of political will
- Geographic isolation



DEPARTMENT OF PUBLIC HEALTH DENTISTRY  
CSBRC

PROFESSOR IN CHARGE:  
Dr. VIRAL PATEL

GUIDED BY -  
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PREPARED BY:  
SHAN VAIKHAM  
GOKUL UMADEV

FINAL B.O.S. 2017-18



## PROGRAMS



Educational Program



Mobile Dental Program



Pit & Fissure Sealant Program



Oral Hygiene Maintenance Program



Topical Fluoridation Program



Atraumatic Restorative Program



Prosthetic Outreach Program



Habit Cessation Program



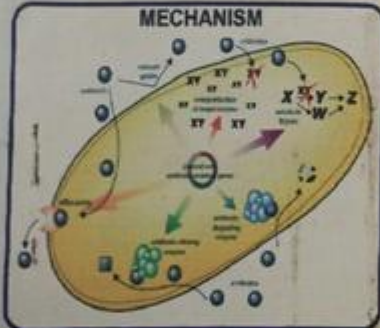
Special Need Community Program



# ANTI MICROBIAL RESISTANCE

## AMR - AntiMicrobial Resistance

AMR is resistance of microorganism to an antimicrobial medicine to which it was previously sensitive.



### CAUSES

- Inadequate national commitment to a comprehensive and coordinated response, ill-defined accountability and insufficient engagement of communities;
- Weak or absent surveillance and monitoring systems;
- Inadequate systems to ensure quality and an interrupted supply of medicines;
- Inappropriate and irrational use of medicines, including in animal husbandry;
- Poor infection prevention and control practices;
- Depleted arsenals of diagnostics, medicines and vaccines as well as insufficient research and development on new products.

### Some Examples of AMR in Dentistry

- Respectin resistance has been described in *Helicobacter* spp. *Haemophilus* and *Prevotella* species isolated from root canals.
- Lactobacillus* spp., *Gemella morbillorum* and an isolate of *Aeromonas* isolated associated with odontogenic abscesses are resistant to metronidazole.
- S. haemolyticus* streptococci show high resistance to cephalosporins.
- Resistance to tetracyclines and macrolides is widespread.
- Chlorhexidine resistance is not so much developed but application for more than one week can cause an increased resistance in *S. mutans* and *S. sobrinus*.

### Implications in Dentistry

- Management of active infectious disease
- Use prophylactic antibiotics when there is a clear indication to do so.
- Orofacial infections must be treated with local drainage whenever possible.
- The routine use of antibiotics before or after extractions or endodontics should be avoided.
- In the case of superficial infections, topical antiseptics (e.g. chlorhexidine) or antiseptics should be considered instead of systemic antimicrobial agents.

### AMR IN GENERAL

Resistance to earlier generation antimalarial medicines such as chloroquine and sulfadoxine-pyrimethamine is widespread in most malaria-endemic countries.

About 400 000 new cases of multidrug-resistant tuberculosis (MDR-TB) emerge annually, causing at least 150 000 deaths.

A high percentage of hospital-acquired infections are caused by highly resistant bacteria such as methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci.

### PREVENTION

- Rational use of antibiotics
- Topical dermatological preparations such as those containing tea tree oil and thyme oil may be effective in preventing transmission of CA-MRSA.
- Vaccines
- Cytokines instead of antibiotics to animal feed
- Phage therapy

### GLOBAL CONCERN

- AMR results in prolonged illness and higher risk of death.
- AMR hampers the control of infectious disease.
- AMR threatens a return to the control of preantibiotic era.
- AMR increases the cost of health care.
- AMR jeopardizes health care gain to society.
- AMR threatens health security, & damages trade and economics.

DEPARTMENT OF PUBLIC HEALTH DENTISTRY, CDSRC

Dr. Viral Patel  
Professor Incharge

: Guided by :  
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: Prepared By:  
Hirpara Juhi | Engineer Kinjal  
Agarwal Sejal

# BIOMEDICAL WASTE MANAGEMENT

<b>BIOMEDICAL WASTE MANAGEMENT</b>		
<b>Category</b>	<b>Waste Category</b>	<b>Treatment</b>
<b>Category 1</b>	<b>Human anatomical waste</b> (Human tissues, organs, body parts)	Incineration/ Deep burial
<b>Category 2</b>	<b>Animal Waste</b> (Animal tissues, organs, body parts carcasses, bleeding parts, fluids, blood and experimental animals used in research, waste generated by veterinary hospitals colleges, discharge from hospital, animal house)	Incineration/ Deep burial
<b>Category 3</b>	<b>Microbiology and biotechnology waste</b> (Waste from laboratory cultures, stocks or specimens of micro-organisms, live or attenuated vaccines, human and animal cell culture used in research and infectious agents from research and industrial laboratories, waste from production of biologicals, toxins, dishes and devices and for transfer of cultures)	Local autoclaving/ Microwaving/ Incineration
<b>Category 4</b>	<b>Waste sharps</b> (Needles, syringes, scalpels, blades, glass etc. that may cause puncture and cuts. This includes both used and unused sharps)	Disinfection (chemical treatment/ autoclaving/ microwaving and mutilation shredding)
<b>Category 5</b>	<b>Discarded medicine and cytotoxic drugs</b> (Wastes comprising of out dated, contaminated and discarded medicines)	Incineration, destruction and drugs disposal in secured landfills
<b>Category 6</b>	<b>Solid waste</b> (Items contaminated with blood and fluids including cotton, dressings, soiled plaster casts, linen, beddings, other material contaminated with blood)	Incineration autoclaving/ microwaving
<b>Category 7</b>	<b>Solid waste</b> (Waste generated from disposable items other than the waste sharps such as tubing, catheters, intravenous sets etc.)	Disinfection by chemical treatment, autoclaving/ microwaving and mutilation/ shredding
<b>Category 8</b>	<b>Liquid waste</b> (Waste generated from laboratory and washing, cleaning, housekeeping and disinfecting activities)	Disinfection by chemical treatment and discharge into drains
<b>Category 9</b>	<b>Incineration ash</b> (Ash from incineration of any bio-medical waste)	Disposal in municipal landfill
<b>Category 10</b>	<b>Chemicals used in production of biological, chemicals used in disinfection, as insecticides, etc.</b>	Chemical treatment and discharge into drains for liquids and secured landfill for solids

DESIGNED BY:- DR. HARSHVARDNAN CAUDHARY  
 PREPARED BY:- KRISHNA PATEL, KRUSHI PATEL, KRUTARTH PATEL, NIDHI PATEL, POOJA PATEL  
 (YEAR:- 14-15)  
 COLLEGE OF DENTAL SCIENCE AND RESEARCH CENTRE







# QUACKERY-QUACKS IN DENTISTRY

## QUACKERY-QUACKS IN DENTISTRY

**DENTAL QUACK:** An untrained person who practices dentistry fraudulently.

**QUACKERY:** "A pretender to medical skill, a charlatan and one who talks pretentiously without sound knowledge of the subject discussed."

**REASONS:** High cost of dental treatment, illiteracy, lack of awareness, poor accessibility to dental clinics, insufficient number of qualified dental surgeons.

### TREATMENTS DONE BY QUACKS



Removable partial denture fixed with acrylic resin



Class II acrylic restoration done in first molar



Removable partial denture fixed with acrylic resin & wire



Quack trimming a tooth on a rusty hand file



Denture with a suction disc

### COMPLICATIONS



Quack inserting denture with bare hands causes infection



Nonsterilized instrument kit



Excessive bleeding after extraction



Swelling of cheek & infection after extraction



Scarring of tissue in suction disc region

### SOLUTIONS:

- Mobilization of qualified doctors to the rural areas.
- Constant surveillance.
- Improve infrastructure.
- Make strict anti quackery laws.
- Increase public awareness.

### DEPARTMENT OF PUBLIC HEALTH DENTISTRY

GUIDED BY: DR. HARSHVARDHAN CHAUDHARY

MADE BY: SHARANYA CHANDRASHEKHAR, SIDDHI SHAH,  
RESHMA SAVAT, MAITRI SHAH, SRUSHTI SHAH, MAHAMMED SHAIKH

# TOOTH NUMBERING SYSTEM

## TOOTH NUMBERING SYSTEM

### FDI SYSTEM



- ◆ This is most widely used internationally. It is approved by W.H.O.
- ◆ International Association for Dental Research (IADR) has also accepted it.
- ADVANTAGES:**
- ◆ Used for multinational interaction.
- ◆ Well known to dentists all over the world.
- ◆ E.g. Permanent Right Maxillary First Molar : - 16

### UNIVERSAL SYSTEM



- ◆ This is most widely used in U.S. and approved by A.D.A.
- ADVANTAGES:**
- ◆ Easy to use, understand.
- ◆ No quadrant or side or in type of teeth confusions.
- ◆ It is acceptable to all computer system.
- ◆ E.g. Permanent Right Maxillary First Molar : - 14

### PALMER NOTATION



- ◆ The oldest system found by Zsigmondy and Palmer in 1861
- ◆ In 1947 it was recommended by A.D.A. as a choice of system.
- ADVANTAGES:**
- ◆ Easier to use.
- DISADVANTAGES:**
- ◆ Difficult to understand because of symbolic appearance
- ◆ E.g. Permanent Right Maxillary First Molar : - 16



# CONSEQUENCES OF HIGH AND LOW VERTICAL DIMENSION

## CONSEQUENCES OF HIGH AND LOW VERTICAL DIMENSIONS

### HIGH VERTICAL DIMENSION

- Increased trauma to denture bearing area.



- Check biting.



- Difficulty in swallowing and speech.
- Pain and clicking in the Temporomandibular joint.



- Discomfort and annoyance to the patient.
- Increased volume or cubical space of oral cavity, with increased lower facial height and increased muscle tone.



- Ridge resorption is more.



- Clicking of teeth.
- Rapid wear of acrylic teeth



### LOW VERTICAL DIMENSION

- Comparatively decreased trauma to denture bearing area.



- Angular cheilitis.



- Difficulty in swallowing.
- Pain, clicking, discomfort of Temporomandibular joint accompanied by neuralgia.



- Obstruction of the Eustachian tube due to elevation of soft palate due to elevation of tongue/mandible.
- Decreased volume or cubical space of oral cavity, with decreased lower facial height and loss of muscle tone.



- Loss of lip fullness.

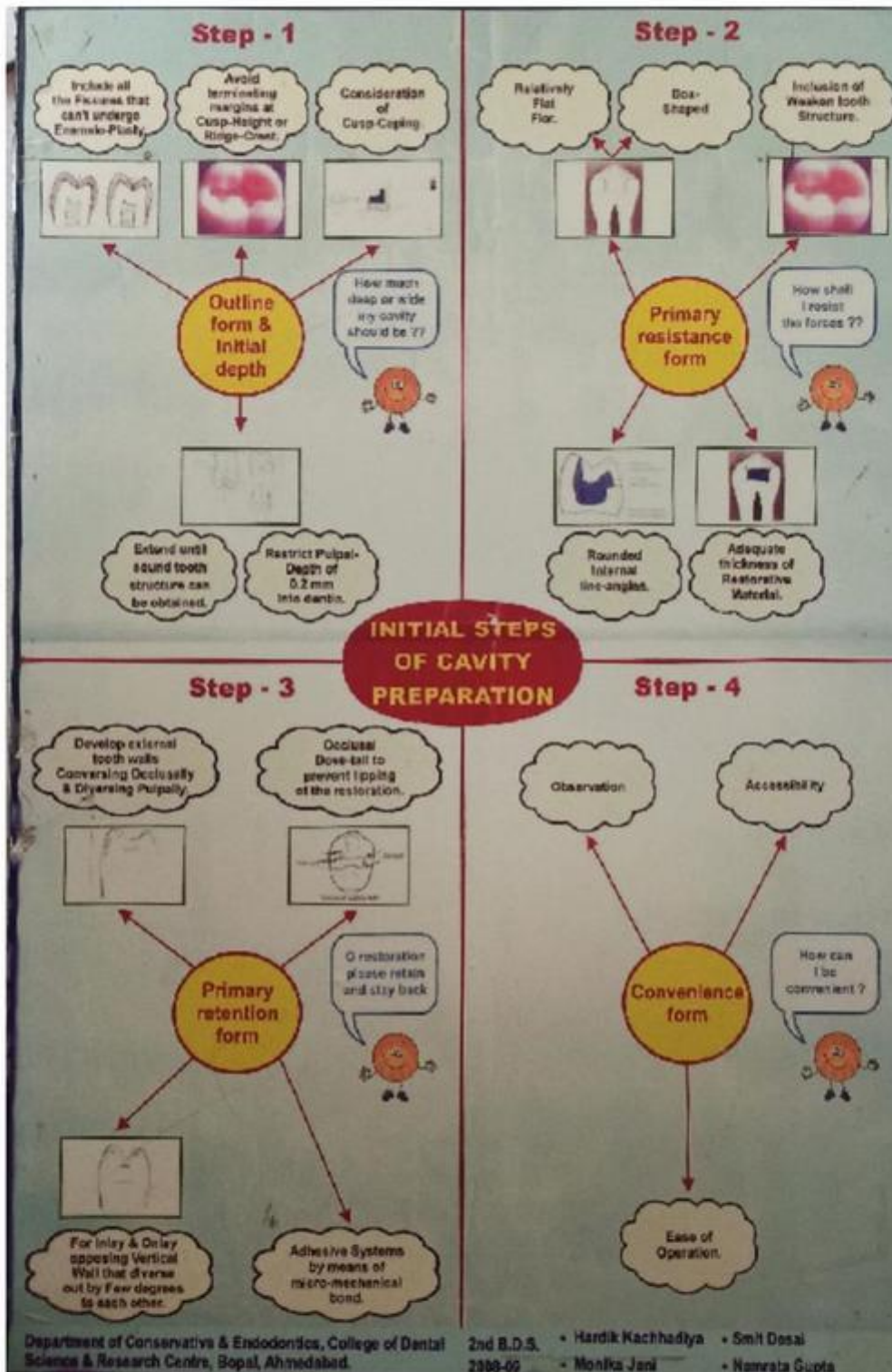


- Corners of mouth are turned down.
- Thinning of the vermilion borders of the lip.





# INITIAL STEPS OF CAVITY PREPARATION



## ULCERATIVE LESIONS OF ORAL CAVITY

### ULCERATIVE LESIONS OF ORAL CAVITY



RECURRENT  
APTHOUS ULCER



MEASLES



TUBERCULOUS  
ULCER



SYPHYLITIC  
ULCER



ALLERGIC  
STOMATITIS



HERPETIC GINGIVO  
STOMATITIS



# DENTAL PRACTICE MARKETING

## DENTAL PRACTICE MARKETING

WHY ???	Marketing Strategies	Key Elements		
<ul style="list-style-type: none"> <li>• Advance marketing techniques gives patients greater range of choice &amp; control over required dental care.</li> <li>• Marketing is the first step in patient's health education to seek dental care.</li> <li>• Dentist today have excellent knowledge but professional knowledge need and additional fertilizer - the marketing skill, in the form of satisfied patient or using marketing strategies.</li> <li>• To market dental practice with high professional &amp; ethical standards to benefit patients as well as dentist.</li> </ul>				
<p><b>Web Marketing</b></p> <p><b>Reward Referrals</b></p>	<p><b>Direct Mail</b></p> <p><b>Send Greeting Cards</b></p>	<p><b>Local Newspapers</b></p> <p><b>Monthly Newsletters</b></p>	<p><b>Informative and Promotional Pamphlets</b></p> <p><b>Posters &amp; Signs</b></p>	<p><b>Create a Pleasant Atmosphere</b></p> <p><b>Dental Logo</b></p>
<p><b>Practice Vision Process</b></p>	<p><b>Value Analysis Wheel</b></p>	<p><b>Marketing Mistakes</b></p> <ul style="list-style-type: none"> <li>• Being generic</li> <li>• Take patient for granted</li> <li>• Stop &amp; go marketing</li> <li>• Not using referral programs</li> <li>• Not leveraging the internet</li> <li>• Not asking for patient feedback</li> </ul>		
<p>Department of Public Health Dentistry College of Dental Science &amp; Research Centre, Manipal</p>			<p>Professor Incharge: Dr. Viral Patel Guided by: Dr. Harshvardhan Chaudhary Prepared by: Chintan Parmar, Devdutt Dahiwala</p>	



# FINAL STAGES OF TOOTH PREPARATIONS

## FINAL STAGES OF TOOTH PREPARATION

### Stage 5 :

#### REMOVAL OF INFECTED DENTIN OR OLD RESTORATIVE MATERIAL OR BOTH, IF INDICATED

Removal of any remaining enamel pit or fissure, infected dentin, or old restorative material is the elimination of any affected carious tooth structure or faulty restorative material left in the tooth after initial tooth preparation.



← REMOVE INFECTED

→ REMOVE RESTORATIVE



### Stage 6 :

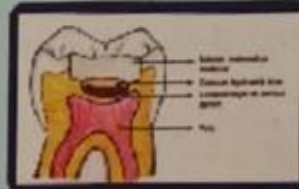
#### PULP PROTECTION IF INDICATED

It is a step in adapting the preparation for receiving the final restorative material.

Using traditional liners or bases, protects the pulp or aid pulpal recovery or both.

Pulpal irritants :

- 1) Ingredients of various restorative materials.
- 2) thermal changes
- 3) forces transmitted through materials to dentin
- 4) galvanic shock and
- 5) ingress of noxious products and bacteria through microleakage.



### Stage 7 :

#### SECONDARY RESISTANCE AND RETENTION FORM

The secondary retention and resistance forms are of two types :-

- 1) Mechanical preparation features
  - i) Retention locks, grooves and covers.
  - ii) Groove extensions.
  - iii) Skirts.
  - iv) Beveled enamel margins.
  - v) Pins, slots, steps and amalgam pins.
- 2) Treatment of the preparation walls with etching, priming and adhesive materials.
  - i) Enamel wall etching.
  - ii) Dentin treatment.



### Stage 8 :

#### PROCEDURE FOR FINISHING OF EXTERNAL WALLS

Objectives :

- 1) Create best marginal seal possible between restorative material and tooth.
- 2) Afford smooth marginal junctions.
- 3) Provide maximal strength of the tooth and the restorative material at and near the margin.

Factors :

- 1) Direction of enamel rods.
- 2) The support of enamel rods at the D<sub>1</sub>J.
- 3) Type of restorative material.
- 4) Location of the margin.
- 5) degree of roughness or smoothness desired.

Features :

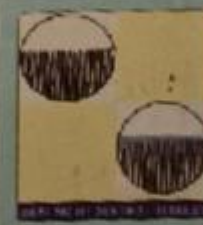
- 1) Design of crossface angle
- 2) degree of smoothness/roughness



### Stage 9 :

#### PINAL PROCEDURE-CLEANING, INSPECTING AND SEALING

Eliminating bacterial penetration is so important that the use of dentin bonding agents or sealers is likely to become universal (under all restoration).



# COMPOSITE

## COMPOSITE



તુટેલા દાંતની સારવાર માટે  
For the restoration of fractured teeth



દાંતના રંગનો સિમેન્ટ પુરવા  
To fill carious teeth



પીળા થયેલા દાંતને સફેદ કરવા માટે  
To treat discoloration of teeth and for esthetic purpose



દાંતના ઊંડા ખાડામાં સડો થતો અટકાવવા  
For prevention of caries

Prepared by: Devanshi Shah, Jainy Shah, Mauli Shah, Misha Shah  
Guided by: Dr. Harshvardhan Chaudhary

DEPARTMENT OF PUBLIC HEALTH DENTISTRY  
COLLEGE OF DENTAL SCIENCES AND RESEARCH CENTRE



ચાંદી કરતા કમ્પોઝીટ દેખાવમાં દાંતનાં રંગ જેવું ભેવાથી વધારે સારું દેખાવ છે  
Composites are esthetically better than amalgam



દાંતની વચ્ચેની જગ્યા પુરવા  
To cover space between two teeth



# DENTAL INSURANCE

## DENTAL INSURANCE

**INSURANCE** is defined as the equitable transfer of the risk of a loss, from one entity to another, in exchange for payment.

**DENTAL INSURANCE** is a type of health insurance designed to pay a portion of the costs associated with dental care.

### PRINCIPLE

- To be insurable, a risk must
- Be precisely definable.
  - Be of sufficient magnitude that if it occurs, it constitutes a major loss.
  - Be infrequent.
  - Be of an unwanted nature, such as destruction of a home through fire.
  - Be beyond the control of the individual.
  - Not constitute a "moral hazard" which means that the presence of insurance itself should not lead to additional claims.

### INDEMNITY

- The insurance company assumes risk. It allow the patient to seek care from any general dentist or specialist of his or her choice.
- There is no contractual relation between dentist and patient.
- e.g.
- Class I treatment:** Diagnostic & Preventive services
- Patient contribution is not require.
- Class II treatment:** Restorative, Endodontic, Periodontic & Extraction
- Patient contribution is 20%.
- Class III treatment:** Fixed & Removable Prosthesis & major restorative procedure such as crown & bridge
- Patient contribution is 50%.

### CLASSIFICATIONS

(A) Insurance type according to involved person

1. Individual



2. Family



3. Group



(B) According to who is assuming the risk for loss

1. Indemnity

2. Administrative services or self

3. Capitation or DHMO (Dental Health Maintenance Organization)

### ADMINISTRATIVE SERVICES OR SELF INSURED PLAN

The employer assumes the risk & use an administrative group to provide supervision

### ERRORS

Two types:

1. Dentist's Errors
  2. Third Party(Company's) Errors
1. **Dentist's Errors:**
- Incorrect recording of birth date of patient
  - Providing no information about other potential insurance coverage
  - Incorrect entry of social security number
2. **Third Party Errors:**
- Loss submitted documentation
  - Request for unnecessary documentation such as requesting radiograph for soft tissue graft
  - Failure to check patient history that

### ADVANTAGES

1. To pay for costly care.
2. To maintain a healthy mouth.
3. To protect their children.
4. Culturally acceptable
5. This system is flexible, fee can be changed in accord with market condition and the dentist is also able to practice what is called "price discrimination".
6. It is administratively simple, since dentist rarely keep a written list of fee for procedure.
7. It is the only system under which some form of dental care likely will ever be provided.

### DISADVANTAGES

Despite the flexibility & price discrimination, there are still some potential patients who can not afford dental care. These persons would thus be unable to receive dental care if private fee-for-service were the only financing mechanism for dental care.

### CAPITATION OR DHMO

- Dentist assumes the risk.
  - The contracting dentist is paid a set fee each month for each enrolled patient, regardless of whether the patient has received any treatment.
  - Patient contribution is not required, except for more expensive treatment such as periodontal surgery or crown & bridge.
  - If dentist has contracted with the plan, the patient has no financial responsibility but, if the dentist has not contracted with plan, the patient is responsible for the difference between the plan payment & the dentist's fee.
- Dentist fear of**
1. High utilization
  2. Demand of expensive treatment

### SOME OF THE INSURANCE COMPANIES

#### PROVIDING DENTAL INSURANCE IN INDIA

1. Aelena Health Care
2. Medicaid
3. MetLife
4. Star Health Insurance
5. Pioneer Health Insurance
6. Delta

**DEPARTMENT OF  
PUBLIC HEALTH DENTISTRY**  
College of Dental Science and Research Center

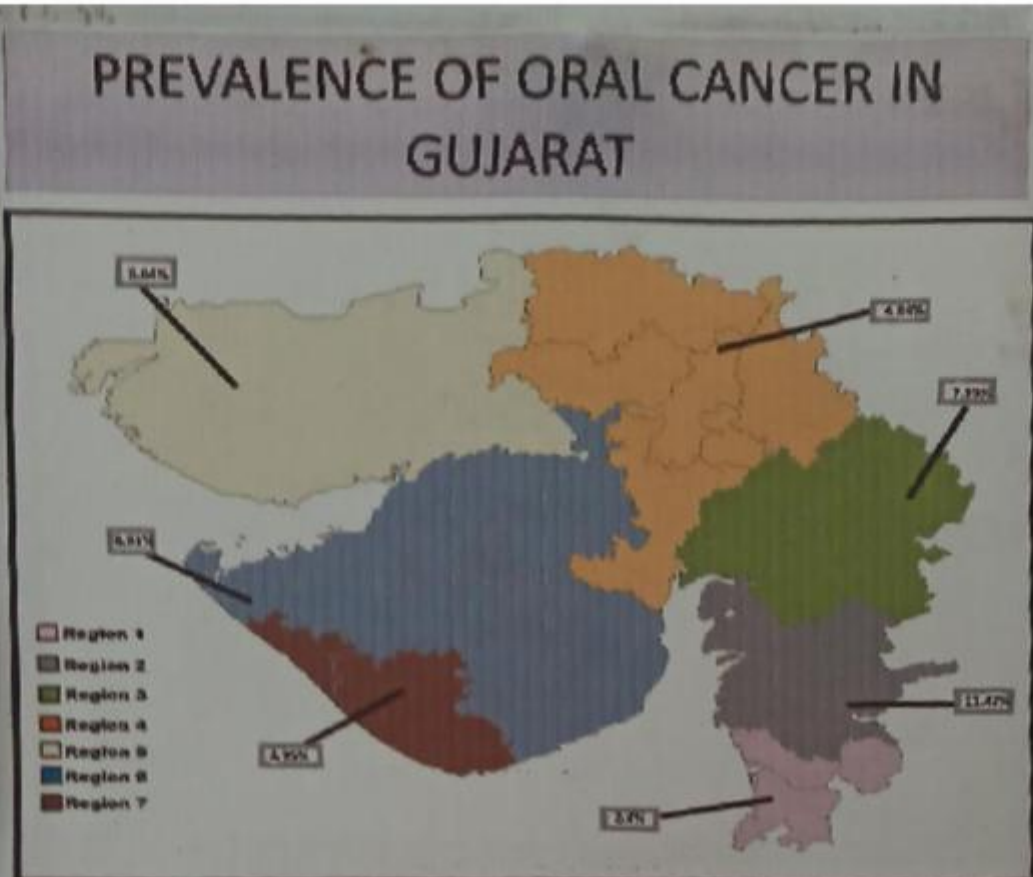
PROFESSOR INCHARGE  
Dr. VIRAL PATEL

GUIDED BY:-  
Dr. HARSHVARDHAN CHAUDHARY

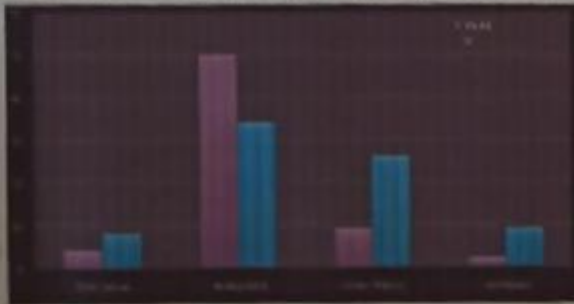
PREPARED BY:  
AMIT PRAJAPATI  
PRATIK PATEL  
HARPAL PARNAR

FINAL B.D.S 2011 - 2012

# PREVALENCE OF ORAL CANCER IN GUJARAT



Dental Oral health survey & fluoride mapping- 2002-03, DCI-200



Oral cancer

Leuko-plakia

M:F=2:1

M>F

Smoking

Tobacco

Lichen planus

Candidi-asis

F>M

F>M

Auto-immune

C.Albicans

Department of public health Dentistry, CDSRC

Department Prof incharge

Guided by :Dr

Dr VIRAL PATEL: *V.P.*

HARSHVARDHAN CHAUDHARY

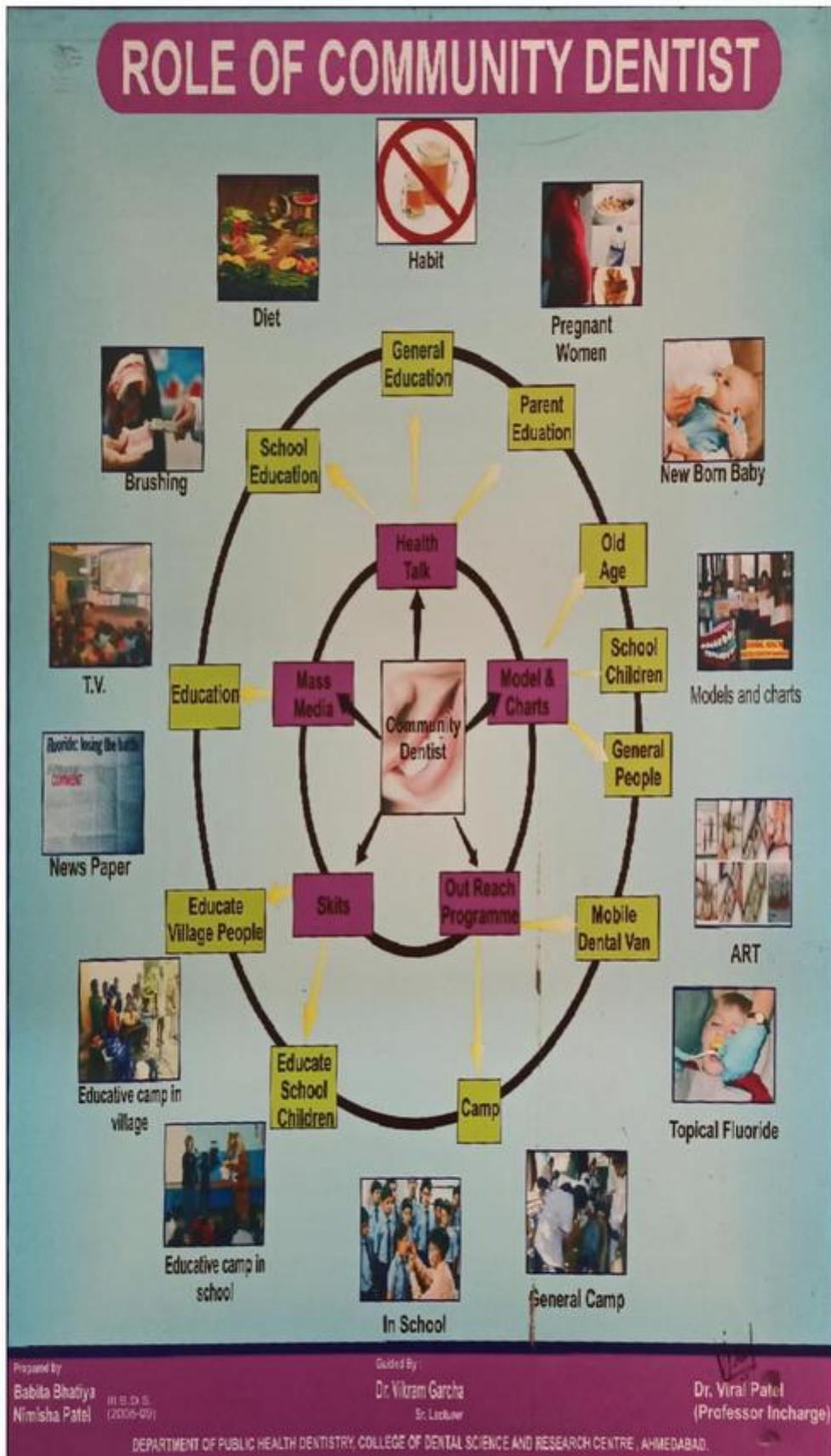
Prepared by: Harvi Desai

Jay Desai

Shruti Devani



# ROLE OF COMMUNITY DENTIST







# BABY BOTTLE TOOTH DECAY

## BABY BOTTLE TOOTH DECAY દુધની બોટલથી થતો સડો

Baby Bottle tooth decay is a type of tooth decay occurring in prolonged use of bottle containing milk or any other sweetener. દુધની બોટલથી થતો સડો એ બાળકોમાં લાંબા સમય માટે દુધ અથવા સ્વચ્છ ગળ્યા ભરેલી બોટલનો ઉપયોગ કરવાથી થાય છે.

### Causes / કારણો



Improper feeding at night with bottle. રાત્રે બોટલથી દુધ પીવાયવી.



Prolonged use of bottles containing milk. દુધની બોટલનો લાંબો સમય ઉપયોગ કરવાથી.



Use of pacifiers with jam & jelly. જામ અથવા જેલી લગાડેલી ટોટી વાપરવાથી.



Prolonged breast feeding at night. રાત્રે લાંબા સમયે સુધી સ્તનપાન કરાવવાથી.



### Clinical Features / લક્ષણો:



Mostly seen in children between 18 months & 3 years of age. સામાન્ય રીતે તે અઠાર મહિનાથી ત્રણ વર્ષના બાળકોમાં જોવા મળે છે.



Always starts from upper front teeth. સડાની શરૂઆત ઉપરના આગળના ડાંતથી થાય છે.



Yellowish brown discoloration noted along the gum line. પેટાની લાઈન પર પીળા - કથઈઈ રંગના ડાઘા જોવા મળે છે.

Avoid milk containing bottle at bed time. સુતી વખતે બોટલનો ઉપયોગ ટાળો.



Pain on eating cold, sweet or hard food. બાળકને ઠંડુ, ગળ્યુ અથવા સખત ખોરાક ખાવાથી દુ:ખાયો થાય છે.



Child prefers eating soft diet. બાળક ટીલો અને પોચો ખોરાક ખાવાનું પસંદ કરે છે.



Fracture of one or more decayed teeth. એક અથવા વધારે સડેલા ડાંત તૂટીને ખરી જાય છે.

Avoid feeding artificial juices with bottle. કૃત્રિમ/ઝાણવટી રસને બોટલ દ્વારા પીવાડવાનું ટાળો.



Regular cleaning of teeth with cloth after feeding. દુધ પીવાડ્યા પછી નિયમિતરૂપે ચોખ્ખા કાપડ વડે ડાંત સાફ કરો.



Feeding with cup or spoon should be encouraged. બાળકને ચમચી અથવા કપ વડે દુધ પીવાડવાયો.



### Prevention નિવારણ



Visit a dentist soon after eruption of first tooth. પહેલો ડાંત આવવાની સાથે જ ડાંતના ડૉ. ની મુલાકાત લો.

Encourage your baby to stay in upright position during bottle feeding. તમારા બાળકને બેઠા-બેઠા દુધ પીવાડવાની આદત પાડો.



Oral hygiene measures should be implemented with the time of eruption of first tooth. પહેલો ડાંત આવવાની સાથે મોઢાનું સ્વાચ્છ જાળવવાનું શરૂ કરો.



Don't use pacifier jam or jelly. જામ અથવા જેલી લગાડેલી ટોટીનો ઉપયોગ ટાળો.

### Treatment / સારવાર



**EARLY STAGE**  
Learning about your child's oral health to help him to maintain oral hygiene, and taking care of the diet. તમારા બાળકના મોઢાના સ્વાચ્છ વિશે જાણ અને જાળવવામાં મદદ કરો.



**LATER STAGE**  
Small cavities are restored with tooth coloured material. ડાંતનો સડેલો ભાગ સાફ કરીને ડાંત જેવા જ દેખાતા મટીરીયલથી પુરાણ કરવામાં આવે છે. Cleaning the root canals and restoring with suitable materials. નસની સારવાર કરી એમા યોગ્ય મટીરીયલથી પુરાણ કરવામાં આવે છે.

Prepared by :  
Davra Tushar

: Guided by :  
Dr. Vikram Garcha

Dr. Viral Patel



# TREATMENT OF MALOCCULSION

## Treatment of Malocclusion

વાંકા ચૂકા દાંતની સારવાર

Stainless Steel  
સ્ટેનલેસ સ્ટીલ



Ceramic  
સિરામીક



Lingual  
દાંતની અંદરની બાજુ



Invisalign  
ઇન્વિઝિલિગન



GUIDED BY : DR.HARSHVARDHAN CHAUDHARY

DEPT. : PUBLIC HEALTH DENTISTRY

COLLEGE OF DENTAL SCIENCE AND RESEARCH CENTRE

MADE BY : BHOOMIKA SIDDHAPURA, SHREYANSHI SONI, NIDHI THAKKAR, JANAK THANATH (2016-2017)



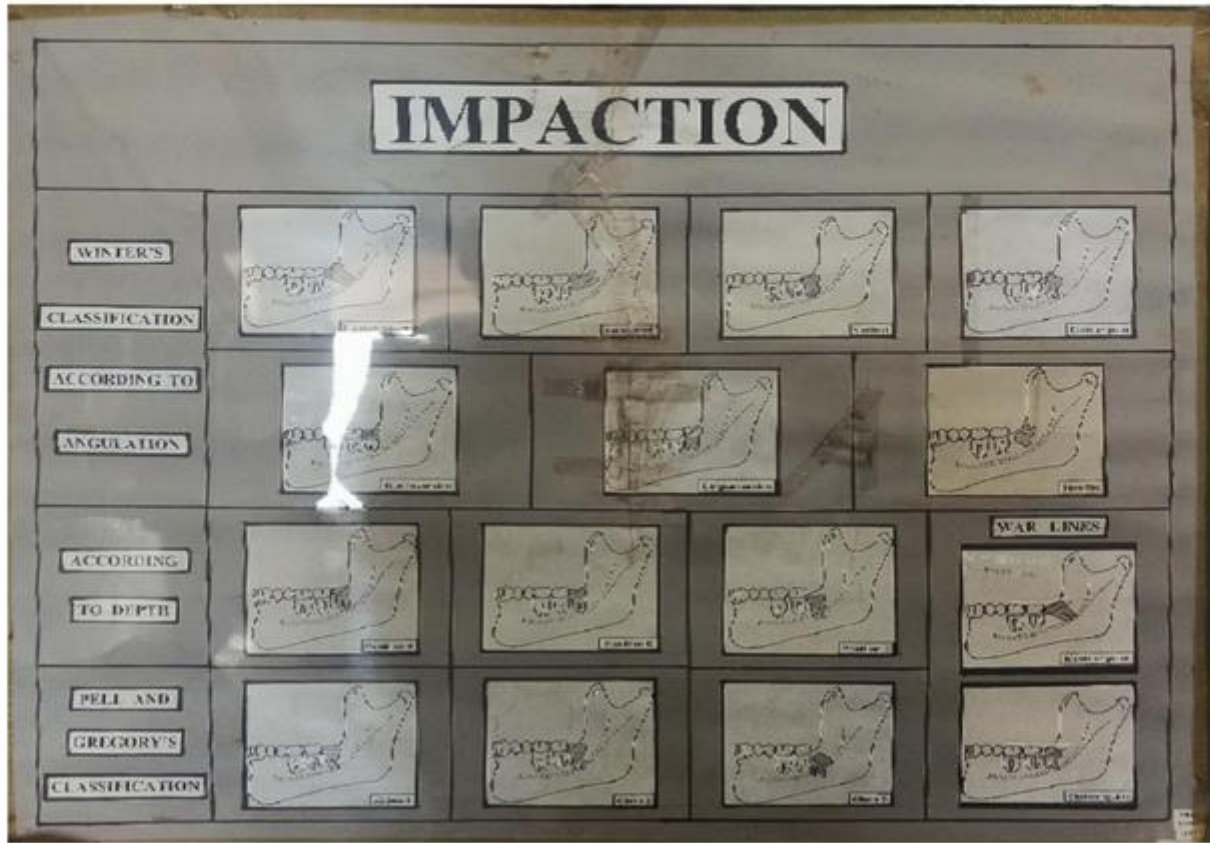
# **PHD POSTERS 2018-2019**

# PATIENTS INSTRUCTION AFTER PERIODONTAL SURGERY

PATIENT'S INSTRUCTIONS AFTER PERIODONTAL SURGERY		પેટાની સર્જરી બાદની સૂચનાઓ
1. After periodontal surgery, for first 24 hours do not spit or brush your teeth.		૧. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક મુંઝવું નહીં તમા કોમળ કરવા નહીં.
2. After periodontal surgery, apply ice packs intermittently for first 48 hrs at the surgical site.		૨. પેટાની સર્જરી બાદ, પહેલા ૪૮ કલાક સર્જરી કરેલી જગ્યાએ બાફરથી બાફરની ખાલીય કરવી.
3. Do not worry if pain persists during first 24 hours of surgery.		૩. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક દુખાવો રહે તે ધિક્કા કરવી નહીં.
4. Do not worry if there is mild swelling, it will gradually subside.		૪. પેટાની સર્જરી બાદ, સોજો ઘેરેઘેરે સોજો થઈ જશે.
5. If pain, swelling or oozing (minor bleeding) persists even after 24 hours of surgery consult your doctor immediately.		૫. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક બાદ જો સોજો, દુખાવો અથવા ઘોલી આવે તો કોન્ટાક્ટ લેવાવધુ.
6. After periodontal surgery, for first 24 hours eat and drink soft and cold food such as ice cream, milk shake, juice, rice, etc.		૬. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક મૃદુ ભજન, ડોડો, ખાચી ખોરાકનું લેવો દા. ત. આઈસ્ક્રીમ, જ્યુસ, મિલકચોડ, ખીચડી, દાળાનાથ ભંડુ વગેરે.
7. Take medications regularly as per doctor's advice.		૭. કોન્ટાક્ટ સમય મુજબ દવાઓ નિયમીત રીતે લેવી.
8. During and after treatment avoid consumption of Cigarette, bidi, pan masala and alcohol, it's a good chance to break your habits!		૮. સમયસર સમગ્ર ટીચ તે દરમિયાન તે બાદમાં યુક્તિપૂર્ણ (બીડી - પાનખેડા), તમાકુ જે દારૂનું સેવન કરવું નહીં.
9. Come for suture removal as per doctor's advice.		૯. કોન્ટાક્ટની સમય મુજબ ટીચ તોડાવવા આવવું.
10. Do not brush at the surgical site where periodontal dressing is given but in rest of places brush properly and maintain oral hygiene.		૧૦. પેટાની સર્જરી બાદ ડ્રેસિંગ આપેલી જગ્યાએ બ્રશ કરવું નહીં અને બાકીની જગ્યાએ યથાવિધ બ્રશ કરીને મોંનું સાફ રાખવું.

\* Meghna Arora - Rishi Arora - Shreshth Desai - Dhruv Shah  
5th Year BDS, DEPARTMENT OF PERIODONTOLOGY

# IMPACTION





# CLASSIFICATION OF TOOTH PREPARATION

## CLASSIFICATION OF TOOTH PREPARATION.

**Definition:** Tooth preparation is the mechanical alteration of a defective, injured or diseased tooth to receive a restorative material that re-establishes a healthy state for the tooth including esthetic corrections where indicated and normal form and function.

**Introduction:** Classification of tooth preparation according to anatomic areas involved and by the associated type of treatment was presented by Greene Vardiman Black.

And is designed as class-1, class-2, class-3, class-4, class-5, class-6. The altered preparation designs are referred to as

- (1) Beveled conventional preparations
- (2) Modified preparations

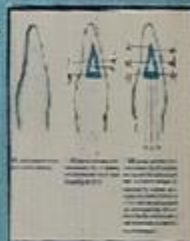
**CLASS-1 Restorations-**  
All pit and fissure restorations are class 1 and they are assigned to three groups:  
(1) Restoration on occlusal two thirds of posterior teeth.  
(2) Restoration on occlusal two thirds of the facial and lingual surfaces of molars.  
(3) Restoration on lingual surface of maxillary incisors.



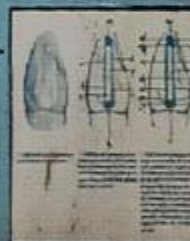
**CLASS-2 Restorations-**  
These are restorations on the proximal surfaces of posterior teeth



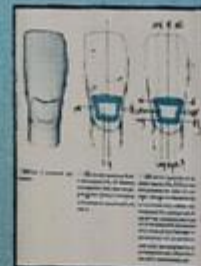
**CLASS-3 Restorations-**  
Restorations on the proximal surfaces of anterior teeth that do not involve the incisal angle.



**CLASS-4 Restorations-**  
Restorations on the proximal surfaces of anterior teeth that do involve incisal angle.



**CLASS-5 Restorations-**  
Restorations on the gingival third of the facial or lingual surfaces of all teeth.



**CLASS-6 Restorations-**  
Restorations on the incisal edge of anterior teeth or the occlusal cusp heights of posterior teeth

PREPARED BY:

POOJA KESSARIA    K JYOTA KARNI  
KAVYAM TILAKYA    ZEEL MEHTA

2nd year (2010-2011)

# PROGRESSION OF DENTAL CARIES

The diagram illustrates the progression of dental caries through four stages, each with a cross-sectional illustration of a tooth and a corresponding text box. The stages are: 1. White Spots, 2. Enamel Caries, 3. Dentin Spots, and 4. Pulp be included. Arrows indicate the progression from left to right and then down to the final stage.

**White Spots**

Chalky white opaque lesion on enamel surface without loss of surface continuity

દાંતની સૌથી ઊપરની સપાટી પર ચુના જેવા સફેદ રંગના ડાઘા જેવો સડો થાય છે. તેમાં દાંતની સપાટી પર કોઈ પણ જાતની તિરાડ પડતી નથી.

**Enamel Caries**

Slowly progressing yellowish brown discoloration restricted only to enamel surface.causes no pain.

ધીમે ધીમે આ સડો વધીને દાંતની સપાટીના ઊપરના ભાગમાં સડો કરે છે. જે પીળાશ પડતા ભૂખરા રંગનો હોય છે. જેનાથી દાંતને કોઈ પીડા થતી નથી

**Progression of dental caries**

**Pulp be included**

Affects the nerves in the pulp, more sensitive to hot and cold too painful to stand, accompanied by swelling and increased pain at night.

દાંતના મૂળ સુધી પહોંચેલા આ સડાથી દાંતને અસહ્ય પીડા થાય છે. આના લીધે સોજો પણ આવી શકે છે અને રાતે પીડાની તીવ્રતા વધે છે.

**Dentin Spots**

Deepest layer of enamel decays and progresses to dentin, sensitive to hot or cold food. No pain when you don't eat

જો આની સાટવાટ ન કરવામાં આવે તો આની અસર દાંતના નીચેના પડ સુધી થાય છે. દાંતને ઠંડુ કે ગરમ ખાવાથી દુઃખાવો થાય છે. જો ત ખાશ તો દુઃખાવો થતો નથી.

**Prepared by:** Drishti Gaglani , Halak Gandhi, Bansari Gevariya, Aastha Hame  
**Guided by:** Dr.Harshvardhan Chaudhary  
**College of Dental Sciences and Research Center Dept. Of Public Health Dentistry**



# BIOTERRORISM

## BIOTERRORISM

**Defination :-** The Deliberate, private use of biological agents to harm and frighten the people of a state or society, is related to the military use of biological, chemical and nuclear weapons is known as bioterrorism.

### classification:-



#### CATEGORY A BIOLOGICAL AGENTS

AGENT	DISEASE CAUSED
BACILLUS ANTHRACIS	ANTHRAX
CLOSTRIDIUM BOTULINUM	BOTULISM
YERSINIA PESTIS	PLAGUE
VARIOLA MAJOR	SMALL POX
FRANCISELLA TULARENENSIS	TULAREMIA
VIRUSES	VIRAL HEMORRHAGIC FEVER

#### CATEGORY B BIOLOGICAL AGENTS

AGENT	DISEASE CAUSED
BRUCELLA	BRUCELLOSIS
SALMONELLA	FOOD SAFETY THREATS
CHLYAMIDIA PSITTACI	PSITTACOSIS
COXIELLA BRUNETTI	Q FEVER
RICKETTSIA	TYPHUS FEVER
VIBRIO CHOLERA	WATER THREATS



Category A Biological agents (Microscopic view)

Category B Biological agents (Microscopic view)

### ROLE OF DENTIST IN A BIOTERRORIST ATTACK

AS HOSPITALS BECOME FILLED, ALTERNATE SITES FOR THE PROVISION OF HEALTH CARE MAY BE REQUIRED, AND DENTAL OFFICES COULD FILL THAT NEED.



### PREPARATION BEFORE AN ATTACK



EDUCATION OF DENTAL PROFESSIONAL REGARDING MEDICAL AND ORAL MANIFESTATIONS OF BIOTERRORIST ATTACK IS IMPORTANT.

DENTAL OFFICES SHOULD BE EQUIPPED WITH POTENTIALLY USEFUL EQUIPMENT



### ASSISTANCE DURING AN ATTACK



• PACKAGING OF MEDICINES IN INDIVIDUAL DOGS

• DIAGNOSIS - PROVIDE INDIVIDUAL PT. DIAGNOSIS BY OBSERVING THE PHYSICAL AND BEHAVIORAL SIGNS OF PEOPLE, SALIVARY SWABS MAY BE COLLECTED BY DENTISTS FOR LABORATORY TESTING



• IMMUNIZATION - DENTISTS MAY REGISTER IN RAPID IMMUNIZATION OR VACCINATION PROGRAM OF PUBLIC TO PREVENT THE SPREAD OF THE DISEASE

Prof.in Charge :-  
Dr. Viral Patel

Guided By :-  
Dr. Harshvardhan Chaudhary

Made By:- Ruchir Patel  
Pinakin Patel  
Ghanshyam Patel



# DISADVANTAGE OF TOOTH LOSS

DISADVANTAGES OF TOOTH LOSS (દાંત ગુમાવવાથી થતા ગેરફાયદાઓ)		
<p><b>1. LOSS OF MASTICATORY EFFICIENCY:</b> Major function of teeth is mastication. Loss of teeth results in to poor masticatory efficiency.</p>		<p>ચાવવામાં તકલીફ પડવી દાંતનું મુખ્ય કાર્ય ખોરાકને ચાવવું છે. જેમાં દાંત ગુમાવવાથી ઘટી જ તકલીફ પડે છે.</p>
<p><b>2. ESTHETICS:</b> Poor aesthetic appearance due to loss of teeth, especially in anterior teeth.</p>		<p>બાહ્ય દેખાવ અગામી દાંત ગુમાવવાથી થઈ રહેલો બાહ્ય દેખાવ અસાધ્ય દેખાવ લાગે છે.</p>
<p><b>3. PSYCHOLOGICAL DISTURBANCE:</b> Psychologically, depression occurs due to loss of teeth in early age.</p>		<p>માનસિક તકલીફો નબની ઉંમરમાં જ દાંત ગુમાવવા પછી માનસિક તરંગાવમાં પરિવર્તન થઈ શકે છે.</p>
<p><b>4. RISK OF CARIES:</b> After losing natural teeth, patient has gap in the lost teeth's place, that causes food lodgement &amp; caries development.</p>		<p>સડે શેવાની સંભાવનાઓ દાંત ગુમાવવા પછી જે દાંતની વચ્ચે જગ્યા પડી જાય છે જેમ વાસ્તવિક અવસ્થામાં ભૂલકા થઈ શકે છે.</p>
<p><b>5. RESORPTION (LOSS) OF ALVEOLAR BONE:</b> After complete tooth loss, alveolar ridge undergoes resorption, resulting into decreased bone height.</p>		<p>જડબાના હાડકાના ધરાઈને થવો દાંત ગુમાવવા દેવાના કારણે દાંતની નીચેના જાડબાનો ભાગ ધરાઈ જાય છે અને હાડકાની પરીમાણ ઓછું થઈ જાય છે.</p>
<p><b>5. DRIFTING:</b> Mesial/distal drifting occurs due to loss of tooth causing difficulty in fabrication of denture.</p>		<p>ગુમાવેલા દાંતની જગ્યાએ અગામી અથવા પાછાનો દાંત ઢબી જવો દાંત ગુમાવવાથી તેની અગામી અથવા પાછાનો દાંત ઢબી જાય છે જેના લીધે ચોક્કસ બનાવવામાં તકલીફ પડે છે.</p>
<p><b>7. SUPRAERUPTION:</b> Due to loss of tooth opposite Tooth supraerupts causing difficulty in making of denture.</p>		<p>ઉપરનો દાંત નીચે તરફ અથવા નીચેનો દાંત ઉપર તરફ જવો દાંત ગુમાવી દેવાના કારણે વિરુદ્ધ દિશામાં રહેલો દાંત વધુ ધડતો જાડબાની બાહ્યર યાવી જાય છે જે ચોક્કસ બનાવવામાં પુરતી સજી છે.</p>
<p><b>8. DIFFICULTY IN SPEECH:</b> Certain pronunciations are Done by touching tongue to teeth, loss of teeth creates Problems in speaking.</p>		<p>બોલવામાં તકલીફ પડવી કેટલાક ઉચ્ચારો કરવા માટે જુલને દાંત ઉપર અડાવી પડે છે. દાંત ગુમાવવાથી બોલવામાં તકલીફ પડે છે.</p>
<p><b>9. JOINT PAIN</b> Long term occlusal disharmony causes pain &amp; discomfort to the TMJ.</p>		<p>જડબાના સાંધાના દુ:ખમાં વધારો લંબા સમયથી ઉપરના અને નીચેના દાંતનો સંપર્ક જતો રહેવાથી જડબાના સાંધાનો દુ:ખાવો થાય છે.</p>
<p><b>10. MAXILLARY SINUS PNEUMATISATION:</b> Due to loss of maxillary teeth, maxillary sinus expands in the space of bone between tooth &amp; increases chances of infection.</p>		<p>ઉપરના દાંત ગુમાવવાથી જડબાની ઉપર રહેતું કુવાનું કુદરતી પોચાણ (માથાના) નીચેનો તરફ ચાલી જાય છે જેથી પોચાણમાં ઈન્ફેક્શન થવાની સંભાવના વધી જાય છે.</p>

# DISPOSAL OF BIOMEDICAL WASTE

## DISPOSAL OF BIOMEDICAL WASTE

*"Discarded biological material from teaching, clinical and research laboratories and operations."*



**YELLOW BAGS**

- Infectious waste,
- Bandage
- Gauzes
- Cotton or any other things which contains body fluids, human body parts, placenta.



**RED BAGS**

- Plastic Waste Such As Catheters, injections, Syringes, I.V Tubes, bottles



**BLUE BAGS**

- All Types Of Glass Bottles & Broken Glass Articles, Outdated & Discarded Medicines



**BLACK BAGS**

- Needles Without Syringes
- Blades
- Sharpers And All Metal Articles



**AMALGAM DISPOSAL**

- Liquid Consist Of Fixer, Sulfide Powder & Water Used For Amalgam Disposal In Dentistry

Final Disposal Of Waste	
NON HAZARDOUS WASTE	SECURED LANDFILLS
Liquid waste	Chemical disinfection and discharged into sewage system
Human anatomical waste	incinerated and sent into landfill areas
sharps	Needles can be cut by needle cutter and send into landfills for disposal
Microbiology waste	Autoclave, Microwave Incineration
Infectious solid waste	Autoclave, Microwave Incineration
Radioactive waste	Solid waste disposed by concentration & storage Liquid waste disposed by dilution & dispersal
Pressurized containers	Disposed off with general waste to the secured landfills

*Prepared by:* AKHILESH, SHIVANI, JUGALRAJ, PUSHTI, KISHOR, PARNASHI (2014-15 BATCH)

*GUIDED BY:* Dr. Harshvarghan Choudhary

**DEPARTMENT OF PUBLIC HEALTH DENTISTRY**



# REMOVEABLE PARTIAL DENTURE

## RPD = REMOVABLE PARTIAL DENTURE

RPD meaning removable partial denture which can be removed at patient's will.

### Indications :

1. Young age group patient (till 17 year of age)
2. Multiple edentulous spaces
3. Teeth with short clinical crowns
4. Long edentulous spaces
5. Patients with emotional problem
6. For economic reason

### Contraindications :

1. Allergy to acrylic material
2. Cannot be used in Handicapped Patients
3. Flabby ridge
4. Patients with large tongue
5. Poor oral hygiene

### Advantages :

1. Prevent migration of adjacent teeth
2. No need to alter adjacent teeth
3. Used in compromised edentulous spaces
4. Provide good vertical support

### Disadvantage :

1. Resorption of underlying mucosa
2. Irritation of underlying mucosa
3. Clasp of denture causes demineralization of enamel of adjacent teeth
4. Allergy of material

### CAST PARTIAL DENTURE



### PEEK DENTURE



### PRECISION ATTACHMENT



### FLEX DENTURE



### CERAMIC CLASP



RPD એટલે દર્દીના અનુસાર કાઢી શકાય એવું અડધું ચોકડું

### ઉપયોગ :

૧. નાની ઉંમરના દર્દી (૧૭ વર્ષ સુધી)
૨. ઘણા બધા ખૂટતાં દાંતની જગ્યા માટે
૩. મોઢામાં રહેલા નાના દાંત માટે
૪. મોઢામાં લાંબી દાંત વગરની જગ્યામાં
૫. દર્દીના મોઢાના સૌંદર્ય માટે
૬. આર્થિક રીતે

### ઉપયોગ ક્યાં ન કરવો.

૧. જેને એકેલીક મટીરીયલ્સની એલર્જી હોય
૨. શારીરિક વિકલાંગ દર્દી તથા માનસિક દર્દી
૩. જે લોકોનું જડબાનું હાડકું ઘસાઈ ગયું હોય
૪. જેને મોટી જીભ હોય
૫. મોઢાની કાળજી જે ન રાખી શકે

### ફાયદો :

૧. બાજુના દાંતને પોતાની જગ્યા પરથી ખસતા રોકે
૨. બાજુના દાંતને ઘસવો ન પડે
૩. તેનો ઉપયોગ વધઘટ થયેલી જગ્યામાં થઈ શકે છે.
૪. ચોકઠાની બરાબર ઉંચાઈ રાખવામાં મદદરૂપ થાય

### ગેરફાયદા :

૧. જડબાના હાડકા ગળાય જાય
૨. મોઢાની અંદર રહેલી ચામડીને નુકશાનદાયક છે
૩. ચોકઠાના રહેલ ક્લેસ્ટ્રા બાજુનાં દાંતના રહેલ ઈનેમલ (દાંતની બહારનું આવરણ)ના તત્વને ઓછું કરે છે.
૪. મટીરીયલ્સની એલર્જી

## COLLEGE OF DENTAL SCIENCES & RESEARCH CENTRE

(DEPARTMENT OF PUBLIC HEALTH DENTISTRY) Guided by : Dr. Harshvardhan Chaudhary

• Valay A. Patel • Vishva Y. Patel

• Vishva H. Patel • Shailee Patil

(Final Year B.D.S. - 2016-17)



# RECENT ADVANCEMENT IN DENTISTRY

## Recent Advancements in Dentistry

<h3>Digital Dental Mirror</h3>  <ul style="list-style-type: none"> <li>It has a loupe and a microscope to capture image and videos just like an intracoral camera.</li> <li>It offers operator to work directly using mirror or indirectly using high resolution image</li> </ul>	<h3>Laser</h3>    <p><b>Soft tissue application:</b></p> <ul style="list-style-type: none"> <li>Crown lengthening</li> <li>Removal of excess gingival growth</li> <li>gingivectomy and gingivoplasty</li> <li>Removal of soft tissue from 2<sup>nd</sup> molar area</li> </ul> <p><b>Hard tissue application:</b></p> <ul style="list-style-type: none"> <li>Isolate removal of caries and re-orientation of crystalline structure of enamel</li> </ul> <p><b>Application in dental materials:</b></p> <ul style="list-style-type: none"> <li>Polymerization of resin based materials</li> <li>Increase the bond strength of resin based materials to tooth surface</li> </ul>	<h3>Dental Microscopes</h3>   <ul style="list-style-type: none"> <li>Used to reveal fine details and structure that are invisible to the naked eye</li> <li>Provide accurate diagnosis and new approach to the treatment</li> </ul>	
<h3>Magnification Loupe</h3>  <p>Evidence the vision of the operator by magnifying the objects and increasing the depth of the vision</p>	<h3>Air Abrasion</h3>  <p>It is a powerful and focused narrow beam of 27 microns aluminum oxide particles</p> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>Abrades teeth without producing heat, vibration and noise</li> <li>No fracturing of the enamel or microfracture</li> <li>Can performed without anesthesia</li> <li>No tactile sensation</li> </ul>	<h3>Ultrasonic Handpiece</h3>  <ul style="list-style-type: none"> <li>It will activate an endodontic file resulting in three dimensional cutting</li> <li>Speed 1500-3000 cycle/second</li> <li>Quicker and easier root canal preparation</li> </ul>	<h3>Thermoplastic Gutta Percha</h3>  <ul style="list-style-type: none"> <li>The complexity of the root canal system (lateral canals and accessory canal).</li> <li>Adequate filling of this canal is desirable along with better adaptation of currently used gutta percha to the canal wall.</li> <li>Heating gutta percha is used as it will easily flows into a simplification of the root canal.</li> </ul>
<h3>Nano Dentistry</h3>  <ul style="list-style-type: none"> <li>Fillers found in modern composites are one micrometre in size</li> <li>Nano scale are more than hundred times smaller than traditional fillers</li> <li>Nano fillers have the perfect size to penetrate the typical micro sized key hole etch pattern of enamel and smallest dentin channel.</li> </ul>	<h3>The WAND</h3>  <ul style="list-style-type: none"> <li>The wand uses a micro procedure and an electronically controlled motor to deliver the anesthetic solution at constant slow rate and motor controlled pressure.</li> <li>Delivery of the anesthetic solution is activated with the foot pedal.</li> </ul> <p><b>Advantages:</b></p> <ol style="list-style-type: none"> <li>When used for palatal, nasopalatine and superior alveolar nerve blocks causes less pain and better distribution and possible increase safety</li> <li>The technique of rotating of needle during insertion avoids deflection, resulting in precise injection</li> </ol>	<p style="text-align: center;">-: Prepared by :-  <b>Kashyap Mangulkya, Vinay Nayakpara</b>          III - B.D.S. (2009-10)</p> <p style="text-align: center;">-: Guided by &gt;  <b>Dr. Rushabh Dagli</b> Senior Lecturer  <b>Dr. Viral Patel</b> Prof. In-Charge</p> <p style="text-align: center;">Department of Preventive and Community Dentistry          CDSRC, Bopal, Ahmedabad.</p>	

# GREEN TEA IN DENTISTRY

## GREEN TEA IN DENTISTRY

**INTRODUCTION:** Widely consumed in china, japan, korea and morocco. it has various health benefits. It has cognitive function and positive impact on bone density, caries, periodontal diseases.

### CLASSIFICATION OF TEA

CONTENT	% DRY WEIGHT
PROTEIN	15-20
AMINO ACID	1-4
FIBER	26
CARBOHYDRATE	7
LIPID	7
PIGMENTS	2
MINERAL	5
PHENOLIC COMPOUND	30
CATECHINS	
EPIGALLOCATECHIN 3 GALLATE	59
EPIGALLOCATECHIN	19
EPICATECHIN 3 GALLATE	13.6
EPICATECHIN	6.4

### ACTION OF CATECHINS

**ANTI OXIDATIVE:** Scavenge reactive o<sub>2</sub> and nitrogen species.  
Induces antioxidant enzymes.

**CAPACITY TO MODULATE PHYSICAL STRUCTURES OF CELL MEMBRANE**

**ANTIMICROBIAL ACTIVITY:** Catechin has anti microbial activity against S.aureus, H.pylori, E.coli.

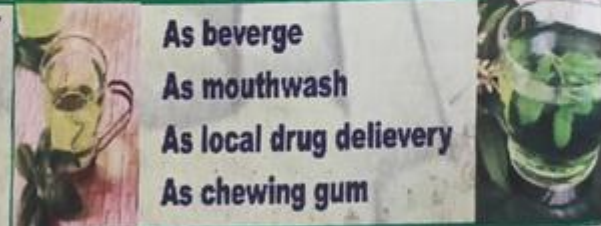
**ANTICARIOGENIC ACTIVITY:** Against S.mutans, Streptococcus sobrinus.

### COMPOSITION OF GREEN TEA

1. Non Fermented Green Tea
2. Semi Fermented Oolong Tea
3. Fermented Black and Red Tea

Department of Public Health Dentistry  
College of Dental Sciences and Research Centre, Ahmedabad

### MODES OF CONSUMPTION



### PROCESSING OF GREEN TEA



### EFFECT OF GREEN TEA ON PERIODONTIUM AND TEETH

1. Inhibiting effect on: P.gingivalis, P.melanogenicus, P.intermedia, Staph aureus, E.coli.
2. Effect on host defense-gingival cell and inflammatory response: Prevent gingival and periodontal inflammation.
3. Effect on bone and bone cell: Inhibit bone resorption by inducing apoptotic cell death of osteoclast and osteoclast like multinucleated giant cell.
4. Effect on collagenase activity: Inhibitory effect on collagenase enzyme.
5. Reduces plaque formation on tooth surfaces.

*Viral*  
Professor Incharge: Dr. Viral Patel, Guided by: Dr. Harshvardhan Chaudhary  
Prepared by: Shah Keval, Shah Palak, Thakkar Nirav [Final B.D.S. (2011-12)]



# RURAL ORAL HEALTH PROGRAMS

## Rural Oral Health Programs

India is predominantly rural, as over 72% population continue to live in rural areas.

More than 90% of dentists are available in urban settings and only 10% available to 72% of rural population. The dentist-population ratio in urban areas is 1:30,000 whereas that in rural areas is 1:3,00,000

Oral health is an integral component of general health.

### Most prevalent conditions

- Dental caries- in children
- Chronic periodontal disease- in adults
- Non-restored edentulous areas

### Reasons for poor oral health seeking in rural areas

- Poverty
- Biological, psychological, social and cultural problems
- High prevalence of tobacco chewing
- Lack of knowledge regarding importance of oral health and systemic effects
- Fear towards dentistry
- Non-availability of oral health care services
- Lack of dental man power
- Lack of required infrastructure
- Lack of political will
- Geographic isolation



DEPARTMENT OF PUBLIC HEALTH DENTISTRY  
CSBRC

PROFESSOR IN CHARGE:  
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GUIDED BY -

Dr. HARSHVARDHAN CHAUDHARY

PREPARED BY:

SHAN VAIBHAV  
GOKUL UMADEV

FINAL B.O.S. 2017-18

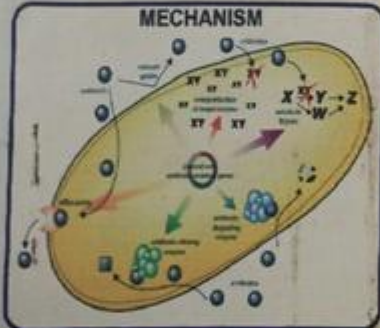




# ANTI MICROBIAL RESISTANCE

## AMR - AntiMicrobial Resistance

AMR is resistance of microorganism to an antimicrobial medicine to which it was previously sensitive.



### CAUSES

- Inadequate national commitment to a comprehensive and coordinated response, ill-defined accountability and insufficient engagement of communities;
- Weak or absent surveillance and monitoring systems;
- Inadequate systems to ensure quality and an interrupted supply of medicines;
- Inappropriate and irrational use of medicines, including in animal husbandry;
- Poor infection prevention and control practices;
- Depleted arsenals of diagnostics, medicines and vaccines as well as insufficient research and development on new products.

### Some Examples of AMR in Dentistry

- Antepectin resistance has been described in *Haemophilus* spp. fusobacterium and *Prevotella* species isolated from root canals.
- Lactobacillus* spp., *Gemella morbillorum* and an isolate of *Aeromonas* isolated associated with odontogenic abscesses are resistant to metronidazole.
- $\beta$ -lactamase streptococci show high resistance to cephalosporins.
- Resistance to tetracyclines and macrolides is widespread.
- Chlorhexidine resistance is not so much developed but application for more than one week can cause an increased resistance in *S. mutans* and *S. sobrinus*.

### Implications in Dentistry

- Management of active infectious disease
- Use prophylactic antibiotics when there is a clear indication to do so.
- Orofacial infections must be treated with local drainage whenever possible.
- The routine use of antibiotics before or after extractions or endodontics should be avoided.
- In the case of superficial infections, topical antiseptics (e.g. chlorhexidine) or antiseptics should be considered instead of systemic antimicrobial agents.

### AMR IN GENERAL

Resistance to earlier generation antimalarial medicines such as chloroquine and sulfadoxine-pyrimethamine is widespread in most malaria-endemic countries.

About 400 000 new cases of multidrug-resistant tuberculosis (MDR-TB) emerge annually, causing at least 150 000 deaths.

A high percentage of hospital-acquired infections are caused by highly resistant bacteria such as methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci.

### PREVENTION

- Rational use of antibiotics
- Topical dermatological preparations such as those containing tea tree oil and thyme oil may be effective in preventing transmission of CA-MRSA.
- Vaccines
- Cytokines instead of antibiotics to animal feed
- Phage therapy

### GLOBAL CONCERN

- AMR results in prolonged illness and higher risk of death.
- AMR hampers the control of infectious disease.
- AMR threatens a return to the control of preantibiotic era.
- AMR increases the cost of health care.
- AMR jeopardizes health care gain to society.
- AMR threatens health security, & damages trade and economics.

DEPARTMENT OF PUBLIC HEALTH DENTISTRY, CDSRC

Dr. Viral Patel  
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: Guided by :  
Dr. Harshvardhan Chaudhary

: Prepared By:  
Hirpara Juhi | Engineer Kinjal  
Agarwal Sejal

# BIOMEDICAL WASTE MANAGEMENT

<b>BIOMEDICAL WASTE MANAGEMENT</b>		
<b>Category</b>	<b>Waste Category</b>	<b>Treatment</b>
<b>Category 1</b>	<b>Human anatomical waste</b> (Human tissues, organs, body parts)	Incineration/ Deep burial
<b>Category 2</b>	<b>Animal Waste</b> (Animal tissues, organs, body parts carcasses, bleeding parts, fluids, blood and experimental animals used in research, waste generated by veterinary hospitals colleges, discharge from hospital, animal house)	Incineration/ Deep burial
<b>Category 3</b>	<b>Microbiology and biotechnology waste</b> (Waste from laboratory cultures, stocks or specimens of micro-organisms, live or attenuated vaccines, human and animal cell culture used in research and infectious agents from research and industrial laboratories, waste from production of biologicals, toxins, dishes and devices and for transfer of cultures)	Local autoclaving/ Microwaving/ Incineration
<b>Category 4</b>	<b>Waste sharps</b> (Needles, syringes, scalpels, blades, glass etc. that may cause puncture and cuts. This includes both used and unused sharps)	Disinfection (chemical treatment/ autoclaving/ microwaving and mutilation shredding)
<b>Category 5</b>	<b>Discarded medicine and cytotoxic drugs</b> (Wastes comprising of out dated, contaminated and discarded medicines)	Incineration, destruction and drugs disposal in secured landfills
<b>Category 6</b>	<b>Solid waste</b> (Items contaminated with blood and fluids including cotton, dressings, soiled plaster casts, linen, beddings, other material contaminated with blood)	Incineration autoclaving/ microwaving
<b>Category 7</b>	<b>Solid waste</b> (Waste generated from disposable items other than the waste sharps such as tubing, catheters, intravenous sets etc.)	Disinfection by chemical treatment, autoclaving/ microwaving and mutilation/ shredding
<b>Category 8</b>	<b>Liquid waste</b> (Waste generated from laboratory and washing, cleaning, housekeeping and disinfecting activities)	Disinfection by chemical treatment and discharge into drains
<b>Category 9</b>	<b>Incineration ash</b> (Ash from incineration of any bio-medical waste)	Disposal in municipal landfill
<b>Category 10</b>	<b>Chemicals used in production of biological, chemicals used in disinfection, as insecticides, etc.</b>	Chemical treatment and discharge into drains for liquids and secured landfill for solids

DESIGNED BY:- DR. HARSHVARDNAN CAUDHARY  
 PREPARED BY:- KRISHNA PATEL, KRUSHI PATEL, KRUTARTH PATEL, NIDHI PATEL, POOJA PATEL  
 (YEAR:- 14-15)  
 COLLEGE OF DENTAL SCIENCE AND RESEARCH CENTRE







## QUACKERY-QUACKS IN DENTISTRY

# QUACKERY-QUACKS IN DENTISTRY

**DENTAL QUACK:** An untrained person who practices dentistry fraudulently.

**QUACKERY:** "A pretender to medical skill, a charlatan and one who talks pretentiously without sound knowledge of the subject discussed."

**REASONS:** High cost of dental treatment, illiteracy, lack of awareness, poor accessibility to dental clinics, insufficient number of qualified dental surgeons.

### TREATMENTS DONE BY QUACKS



Removable partial denture fixed with acrylic resin



Class II acrylic restoration done in first molar



Removable partial denture fixed with acrylic resin & wire



Quack trimming a tooth on a rusty hand file



Denture with a suction disc

### COMPLICATIONS



Quack inserting denture with bare hands causes infection



Nonsterilized instrument kit



Excessive bleeding after extraction



Swelling of cheek & infection after extraction



Scarring of tissue in suction disk region

### SOLUTIONS:

- Mobilization of qualified doctors to the rural areas.
- Constant surveillance.
- Improve infrastructure.
- Make strict anti quackery laws.
- Increase public awareness.

### DEPARTMENT OF PUBLIC HEALTH DENTISTRY

GUIDED BY: DR. HARSHVARDHAN CHAUDHARY

MADE BY: SHARANYA CHANDRASHEKHAR, SIDDHI SHAH,  
RESHMA SAVAT, MAITRI SHAH, SRUSHTI SHAH, MAHAMMED SHAIKH

# TOOTH NUMBERING SYSTEM

## TOOTH NUMBERING SYSTEM

### FDI SYSTEM



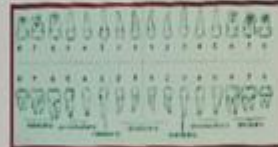
- ◆ This is most widely used internationally. It is approved by W.H.O.
- ◆ International Association for Dental Research (IADR) has also accepted it.
- ADVANTAGES:**
- ◆ Used for multinational interaction.
- ◆ Well known to dentists all over the world.
- ◆ E.g. Permanent Right Maxillary First Molar : - 16

### UNIVERSAL SYSTEM



- ◆ This is most widely used in U.S. and approved by A.D.A.
- ADVANTAGES:**
- ◆ Easy to use, understand.
- ◆ No quadrant or side or in type of teeth confusions.
- ◆ It is acceptable to all computer system.
- ◆ E.g. Permanent Right Maxillary First Molar : - 14

### PALMER NOTATION



- ◆ The oldest system found by Zsigmondy and Palmer in 1861
- ◆ In 1947 it was recommended by A.D.A. as a choice of system.
- ADVANTAGES:**
- ◆ Easier to use.
- DISADVANTAGES:**
- ◆ Difficult to understand because of symbolic appearance
- ◆ E.g. Permanent Right Maxillary First Molar : - 16



# CONSEQUENCES OF HIGH AND LOW VERTICAL DIMENSION

## CONSEQUENCES OF HIGH AND LOW VERTICAL DIMENSIONS

### HIGH VERTICAL DIMENSION

- Increased trauma to denture bearing area.



- Check biting.



- Difficulty in swallowing and speech.
- Pain and clicking in the Temporomandibular joint.



- Discomfort and annoyance to the patient.

- Increased volume or cubical space of oral cavity, with increased lower facial height and increased muscle tone.



- Ridge resorption is more.



- Clicking of teeth.
- Rapid wear of acrylic teeth



### LOW VERTICAL DIMENSION

- Comparatively decreased trauma to denture bearing area.



- Angular cheilitis.



- Difficulty in swallowing.
- Pain, clicking, discomfort of Temporomandibular joint accompanied by neuralgia.



- Obstruction of the Eustachian tube due to elevation of soft palate due to elevation of tongue/mandible.

- Decreased volume or cubical space of oral cavity, with decreased lower facial height and loss of muscle tone.



- Loss of lip fullness.

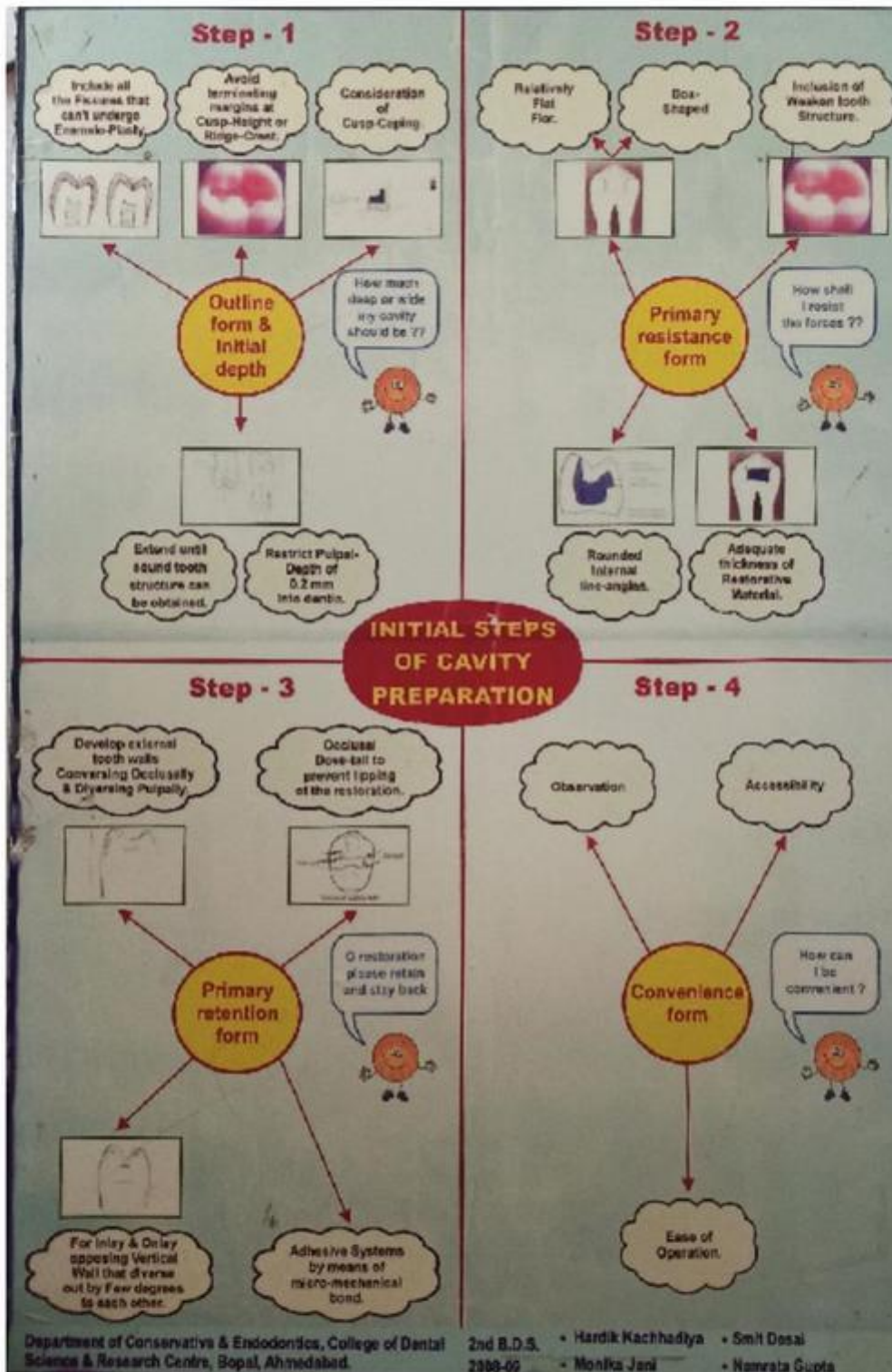


- Corners of mouth are turned down.
- Thinning of the vermilion borders of the lip.





# INITIAL STEPS OF CAVITY PREPARATION



## ULCERATIVE LESIONS OF ORAL CAVITY

### ULCERATIVE LESIONS OF ORAL CAVITY



**RECURRENT  
APTHOUS ULCER**



**MEASLES**



**TUBERCULOUS  
ULCER**



**SYPHYLTIC  
ULCER**



**ALLERGIC  
STOMATITIS**



**HERPETIC GINGIVO  
STOMATITIS**



# DENTAL PRACTICE MARKETING

## DENTAL PRACTICE MARKETING

WHY ???	Marketing Strategies	Key Elements		
<ul style="list-style-type: none"> <li>• Advance marketing techniques gives patients greater range of choice &amp; control over required dental care.</li> <li>• Marketing is the first step in patient's health education to seek dental care.</li> <li>• Dentist today have excellent knowledge but professional knowledge need and additional fertilizer - the marketing skill, in the form of satisfied patient or using marketing strategies.</li> <li>• To market dental practice with high professional &amp; ethical standards to benefit patients as well as dentist.</li> </ul>				
<p><b>Web Marketing</b></p> <p><b>Reward Referrals</b></p>	<p><b>Direct Mail</b></p> <p><b>Send Greeting Cards</b></p>	<p><b>Local Newspapers</b></p> <p><b>Monthly Newsletters</b></p>	<p><b>Informative and Promotional Pamphlets</b></p> <p><b>Posters &amp; Signs</b></p>	<p><b>Create a Pleasant Atmosphere</b></p> <p><b>Dental Logo</b></p>
<p><b>Practice Vision Process</b></p>	<p><b>Value Analysis Wheel</b></p>	<p><b>Marketing Mistakes</b></p> <ul style="list-style-type: none"> <li>• Being generic</li> <li>• Take patient for granted</li> <li>• Stop &amp; go marketing</li> <li>• Not using referral programs</li> <li>• Not leveraging the internet</li> <li>• Not asking for patient feedback</li> </ul>		

Professor Incharge: Dr. Viral Patel  
 Guided by: Dr. Harshvardhan Chaudhary  
 Prepared by: Chintan Parmar, Devdutt Dahiwala

Department of Public Health Dentistry  
 College of Dental Science & Research Centre, Manipal



# FINAL STAGES OF TOOTH PREPARATIONS

## FINAL STAGES OF TOOTH PREPARATION

### Stage 5 :

#### REMOVAL OF INFECTED DENTIN OR OLD RESTORATIVE MATERIAL OR BOTH, IF INDICATED

Removal of any remaining enamel pit or fissure, infected dentin, or old restorative material is the elimination of any affected carious tooth structure or faulty restorative material left in the tooth after initial tooth preparation.



← REMOVE INFECTED

→ REMOVE RESTORATIVE



### Stage 6 :

#### PULP PROTECTION IF INDICATED

It is a step in adapting the preparation for receiving the final restorative material.

Using traditional liners or bases, protects the pulp or aid pulpal recovery or both.

Pulpal irritants :

- 1) Ingredients of various restorative materials.
- 2) thermal changes
- 3) forces transmitted through materials to dentin
- 4) galvanic shock and
- 5) ingress of noxious products and bacteria through microleakage.



### Stage 7 :

#### SECONDARY RESISTANCE AND RETENTION FORM

The secondary retention and resistance forms are of two types :-

- 1) Mechanical preparation features
  - i) Retention locks, grooves and covers.
  - ii) Groove extensions.
  - iii) Skirts.
  - iv) Beveled enamel margins.
  - v) Pins, slots, steps and amalgam pins.
- 2) Treatment of the preparation walls with etching, priming and adhesive materials.
  - i) Enamel wall etching.
  - ii) Dentin treatment.



### Stage 8 :

#### PROCEDURE FOR FINISHING OF EXTERNAL WALLS

Objectives :

- 1) Create best marginal seal possible between restorative material and tooth.
- 2) Afford smooth marginal junctions.
- 3) Provide maximal strength of the tooth and the restorative material at and near the margin.

Factors :

- 1) Direction of enamel rods.
- 2) The support of enamel rods at the D<sub>1</sub>J.
- 3) Type of restorative material.
- 4) Location of the margin.
- 5) degree of roughness or smoothness desired.

Features :

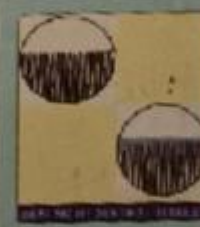
- 1) Design of crossface angle
- 2) degree of smoothness/roughness



### Stage 9 :

#### FINAL PROCEDURE-CLEANING, INSPECTING AND SEALING

Eliminating bacterial penetration is so important that the use of dentin bonding agents or sealers is likely to become universal (under all restoration).



# COMPOSITE

## COMPOSITE



તુટેલા દાંતની સારવાર માટે  
For the restoration of fractured teeth



દાંતના રંગનો સિમેન્ટ પુરવા  
To fill carious teeth



પીળા થયેલા દાંતને સફેદ કરવા માટે  
To treat discoloration of teeth and for esthetic purpose



દાંતના ઊંડા ખાડામાં સડો થતો અટકાવવા  
For prevention of caries

Prepared by: Devanshi Shah, Jainy Shah, Mauli Shah, Misha Shah  
Guided by: Dr. Harshvardhan Chaudhary

DEPARTMENT OF PUBLIC HEALTH DENTISTRY  
COLLEGE OF DENTAL SCIENCES AND RESEARCH CENTRE



ચાંદી કરતા કમ્પોઝીટ દેખાવમાં દાંતનાં રંગ જેવું ભેવાથી વધારે સારું દેખાવ છે  
Composites are esthetically better than amalgam



દાંતની વચ્ચેની જગ્યા પુરવા  
To cover space between two teeth



# DENTAL INSURANCE

## DENTAL INSURANCE

**INSURANCE** is defined as the equitable transfer of the risk of a loss, from one entity to another, in exchange for payment.

**DENTAL INSURANCE** is a type of health insurance designed to pay a portion of the costs associated with dental care.

### PRINCIPLE

- To be insurable, a risk must
- Be precisely definable.
  - Be of sufficient magnitude that if it occurs, it constitutes a major loss.
  - Be infrequent.
  - Be of an unwanted nature, such as destruction of a home through fire.
  - Be beyond the control of the individual.
  - Not constitute a "moral hazard" which means that the presence of insurance itself should not lead to additional claims.

### INDEMNITY

- The insurance company assumes risk. It allow the patient to seek care from any general dentist or specialist of his or her choice.
  - There is no contractual relation between dentist and patient.
- e.g.
- Class I treatment:** Diagnostic & Preventive services
- Patient contribution is not require.
- Class II treatment:** Restorative, Endodontic, Periodontic & Extraction
- Patient contribution is 20%.
- Class III treatment:** Fixed & Removable Prosthesis & major restorative procedure such as crown & bridge
- Patient contribution is 50%.

### CLASSIFICATIONS

(A) Insurance type according to involved person

1. Individual



2. Family



3. Group



(B) According to who is assuming the risk for loss

1. Indemnity

2. Administrative services or self

3. Capitation or DHMO (Dental Health Maintenance Organization)

### ADMINISTRATIVE SERVICES OR SELF INSURED PLAN

The employer assumes the risk & use an administrative group to provide supervision

### ERRORS

Two types:

1. Dentist's Errors
  2. Third Party(Company's) Errors
- 1. Dentist's Errors:**
- Incorrect recording of birth date of patient
  - Providing no information about other potential insurance coverage
  - Incorrect entry of social security number
- 2. Third Party Errors:**
- Loss submitted documentation
  - Request for unnecessary documentation such as requesting radiograph for soft tissue graft
  - Failure to check patient history that

### ADVANTAGES

1. To pay for costly care.
2. To maintain a healthy mouth.
3. To protect their children.
4. Culturally acceptable
5. This system is flexible, fee can be changed in accord with market condition and the dentist is also able to practice what is called "price discrimination".
6. It is administratively simple, since dentist rarely keep a written list of fee for procedure.
7. It is the only system under which some form of dental care likely will ever be provided.

### DISADVANTAGES

Despite the flexibility & price discrimination, there are still some potential patients who can not afford dental care. These persons would thus be unable to receive dental care if private fee-for-service were the only financing mechanism for dental care.

### CAPITATION OR DHMO

- Dentist assumes the risk.
  - The contracting dentist is paid a set fee each month for each enrolled patient, regardless of whether the patient has received any treatment.
  - Patient contribution is not required, except for more expensive treatment such as periodontal surgery or crown & bridge.
  - If dentist has contracted with the plan, the patient has no financial responsibility but, if the dentist has not contracted with plan, the patient is responsible for the difference between the plan payment & the dentist's fee.
- Dentist fear of**
1. High utilization
  2. Demand of expensive treatment

### SOME OF THE INSURANCE COMPANIES

#### PROVIDING DENTAL INSURANCE IN INDIA

1. Aelena Health Care
2. Medicaid
3. MetLife
4. Star Health Insurance
5. Pioneer Health Insurance
6. Delta

**DEPARTMENT OF  
PUBLIC HEALTH DENTISTRY**  
College of Dental Science and Research Center

PROFESSOR INCHARGE  
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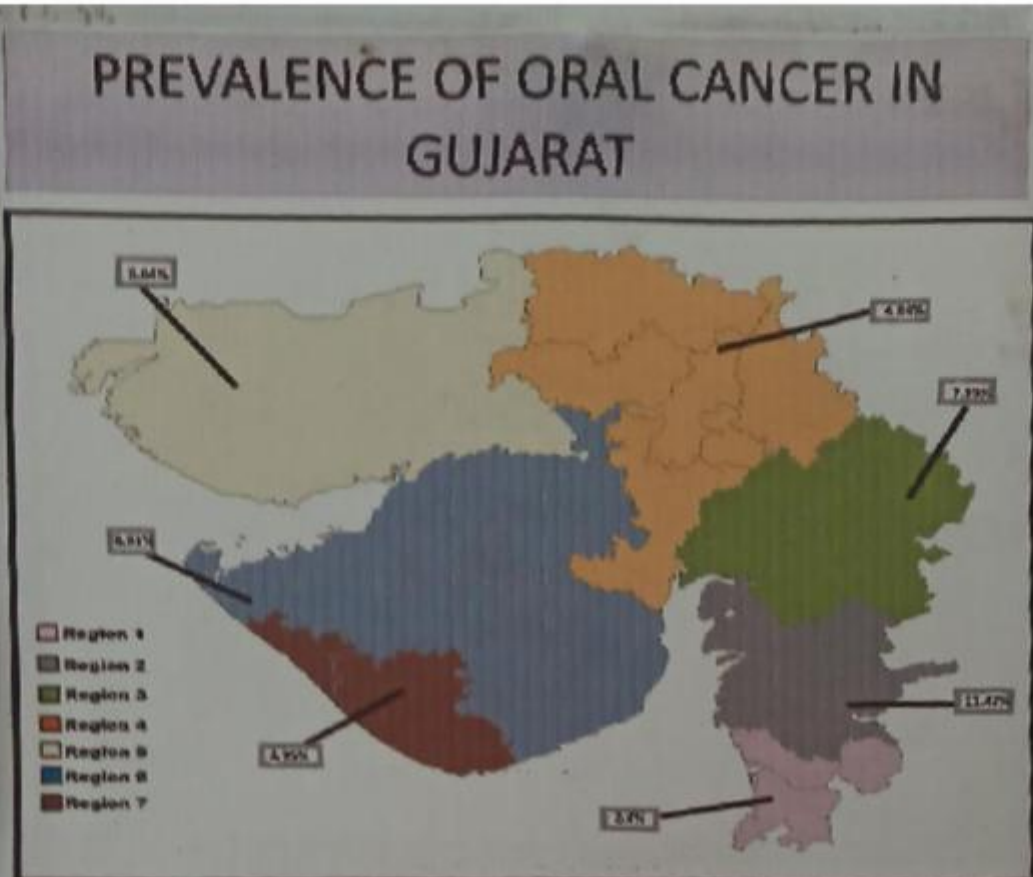
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PRATIK PATEL  
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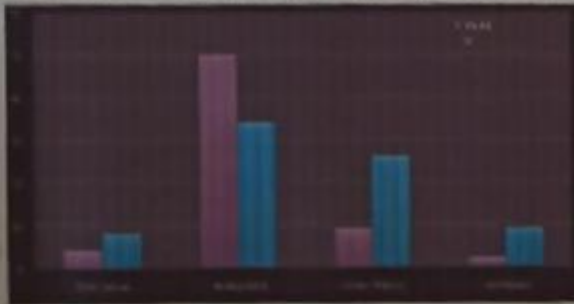
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# PREVALENCE OF ORAL CANCER IN GUJARAT



Dental Oral health survey & fluoride mapping- 2002-03, DCI-200



Oral cancer

Leuko-plakia

M:F=2:1

M>F

Smoking

Tobacco

Lichen planus

Candidi-asis

F>M

F>M

Auto-immune

C.Albicans

Department of public health Dentistry, CDSRC

Department Prof incharge

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Guided by :Dr

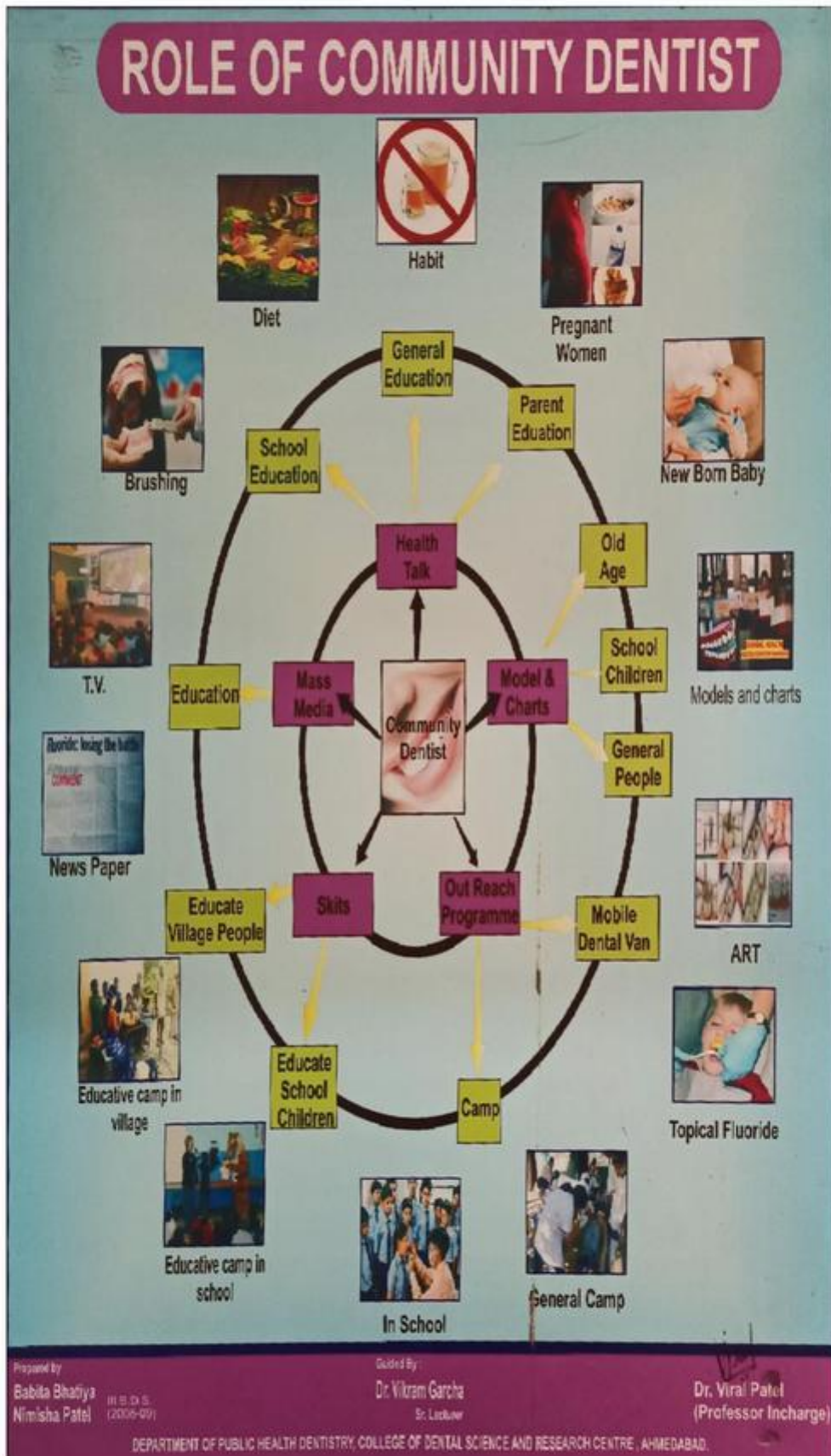
HARSHVARDHAN CHAUDHARY

Prepared by: Harvi Desai

Jay Desai

Shruti Devani

# ROLE OF COMMUNITY DENTIST





# BABY BOTTLE TOOTH DECAY

## BABY BOTTLE TOOTH DECAY દુધની બોટલથી થતો સડો

Baby Bottle tooth decay is a type of tooth decay occurring in prolonged use of bottle containing milk or any other sweetener. દુધની બોટલથી થતો સડો એ બાળકોમાં લાંબા સમય માટે દુધ અથવા સ્વાદુ ગળવા અથવા બોટલનો ઉપયોગ કરવાથી થાય છે.

### Causes / કારણો



Improper feeding at night with bottle. રાત્રે બોટલથી દુધ પીવાયવી.



Prolonged use of bottles containing milk. દુધની બોટલનો લાંબો સમય ઉપયોગ કરવાથી.



Use of pacifiers with jam & jelly. જામ અથવા જેલી લગાડેલી ટોટી વાપરવાથી.



Prolonged breast feeding at night. રાત્રે લાંબા સમયે સુધી સ્તનપાન કરાવવાથી.



### Clinical Features / લક્ષણો:



Mostly seen in children between 18 months & 3 years of age. સામાન્ય રીતે તે અઠાર મહિનાથી ત્રણ વર્ષના બાળકોમાં જોવા મળે છે.



Always starts from upper front teeth. સડાની શરૂઆત ઉપરના આગળના દાંતથી થાય છે.



Yellowish brown discoloration noted along the gum line. પેદાની લાઈન પર પીળા - કથ્થઈ રંગના ડાઘા જોવા મળે છે.

Avoid milk containing bottle at bed time. સુતી વખતે બોટલનો ઉપયોગ ટાળો.



Pain on eating cold, sweet or hard food. બાળકને ઠંડુ, ગરમ અથવા સખત ખોરાક ખાવાથી દુ:ખાયો થાય છે.



Child prefers eating soft diet. બાળક ટીલો અને પોચો ખોરાક ખાવાનું પસંદ કરે છે.



Fracture of one or more decayed teeth. એક અથવા વધારે સડેલા દાંત તૂટીને ખરી જાય છે.

Avoid feeding artificial juices with bottle. કૃત્રિમ/બનાવટી રસને બોટલ દ્વારા પીવાડવાનું ટાળો.

Feeding with cup or spoon should be encouraged. બાળકને ચમચી અથવા કપ વડે દુધ પીવાડવાયો.

Encourage your baby to stay in upright position during bottle feeding. તમારા બાળકને બેઠા-બેઠા દુધ પીવાડવાની આદત પાડો.



### Prevention નિવારણ



Regular cleaning of teeth with cloth after feeding. દુધ પીવાડ્યા પછી નિયમિતરૂપે ચોખ્ખા કાપડ વડે દાંત સાફ કરો.



Visit a dentist soon after eruption of first tooth. પહેલો દાંત આવવાની સાથે જ દાંતના ડૉ. ની મુલાકાત લો.



Oral hygiene measures should be implemented with the time of eruption of first tooth. પહેલો દાંત આવવાની સાથે મોઢાનું સ્વાસ્થ્ય જાળવવાનું શરૂ કરો.

Don't use pacifier jam or jelly. જામ અથવા જેલી લગાડેલી ટોટીનો ઉપયોગ ટાળો.

### Treatment / સારવાર



**EARLY STAGE**  
Learning about your child's oral health to help him to maintain oral hygiene, and taking care of the diet. તમારા બાળકના મોઢાનું સ્વાસ્થ્ય વિશે શીખો અને જાળવવામાં મદદ કરો.

#### LATER STAGE



Small cavities are restored with tooth coloured material. દાંતનો સડેલો ભાગ સાફ કરીને દાંત જેવા જ દેખાતા મટીરીયલથી પૂરાણ કરવામાં આવે છે. Cleaning the root canals and restoring with suitable materials. નસની સારવાર કરી એમા યોગ્ય મટીરીયલથી પૂરાણ કરવામાં આવે છે.

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# TREATMENT OF MALOCCLUSION

## Treatment of Malocclusion

વાંકા ચૂકા દાંતની સારવાર

Stainless Steel  
સ્ટેનલેસ સ્ટીલ



Ceramic  
સિરામીક



Lingual  
દાંતની અંદરની બાજુ



Invisalign  
ઇન્વિઝિલિગન



GUIDED BY : DR.HARSHVARDHAN CHAUDHARY

DEPT. : PUBLIC HEALTH DENTISTRY

COLLEGE OF DENTAL SCIENCE AND RESEARCH CENTRE

MADE BY : BHOOMIKA SIDDHAPURA, SHREYANSHI SONI, NIDHI THAKKAR, JANAK THANATH (2016-2017)



# ORAL HEALTH CARE DURING PREGNANCY

## Oral Health Care During Pregnancy

### ORAL MANIFESTATIONS DURING PREGNANCY



**Pregnancy Gingivitis**



**Pyogenic Granuloma**



**Xerostomia**



**Perimyolysis**



**Gestational Diabetes**

#### 1<sup>st</sup> trimester

- ◆ Educate patient about oral changes which can occur during pregnancy.
- ◆ Emphasize strict oral hygiene instruction.
- ◆ Limit treatment to periodontal prophylaxis & emergency treatment, as there is a risk of undergoing spontaneous abortion.
- ◆ Avoid routine radiographs.

### DENTAL MANAGEMENT DURING PREGNANCY

#### 2<sup>nd</sup> trimester

- ◆ In supine position patient may go under syncope which can be prevented by positioning the patient on her left side & elevating head of the chair.
- ◆ Control of active oral disease may be done.
- ◆ Avoid routine radiographs.

#### 3<sup>rd</sup> trimester

- ◆ Avoid any elective dental procedures during 2<sup>nd</sup> half of third trimester.
- ◆ Avoid routine radiographs.



#### Drugs

##### Contraindicated drugs

Aspirin (Not in 3<sup>rd</sup> trimester)  
Ibuprofen (Not in 3<sup>rd</sup> trimester)  
Tetracycline  
Mepivacaine  
Bupivacaine  
Chlorhexidine  
Nitrous oxide

##### Possible side Effects

Postpartum haemorrhage  
Delayed labour  
fetal toxicity  
Fatal bradycardia  
Fatal toxicity  
Spontaneous abortions



PREPARED BY: Rohit, Kuldeep, Arpit, Shrutva, Heena J, Sumaiya, Vinisha (FINAL YEAR 2014-15 BATCH)

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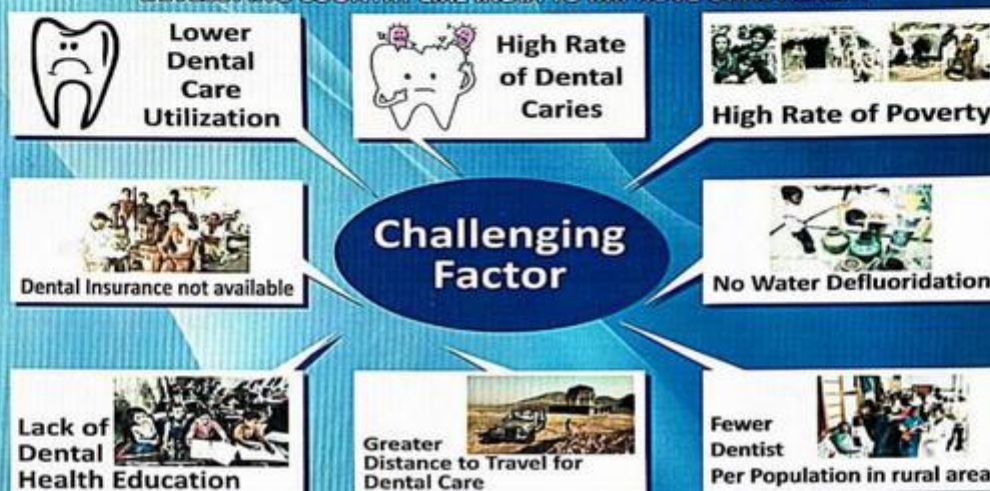
**DEPARTMENT OF PUBLIC HEALTH DENTISTRY**

# WHAT INDIAN CAN LEARN FROM USA FOR RURAL ORAL HEALTH CARE!

## WHAT INDIA CAN LEARN FROM USA FOR RURAL ORAL HEALTH CARE !!!!

THE SYSTEMIC REVIEW DONE BY SM SKILLMAN ET AL IN YEAR 2010 IDENTIFIES THAT ORAL HEALTH CARE IN RURAL USA HAVE AREA OF INNOVATION IN PREVENTION, DELIVERY OF DENTAL SERVICES & WORK FORCE DEVELOPMENT THAT IMPROVE ORAL HEALTH IN RURAL POPULATION.

THIS CONCEPT CAN ALSO BE IMPLIMENTED IN DEVELOPING COUNTRY LIKE INDIA TO IMPROVE ORAL HEALTH



	WATER FLUORIDATION	EDUCATION SERVICE & PREVENTION	BEHAVI OUR HEALTH SERVICE	RECRUIT OF DENTIST FROM RURAL AREA	LOANS / SCHOLARSHIP FOR RURAL SERVICE	NEW ROLES FOR HEALTH CARE PROVIDER	MOBILE PORTABLE DENTAL CLINICS	TELEHEALTH TECHNOLOGY	EXPAND INSURANCE COVERAGE TO DENTISTRY
American Rural Area	SERVICE AVAILABLE	SERVICE AVAILABLE	SERVICE AVAILABLE	SERVICE IS PARTIALLY DEVELOP	SERVICE AVAILABLE	SERVICE AVAILABLE	SERVICE AVAILABLE	SERVICE IS PARTIALLY DEVELOP	SERVICE AVAILABLE
Indian Rural Area	SERVICE IS NOT AVAILABLE	SERVICE IS PARTIALLY DEVELOP	SERVICE IS NOT AVAILABLE	SERVICE IS PARTIALLY DEVELOP	SERVICE IS PARTIALLY DEVELOP	SERVICE IS PARTIALLY DEVELOP	SERVICE IS PARTIALLY DEVELOP	SERVICE IS PARTIALLY DEVELOP	SERVICE IS NOT AVAILABLE

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# PLATELET RICH PLASMA

## PLATELET RICH PLASMA

It is a blood plasma that has been enriched with platelets

HOW DOES IT WORK?	COMPONENTS	IMPLICATIONS IN DENTISTRY	
<ul style="list-style-type: none"> <li>PLATELET RICH PLASMA contains autologous platelets which have alpha granules which releases several different growth factors and cytokines through the degranulation process that stimulates healing of bone and soft tissue .</li> </ul>	<ul style="list-style-type: none"> <li>Platelets collected in PRP are activated by addition of thrombin and calcium chloride which releases the following growth factors and cytokines</li> <li>Platelet derived growth factor</li> <li>Transforming growth factor beta</li> <li>Fibroblast growth factor</li> <li>Insulin like growth factor</li> <li>Vascular endothelial growth factor</li> <li>Epidermal growth factor</li> <li>Inter leukin 8</li> <li>Keratinocyte growth factor</li> <li>Connective tissue</li> </ul>	<ul style="list-style-type: none"> <li>Bone grafting for dental implants, sinus lift &amp; ridge augmentation procedure, closure of cleft lip &amp; palate</li> </ul> 	<ul style="list-style-type: none"> <li>Repair of bone defects created by removal of small cyst or teeth- mostly in maxillofacial reconstruction</li> <li>Repair of fistula between sinus cavity &amp; mouth</li> <li>To accelerate post surgical wound healing</li> </ul> 
 <p><b>BONE GRAFTING USING PLATELET RICH PLASMA</b></p>	<h3>WHAT DOES PRP TREATMENT INVOLVE</h3> <ul style="list-style-type: none"> <li>Small (about 20 ml) sample of blood will be collected. Blood will be placed in to centrifuge to separate the plasma from the RBC's. A 2<sup>nd</sup> centrifuge will be use to concentrate the platelets which contains the growth factor</li> </ul>  <p>Immediately after suturing the wound, the dentist will apply the PRP to the surgical area in high concentration</p>	<p>PRP is widely used nowadays because of its:</p> <ul style="list-style-type: none"> <li>Safety-lower infection risk</li> <li>Convenience</li> <li>Faster healing</li> <li>Cost effectiveness</li> </ul>	<h3>DISADVANTAGES</h3> <ul style="list-style-type: none"> <li>It cannot be used in all bone grafting cases</li> <li>It cannot be used alone to stimulate bone formation</li> <li>Expensive</li> </ul>
<p>PROFESSOR INCHARGE- <b>Dr. VIRAL PATEL</b></p> 		<p>DEPARTMENT OF PUBLIC HEALTH DENTISTRY, CDSRC</p> <p>GUIDED BY:- <b>Dr. RUSHABH DAGLI</b> <b>Dr. HARSH VARDHAN CHAUDHARY</b></p>	

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# OCCUPATIONAL HAZARDS IN DENTISTRY

**OCCUPATIONAL HAZARDS IN DENTISTRY**

OCCUPATIONAL HEALTH IS OF UPMOST IMPORTANCE AS IT AIMS AT PROMOTION AND MAINTAINANCE OF HIGHEST DEGREE OF PHYSICAL, MENTAL AND SOCIAL WELLBEING OF WORKER AND THEREBY INCREASING THEIR EFFICIENCY.

### NOISE

**SOURCES**



High Speed Abraser   Compressor   Ultrasonic Scaler

**EFFECT**

- Temporary or Permanent Hearing loss
- Fatigue
- Interference with Communication by Speech
- Decreased Efficiency
- Annoyance

### MUSCULOSKELETAL HAZARDS



Prolonged working leading to musculoskeletal disorders in dentistry.

### PREVENTION



Use of PPE  
Ergonomic tools

### INHALATION OF MERCURY

Mercury which in a Metallic Form is an Odorous Silver Liquid That is as Fascinating as it is Dangerous.



**EFFECTS**

- Neurological
- Cardiovascular
- Renal
- Respiratory
- Reproductive

**PREVENTION**

- Use of Prepackaged Alloys.
- Good Ventilation.
- Excess and Spilled Mercury should be Collected in Floor Containing Break Resistant Bottles.



### UV LIGHT AND RADIATION

X-Ray Radiation   Light cure Composite   Lasers



**EFFECT**

- Eyes Affected Causing Intense Conjunctivitis and Keratitis.
- In Acute Cases Erythema & Dermatitis.
- In Chronic Cases Skin Cancer & Bone Marrow Depression.

**PREVENTION**

- Use Screen Glass in Place of Spectacles. Lead Aprons should be worn by the Operator.
- Operator Must Leave the room or take Position behind & outside Barrier.
- During X-ray Radiographic Take, Room door to be kept closed by Operator.

### SHARP INSTRUMENTS

**SOURCES**



Lancets, Glass Wares, Needles, Blades

**CARE TO BE TAKEN**

If These All Instruments Are Not Handled with Proper Care, it Can Lead to Cuts, and Wounds, this can Cause Infection to Operator.

### BIOLOGICAL HAZARDS

- Biological Hazards are Constituted by Infectious Agents of Human Origin and include Prions, Viruses, Bacteria and Fungi.
- A Dental can be Infected Either Directly or Indirectly by
  - Cut or Wound,
  - Needlestick Injury,
  - Aspirate of Saliva,
  - Gingival Fluid.



**PREVENTION**

Patients are Instructed to Cover Their Mouth and Nose When They Sneeze or Cough.

Dentist Should Always wear Mask, Goggles and Goggles to Avoid any Infection to Occur.

### HEPATITIS B AND C

Some Patients Show Seropositivity of Blood Test Shows HBs Ag and HBe Ag in Saliva.

**SOURCES**

- Contaminated Instruments
- Spit, Saliva, Lack of aseptic technique
- Needles
- Paper

**CONSEQUENCES**

- Chronicity of Liver
- Hepatic Failure
- Cholangiocarcinoma

**PREVENTION**

- Proper Infection, Reducing Virus in Mouth of the Patient when Faculty for use used as Adult Transmission Occur Through Contact with Blood and other Body Fluids.

**HEALTH MONITORING**

- Check Seropositivity and Serology.

### LOCAL ACTION OF LATEX

**SOURCES**

- Gloves, Rubber Dam Sheet

**EFFECTS**

- Urticaria



**PREVENTION**

- Use of Non-Latex Gloves.
- Vinyl or Nitril Gloves.

### INGESTION OF OTHER CHEMICALS

**SOURCES**

These are the Chemicals used as Disinfectant and Sterilization Purpose.

Formaldehyde and Xylene.

**EFFECTS**

- Eye and Respiratory Irritation
- Nausea and Vomiting
- Over Long Period Laryngitis and Bronchitis May Occur.
- If Xylene Contains Benzene May Lead to Leukemia.

**DEPARTMENT OF  
PUBLIC HEALTH DENTISTRY**

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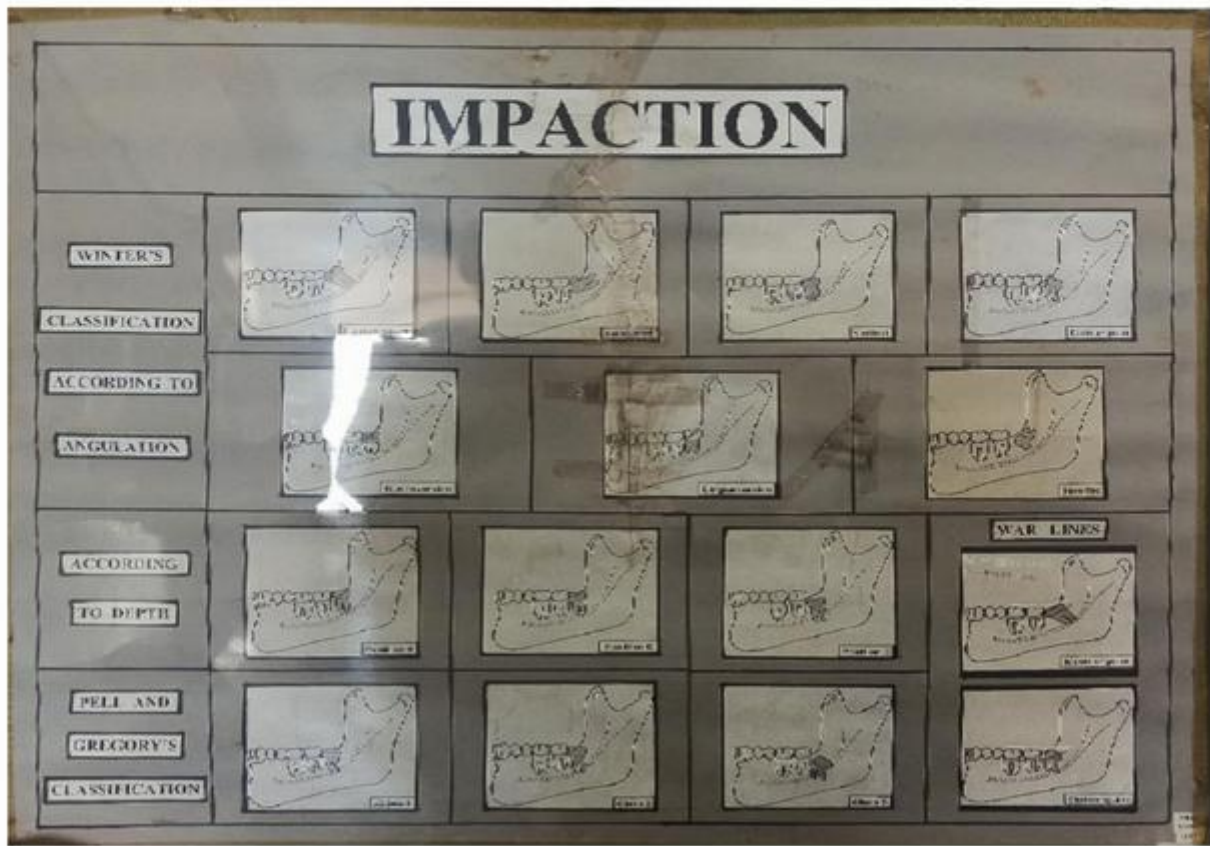
# **PHD POSTERS 2019-2020**

# PATIENTS INSTRUCTION AFTER PERIODONTAL SURGERY

PATIENT'S INSTRUCTIONS AFTER PERIODONTAL SURGERY		પેટાની સર્જરી બાદની સૂચનાઓ
1. After periodontal surgery, for first 24 hours do not spit or brush your teeth.		૧. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક સુંઠું નહીં તમા કોમળ કરવા નહીં.
2. After periodontal surgery, apply ice packs intermittently for first 48 hrs at the surgical site.		૨. પેટાની સર્જરી બાદ, પહેલા ૪૮ કલાક સર્જરી કરેલી જગ્યાએ બાહરનો બેઠકની મહત્તમ કરવી.
3. Do not worry if pain persists during first 24 hours of surgery.		૩. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક દુખાવો રહે તે ધિક્કા કરવી નહીં.
4. Do not worry if there is mild swelling, it will gradually subside.		૪. પેટાની સર્જરી બાદ, સોજો ઘેરેઘેરે સોજો થઈ જશે.
5. If pain, swelling or oozing (minor bleeding) persists even after 24 hours of surgery consult your doctor immediately.		૫. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક બાદ જો સોજો, દુખાવો અથવા ઘોલી આવે તો કોન્ટાકને બતાવવું.
6. After periodontal surgery, for first 24 hours eat and drink soft and cold food such as ice cream, milk shake, juice, rice, etc.		૬. પેટાની સર્જરી બાદ, પહેલા ૨૪ કલાક મૃદુ ભજન, ઠંડો, ખાચી ખોરાકનું લેવો દા. ત. આઈસ્ક્રીમ, જ્યુસ, મિલકચોડ, ખીચડી, દાળાનાથ ભંડુ વગેરે.
7. Take medications regularly as per doctor's advice.		૭. કોન્ટાકની સલાહ મુજબ દવાઓ નિયમીત રીતે લેવી.
8. During and after treatment avoid consumption of Cigarette, bidi, pan masala and alcohol, it's a good chance to break your habits!		૮. સારવાર સમયે ટીચ તે દરમિયાન જે બાદમાં યુક્તિપાન (બીડી - પાનખેડ), તમાકુ જે દારૂનું સેવન કરવું નહીં.
9. Come for suture removal as per doctor's advice.		૯. કોન્ટાકની સલાહ મુજબ સંકલ લેવાના સમયે.
10. Do not brush at the surgical site where periodontal dressing is given but in rest of places brush properly and maintain oral hygiene.		૧૦. પેટાની સર્જરી બાદ ડ્રેસિંગ આપેલી જગ્યાએ બ્રશ કરવું નહીં અને બાકીની જગ્યાએ યથોચિત બ્રશ કરીને મોંનું સાફ રાખવું.



# IMPACTION



# CLASSIFICATION OF TOOTH PREPARATION

## CLASSIFICATION OF TOOTH PREPARATION.

**Definition:** Tooth preparation is the mechanical alteration of a defective, injured or diseased tooth to receive a restorative material that re-establishes a healthy state for the tooth including esthetic corrections where indicated and normal form and function.

**Introduction:** Classification of tooth preparation according to anatomic areas involved and by the associated type of treatment was presented by Greene Vardiman Black.

And is designed as class-1, class-2, class-3, class-4, class-5, class-6. The altered preparation designs are referred to as

- (1) Beveled conventional preparations
- (2) Modified preparations

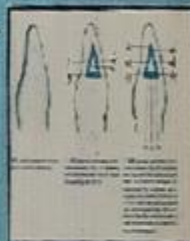
**CLASS-1 Restorations-**  
All pit and fissure restorations are class 1 and they are assigned to three groups:  
(1) Restoration on occlusal two thirds of posterior teeth.  
(2) Restoration on occlusal two thirds of the facial and lingual surfaces of molars.  
(3) Restoration on lingual surface of maxillary incisors.



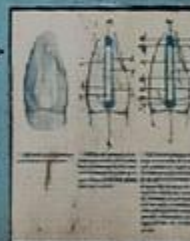
**CLASS-2 Restorations-**  
These are restorations on the proximal surfaces of posterior teeth



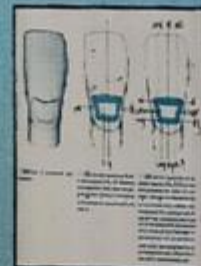
**CLASS-3 Restorations-**  
Restorations on the proximal surfaces of anterior teeth that do not involve the incisal angle.



**CLASS-4 Restorations-**  
Restorations on the proximal surfaces of anterior teeth that do involve incisal angle.



**CLASS-5 Restorations-**  
Restorations on the gingival third of the facial or lingual surfaces of all teeth.



**CLASS-6 Restorations-**  
Restorations on the incisal edge of anterior teeth or the occlusal cusp heights of posterior teeth

PREPARED BY:


POOJA KESSARIA    K JYOTA KARNI  
KAVYAM ITALYA    ZEEL BENTA

2nd year (2010-2011)



# PROGRESSION OF DENTAL CARIES


**White Spots**



Chalky white opaque lesion on enamel surface without loss of surface continuity

દાંતની સૌથી ઊપરની સપાટી પર ચુના જેવા સફેદ રંગના ડાઘા જેવો સડો થાય છે. તેમાં દાંતની સપાટી પર કોઈ પણ જાતની તિરાડ પડતી નથી.

**Enamel Caries**




Slowly progressing yellowish brown discoloration restricted only to enamel surface.causes no pain.

ધીમે ધીમે આ સડો વધીને દાંતની સપાટીના ઊપરના ભાગમાં સડો કરે છે. જે પીળાશ પડતા ભૂખરા રંગનો હોય છે. જેનાથી દાંતને કોઈ પીડા થતી નથી

**Progression of dental caries**


**Pulp be included**



Affects the nerves in the pulp, more sensitive to hot and cold too painful to stand, accompanied by swelling and increased pain at night.

દાંતના મૂળ સુધી પહોંચેલા આ સડાથી દાંતને અસહ્ય પીડા થાય છે. આના લીધે સોજો પણ આવી શકે છે અને રાતે પીડાની તીવ્રતા વધે છે.

**Dentin Spots**



Deepest layer of enamel decays and progresses to dentin, sensitive to hot or cold food.

No pain when you don't eat

જો આની સાટવાટ ન કરવામાં આવે તો આની અસર દાંતના નીચેના પડ સુધી થાય છે. દાંતને ઠંડુ કે ગરમ ખાવાથી દુઃખાવો થાય છે. જો ત ખાશ તો દુઃખાવો થતો નથી.

**Prepared by:** Drishti Gagliani , Halak Gandhi, Bansari Gevariya, Aastha Hame  
**Guided by:** Dr.Harshvardhan Chaudhary  
**College of Dental Sciences and Research Center Dept. Of Public Health Dentistry**



# BIOTERRORISM

## BIOTERRORISM

**Defination :-** The Deliberate, private use of biological agents to harm and frighten the people of a state or society, is related to the military use of biological, chemical and nuclear weapons is known as bioterrorism.

### classification:-



#### CATEGORY A BIOLOGICAL AGENTS

AGENT	DISEASE CAUSED
BACILLUS ANTHRACIS	ANTHRAX
CLOSTRIDIUM BOTULINUM	BOTULISM
YERSINIA PESTIS	PLAGUE
VARIOLA MAJOR	SMALL POX
FRANCISELLA TULARENSIS	TULAREMIA
VIRUSES	VIRAL HEMORRHAGIC FEVER

#### CATEGORY B BIOLOGICAL AGENTS

AGENT	DISEASE CAUSED
BRUCELLA	BRUCELLOSIS
SALMONELLA	FOOD SAFETY THREATS
CHLYAMPIA PSITTACI	PSITTACOSIS
COXIELLA BRUNETTI	Q FEVER
RICKETTSIA	TYPHUS FEVER
VIBRIO CHOLERA	WATER THREATS



Category A Biological agents (Microscopic view)

Category B Biological agents (Microscopic view)

### ROLE OF DENTIST IN A BIOTERRORIST ATTACK

AS HOSPITALS BECOME FILLED, ALTERNATE SITES FOR THE PROVISION OF HEALTH CARE MAY BE REQUIRED, AND DENTAL OFFICES COULD FILL THAT NEED.



### PREPARATION BEFORE AN ATTACK



EDUCATION OF DENTAL PROFESSIONAL REGARDING MEDICAL AND ORAL MANIFESTATIONS OF BIOTERRORIST ATTACK IS IMPORTANT.

DENTAL OFFICES SHOULD BE EQUIPPED WITH POTENTIALLY USEFUL EQUIPMENT



### ASSISTANCE DURING AN ATTACK



• PACKAGING OF MEDICINES IN INDIVIDUAL DOGS

• DIAGNOSIS - PROVIDE INDIVIDUAL PT. DIAGNOSIS BY OBSERVING THE PHYSICAL AND BEHAVIORAL SIGNS OF PEOPLE, SALIVARY SWABS MAY BE COLLECTED BY DENTISTS FOR LABORATORY TESTING



• IMMUNIZATION - DENTISTS MAY REGISTER IN RAPID IMMUNIZATION OR VACCINATION PROGRAM OF PUBLIC TO PREVENT THE SPREAD OF THE DISEASE

Prof.in Charge :-  
Dr. Viral Patel

Guided By :-  
Dr. Harshvardhan Chaudhary

Made By:- Ruchir Patel  
Pinakin Patel  
Ghanshyam Patel

# DISADVANTAGE OF TOOTH LOSS

DISADVANTAGES OF TOOTH LOSS (દાંત ગુમાવવાથી થતા ગેરફાયદાઓ)		
<p><b>1. LOSS OF MASTICATORY EFFICIENCY:</b> Major function of teeth is mastication. Loss of teeth results in to poor masticatory efficiency.</p>		<p>ચાવવામાં તકલીફ પડવી દાંતનું મુખ્ય કાર્ય ખોરાકને ચાવવું છે. જેમાં દાંત ગુમાવવાથી ઘટી જ તકલીફ પડે છે.</p>
<p><b>2. ESTHETICS:</b> Poor aesthetic appearance due to loss of teeth, especially in anterior teeth.</p>		<p>બાહ્ય દેખાવ અગામી દાંત ગુમાવવાથી થઈ રહેલો બાહ્ય દેખાવ અસાધ્ય દેખાય લાગે છે.</p>
<p><b>3. PSYCHOLOGICAL DISTURBANCE:</b> Psychologically, depression occurs due to loss of teeth in early age.</p>		<p>માનસિક તકલીફો નબની ઉંમરમાં જ દાંત ગુમાવવા પછી માનસિક તરબતરમાં પડી શકે છે.</p>
<p><b>4. RISK OF CARIES:</b> After losing natural teeth, patient has gap in the lost teeth's place, that causes food lodgement &amp; caries development.</p>		<p>સડે શેવાની સંભાવનાઓ દાંત ગુમાવવા પછી જે દાંતની વચ્ચે જગ્યા પડી જાય છે જેમ વચ્ચેથી ખોરાકનું ભરાય છે જેના લીધે સડા અસર છે.</p>
<p><b>5. RESORPTION (LOSS) OF ALVEOLAR BONE:</b> After complete tooth loss, alveolar ridge undergoes resorption, resulting into decreased bone height.</p>		<p>જડબાના હાડકાના ધરસરો થવો દાંત ગુમાવવા દેવાના કારણે દાંતની નીચેના જાડબાનો ભાગ ધરસરો જાય છે અને હાડકાની પરીમાણ ઓછું થઈ જાય છે.</p>
<p><b>5. DRIFTING:</b> Mesial/distal drifting occurs due to loss of tooth causing difficulty in fabrication of denture.</p>		<p>ગુમાવેલા દાંતની જગ્યાએ અગામી અથવા પાછળનો દાંત ઢબી જવો દાંત ગુમાવવાથી તેની અગામી અથવા પાછળનો દાંત ઢબી જાય છે જેના લીધે ચોક્કસ બનાવવામાં તકલીફ પડે છે.</p>
<p><b>7. SUPRAERUPTION:</b> Due to loss of tooth opposite Tooth supraerupts causing difficulty in making of denture.</p>		<p>ઉપરનો દાંત નીચે તરફ અથવા નીચેનો દાંત ઉપર તરફ જવો દાંત ગુમાવી દેવાના કારણે વિરુદ્ધ દિશામાં રહેલો દાંત વધુ પડતો જડબાની અંદર ચાલી જાય છે જે ચોક્કસ બનાવવામાં પુરેલી સજો છે.</p>
<p><b>8. DIFFICULTY IN SPEECH:</b> Certain pronunciations are Done by touching tongue to teeth, loss of teeth creates Problems in speaking.</p>		<p>બોલવામાં તકલીફ પડવી કેટલાક ઉચ્ચારો કરવા માટે જુલને દાંત ઉપર અડાવી પડે છે. દાંત ગુમાવવાથી બોલવામાં તકલીફ પડે છે.</p>
<p><b>9. JOINT PAIN</b> Long term occlusal disharmony causes pain &amp; discomfort to the TMJ.</p>		<p>જડબાના સાંધાના દુ:ખમાં વધારો લંબા સમયથી ઉપરના અને નીચેના દાંતનો સંપર્ક જતો રહેવાથી જડબાના સાંધાનો દુ:ખાવો થાય છે.</p>
<p><b>10. MAXILLARY SINUS PNEUMATISATION:</b> Due to loss of maxillary teeth, maxillary sinus expands in the space of bone between tooth &amp; increases chances of infection.</p>		<p>ઉપરના દાંત ગુમાવવાથી જડબાની ઉપર રહેતું કુવાનું કુદરતી પોચાણ (માથાના) નીચેનો તરફ ચાલી જાય છે જેથી પોચાણમાં ઈન્ફેક્શન થવાની સંભાવના વધી જાય છે.</p>

# DISPOSAL OF BIOMEDICAL WASTE


## DISPOSAL OF BIOMEDICAL WASTE

*"Discarded biological material from teaching, clinical and research laboratories and operations."*



**YELLOW BAGS**

- Infectious waste,
- Bandage
- Gauzes
- Cotton or any other things which contains body fluids, human body parts, placenta.



**RED BAGS**

- Plastic Waste Such As Catheters, injections, Syringes, I V Tubes, bottles



**BLUE BAGS**

- All Types Of Glass Bottles & Broken Glass Articles, Outdated & Discarded Medicines



**BLACK BAGS**

- Needles Without Syringes
- Blades
- Sharpers And All Metal Articles



**AMALGAM DISPOSAL**

- Liquid Consist Of Fixer, Sulfide Powder & Water Used For Amalgam Disposal In Dentistry

Final Disposal Of Waste	
NON HAZARDOUS WASTE	SECURED LANDFILLS
Liquid waste	Chemical disinfection and discharged into sewage system
Human anatomical waste	incinerated and sent into landfill areas
sharps	Needles can be cut by needle cutter and send into landfills for disposal
Microbiology waste	Autoclave, Microwave Incineration
Infectious solid waste	Autoclave, Microwave Incineration
Radioactive waste	Solid waste disposed by concentration & storage Liquid waste disposed by dilution & dispersal
Pressurized containers	Disposed off with general waste to the secured landfills

*Prepared by:* AKHILESH, SHIVANI, JUGALRAJ, PUSHTI,  
KISHOR PARNASHI (2014-15 BATCH)  
**GUIDED BY:** Dr. Harshvarghan Choudhary

**DEPARTMENT OF PUBLIC HEALTH DENTISTRY**



# REMOVEABLE PARTIAL DENTURE

## RPD = REMOVABLE PARTIAL DENTURE

RPD meaning removable partial denture which can be removed at patient's will.

### Indications :

1. Young age group patient (till 17 year of age)
2. Multiple edentulous spaces
3. Teeth with short clinical crowns
4. Long edentulous spaces
5. Patients with emotional problem
6. For economic reason

### Contraindications :

1. Allergy to acrylic material
2. Cannot be used in Handicapped Patients
3. Flabby ridge
4. Patients with large tongue
5. Poor oral hygiene

### Advantages :

1. Prevent migration of adjacent teeth
2. No need to alter adjacent teeth
3. Used in compromised edentulous spaces
4. Provide good vertical support

### Disadvantage :

1. Resorption of underlying mucosa
2. Irritation of underlying mucosa
3. Clasp of denture causes demineralization of enamel of adjacent teeth
4. Allergy of material

### CAST PARTIAL DENTURE



RPD એટલે દર્દીના અનુસાર કાઢી શકાય એવું અડધું ચોકડું

### ઉપયોગ :

૧. નાની ઉંમરના દર્દી (૧૭ વર્ષ સુધી)
૨. ઘણા બધા ખૂટતાં દાંતની જગ્યા માટે
૩. મોઢામાં રહેલા નાના દાંત માટે
૪. મોઢામાં લાંબી દાંત વગરની જગ્યામાં
૫. દર્દીના મોઢાના સૌંદર્ય માટે
૬. આર્થિક રીતે

### ઉપયોગ ક્યાં ન કરવો.

૧. જેને એકેલીક મટીરીયલ્સની એલર્જી હોય
૨. શારિરીક વિકલાંગ દર્દી તથા માનસિક દર્દી
૩. જે લોકોનું જડબાનું હાડકું ઘસાઈ ગયું હોય
૪. જેને મોટી જીભ હોય
૫. મોઢાની કાળજી જે ન રાખી શકે

### ફાયદો :

૧. બાજુના દાંતને પોતાની જગ્યા પરથી ખસતા રોકે
૨. બાજુના દાંતને ઘસવો ન પડે
૩. તેનો ઉપયોગ વધઘટ થયેલી જગ્યામાં થઈ શકે છે.
૪. ચોકઠાની બરાબર ઉંચાઈ રાખવામાં મદદરૂપ થાય

### ગેરફાયદા :

૧. જડબાના હાડકા ગળાય જાય
૨. મોઢાની અંદર રહેલી ચામડીને નુકશાનદાયક છે
૩. ચોકઠાના રહેલ ક્લેસ્ટ્રા બાજુનાં દાંતના રહેલ ઈનેમલ (દાંતની બહારનું આવરણ)ના તત્વને ઓછું કરે છે.
૪. મટીરીયલ્સની એલર્જી

## COLLEGE OF DENTAL SCIENCES & RESEARCH CENTRE

(DEPARTMENT OF PUBLIC HEALTH DENTISTRY) Guided by : Dr. Harshvardhan Chaudhary

• Valay A. patel • Vishva Y. Patel

• Vishva H. Patel • Shailee Patil

(Final Year B.D.S. - 2016-17)

# RECENT ADVANCEMENT IN DENTISTRY

## Recent Advancements in Dentistry

<h3>Digital Dental Mirror</h3>  <ul style="list-style-type: none"> <li>It has a loupe and a microscope to capture image and videos just like an intracoral camera.</li> <li>It offers operator to work directly using mirror or indirectly using high resolution image</li> </ul>	<h3>Laser</h3>    <p><b>Soft tissue application:</b></p> <ul style="list-style-type: none"> <li>Crown lengthening</li> <li>Removal of excess gingival growth</li> <li>gingivectomy and gingivoplasty</li> <li>Removal of soft tissue from 2<sup>nd</sup> molar area</li> </ul> <p><b>Hard tissue application:</b></p> <ul style="list-style-type: none"> <li>Isolate removal of caries and re-orientation of crystalline structure of enamel</li> </ul> <p><b>Application in dental materials:</b></p> <ul style="list-style-type: none"> <li>Polymerization of resin based materials</li> <li>Increase the bond strength of resin based materials to tooth surface</li> </ul>	<h3>Dental Microscopes</h3>   <ul style="list-style-type: none"> <li>Used to reveal fine details and structure that are invisible to the naked eye</li> <li>Provide accurate diagnosis and new approach to the treatment</li> </ul>	
<h3>Magnification Loupe</h3>  <p>Evidence the vision of the operator by magnifying the objects and increasing the depth of the vision</p>	<h3>Air Abrasion</h3>  <p>It is a powerful and focused narrow beam of 27 microns aluminum oxide particles</p> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>Abrades teeth without producing heat, vibration and noise</li> <li>No fracturing of the enamel or microfracture</li> <li>Can performed without anesthesia</li> <li>No tactile sensation</li> </ul>	<h3>Ultrasonic Handpiece</h3>  <ul style="list-style-type: none"> <li>It will activate an endodontic file resulting in three dimensional cutting</li> <li>Speed 1500-3000 cycle/second</li> <li>Quicker and easier root canal preparation</li> </ul>	<h3>Thermoplastic Gutta Percha</h3>  <ul style="list-style-type: none"> <li>The complexity of the root canal system (lateral canals and accessory canal).</li> <li>Adequate filling of this canal is desirable along with better adaptation of currently used gutta percha to the canal wall.</li> <li>Heating gutta percha is used as it will easily flows into a simplification of the root canal.</li> </ul>
<h3>Nano Dentistry</h3>  <ul style="list-style-type: none"> <li>Fillers found in modern composites are one micrometre in size</li> <li>Nano scale are more than hundred times smaller than traditional fillers</li> <li>Nano fillers have the perfect size to penetrate the typical micro sized key hole etch pattern of enamel and smallest dentin channel.</li> </ul>	<h3>The WAND</h3>  <ul style="list-style-type: none"> <li>The wand uses a micro procedure and an electronically controlled motor to deliver the anesthetic solution at constant slow rate and motor controlled pressure.</li> <li>Delivery of the anesthetic solution is activated with the foot pedal.</li> </ul> <p><b>Advantages:</b></p> <ol style="list-style-type: none"> <li>When used for palatal, nasopalatine and superior alveolar nerve blocks causes less pain and better distribution and possible increase safety</li> <li>The technique of rotating of needle during insertion avoids deflection, resulting in precise injection</li> </ol>	<p style="text-align: center;">-: Prepared by :- Kashyap Mangulkhya, Vinay Nayakpara III - B.D.S. (2009-10)</p> <p style="text-align: center;">-: Guided by :- Dr. Rushabh Dagli Senior Lecturer</p> <p style="text-align: center;">Dr. Viral Patel Prof. In-Charge</p> <p style="text-align: center;">Department of Preventive and Community Dentistry CDSRC, Bopal, Ahmedabad.</p>	



# GREEN TEA IN DENTISTRY

## GREEN TEA IN DENTISTRY

**INTRODUCTION:** Widely consumed in china, japan, korea and morocco. it has various health benefits. It has cognitive function and positive impact on bone density, caries, periodontal diseases.

### CLASSIFICATION OF TEA

CONTENT	% DRY WEIGHT
PROTEIN	15-20
AMINO ACID	1-4
FIBER	26
CARBOHYDRATE	7
LIPID	7
PIGMENTS	2
MINERAL	5
PHENOLIC COMPOUND	30
CATECHINS	
EPIGALLOCATECHIN 3 GALLATE	59
EPIGALLOCATECHIN	19
EPICATECHIN 3 GALLATE	13.6
EPICATECHIN	6.4

### ACTION OF CATECHINS

**ANTI OXIDATIVE:** Scavange reactive o<sub>2</sub> and nitrogen species.  
Induces antioxidant enzymes.

**CAPACITY TO MODULATE PHYSICAL STRUCTURES OF CELL MEMBRANE**

**ANTIMICROBIAL ACTIVITY:** Catechin has anti microbial activity against S.aureus, H.pylori, E.coli.

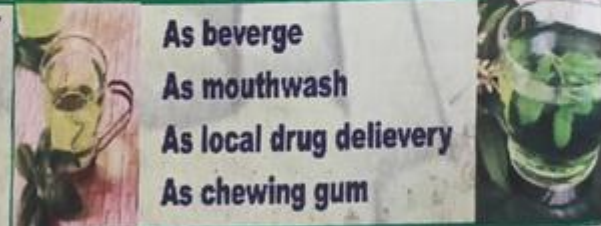
**ANTICARIOGENIC ACTIVITY:** Against S.mutans, Streptococcus sobrinus.

### COMPOSITION OF GREEN TEA

1. Non Fermented Green Tea
2. Semi Fermented Oolong Tea
3. Fermented Black and Red Tea

Department of Public Health Dentistry  
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### MODES OF CONSUMPTION



### PROCESSING OF GREEN TEA



### EFFECT OF GREEN TEA ON PERIODONTIUM AND TEETH

1. Inhibiting effect on: P.gingivalis, P.melanogenicus, P.intermedia, Staph aureus, E.coli.
2. Effect on host defense-gingival cell and inflammatory response: Prevent gingival and periodontal inflammation.
3. Effect on bone and bone cell: Inhibit bone resorption by inducing apoptotic cell death of osteoclast and osteoclast like multinucleated giant cell.
4. Effect on collagenase activity: Inhibitory effect on collagenase enzyme.
5. Reduces plaque formation on tooth surfaces.

Viral  
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# RURAL ORAL HEALTH PROGRAMS

## Rural Oral Health Programs

India is predominantly rural, as over 72% population continue to live in rural areas.

More than 90% of dentists are available in urban settings and only 10% available to 72% of rural population. The dentist-population ratio in urban areas is 1:30,000 whereas that in rural areas is 1:3,00,000

Oral health is an integral component of general health.

### Most prevalent conditions

- Dental caries- in children
- Chronic periodontal disease- in adults
- Non-restored edentulous areas

### Reasons for poor oral health seeking in rural areas

- Poverty
- Biological, psychological, social and cultural problems
- High prevalence of tobacco chewing
- Lack of knowledge regarding importance of oral health and systemic effects
- Fear towards dentistry
- Non-availability of oral health care services
- Lack of dental man power
- Lack of required infrastructure
- Lack of political will
- Geographic isolation



DEPARTMENT OF PUBLIC HEALTH DENTISTRY  
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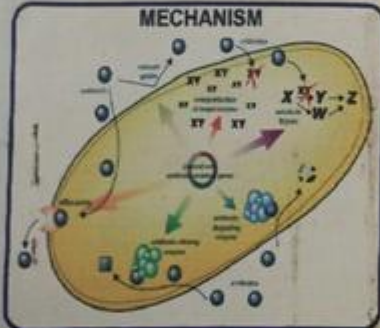
## PROGRAMS



# ANTI MICROBIAL RESISTANCE

## AMR - AntiMicrobial Resistance

AMR is resistance of microorganism to an antimicrobial medicine to which it was previously sensitive.



### CAUSES

- Inadequate national commitment to a comprehensive and coordinated response, ill-defined accountability and insufficient engagement of communities;
- Weak or absent surveillance and monitoring systems;
- Inadequate systems to ensure quality and an interrupted supply of medicines;
- Inappropriate and irrational use of medicines, including in animal husbandry;
- Poor infection prevention and control practices;
- Depleted arsenals of diagnostics, medicines and vaccines as well as insufficient research and development on new products.

### Some Examples of AMR in Dentistry

- Antepectin resistance has been described in *Haemophilus* spp. *Haemophilus* and *Prevotella* species isolated from root canals.
- Lactobacillus* spp., *Gemella morbillorum* and an isolate of *Actinomyces* isolated associated with odontogenic abscesses are resistant to metronidazole.
- Staphylococcus aureus* show high resistance to cephalosporins.
- Resistance to tetracyclines and macrolides is widespread.
- Chlorhexidine resistance is not so much developed but application for more than one week can cause an increased resistance in *S. mutans* and *S. sobrinus*.

### Implications in Dentistry

- Management of active infectious disease
- Use prophylactic antibiotics when there is a clear indication to do so.
- Orofacial infections must be treated with local drainage whenever possible.
- The routine use of antibiotics before or after extractions or endodontics should be avoided.
- In the case of superficial infections, topical antiseptics (e.g. chlorhexidine) or antiseptics should be considered instead of systemic antimicrobial agents.

### AMR IN GENERAL

Resistance to earlier generation antimalarial medicines such as chloroquine and sulfadoxine-pyrimethamine is widespread in most malaria-endemic countries.

About 400 000 new cases of multidrug-resistant tuberculosis (MDR-TB) emerge annually, causing at least 150 000 deaths.

A high percentage of hospital-acquired infections are caused by highly resistant bacteria such as methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci.

### PREVENTION

- Rational use of antibiotics
- Topical dermatological preparations such as those containing tea tree oil and thyme oil may be effective in preventing transmission of CA-MRSA.
- Vaccines
- Cytokines instead of antibiotics to animal feed
- Phage therapy

### GLOBAL CONCERN

- AMR results in prolonged illness and higher risk of death.
- AMR hampers the control of infectious disease.
- AMR threatens a return to the control of preantibiotic era.
- AMR increases the cost of health care.
- AMR jeopardizes health care gain to society.
- AMR threatens health security, & damages trade and economics.

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# BIOMEDICAL WASTE MANAGEMENT

<b>BIOMEDICAL WASTE MANAGEMENT</b>		
<b>Category</b>	<b>Waste Category</b>	<b>Treatment</b>
<b>Category 1</b>	<b>Human anatomical waste</b> (Human tissues, organs, body parts)	Incineration/ Deep burial
<b>Category 2</b>	<b>Animal Waste</b> (Animal tissues, organs, body parts carcasses, bleeding parts, fluids, blood and experimental animals used in research, waste generated by veterinary hospitals colleges, discharge from hospital, animal house)	Incineration/ Deep burial
<b>Category 3</b>	<b>Microbiology and biotechnology waste</b> (Waste from laboratory cultures, stocks or specimens of micro-organisms, live or attenuated vaccines, human and animal cell culture used in research and infectious agents from research and industrial laboratories, waste from production of biologicals, toxins, dishes and devices and for transfer of cultures)	Local autoclaving/ Microwaving/ Incineration
<b>Category 4</b>	<b>Waste sharps</b> (Needles, syringes, scalpels, blades, glass etc. that may cause puncture and cuts. This includes both used and unused sharps)	Disinfection (chemical treatment/ autoclaving/ microwaving and mutilation shredding)
<b>Category 5</b>	<b>Discarded medicine and cytotoxic drugs</b> (Wastes comprising of out dated, contaminated and discarded medicines)	Incineration, destruction and drugs disposal in secured landfills
<b>Category 6</b>	<b>Solid waste</b> (Items contaminated with blood and fluids including cotton, dressings, soiled plaster casts, linen, beddings, other material contaminated with blood)	Incineration autoclaving/ microwaving
<b>Category 7</b>	<b>Solid waste</b> (Waste generated from disposable items other than the waste sharps such as tubing, catheters, intravenous sets etc.)	Disinfection by chemical treatment, autoclaving/ microwaving and mutilation/ shredding
<b>Category 8</b>	<b>Liquid waste</b> (Waste generated from laboratory and washing, cleaning, housekeeping and disinfecting activities)	Disinfection by chemical treatment and discharge into drains
<b>Category 9</b>	<b>Incineration ash</b> (Ash from incineration of any bio-medical waste)	Disposal in municipal landfill
<b>Category 10</b>	<b>Chemicals used in production of biological, chemicals used in disinfection, as insecticides, etc.</b>	Chemical treatment and discharge into drains for liquids and secured landfill for solids

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