



# ملخصات انفوجرافيك في طب الأسنان

## INFOGRAPHIC SUMMARIES IN **DENTISTRY**

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*King Fahd National Library Cataloging-in-Publication Data*

Alshehri, Mohammed Abdullah Mohammed  
INFOGRAPHIC SUMMARIES IN DENTISTRY. / Mohammed  
Abdullah Mohammed Alshehri - 1. .- Riyadh , 2022

27p ; B5cm

ISBN: 978-603-04-4401-4

1- DENTISTRY            I-Title  
617.6 dc                1444/4685

**L.D. no. 1444/4685**  
**ISBN: 978-603-04-4401-4**



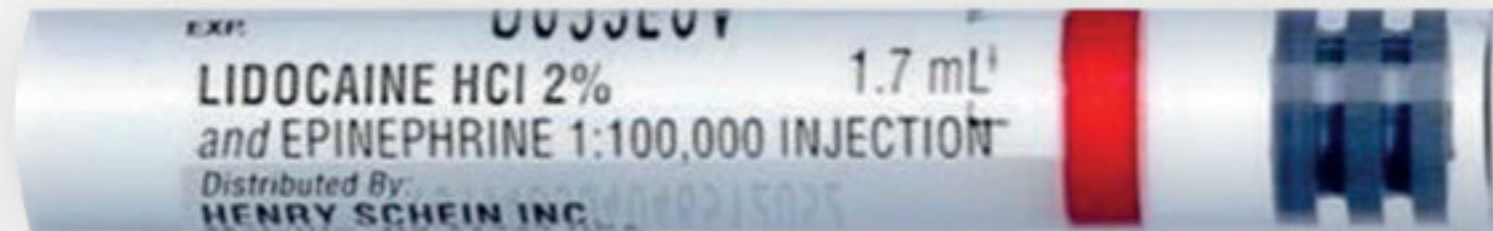
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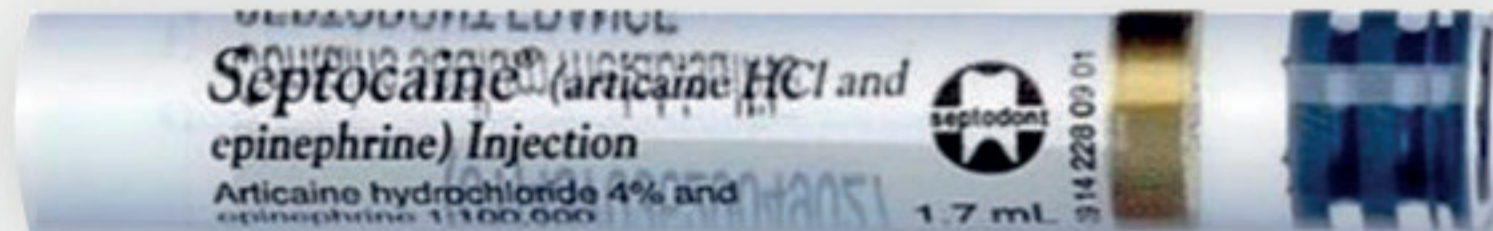


# LOCAL ANESTHESIA

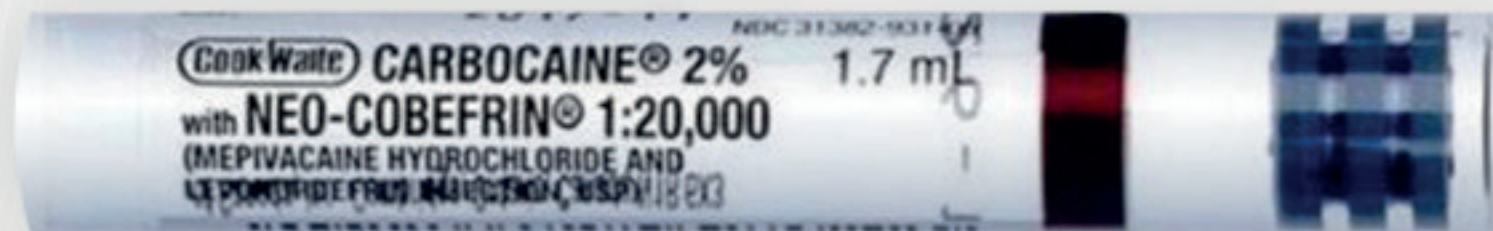
## Lidocaine: xylocaine



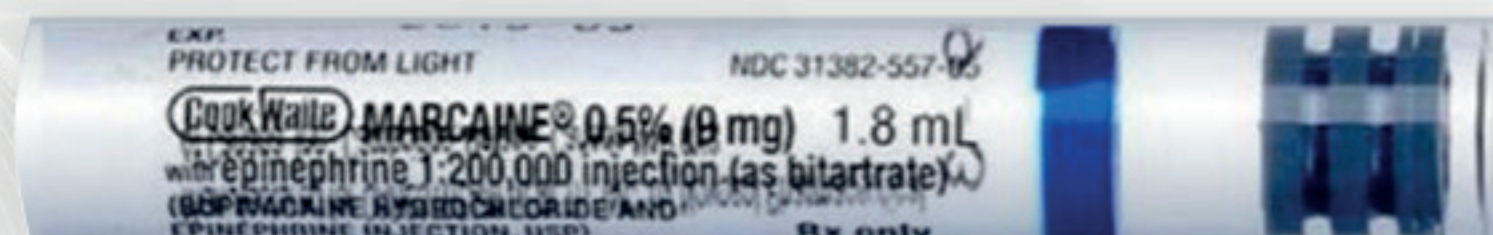
## Articaine: septocaine



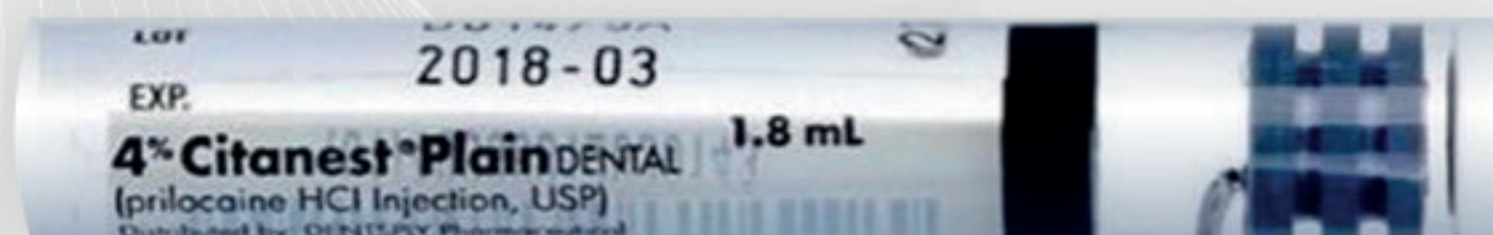
## Mepivacaine: carbocaine



## Bupivacaine: marcaine

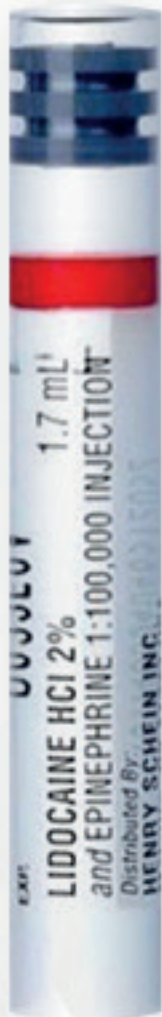


## Prilocaine: citanest





# LOCAL ANESTHESIA



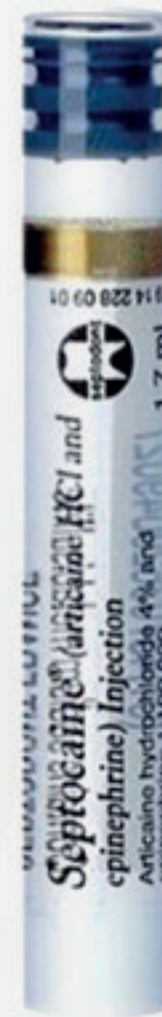
## Lidocaine

2% Lidocaine with  
1:100,000 epi

Most commonly used  
anesthesia for intraoral  
injections, good efficacy.

Good for maxillary infiltration,  
nerve blocks, PDL, etc.

Safe for use during  
pregnancy.



## Articaine

4% Articaine w/ 1:100,000 epi

Great ability to diffuse which  
makes it more optimal for  
mandibular infiltrationst.

Can be used for Inferior  
Alveolar.

Nerve Block (IANB) although  
some research suggests the  
potential for increased risk  
of paresthesia.

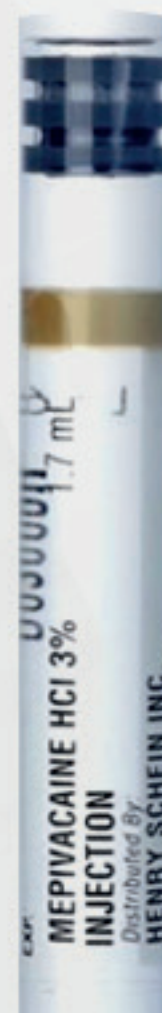


## Mepivacaine

3% Mepivacaine Plain

Good for injection around  
an abscess due to its  
higher pH.

Best anesthesia for patients  
with heart conditions  
where limited epinephrine  
is recommended.



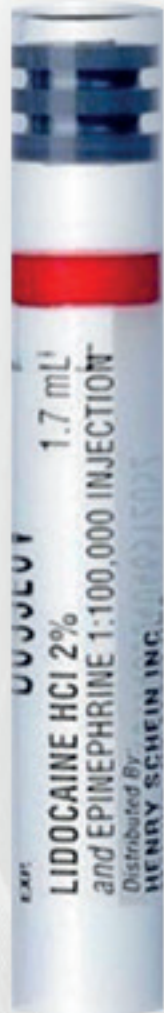
## Bupivacaine

0.5% Bupivacaine  
w/ 1:200,000 epi

Great for use before or after  
extractions & other surgery  
to help with post op pain  
management due to its  
long duration.



# LOCAL ANESTHESIA



## **Lidocaine 2%** **1:100,000 epi**

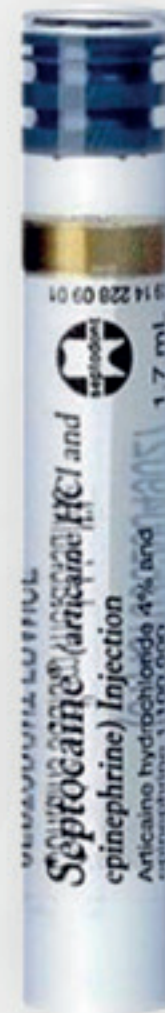
Brand Name  
**Xylocane**

Pupal Duration  
**60min**

Soft Tissue Duration  
**180-300min**

Max Dose In 70kg Person  
**11 Carpules \*based On Epi**

Special Info  
**Go-to "Safe" Anesthetic**



## **Articaine 4%** **1:100,000 epi**

Brand Name  
**septocaine**

Pupal Duration  
**60-75 Min**

Soft Tissue Duration  
**180-300min**

Max Dose In 70kg Person  
**7 Carpules**

Special Info  
**Perfuses Through Bone**



## **Mepivacaine 2%** **1:20,000 levonordephrin**

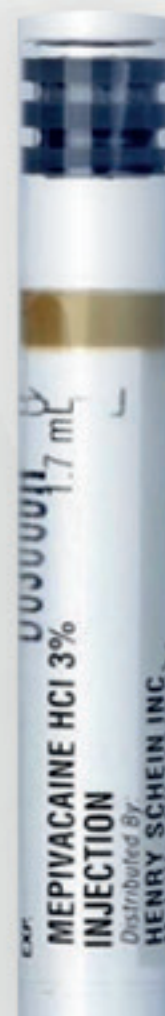
Brand Name  
**carbocaine**

Pupal Duration  
**60min**

Soft Tissue Duration  
**180-300 Min**

Max Dose In 70kg Person  
**11 Carpules**

Special Info  
**Pts With Cardiac Issues**



## **Mepivacaine 3%** **Plain (no epi)**

Brand Name  
**Carbocaine**

Pupal Duration  
**5-10min**

Soft Tissue Duration  
**30-45min**

Max Dose In 70kg Person  
**7.5 Carpules**

Special Info  
**Short Lasting**



# LOCAL ANESTHESIA



## Prilocaine 4% Plain (no epi)

Brand Name  
**Citanest**

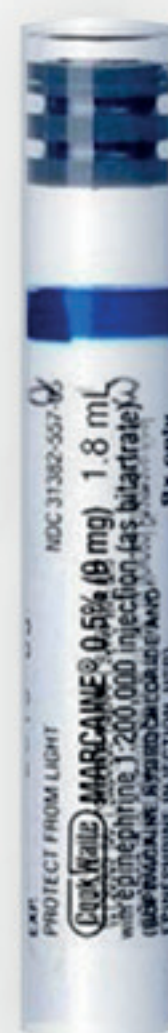
Pupal Duration  
Infil **10 - 15 Min**  
Block **40-60 Min**

Soft Tissue Duration  
Infil **60 - 120 Min**  
Block **120-240 Min**

Max Dose In 70kg Person  
**8.3 Carpules**

Special Info  
**Short Lasting**

Prilocaine with felypressin could be a good choice for patients who have contraindication to the use of lidocaine with adrenaline



## Bupivacaine 5% 1:200,000 epi

Brand Name  
**Marcaine**

Pupal Duration  
**>90min**

Soft Tissue Duration  
**240-720min**

Max Dose In 70kg Person  
**10 Carpules**

Special Info  
**Long Lasting**

## MAXIMUM DOSE OF VASOCONSTRICTOR

**EPINEPHRINE 1:50.000**

**EPINEPHRINE 1:100,000**

**EPINEPHRINE 1:200,000**

**LEVONORDEPHRINE 1:20.000**

**70KG  
PATIENT**

**5.5 CARPS**

**11 CARPS**

**11 CARPS**

**11 CARPS**

**70KG CARDIAC  
PATIENT**

**AVOID**

**2 CARPS**

**4 CARPS**

**2 CARPS**



# DIGITAL GUIDE FOR **ANTIBIOTICS**



Amoxicillin



Amoxicillin + Clavulunate



Azithromycin



Cephalexin



Ciprofloxacin



Clarithromycin



Clindamycin



Dicloxacillin



Doxycycline



Metronidazole



Penicillin V Potassium



Tetracycline



# DIGITAL GUIDE FOR ANTIBIOTICS

## AMOXICILLIN

### TABS

250mg, 500mg, 875mg

### INDICATIONS

Dental infections, dental abscess, porphyria

### EXAMPLE PRESCRIPTION

250mg 3 times a day for 5 to 7 days

500mg 3 times a day for 5 to 7 days

875mg 2 times a day for 5 to 7 days

**Max dose:** 40 mg/kg/day

Not to be prescribed in case of penicillin allergy. Alternatives in case of penicillin allergy: Clindamycin, Clarithromycin



## AMOXICILLIN CLAVULANATE

### TABS

250/125mg, 500/125mg, 875/125mg

### INDICATIONS

Dental infections, dental abscess, porphyria

### EXAMPLE PRESCRIPTION

250/125mg 3 times a day for 5 to 7 days

500/125mg 3 times a day for 5 to 7 days

875/125mg 2 times a day for 5 to 7 days

**Max dose:** 40 mg/kg/day

Not to be prescribed in case of penicillin allergy.



## AZITHROMYCIN

### TABS

250mg, 500mg, 600mg

### INDICATIONS

Dental infections, dental abscess, sinusitis

### EXAMPLE PRESCRIPTION

250mg take 2 tablets in day 1, then 1 tablet days 2 to 5

500mg 1 time a day for 3 days

600mg 1 time a day for 3 days (rarely used in dentistry)

Avoid in patients with cardiac problems or arrhythmias (May cause QT prolongation)



## CEPHALEXIN

### TABS

250mg, 500mg

### INDICATIONS

Dental infections, dental abscess, prophylaxis, sinus communications

### EXAMPLE PRESCRIPTION

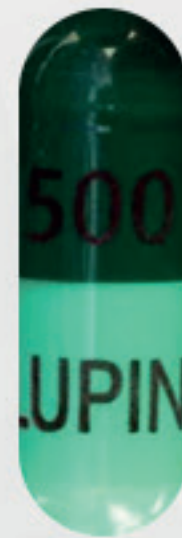
250mg 4 times a day every 6 hours for 7 days

500mg 4 times a day every 6 hours for 7 days

**Max dose:** 4 g/24 hours

Contraindicated in patients with known allergy to the cephalosporins.

10 - 25% chance of cross reactivity with penicillins





# DIGITAL GUIDE FOR ANTIBIOTICS

## CIPROFLOXACIN

### TABS

250mg, 500mg, 750mg

### INDICATIONS

Dental infections, dental abscess, prophylaxis

### EXAMPLE PRESCRIPTION

250mg 2 times a day for 7 days

500mg 2 times a day for 7 days

750mg 2 times a day for 7 days

**Max dose:** 40 mg/kg/day

May cause GI upset or GI symptoms, headache, restlessness, and rash.

Can increase the effects or toxicity of theophylline, warfarine, tizanidine, and cyclosporine. If patient is on antacids, defer antacids until 2-4 hours after ciprofloxacin dose. Can increase the risk of tendon tearing, avoid to prescribe for athletics

## CLARITHROMYCIN

### TABS

250mg, 500mg

### INDICATIONS

Dental infections, dental abscess, prophylaxis

### EXAMPLE PRESCRIPTION

250mg 2 times a day for 7 days

500mg 2 times a day for 7 days

**Max dose:** 1000mg/24 hours

Avoid in patients with known allergy to Clarithromycin.

Avoid in patients with cardiac problems or arrhythmias (QT prolongation)

## CLINDAMYCIN

### TABS

75mg, 150mg, 300mg

### INDICATIONS

Dental infections, dental abscess, prophylaxis

### EXAMPLE PRESCRIPTION

75mg 4 times a day for 7 days

150mg 4 times a day for 7 days

300mg 3 times a day for 7 days

Dose can range from 150 to 450 mg/dose every 6-8 hr for 7-10 days.

**Max dose:** 1.8g/24 hr.

Caution: higher risk of pseudomembranous colitis

## DICLOXACILLIN

### TABS

250mg, 500mg

### INDICATIONS

Dental infections, dental abscess, prophylaxis

### EXAMPLE PRESCRIPTION

250mg 4 times a day for 7 days

500mg 4 times a day for 7 days

125-500mg/dose every 6 hr.

**Max dose:** 4g/24 hours

Contraindicated in patients who have shown penicillin allergy



# DIGITAL GUIDE FOR ANTIBIOTICS

## DOXYCYCLINE

### TABS

50mg, 100mg

### INDICATIONS

Dental Infections, dental abscess, prophylaxis, post operative periodontal procedures.

### EXAMPLE PRESCRIPTION

50mg 2 times per day for 7 days

100mg 2 capsules day 1 then 1 capsule once per day for 7 days

Not to be prescribed in case of Tetracycline allergy  
100mg can be prescribed as a prophylaxis after a ridge augmentation or bone graft procedures

## METRONIDAZOLE

### TABS

250mg, 500mg

### INDICATIONS

Dental Infections, dental abscess, prophylaxis, Acute oral infection (anaerobes), periodontal disease.

### EXAMPLE PRESCRIPTION

250mg 4 times a day for 7 days

500mg 3 times a day for 7 days

**Max dose:** 40 mg/kg/day

It can be taken in conjunction with Amoxicillin to target anaerobes

## PENICILLIN V POTASSIUM Penicillin-VK

### TABS

250mg, 500mg

### INDICATIONS

Dental infections, dental abscess, prophylaxis

### EXAMPLE PRESCRIPTION

250mg 4 times a day for 7 days

500mg 4 times a day for 7 days

**Max dose:** 3g/24 hours

Can be prescribed either as 3 or 4 times/day

Not to be prescribed in case of penicillin allergy

## TETRACYCLINE

### TABS

250mg, 500mg

### INDICATIONS

Dental infections, dental abscess, prophylaxis

### EXAMPLE PRESCRIPTION

250mg 3 times per day for 14 days

500mg 2 times per day for 14 days

1-2 g/24 hours every 6-12hr.

**Max dose:** 3g/24 hours

Contraindicated in patients who have shown tetracycline allergy and pregnant women



# DIGITAL GUIDE FOR ANTIBIOTICS



Amoxicillin



Amoxicillin + Clavulunate



Azithromycin



Cephalexin



Ciprofloxacin



Clarithromycin



Clindamycin



Dicloxacillin



Doxycycline



Metronidazole



Penicillin V Potassium



Tetracycline

## Antibiotic Prophylaxis

Single dose 30-60 minutes before procedures

| Situation  | Agent   | Adults       | Children                           |
|--|---|--------------|------------------------------------|
| Oral   | Amoxicillin   | 2 g          | 50 mg/kg                           |
| Unable to take oral medication   | Ampicillin<br>OR<br>cefazolin or<br>ceftriaxone                             | 2 g IM or IV | 50 mg/kg IM or IV                  |
|  |   | 1 g IM or IV | 50 mg/kg IM or IV                  |
| Allergic to penicillin or ampicillin—oral                                  | Cephalexin*<br>OR<br>azithromycin or<br>clarithromycin<br>OR<br>doxycycline | 2 g          | 50 mg/kg                           |
|  |   | 500 mg       | 15 mg/kg                           |
|  |   | 100 mg       | <45 kg, 4.4mg/kg<br>>45 kg, 100 mg |
| Allergic to penicillin or ampicillin and<br>unable to take oral medication | Cefazolin<br>or<br>ceftriaxone†   | 1 g IM or IV | 50 mg/kg IM or IV                  |



# ETCHING TECHNIQUES FOR RESTORATIVE DENTISTRY

## What is Acid etching in dentistry?

Phosphoric acid is commercially available in concentrations between **30%** and **40%**, with **37%** being the most common

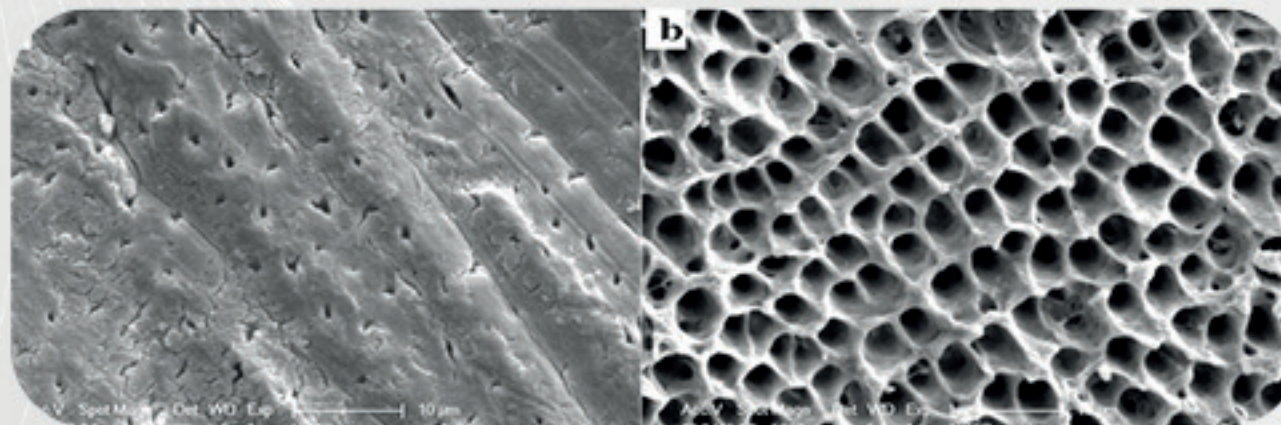
Used to remove the smear layer present after tooth preparation which create rough surface microscopically, increasing retention of restorative materials. It opens the dentinal tubules to allow for better adhesion between the tooth and restorative materials.



## ● Removal of Smear Layer on Dentin Tubules

Before

After





# ETCHING TECHNIQUES

## FOR RESTORATIVE DENTISTRY

### Total Etch

#### Technique:

Phosphoric acid (etch) applied to entire preparation of tooth including enamel and dentin. Tooth is thoroughly rinsed and dried.

**Enamel requires ~25 seconds of exposure to etch.**

**Dentin should not be exposed to etch for >15 seconds.**

#### Considerations:

Over-etching dentin results in postoperative sensitivity as well as decrease in bond strength.



### Selective Etch

#### Aka Hybrid Etch

#### Technique:

Phosphoric acid etch is selectively placed on enamel only for ~25 seconds.

Tooth is thoroughly rinsed and dried.

#### Considerations:

Etching enamel has been shown to seldom produce postoperative tooth sensitivity. Etch and rinse then adhesive to enamel is shown to have increased bond strength.





# ETCHING TECHNIQUES FOR RESTORATIVE DENTISTRY

## Self-Etch Technique:



Self etching bond/primer placed and rubbed in for ~15 sec then air dried and cured.

### Considerations:

Shown to produce minimal to no sensitivity Easier technique, less steps.



## Considerations

Self-etch and selective-etch are shown to produce less postoperative tooth sensitivity Self etch is less technique sensitive.

Total-etch may cause more postoperative sensitivity if not done properly.

Selective etching combines the best of both the total etch technique and the self etching systems.



Total Etch



Selective Etch



Self-Etch



# Dental Adhesives History



**1873** Thomas Fletcher introduced the first tooth-colored filling material, silicate cement

**1904** Steenbock introduced an improved version

**1940s** Otto Röhm developed the first acrylic resins

**1948** The first dental acrylic resin product was introduced (better color stability but significant shrinkage, limited stiffness, and poor adhesion)

**1951** Oscar Hagger developed the first dimethacrylate molecule (cross-polymerized matrix)

**1955** Michael Buonocore published a milestone article that described a simple method of increasing the adhesion of acrylic fillings to enamel

**1962** Ray Bowen and others developed a large-molecule, hydrophobic dimethacrylate monomer (Bis-GMA) which forms the basis of present-day composite resins because of limited shrinkage and fracture resistance

**1964** The production of first dental product with more durable and color-stable dimethacrylate

**1969** first use of Bis-GMA in dental composite



# Dental Adhesives



## 1st generation

GPDM by Hagger can penetrate the dentin

1952

## 2nd generation

Smear layer maintained but poor results (5-6 MPa)

1970

## 3rd generation

Modified or completely removed smear layer

1980

## 4th generation

Three steps (etch and rinse) The golden standard

1980  
Late

## 5th generation

Two-step (etch-and-rinse)

1990  
Early

## 6th generation

Two-steps (self-etch) one-step (with mixing)

1990  
Late

## 7th generation

One-step (without mixing)

2000

## 8th generation

Universal adhesives with 10-MDP

2010



# Dental Adhesives

## 4th generation

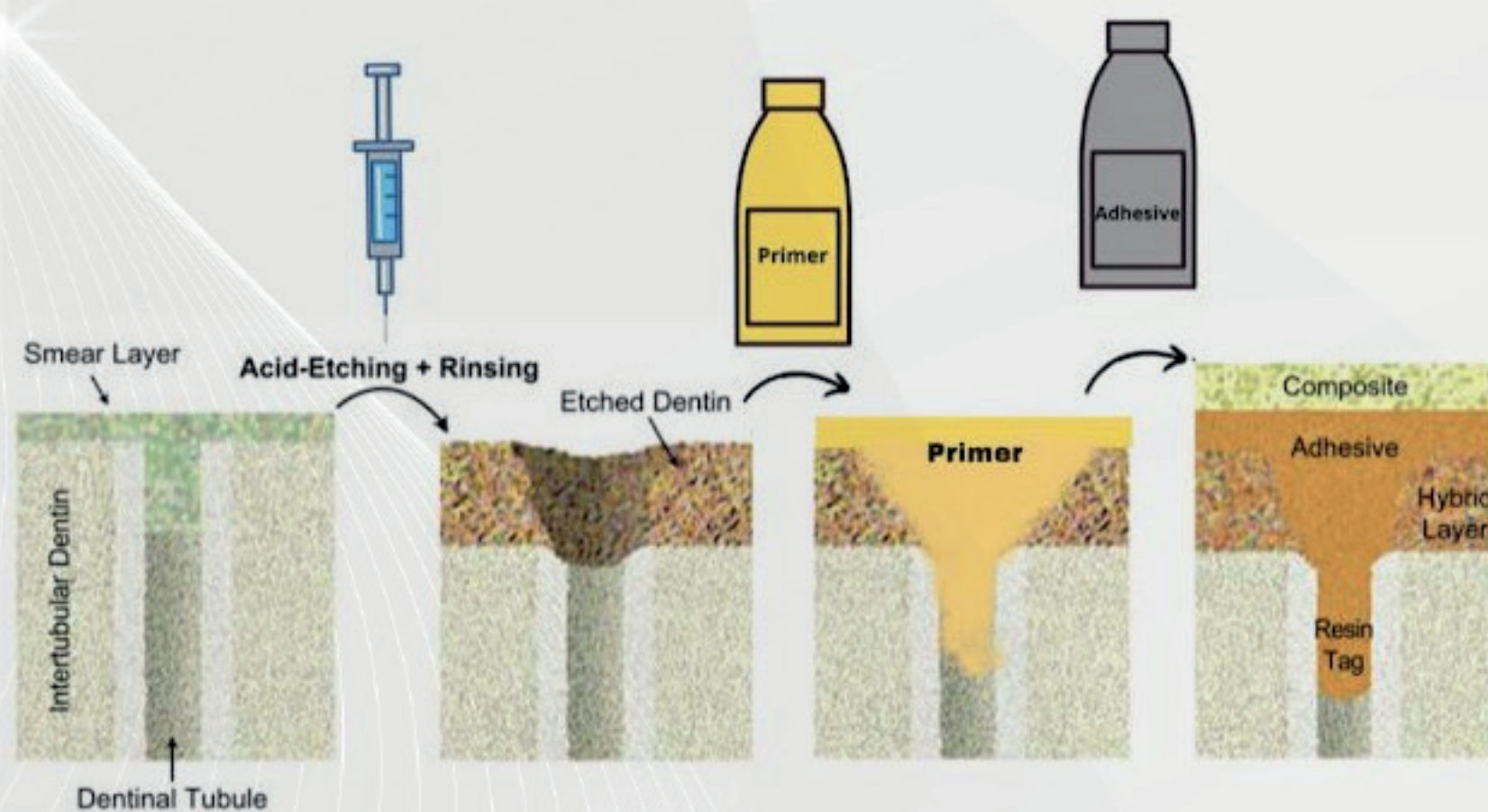
### The golden standard dentin bonding protocol (3 steps)

The application of acid 35-37.5% for 10-15 seconds (STEP 1) has the primary goal of removing the smear layer accompanied by the dissolution of the mineral surface of dentin and exposure of the collagen fibers, which result in increased tubule openings, allowing for the output of dentinal fluid.

Then, the primer is applied to the dentin surface (STEP 2) for which an ethanol/water-based solvent is used as a carrier for the monomer. The primer consists of bifunctional monomers (hydrophilic molecules and a hydrophobic part).

Then, application of the adhesive resin in the conditioned primed dentin (STEP 3), the adhesive fills the interspaces of the exposed collagen fiber network, penetrating the dentinal tubules, forming extensions or resin tags. Light scrubbing motion for 15 seconds is required. Gentle air blow or a dry brush is used to remove excesses and then light-curing is done (hybrid layer by Nakabayashi et al in 1982)

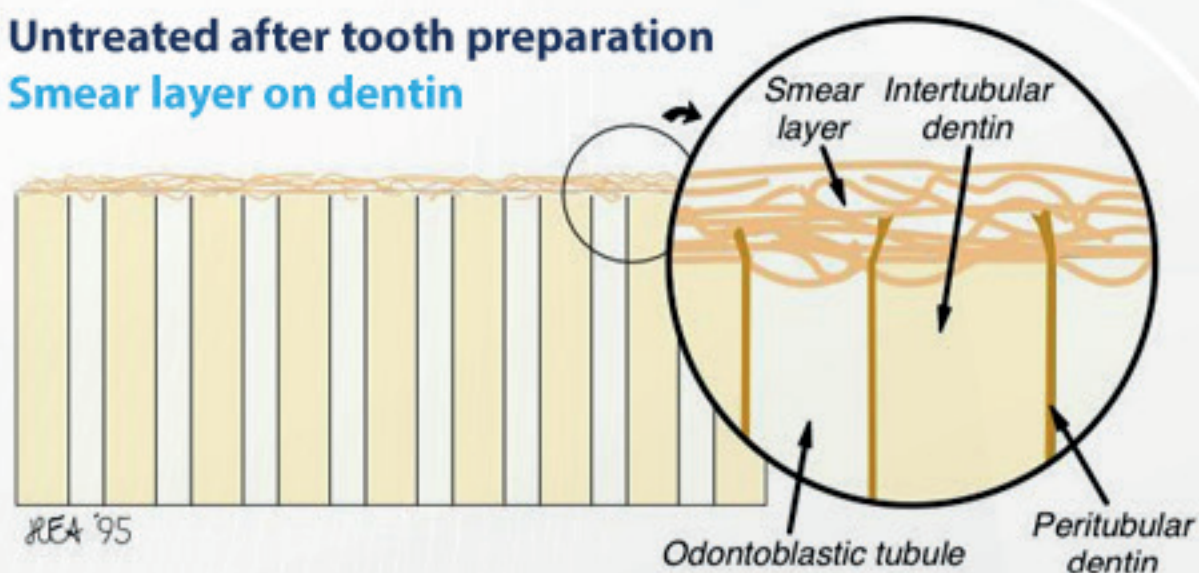
4th generation adhesives are the first ones able to fully develop the fundamentals mechanisms of adhesion (surface wetting, microretention, and chemical interaction).



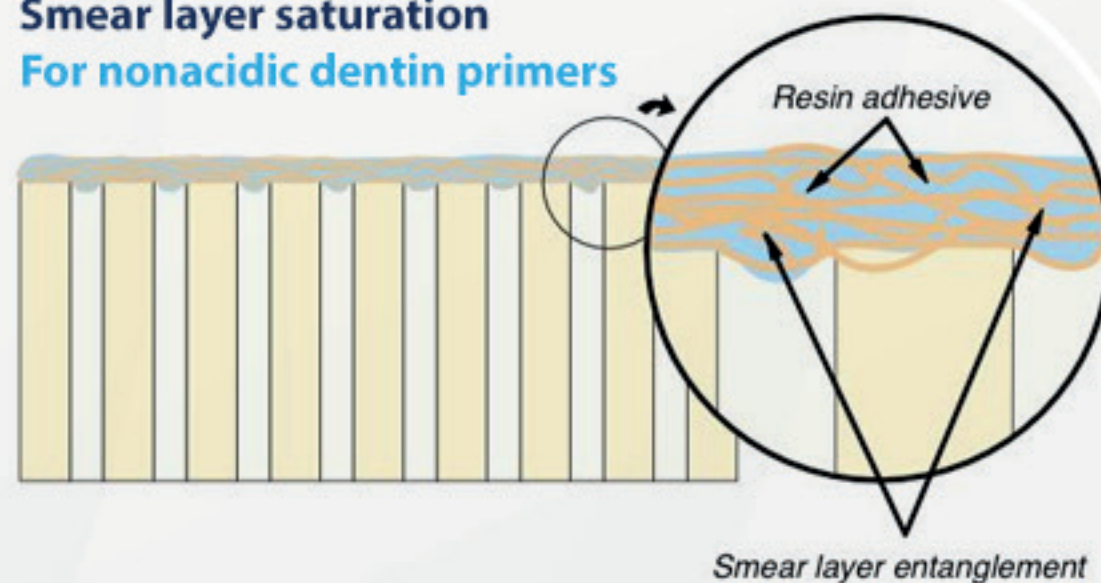


# Dental Adhesives

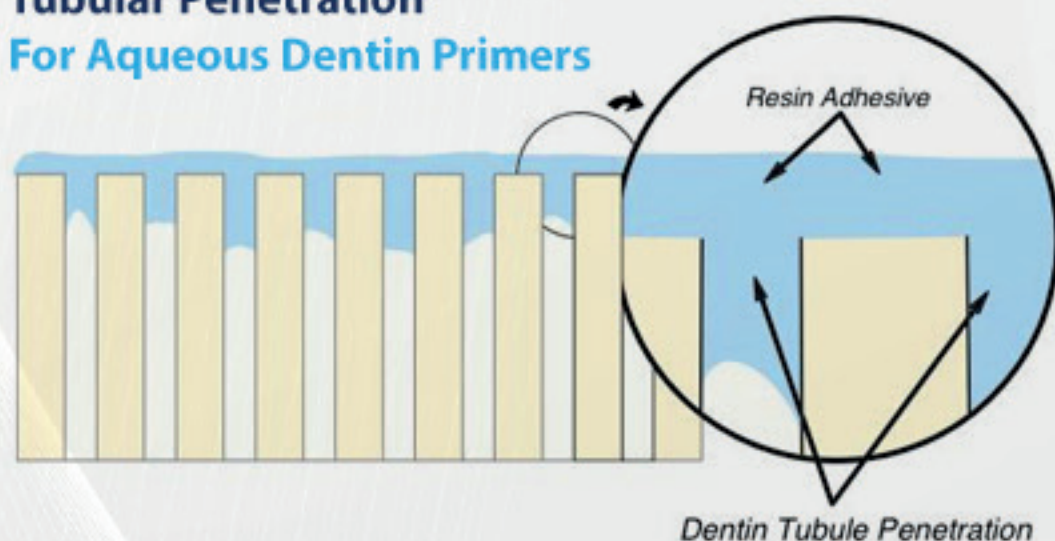
**Untreated after tooth preparation**  
**Smear layer on dentin**



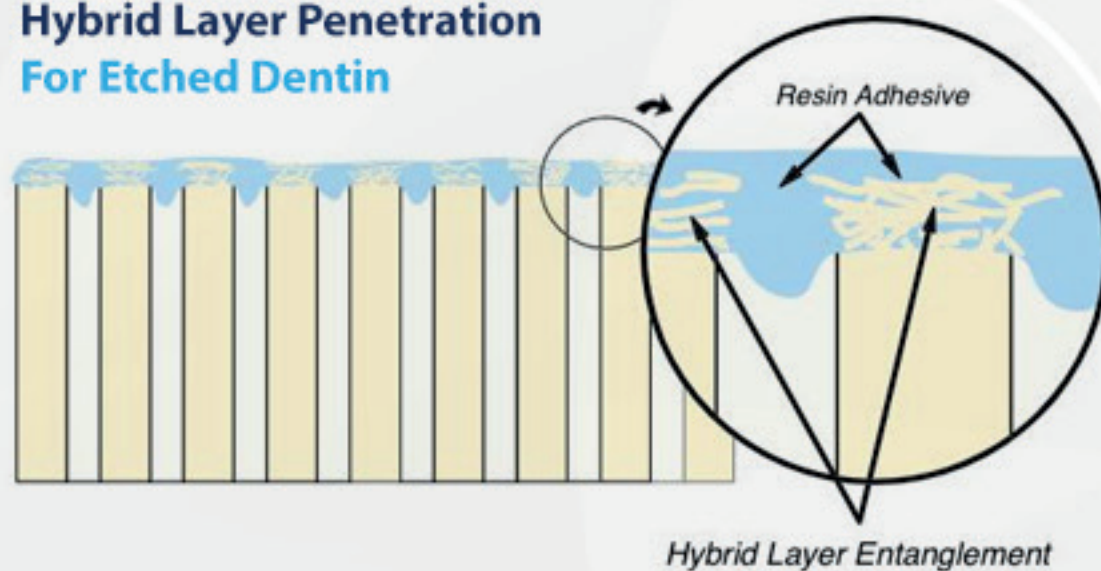
**Smear layer saturation**  
**For nonacidic dentin primers**



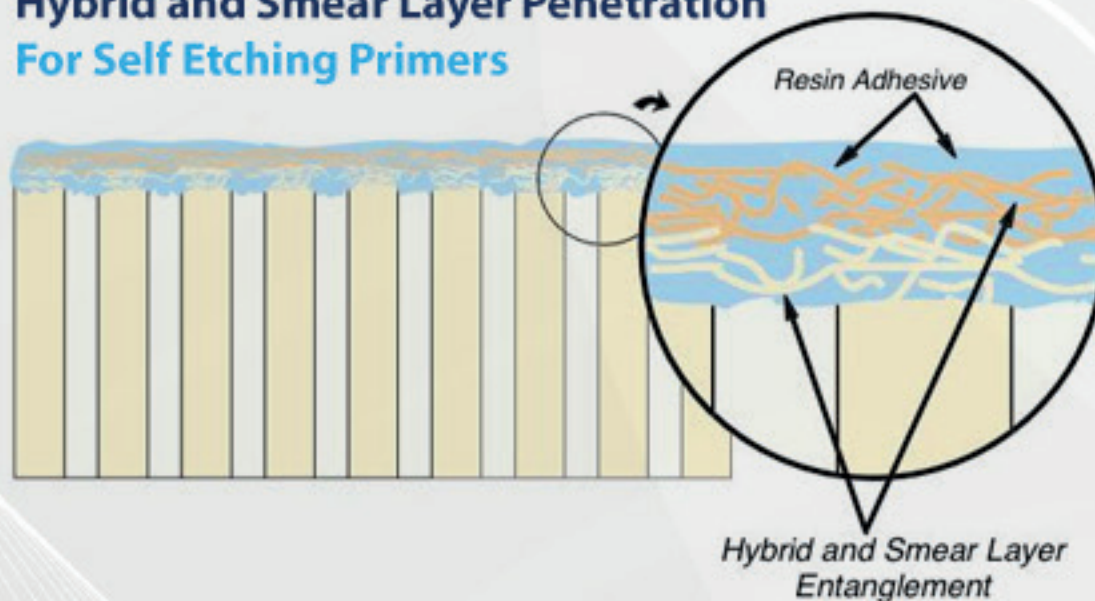
**Tubular Penetration**  
**For Aqueous Dentin Primers**



**Hybrid Layer Penetration**  
**For Etched Dentin**



**Hybrid and Smear Layer Penetration**  
**For Self Etching Primers**



**Hydrated dentin**

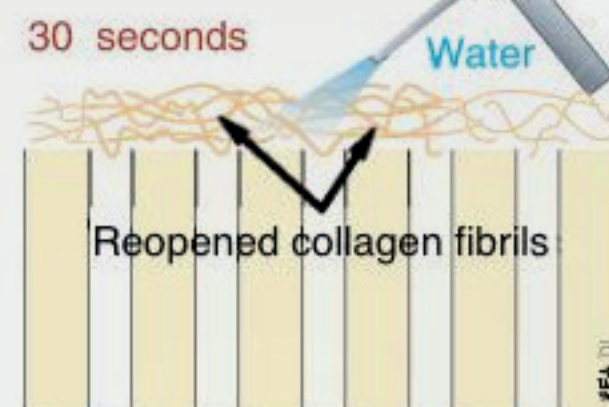


**Dessicated dentin**



50% bond strength loss

**Rehydrated dentin**



Bond strength restored



# Oral Analgesics for Dental Pain

- Nonsteroidal anti-inflammatory drugs (NSAIDs) have been shown to be more effective at reducing pain than opioid analgesics, and are therefore recommended as the first-line therapy for acute pain management.
- pain that lasts longer than 3 months is considered to be chronic.

**Table 1.** Examples of Anticipated Postprocedural Pain Levels According to Dental Intervention<sup>16</sup>

| Intervention   | Anticipated Postprocedural Pain |
|--|---------------------------------|
| Frenectomy<br>Gingivectomy<br>Routine Endodontics<br>Scaling/root planing<br>Simple extraction<br>Subgingival restorative procedures | Mild                            |
| Implant surgery<br>Quadrant periodontal flap surgery with bony recontouring<br>Surgical endodontics<br>Surgical extraction           | Moderate                        |
| Complex implant<br>Partial or full bony impaction surgery<br>Periodontal surgery   | Severe                          |



# Oral Analgesics for Dental Pain

## Nonopioid analgesics-mild to moderate pain

### 1. Nonsteroidal anti-inflammatory drugs (NSAIDs)

- in general, inhibit cyclooxygenase (COX), an enzyme involved in the conversion of arachidonic acid to prostaglandins, which are mediators of inflammation, fever, and pain
- act peripherally, meaning they help with pain by reducing inflammation at the site where it is occurring.



### Ibuprofen

#### TABS

400 mg, 600 mg, 800 mg

#### INDICATIONS

moderate to severe pain & Anti-inflammatory

#### EXAMPLE PRESCRIPTION

400mg every 4 hours

600mg every 6 hours

800mg every 8 hours

**Max dose:** 3.2g/24 hours

Can be prescribed either as 3 or 4 times/day

- Do not combine with any NSAIDs.
- Contraindicated to patients with aspirin intolerance/allergy.
- All NSAIDs have possible risks of stomach problems like bleeding, ulcer and stomach upset.
- Use with caution in patients taking Albuterol, NSAIDs can precipitate in asthmatic attacks.



### Naproxen

#### TABS

220 mg, 500 mg

#### INDICATIONS

Mild to moderate pain & Anti-inflammatory

#### EXAMPLE PRESCRIPTION

220mg take 2 tablets for the 1st dose, then 1 tablet every 8 - 12 hours

500 mg every 12 hours

**Max dose:** 1250 mg/24 hours

- Do not combine with any NSAIDs. Contraindicated to patients with aspirin intolerance/allergy.
- All NSAIDs have possible risks of stomach problems like bleeding, ulcer and stomach upset.
- Use with caution in patients taking Albuterol, NSAIDs can precipitate in asthmatic attacks.



# Oral Analgesics for Dental Pain

## Nonopioid analgesics-mild to moderate pain

### Celecoxib

Sulfa-Drug

#### TABS

100 mg, 200 mg, 400 mg

#### INDICATIONS

Mild to moderate pain

#### EXAMPLE PRESCRIPTION

100mg & 200 mg take 2 tablets for the 1st dose, then 1 tablet every 12 hours

400 mg every 12 hours

**Max dose:** 800 mg/24 hours

Elderly 400 mg/24 hours.

- Contraindicated to patients allergic to sulfa-drug.
- Prolonged use may increase cardiovascular events.
- Avoid for patient who had recent strokes.

### Aspirin

#### TABS

325 mg, 500 mg

#### INDICATIONS

Mild to moderate pain, Anti-inflammatory

#### EXAMPLE PRESCRIPTION

325mg take 2-3 tablets every 4-6 hours

500mg take 1-2 tablets every 4-6 hours

**Max dose:** 4 g/24 hours

- Do not combine with any NSAIDs.
- Contraindicated to patients with aspirin intolerance/allergy.
- All NSAIDs has possible risks of stomach problems like bleeding, ulcer and stomach upset.
- Use with caution in patients taking Albuterol, NSAIDs can precipitate in asthmatic attacks.



# Oral Analgesics for Dental Pain

## Nonopioid analgesics-mild to moderate pain

### 2. acetaminophen

- some evidence suggest it involves the inhibition of prostaglandin synthesis in the central nervous system.
- acts centrally by blocking the transmission of pain signaling within the central nervous system.

### Acetaminophen

#### TABS

500 mg

#### INDICATIONS

Mild to moderate pain

#### EXAMPLE PRESCRIPTION

500mg 1 tablet every 4 to 6 hours as needed for pain

**Max dose:** 3 g/24 hours

Do not give more than 5 doses/24 hours

Most common recommendations for healthy

patients are 500 mg & 650 mg q4-6 hours.

Max effective dose: 650 mg(or maximum single dose >

dose beyond this won't produce effect).

Should not be combined with any other medication containing Acetaminophen. Patients with liver problems are at increased risk of hepatotoxicity



## Oral Analgesics for Dental Pain



Due to these differing mechanisms of action, taking NSAIDs and acetaminophen in combination has been shown to be highly effective in reducing mild to moderate pain, as the pain is being blocked at both ends of the nociceptive pathway

**Table 2.** Analgesic Use According to Pain Level?

| Anticipated Pain Level | Oral Analgesic Options  |
|------------------------|---|
| Mild                   | Ibuprofen 200-400 mg as needed for pain every 4 to 6 hours  |
| Mild to Moderate       | Ibuprofen 400 to 600 mg fixed interval every 6 hours for 24 hours then<br>Ibuprofen 400 mg as needed for pain every 4 to 6 hours  |
| Moderate to Severe     | Ibuprofen 400 to 600 mg plus acetaminophen 500 mg fixed interval every 6 hours for 24 hours then<br>Ibuprofen 400 mg plus acetaminophen 500 mg as needed for pain every 6 hours                                     |
| Severe                 | Ibuprofen 400 to 600 mg plus acetaminophen 650 mg with hydrocodone 10 mg fixed interval every 6 hours for 24 to 48 hours then<br>Ibuprofen 400 to 600 mg plus acetaminophen 500 mg as needed for pain every 6 hours |

### Opioid analgesics -moderate to severe

- These drugs are often prescribed as formulations that are combined with acetaminophen or aspirin
- Opioids act as agonists at opioid receptors, and alter the nervous system's response to painful stimuli. They can be full agonists, partial agonists, or they can be mixed agonist/antagonists
- Common adverse effects associated with opioids include sedation, dizziness, nausea, vomiting, pruritus, sweating, constipation, and respiratory depression





# Antibiotics

## Pediatric Dentistry

### Amoxicillin



Common Form  
(Suspension)

20 - 40 mg/kg/day



No



Yes

**Indications:** Dental infection/abscess, prophylaxis

Available in 1 strength only 125 mg/5ml

Dose 125 mg/5ml

Disp 150 ml

#### Instructions

Take 1 teaspoon (5ml) every 8 hours for 10 days This is an example prescription for a 3 yr old child weighing 12 kg (25 lb) with dental abscess.

**Precautions:** Not to be prescribed in case of penicillin allergy

### Augmentin



Common Form  
(Suspension)

20 - 40 mg/kg/day



No



Yes

**Indications:** Dental infection/abscess, prophylaxis

Available in 1 strength only 125 mg/5ml

Dose 125 mg/5ml

Disp 150 ml

#### Instructions

Take 1 teaspoon (5ml) every 8 hours for 10 days This is an example prescription for a 3 yr old child weighing 12 kg (25 lb) with dental abscess.

**Precautions:** Not to be prescribed in case of penicillin allergy

### Cephalexin



Common Form  
(Suspension)

25 - 50 mg/kg/day



No



Yes

**Indications:** Dental infection/abscess, prophylaxis

Available in 1 strength only 125 mg/5ml

Dose 125 mg/5ml

Disp 200 ml

#### Instructions

Take 1 teaspoon (5ml) every 8 hours for 10 days This is an example prescription for a 3 yr old child weighing 12 kg (25 lb) with dental abscess.

**Precautions:** Contraindicated in patients with known allergy to the cephalosporins. 10 - 25% chance of cross reactivity with penicillins

### Clindamycin (Cleocin)



Common Form  
(Suspension)

8-25 mg/kg/day



No



Yes

**Indications:** Dental infection/abscess, prophylaxis

Available in 1 strength only 75 mg/5ml

Dose 75 mg/5ml

Disp 200 ml

#### Instructions

Take 1 teaspoon (5ml) every 8 hours for 10 days This is an example prescription for a 3 yr old child weighing 12 kg (25 lb) with dental abscess.

**Precautions:** Higher risk of pseudomembranous colitis

### Metronidazole (Flagyl)



Common Form  
(Suspension)

30 mg/kg/day



No



Yes

**Indications:** Dental infection/abscess, prophylaxis

Available in 1 strength only 250 mg/5ml

Dose 250 mg/5ml

Disp 100 ml

#### Instructions

Instructions vary with age and weight. Rule is 30 mg/kg/day every 6 hours Common prescription would be 5ml every 6 hours for 7 days.

**Precautions:** Maximum dose 4 g/day



# Pain Control

# Pediatric Dentistry

## Acetaminophen



Common Form  
(Suspension)

10-15 mg/kg q 4-6 hours

**Indications:** Mild to moderate pain

Available in 1 strength only 160 mg/5ml

Dose 160 mg/5ml

Disp 160 ml



Yes



Yes

### Instructions

Instructions vary with age and weight.  
Rule is 10-15 mg/kg/dose every 4-6

**Precautions:** Do not exceed 5 doses/day

## Ibuprofen



Common Form  
(Suspension)

4-10 mg/kg/dose

**Indications:** Mild to moderate pain

Available in 1 strength only 100 mg/5ml

Dose 100 mg/5ml

Disp 120 ml



Yes



Yes

### Instructions

Instructions vary with age and weight.  
Rule is 4-10 mg/kg/dose every 4-6 hours

**Precautions:**  
Gastric irritant, may impair clotting.

## Naproxen



Common Form  
(Suspension)

5-7 mg/kg/dose

**Indications:** Mild to moderate pain

Available in 1 strength only 125 mg/5ml

Dose 125 mg/5ml

Disp 500 ml



Yes



Yes

### Instructions

Instructions vary with age and weight.  
Rule is 5-7 mg/kg/dose every 8-12 hours

**Precautions:**  
For children of age 2 and above



### Hepatic Precaution

There might be a need for caution  
or need for dose adjustment for  
patients with hepatic problems



### Renal Precaution

There might be a need for caution  
or need for dose adjustment for  
patients with renal problems



## Ketoconazole



Common Form  
(Suspension)

3.3 - 6.6 mg/kg/day



Yes



Yes

**Indications:** Fungal infection

Available in 1 strength only 20 mg/ml

Dose 20 mg/ml

Disp 100 ml

### Instructions

3.3-6.6 mg/kg/day once daily until 3 days after healing

### Precautions:

Possible risk of hepatotoxicity

## Mycelex (Clotrimazole)



Common Form  
(Troches)

4-10 mg/kg/dose



Yes



No

**Indications:** Fungal infection

Available in 1 strength only 10 mg troches

Dose 10 mg troches

Disp 70 troches

### Instructions

Slowly dissolved troche in the mouth 5 times per day for 14 consecutive days

### Precautions:

Patient must be 3 years and older



### Hepatic Precaution

There might be a need for caution or need for dose adjustment for patients with hepatic problems



### Renal Precaution

There might be a need for caution or need for dose adjustment for patients with renal problems



## Valium (Diazepam)

0.2 - 0.3 mg/kg

**Indications:** Sedation

Available in 1 strength only 5 mg tablets

Dose 5 mg tablets

Disp 4 tablets Or based on no. of appointments



Common Form  
(Tablets)



Yes



Yes

### Instructions

Take 1 tablet 45-60 minutes prior to procedure

**Precautions:** Warn parents about possible side effects like feeling lightheaded or dizzy, drowsiness or tiredness, dry mouth, and diarrhea

## Vistaril (Hydroxyzine)

50 mg/day

**Indications:** Sedation

Available in 1 strength only 25 mg/5ml

Dose 25 mg/5ml

Disp 120 ml



Common Form  
(Suspension)



Yes



Yes

### Instructions

If patient is <6 years max dose is 50 mg/day (2.5ml 4 times/day), if 6+ years 50-100 mg/day (5ml)

**Precautions:** May cause dry mouth



### Hepatic Precaution

There might be a need for caution or need for dose adjustment for patients with hepatic problems



### Renal Precaution

There might be a need for caution or need for dose adjustment for patients with renal problems



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*King Fahd National Library Cataloging-in-Publication Data*

Alshehri, Mohammed Abdullah Mohammed  
INFOGRAPHIC SUMMARIES IN DENTISTRY. / Mohammed  
Abdullah Mohammed Alshehri - 1. .- Riyadh , 2022

27p ; B5cm

ISBN: 978-603-04-4401-4

1- DENTISTRY            I-Title  
617.6 dc                1444/4685

**L.D. no. 1444/4685**  
**ISBN: 978-603-04-4401-4**



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جامعة الملك سعود  
King Saud University

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