Emergency care in dental office

Dr. Venugopalan P P
DA,DNB,MNAMS,MEM-GW
Director ,Emergency Medicine
Aster DM Healthcare

a human innovation angels active network group of emergency life savers

Why emergency care in dental office ?

- Increasing numbers of aged population
- Increasing numbers of life style diseases
- Individuals with systemic medical conditions that can affect oral health and dental treatment.
- Dental management of medically compromised patients can be problematic in terms of oral complications, dental therapy, and emergency care

a human innovation

angels

active network group of emergency life savers

Why emergency care in dental office ?

- Number of medical problems that dentists might encounter in daily practice
- Necessitate extra knowledge and care to prevent potential complications
- Unnecessary morbidity and mortality.
- Diabetes, multiple drug interactions, cardiac abnormalities, and infectious disease

Understanding of emergency care

- The first step in managing the patient with medical problems is acquiring a thorough **health history**
- The second step is for the clinician to fully understand the **significance of the disease** that may be endorsed by the patient.
- Each identified condition can affect dental care in a unique manner
- The dental clinician needs to understand the potential complications that can occur as a consequence of dental treatment of a medically compromised patient
- When pretreatment or post treatment medication or emergency care is indicated

Understanding of emergency care

- Certain **medically compromised** patients should only be treated in a hospital setting
- Emergency issues, should they arise, can be immediately addressed and promptly attended to in a controlled manner
- Significant bleeding problem or **thrombocytopenia** arising as a primary condition or Secondary to medication, radiation, or leukemia
- Best managed in an **inpatient environment** where replacement of platelets can be provided before the procedure or afterwards if spontaneous bleeding occurs (eg, following a tooth extraction).

Dental management of a medically compromised patient

- **Complete health history**
- **Documentation via questionnaire as well as a verbal history.**
- **Health history questionnaire should include questions about the patients**

- Cardiovascular
- Hematologic
- Neural and sensory
- Gastrointestinal

- Respiratory
- Dermal
- Mucocutaneous, and musculoskeletal
- Endocrine
- Urinary systems

Dental management of a medically compromised patient

- **Complete health history**

- Sexually transmitted diseases,
- Drug use (eg, alcohol, tobacco)
- Allergies
- Xray exposure
- Treatment, medications
- Hospitalizations.
- Oral history should also be obtained as a **review of systems (ROS)**.

Dental history

1. Present oral conditions (periodontal disease or oral ulceration)
2. Past dental treatment
3. Potential complications from prior intervention including treatment failure
4. Problems in delivery of anesthesia
5. Post treatment medication

Physical Exams

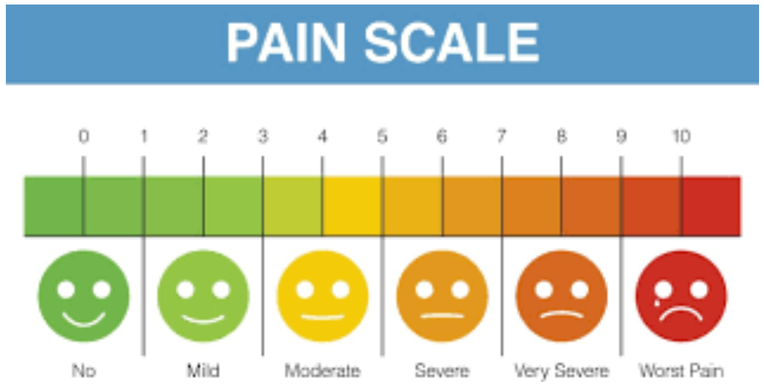
- Evaluation of the patient's general appearance
  (weight, posture, skin, and nails)
- Blood pressure
- Temperature
- Pulse rate
- Respiratory rate
- Head and neck inspection
  (assessment of lymph nodes, salivary glands, otologic assessment, assessment of breath smell)
- Cranial nerve examination

Aslo do …

- Pulse oximetry
- Pain score
- GRBS

INR 987

INR 429



Zero INR

Labs needed before dental procedure

- Complete blood count
- Differential count
- Tests for hemostasis
- Hepatitis B and C
- HIV
- FBS/PPBS
- HbA1C
- ECG

Then what ?

- **Newly identified problem -** Appropriate referrals for detailed medical evaluations
- **Preexisting disease-** preparation for dental treatment should include determination of disease status.
- Knowing the level of brittleness of the disease.
- Requesting for more tests or evaluation

Planning dental treatment
Medically compromised patient

1. Understanding of the nature of the patient's disease
2. Impact on physiology
3. Response to dental management
4. Post dental treatment healing
5. Manage potential complications

Medical conditions disturb dental practitioners

- Diabetes Mellitus
- Drug reactions
- Local Anaesthetic toxicity
- Sedatives/hypnotics
- Pain Medications
- Antibiotics

- Cardiac abnormalities
- Infective endocarditis
- IHD and Angina
- MI
- Cardiac Arrhythmias
- CCF

- Infectious diseases

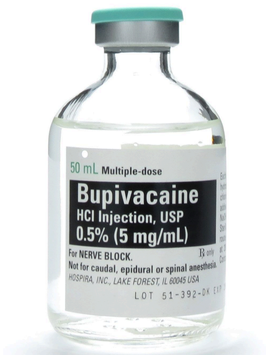
Local Anaesthetics

TABLE 2. Local anesthetics

AMIDE GROUP	ESTER GROUP
Lidocaine	Cocaine
Mepivacaine	Procaine
Bupivacaine	Chloroprocaine
Etidocaine	Tetracaine
Prilocaine	

Local Anaesthetic Toxicity

- Lignocaine 2%
- Lgnocaine 2% with Adrenaline
- Preservative free Lignocaine
- Bupivaciane 0.5% or 0.25%



Toxicity

Stage of CNS-Depression
Coma, Apnea, Depression, Hyoptonsion

Convulsive Stage
General, tonic-clonic Seizures

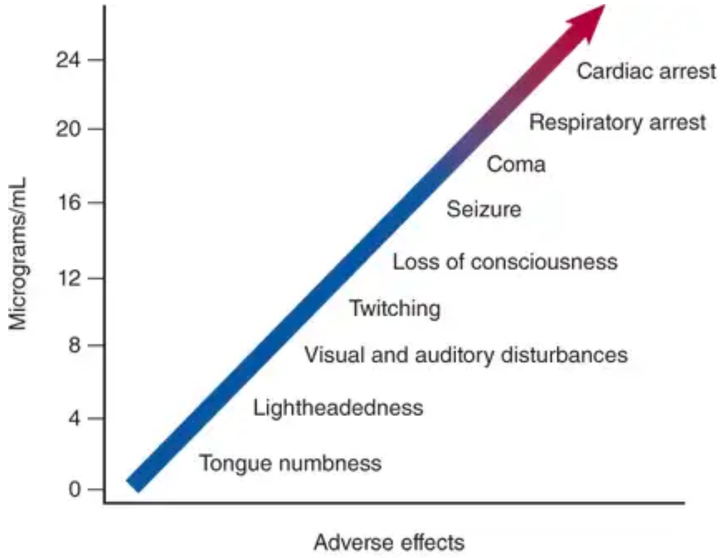
Preconvulsive Stage
Tremor, Tinnitus, Nystagmus, clouding of consciousness

First Stage
Numbness, metalic flavour, dysgeusea

LA-Concentration

Direct cardiac depression
cardiac arrest
hypotension
ischemia
AV-dissociation
arrhythmia, bradycardia
ECG-widening
low output

Indirect cardiac depression
hypertension, tachycardia, arrhythmia



Source: J.E. Tintinalli, J.S. Stapczynski, O.J. Ma, D.M. Yealy, G.D. Meckler, D.M. Cline: Tintinalli's Emergency Medicine: A Comprehensive Study Guide, 8th Edition
www.accessmedicine.com

Toxic dose

Drug	Onset	Max dose (mg/kg)	Max dose with Epi (mg/kg)
Lidocaine	Rapid	4.5	7
Mepivacaine	Medium	5	7
Bupivacaine	Slow	2.5	3
Ropivacaine	Slow	4	N/A
Tetracaine	Slow	1.5	N/A
Chlorprocaine	Rapid	10	15

Local Anaesthetic Allergy

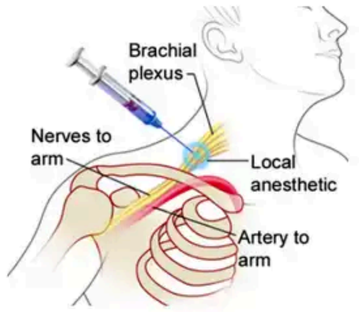
- Mainly due to Preservatives
- Methyl Pareben
- Benzyl Alcohol

EMNote.org

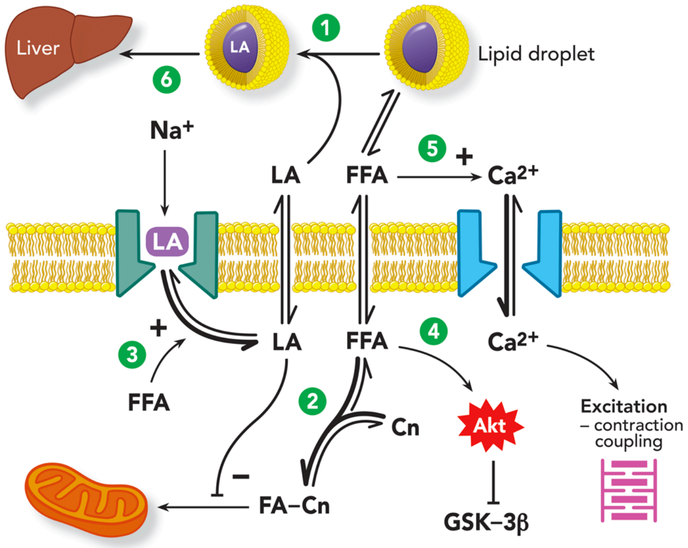
Local Anesthetic Systemic Toxicity

Mnemonic for treatment priority: "ACLS - SLE"

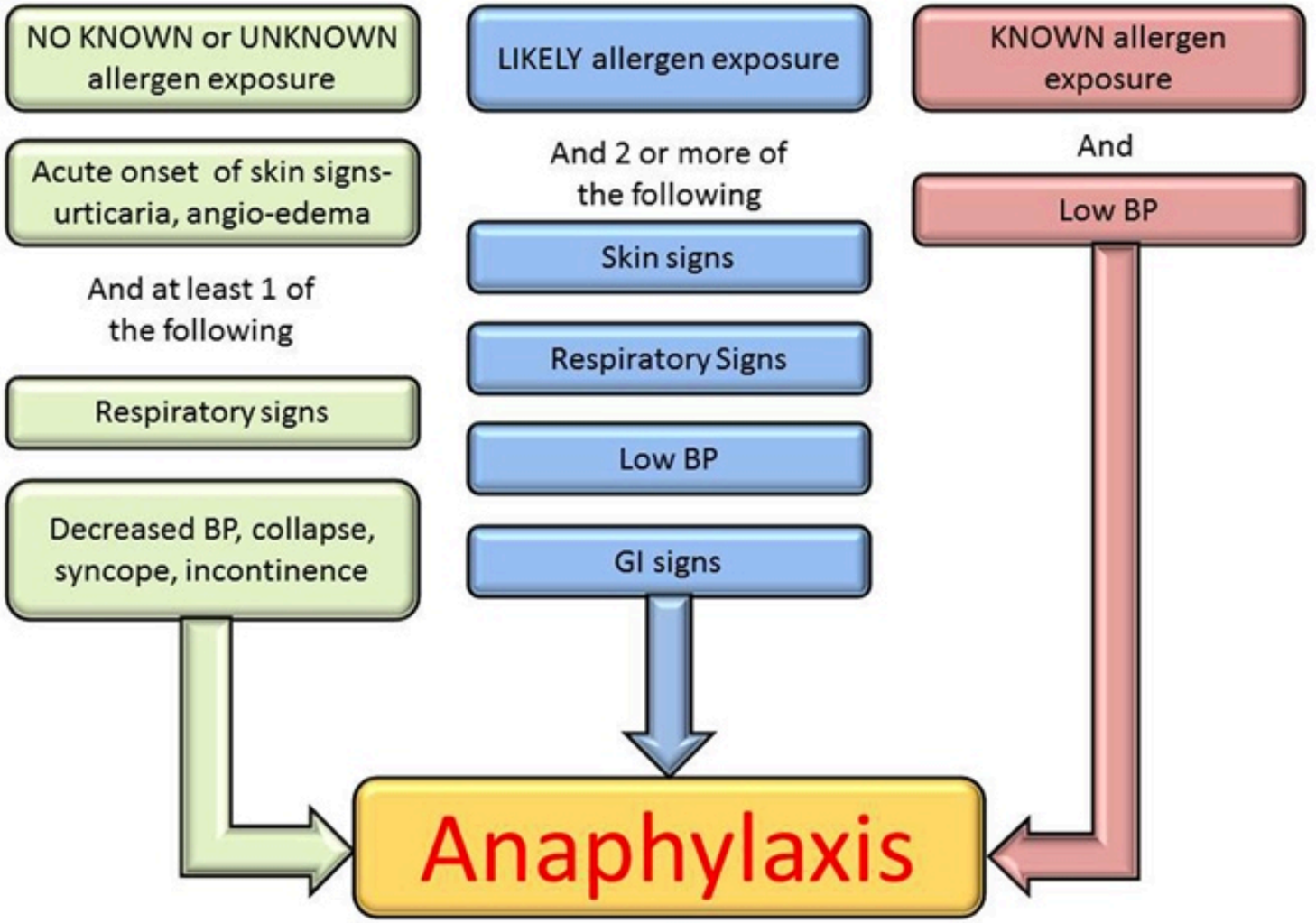
- **ACLS** :
  - BVM ventilate with 100% O2, intubate, and high-quality chest compressions
  - Low-dose **epinephrine** (**10-100 µg** boluses in adults), avoid vasopressin
  - Avoid calcium channel blockers and beta-blockers
  - Ventricular arrhythmias: use **amiodarone**, avoid class IB antidysrhythmic agents
- **S** : Seizure suppression:
  - Use **benzodiazepine**, avoid propofol
- **L** : Lipid emulsion therapy with **20% intralipid**
  - Bolus: **1.5 mL/kg** over 1 min, may repeat bolus in 5 min
  - Infusion: **0.25 mL/kg/min** for 30-60 min, may double infusion rate as needed
  - Maximum dose: **10 mL/kg** in 30 min
- **E** : ECMO



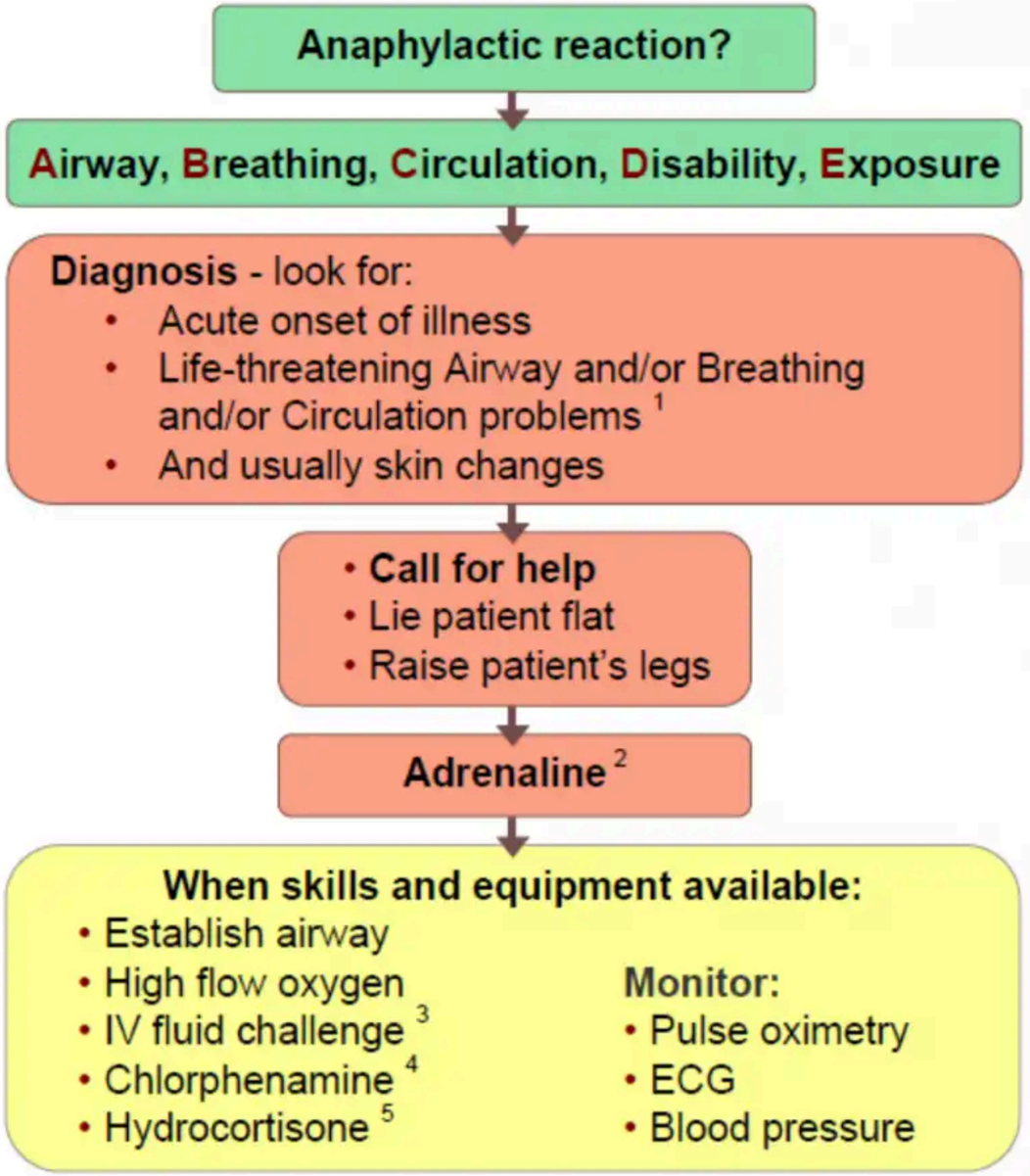
@ jackcfchong

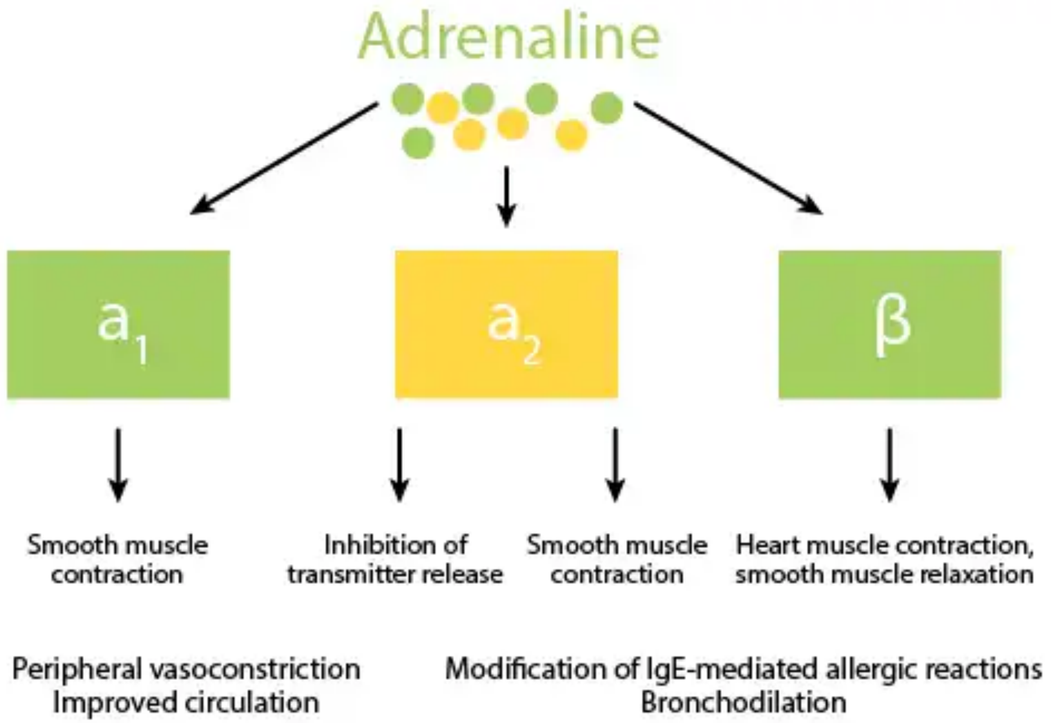


Anaphylaxis



Resuscitation Council (UK)

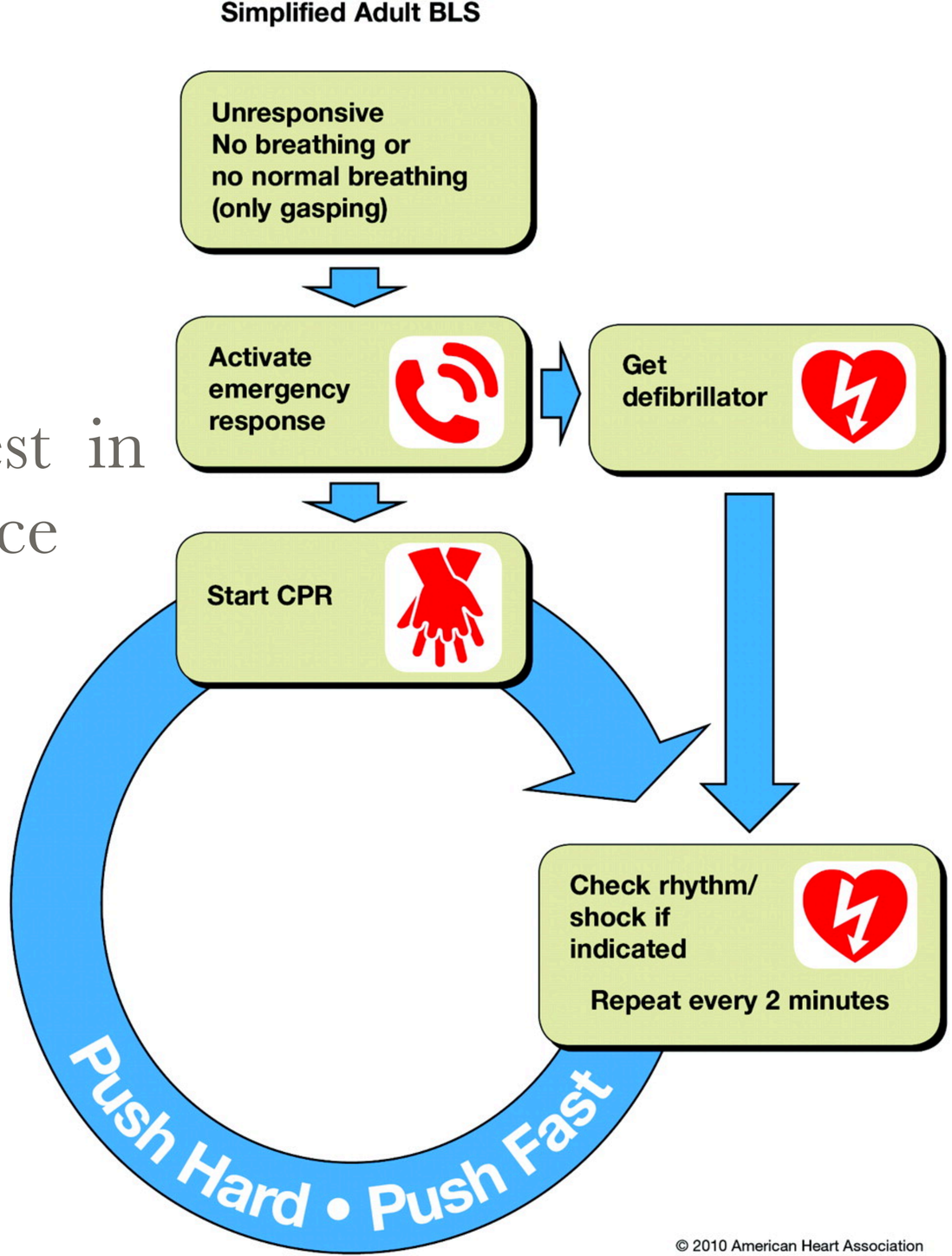




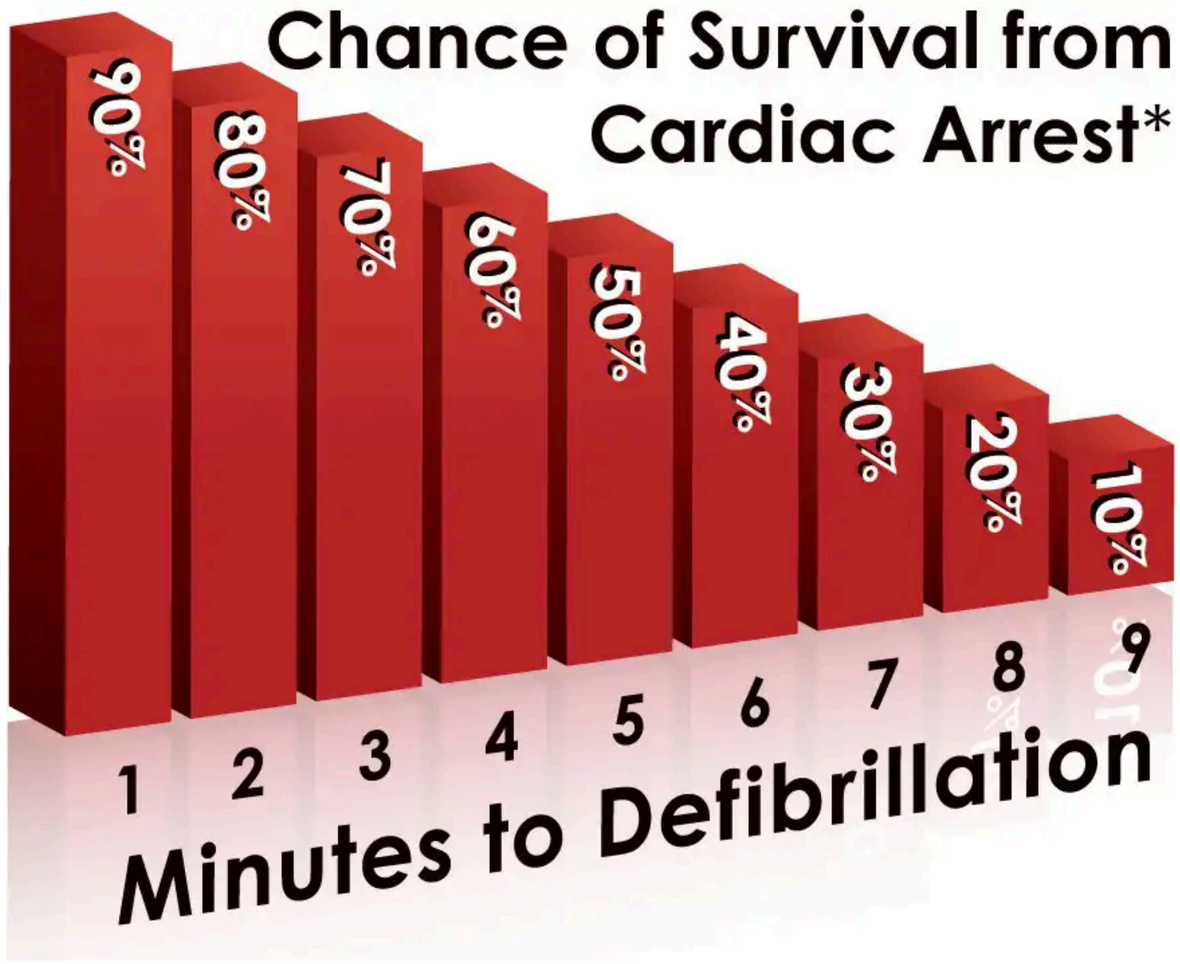
ANAPHYLAXIS DOSES

- **Adults-initial dose is 100 to 500 microgram (0.1 to 0.5 mL of the 1:1,000 sol) SC or IM.**
- **repeated at 20 minute to 4 hour intervals**
- **severe anaphylactic shock, slow and cautious IV administration-100 to 250 microgram**
- **Children-10 microgram per kg SC repeated at intervals of 20 min to 4 hrs**

Cardiac Arrest in dental office



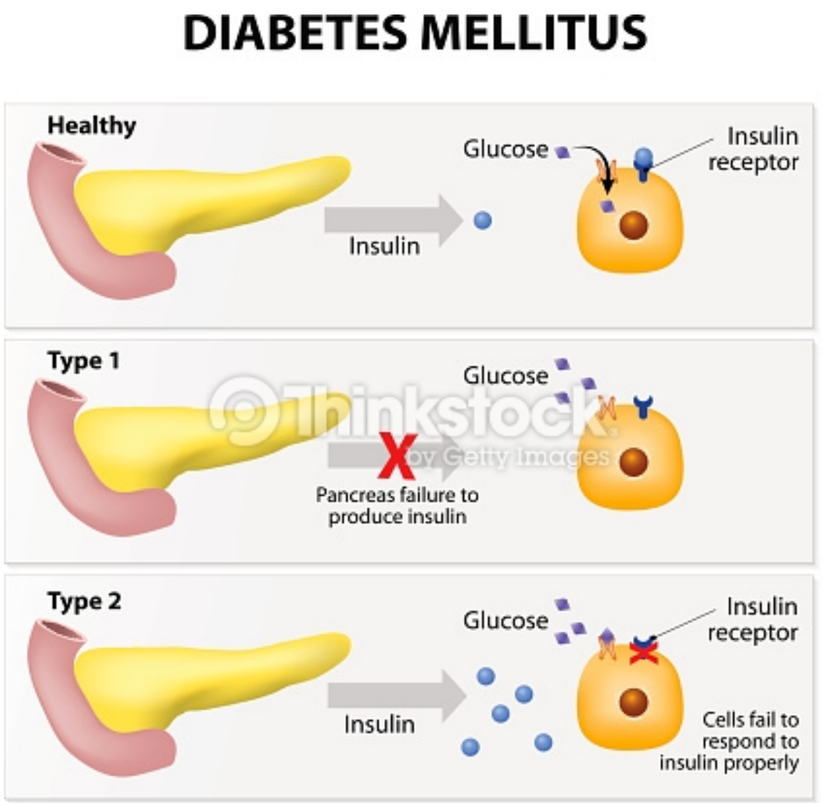
Cardiac Arrest



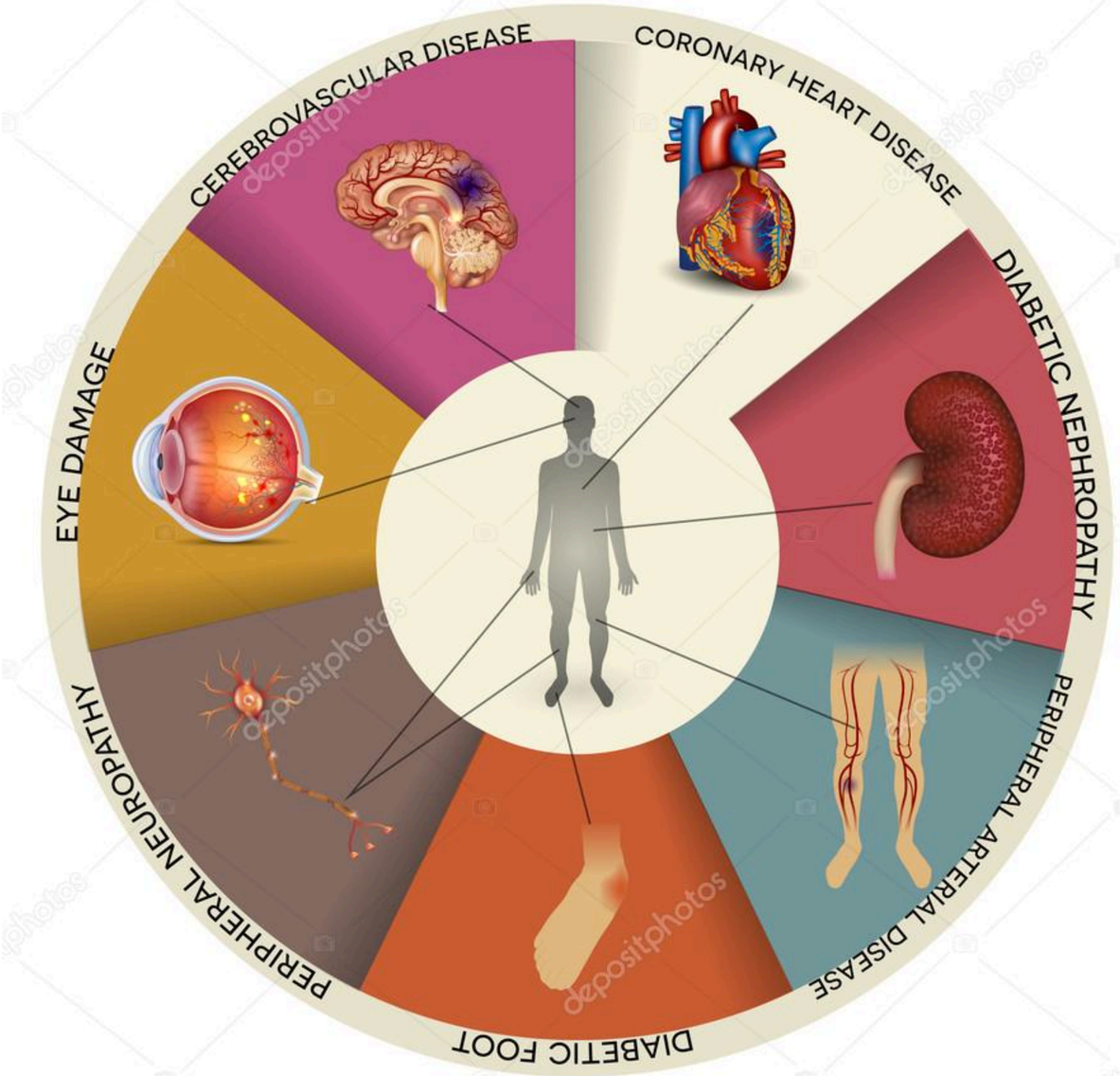
Diabetes

Diabetes effects blood glucose metabolism and vessel pathology

- Absolute insulin deficiency (type 1 diabetes)
- Problem with insulin function (termed relative or type 2 diabetes)
- Both conditions
- Gestational diabetes
- Diabetes occurring secondary to other diseases



DIABETES


CEREBROVASCULAR DISEASE
CORONARY HEART DISEASE
EYE DAMAGE
DIABETIC NEPHROPATHY
PERIPHERAL NEUROPATHY
PERIPHERAL ARTERIAL DISEASE
DIABETIC FOOT

Diabetes mellitus

- **A well controlled diabetic patient**

1. FBS of less than 125mg/dL
2. PP less than 140mg/dL
3. HBA1 C of less than 7%.

- **Uncontrolled patient**

1. FBS will be greater than 140 mg/dL
2. PP greater than 200mg/dL
3. HbA1 C greater than 8%.

- **Out of range values warrant additional medical evaluation**.

Dental management

Controlled diabetes

- No special treatment is required for routine dentistry including prophylaxis and dental restorative care
- Patient should be told to continue with their normal eating and injection regimen
- Morning appointments are recommended because cortisol levels are highest at this time and will provide the best blood glucose level
- Morning meal should not be skipped

Type 1 diabetes

- Type 1 patient should not be scheduled immediately after an insulin injection
- May result in a hypoglycemic episode
- No more than 2 carpules of lidocaine 1:100,000, prilocaine HCL (1:200,000), or bupivacaine with 1:200,000 epinephrine should be delivered for anesthesia

Moderately controlled diabetic patient

- A maximum of 2 carpules of bupivacaine or prilocaine should be used
- Major procedure is planned (eg, multiple extractions, periodontal surgery), an **antibiotic** should be prescribed following therapy.
- Following surgery the patient’s food intake should include the **proper caloric content** and protein/carbohydrate/fat ratio to maintain glucose balance

Uncontrolled or Brittle diabetes

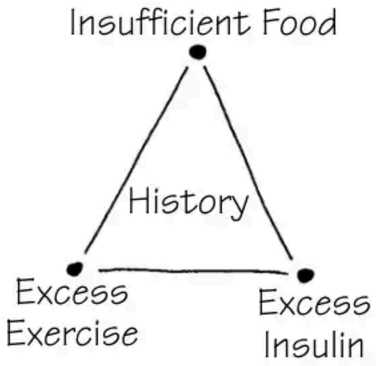
1. Only acute dental infection should be treated on an outpatient basis
2. Delivered anesthetic should not include epinephrine
3. Antibiotics should be prescribed following treatment
4. Monitor carefully for sensitivity and efficacy.
5. Inpatient intervention is recommended for more complicated dental treatment
6. Precise insulin management and post treatment care with respect to infection and electrolyte balance may be needed

DM- problems

- Hyperglycemia and ketoacidosis
- Vascular wall disease (microangiopathy and atherosclerosis)
- Alters the body's ability to manage infection and heal.
- Complications in the diabetic patient that can occur during and after dental treatment

1. **Hypoglycemia**
2. **Coma**
3. **Electrolyte imbalances**
4. **Infection**
5. **Delayed healing**

HYPOGLYCEMIA



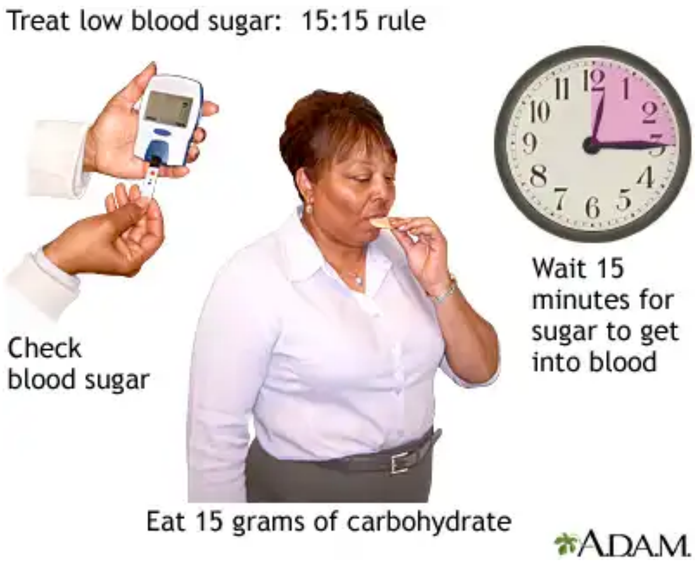
Onset
Rapid...
1 - 3 Hours

- Anxious
- Sweaty
- Hungry
- Confused
- Blurred or Double Vision
- Shaky
- Irritable
- Cool, Clammy Skin

Needs...
BLOOD SUGAR
Increased

Hypoglycemia

1. Dental treatment should be terminated
2. Glucose to be administered
3. **Loss of consciousness is the most serious complication of hypoglycemia**
4. Medical assistance should be quickly sought
5. Dentist is knowledgeable with IV procedure, an IV should be placed
6. Start 25 to 30 mL of a 50% dextrose solution
7. Glucagon 1gm IV
8. **Glucagon can also be provided by intramuscular or subcutaneous delivery.**



TREAT DKA WITH DKA

	ADULTS	PEDS
DEHYDRATION	Give 2L IVF over first 2 hrs	2 x Maintenance fluids Decompensated: 5-10 cc/kg boluses (repeat as needed)
K+	K+ < 3.5: Give K+, hold insulin K+ 3.5-5.3: Give K+,give insulin K+ >5.4: Start insulin	K+ <5.5 and the patient has urinated: add 40KCL to IVF
ANION GAP	Regular insulin IV until AG closed: 0.1-0.14 units/kg/hr (Bolus not needed) Subcutaneous insulin in mild DKA (0.2 units/kg)	Insulin 0.05-0.1units/kg/hr infusion (after patient has received IVF) Subcutaneous insulin in mild DKA
ADDRESS TRIGGER	Infection Iatrogenic (not enough insulin) Infraction (forgot insulin) Ischemia Infant (pregnant) Intoxication Initial presentation	

DM and Dentist

1. Periodontitis and diabetes have a bidirectional relationship
2. Diabetes is associated with an increased prevalence and severity of periodontitis (especially if the glycemic control is poor)
3. Severe periodontitis is associated with compromised glycemic control. Dental team has an important role to play in the management of people with diabetes
4. Emerging role for dental professionals, diabetes screening tools could be used to identify patients at high risk of diabetes, to enable them to seek further investigation and assessment from medical healthcare providers

Infective endocarditis, surgically corrected heart disease, and antibiotic coverage

- Tooth extraction, periodontal surgery, tooth cleaning and scaling, rubber dam placement, and root canal therapy can cause a bacteremia
- **Classes of conditions warranting antibiotic coverage**

1. Artificial heart valves
2. History of infective endocarditis
3. Cardiac transplant that develops a heart valve problem
4. Congenital heart condition
5. Repaired cyanotic congenital heart disease with shunts or conduits
6. Repaired congenital heart defects with prosthetic material
7. Devices having been placed during the first 6 months after the procedure
8. Repaired congenital heart defect with residual defect

ADA, AMA, and AHA recommended prophylactic antibiotic regimen for the above conditions (2007)

A. Able to take oral medication: Amoxicillin 2 g (50 mg/kg)
B. Unable to take oral medication: Ampicillin 2 g IM or IV (50 mg/kg IM or IV); Cefazolin or ceftriaxone 1 g IM or IV (50 mg/kg IM or IV)
C. Allergic to penicillin or ampicillin: Cephalexin 2 g (50 mg/kg); Clindamycin 600 mg (20 mg/kg); Azithromycin or clarithromycin 500 mg (15 mg/kg)
D. Allergic to penicillin or ampicillin and unable to take oral medication: Cefazolin or ceftriaxone 1 g IM or IV (50 mg/kg IM or IV); Clindamycin 600 mg IM or IV (20 mg/kg IM or IV)

Ischaemic Heart Disease and Angina

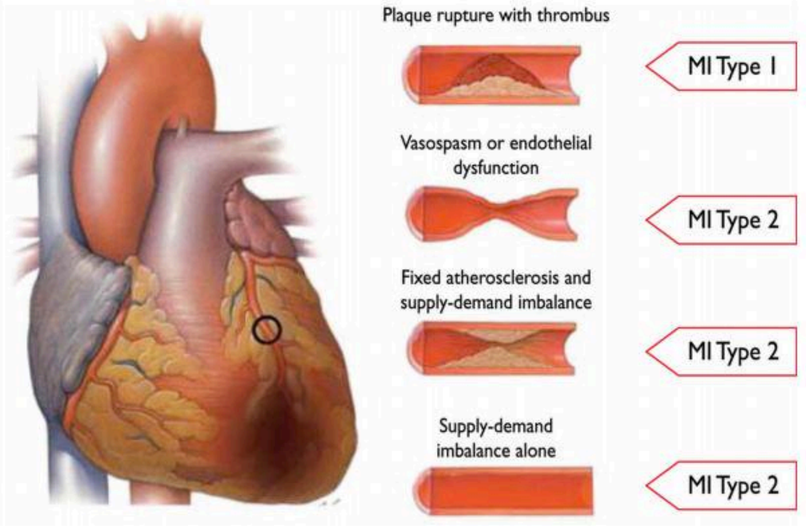
- **Angina attacks resulting from cardiac ischemia may be precipitated by dental treatment.**
- **L**ead to infarction and cardiac arrest.

Dental mangement

1. Empathy
2. Short morning appointments
3. Premedication with anxiolytics
4. Prophylactic nitroglycerin
5. Nitrous oxide oxygen sedation
6. Slow delivery of an anesthetic with epinephrine (1:100,000) coupled with aspiration
7. Mild or moderate angina should be reminded to have with them their nitroglycerin tablets in case of an attack during treatment
8. Oxygen via nasal cannula at 3L/min during dental treatment

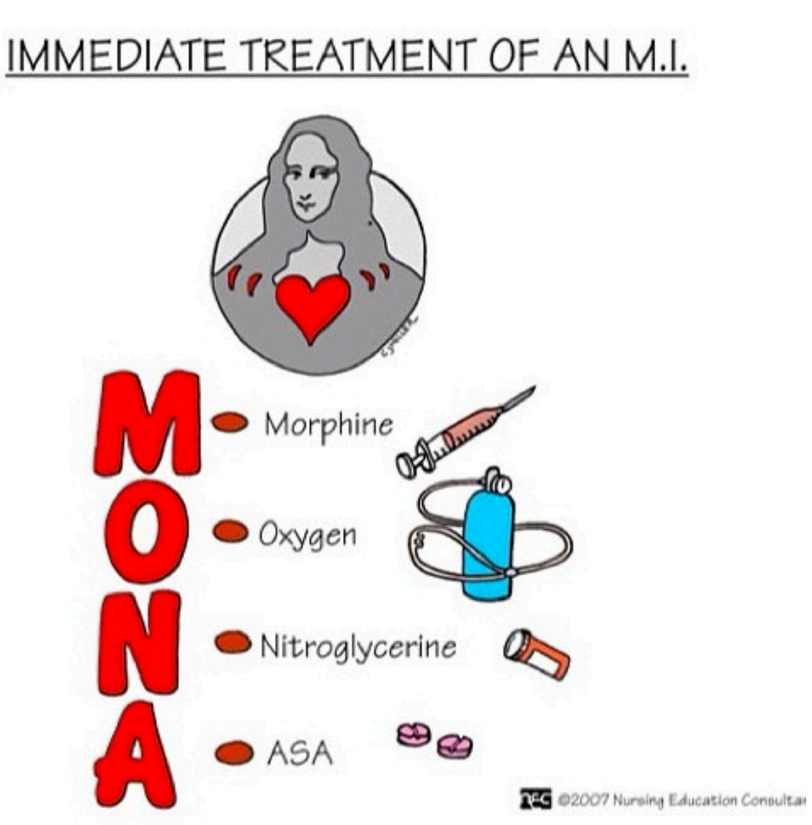
Myocardial infarction

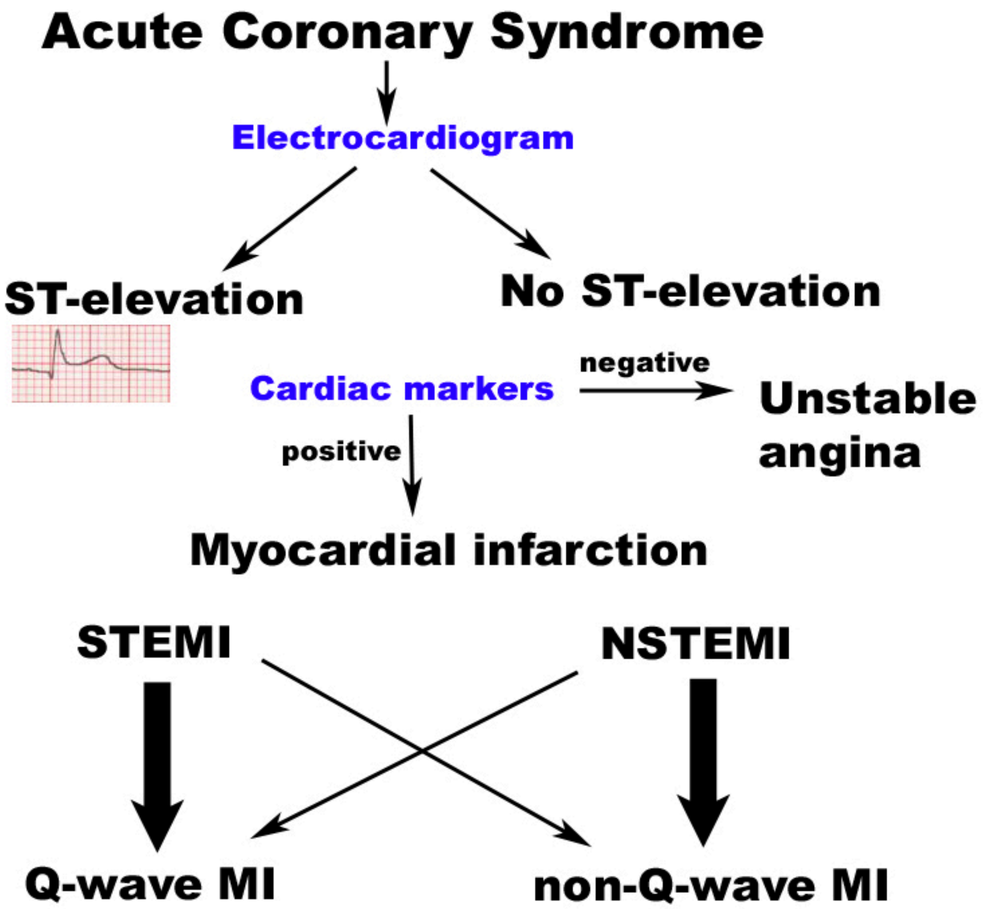
1. Dental treatment should not be pursued for at least 6 months after the cardiac event.
2. The patient's physician should be contacted prior to treatment
3. Verification sought regarding the patients current cardiac status.
4. Short morning appointments are best.
5. The combination of an MI with congestive heart failure increases risk to the patient **so only emergency treatment** should be provided on an outpatient basis.
6. Onset of chest pain and shortness of breath during dental treatment warrants discontinuation of the procedure
7. Immediate medical consultation or hospitalization



Other considerations

1. Post MI may be on anticoagulant medication
2. Dose may need to be reduced if dental extractions or periodontal surgery is necessary.
3. Prolonged aspirin use can affect bleeding time
4. Potential complications can be avoided by acquiring a **prothrombin time** on the day of surgery to verify the patient's ability to clot
5. Drug interactions
6. Potential adverse reactions need to be taken into account after treatment (eg, the interaction between NSAIDs, penicillin, tetracyclines, metronidazole, and anticoagulants)
7. Digitalis, which can increase nausea as well as exacerbate the gag reflex, a consideration if a rubber dam is not used.
8. Patients with pacemakers, **electrocautery** and the use of a **Cavitron** should be avoided
9. 20-40 fold increase in endogenous epinephrine occurs with stress, so management of this factor is extremely important in the provision of dental treatment

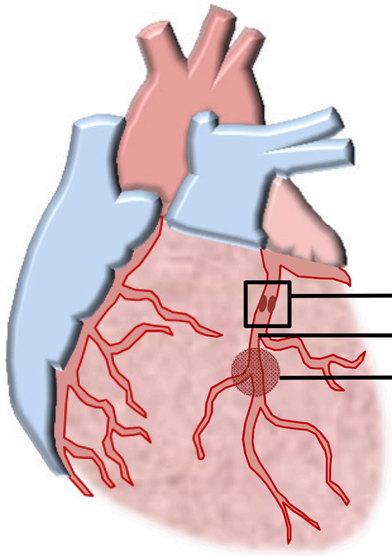

IMMEDIATE TREATMENT OF AN M.I.
MONA
Morphine
Oxygen
Nitroglycerine
ASA
©2007 Nursing Education Consultan


Acute Coronary Syndrome
Electrocardiogram
ST-elevation
No ST-elevation
Cardiac markers
negative
Unstable angina
positive
Myocardial infarction
STEMI
NSTEMI
Q-wave MI
non-Q-wave MI

Traditional treatment

- Drug therapies
- Thrombolytic therapy
- Percutaneous coronary intervention
- Coronary artery bypass grafting

Myocardial infarction



- blocked artery
- reduced blood flow
- myocyte damage

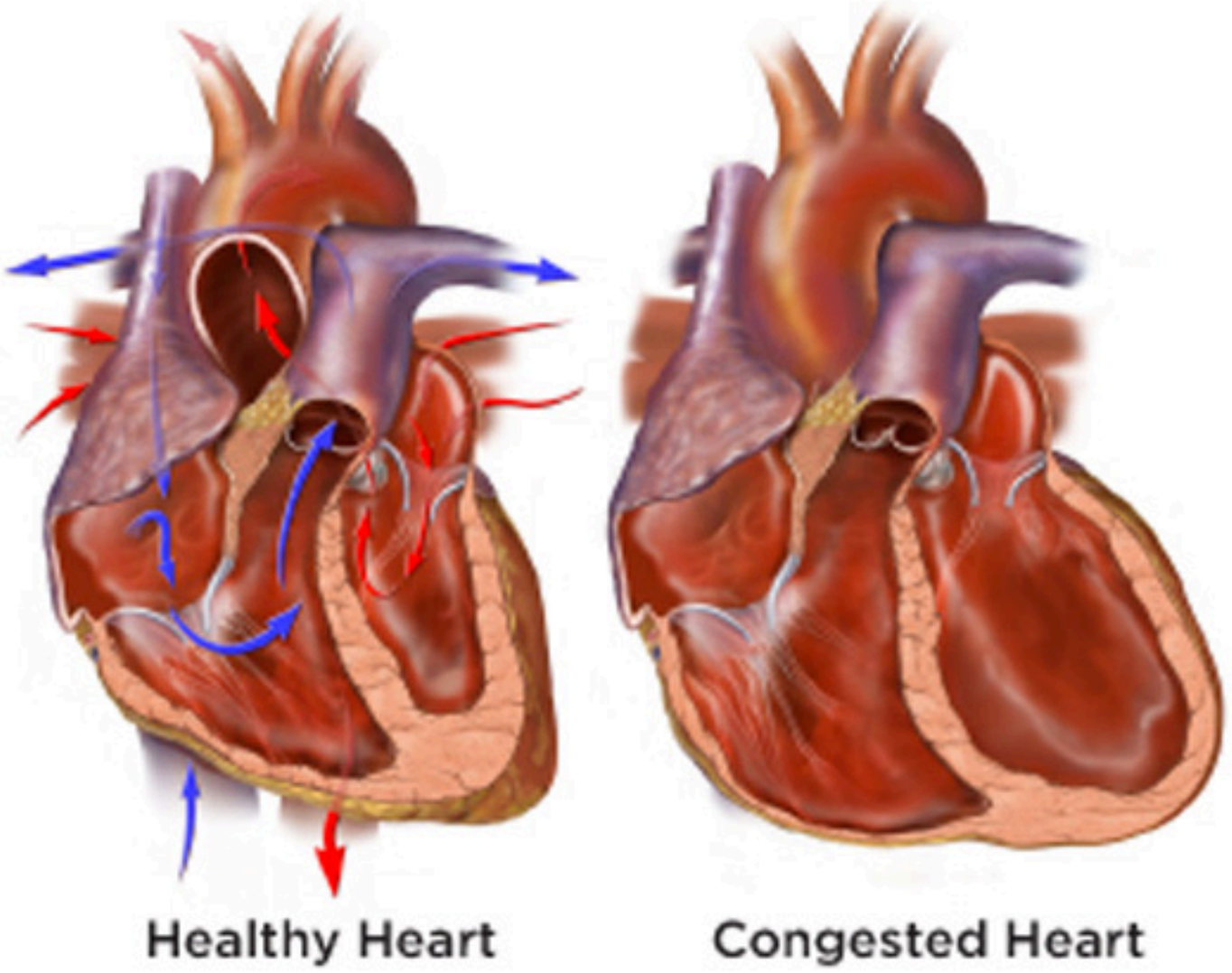
New strategies

- Embryonic stem cells
- Induced pluripotent stem cells
- Skeletal muscle stem cells
- Bone marrow cells
- Mesenchymal stem cells
- Cardiac stem cells
- Stem cell-derived exosomes

Cardiac Arrhythmias

1. Patients on drugs like Procainamide, quinidine, or propranolol
2. Medical consultation should be sought before dental treatment to verify the patient's cardiac status
3. Confirm the medications that are being taken and if they are being taken as prescribed.
4. Reduce stress and anxiety
5. Short morning appointments
6. If the patient's cardiac status is unclear, treating in a more controlled hospital environment may be best.
7. Avoid excessive anesthetic with epinephrine.
8. Excessive delivery of anesthetic with epinephrine by intra ligamentary injection is contraindicated

Congestive cardiac failure



Congestive heart failure

- Consultation on the status of the disease prior to treatment
- Is it stable or unstable?
- Confounded by

Hypertension

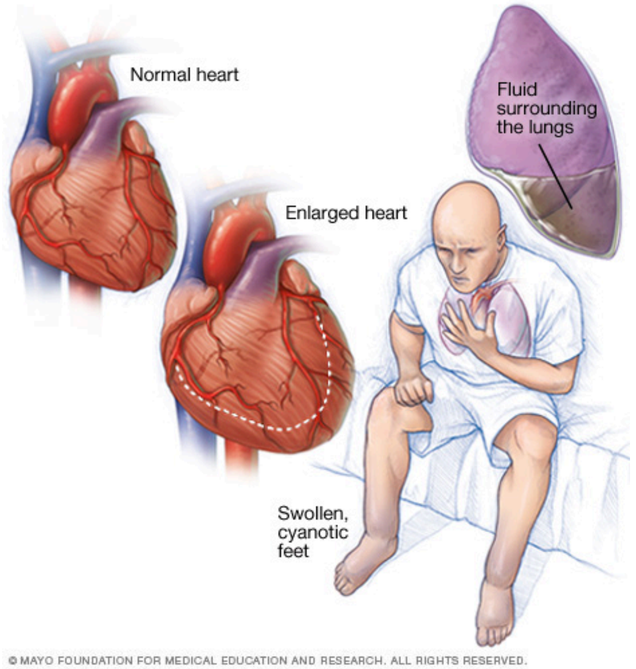
History of MIs

Renal failure

Thyrotoxicosis

Chronic obstructive pulmonary disease (COPD).

- Antibiotics need to be prescribed following treatment to prevent infection
- The amount of epinephrine delivered can be a critical confounder of the disease.
- A dentist treating the patient with congestive heart failure should be prepared for potential complications.



Congestive heart failure

1. Patient with multiple comorbid conditions, only urgent dental needs should be provided
2. Patient who is deemed stable and without significant complications, routine conservative dental care can be performed in an outpatient setting
3. Prior to treatment, a prothrombin time should be obtained, and, during treatment
4. Patient should be placed in an upright position to prevent additional pulmonary fluid collection

Hypertension

- Continue morning dose of medication
- Uncontrolled HTN- urgent procedures only
- Uncontrolled HTN -need medical consult and drug therapy
- Short morning appointments
- Careful with Lignocaine with adrenaline

What is the AHA recommendation for healthy blood pressure?

This chart reflects blood pressure categories defined by the American Heart Association.

Blood Pressure Category	Systolic mm Hg (upper #)		Diastolic mm Hg (lower #)
Normal	less than **120**	and	less than **80**
Prehypertension	**120 – 139**	or	**80 – 89**
High Blood Pressure (Hypertension) Stage 1	**140 – 159**	or	**90 – 99**
High Blood Pressure (Hypertension) Stage 2	**160** or higher	or	**100** or higher
Hypertensive Crisis (Emergency care needed)	Higher than **180**	or	Higher than **110**

* Your doctor should evaluate unusually low blood pressure readings.

Seizures

TABLE 3. Seizure Management Protocol In the Dental Practice[14]

1. Terminate dental procedure
2. Activate emergency response system
3. Do not attempt to restrain patient convulsions
4. Clear proximate environment from sharps
5. Loosen tight clothing
6. Do not force anything into mouth
7. Protect patient from personal injury
8. Establish airway and adjust patient to recovery position
9. Assess level of consciousness
10. Monitor vital signs

Triple A in dental practice

COMMON MEDICAL EMERGENCIES AND THEIR MANAGEMENT IN DENTAL PRACTICE

CONDITION	MEDICAL HISTORY CAUTION	SIGNS / SYMPTOMS	ROUTE & DRUG	+ MANAGEMENT
ADRENAL INSUFFICIENCY	Long term administration of oral corticosteroids	Hypotensive under physiological stress, abnormal heart rate, nausea, vomiting, extreme weakness, drowsiness, severe headache, abdominal tenderness.	IM 100mg Hydrocortisone Sodium if vomiting more than once. Oral Glucose.	Dose adjustment prior to major procedure. Oxygen 15 litres per minute. Hospital transfer, if required.
ANAPHYLAXIS	Previous history of allergy. Drug or contact with substances such as latex.	Rapidly developing life-threatening airway and/or breathing and/or circulation problems. Urticaria, erythema, rhinitis, conjunctivitis. Abdominal pain, vomiting, diarrhoea and a sense of impending doom. Flushing or pallor.	IM 1:1000 Adrenaline 12 years to adult: 0.5ml 6-12 years: 0.3ml <6 years: 0.15ml (Repeat after 5 min if not better)	ABCDE Manage airway, breathing, blood pressure (laying the patient flat, raising the feet),oxygen (15 litres per minute)
ANGINA	Previous history of angina.	Pressure or squeezing in the chest. The pain also can occur in shoulders, arms, neck, jaw, or back. Angina pain may even feel like indigestion.	Sublingual Glyceryl Trinitrate spray or tablets	Hospital Transfer if worsening situation. If cyanosed: oxygen (15 litres per minute)

Adapted from The Resuscitation Council (UK) Resources

COURTESY: DR NEIL PANDE (NEPAL)

Adrenal insufficiency
Anaphylaxis
Angina

Infectious diseases in dental management

Diseases

1. Hepatitis B (HBV)
2. Hepatitis C (HCV)
3. HIV
4. Tuberculosis.
5. Severe acute respiratory syndrome (SARS)
6. Methicillin resistant Staphylococcus aureus (MRSA).

Several potential complications that can occur during dental treatment

1. Risk of transmission
2. Medication interactions
3. Management of the patient with comorbid organ disease
4. Complications related to viral infection or associated with medication management (eg, susceptibility to bleeding, oral disease, or respiratory infection).
5. Transmission of cold and flu virus from staff to patients with immune suppression resulting from treatment of the viral infection is also a concern.

Infectious diseases in dental management

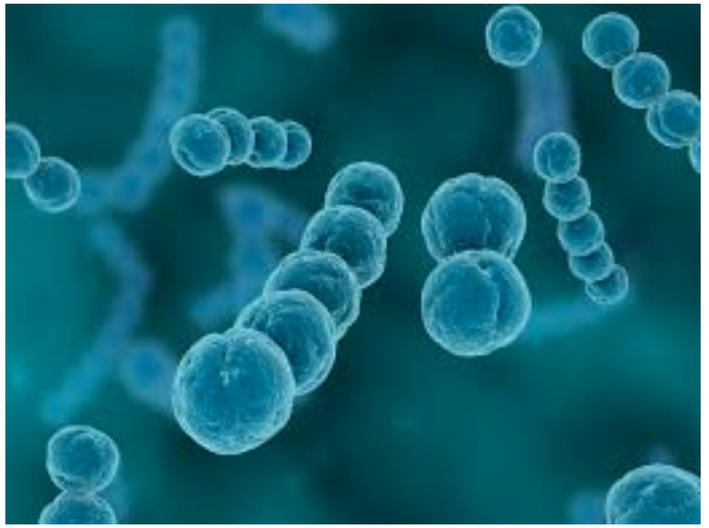
- Occupational exposure, remains an important concern for dental staff including assistants, hygienists, lab technicians, and dentists.
- Education of all staff, whether administrative or clinical, is extremely important if patients with infectious disease are to be managed in an outpatient setting

Infectious diseases in dental management

1) A regulatory framework for disinfectants and sterilants which includes a summary of resistant microorganisms to germicidal chemicals in decreasing order

2) Immunizations that are strongly recommended for health care personnel

3)Methods for sterilizing and disinfecting patient care items and environmental surfaces



Needle stick injuries

a human innovation

angels

active network group of emergency life savers

Encourage Bleeding: Do NOT suck the wound.

↓

Wash the wound with plenty of soap and running water, do not scrub.

↓

Dry the wound and cover with a waterproof dressing

↓

Report

↓

Check patients medical history

↓

Contact Occupational Health

↓

Complete accident report

a human innovation angels active network group of emergency life savers

Assessment for HIV PEP following Occupational or Non-occupational exposure

(only for patients presenting within 72hrs of exposure)

Step 1: Assess risk of exposure

Low Risk:
Contact with saliva, urine or feces
Bite with no donor blood
Blood onto intact skin

→ Reassurance only

GP follow-up

Moderate Risk:
Needlestick
- Solid needle
- Hollow needle with no visible blood in hub/syringe

Small amount of blood onto mucosa or non-intact skin
Superficial bite with donor blood

High Risk:
Hollow needle with visible blood
Deep bite with donor blood on wound
Large amount of blood on mucosa or non-intact skin

→ Assess risk of source (step 2)

Table 46: Potentially infectious body fluids

Exposure to body fluids considered '*at risk*'	Exposure to body fluids considered '*not at risk*'	
Blood	Tears	
Semen	sweat	
Vaginal secretions	Urine and faeces	*unless these secretions contain visible blood*
Cerebrospinal fluid	saliva	
Synovial, pleural, peritoneal, pericardial fluid		
Amniotic fluid		
Other body fluids contaminated with visible blood		

For skin—If the skin is broken after a needle-stick or sharp instrument:
Immediately wash the wound and surrounding skin with water and soap, and rinse. Do not scrub. Do not use antiseptics or skin washes (bleach, chlorine, alcohol, betadine).

After a splash of blood or body fluids:

To unbroken skin:

- Wash the area immediately
- Do not use antiseptics

For the eye:

- Irrigate exposed eye immediately with water or normal saline.
- Sit in a chair, tilt head back and ask a colleague to gently pour water or normal saline over the eye.
- If wearing contact lens, leave them in place while irrigating, as they form a barrier over the eye and will help protect it.
- Once the eye is cleaned, remove the contact lens and clean them in the normal manner. This will make them safe to wear again.
- Do not use soap or disinfectant on the eye.

For mouth:

- Spit fluid out immediately.
- Rinse the mouth thoroughly, using water or saline and spit again. Repeat this process several times.
- Do not use soap or disinfectant in the mouth.
- Consult the designated physician of the institution for management of the exposure immediately.

Table 49: Summary of do's and don't

Do	Do Not
Remove gloves, if appropriate	**Do not** panic
Wash the exposed site thoroughly with running water	**Do not** put the pricked finger in mouth
Irrigate with water or saline if eyes or mouth have been exposed	**Do not** squeeze the wound to bleed it
Wash the skin with soap and water	**Do not** use bleach, chlorine, alcohol, betadine, iodine or other antiseptics/detergents on the wound

** Do - Consult the designated physician immediately as per institutional guidelines for management of the occupational exposure **

Steps for managing occupational exposure

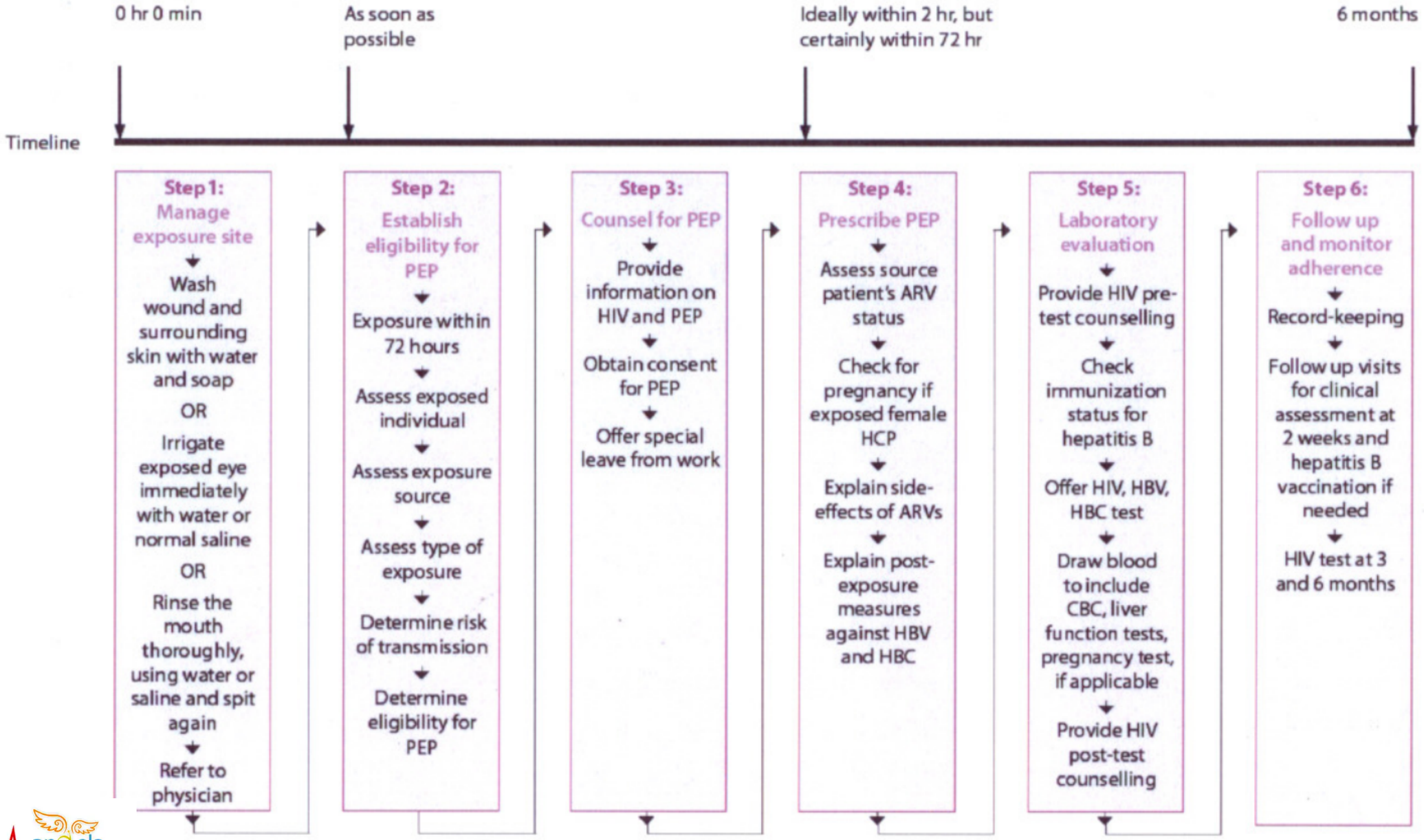


Table 51: Categories of situations depending on results of the source	
Source HIV Status	**Definition of risk in source**
HIV negative	Source is not HIV infected but consider HBV and HCV
Low risk	HIV positive and clinically asymptomatic
High risk	HIV positive and clinically symptomatic (see WHO clinical staging)
Unknown	Status of the patient is unknown, and neither the patient nor his/her blood is available for testing (e.g. injury during medical waste management the source patient might be unknown). The risk assessment will be based only upon the exposure **(HIV prevalence in the locality can be considered)**

Table 53: HIV Post-exposure Prophylaxis evaluation			
Exposure	**Status of source**		
	HIV+ and asymptomatic	**HIV+ and Clinically symptomatic**	**HIV status unknown**
mild	Consider 2-drug PEP	Start 2- drug PEP	Usually no PEP or consider 2-drug PEP
moderate	Start 2-drug PEP	Start 3-drug PEP	Usually no PEP or consider 2-drug PEP
severe	Start 3-drug PEP	Start 3-drug PEP	Usually no PEP or consider 2-drug PEP

Table 54: Dosages of the drugs for PEP

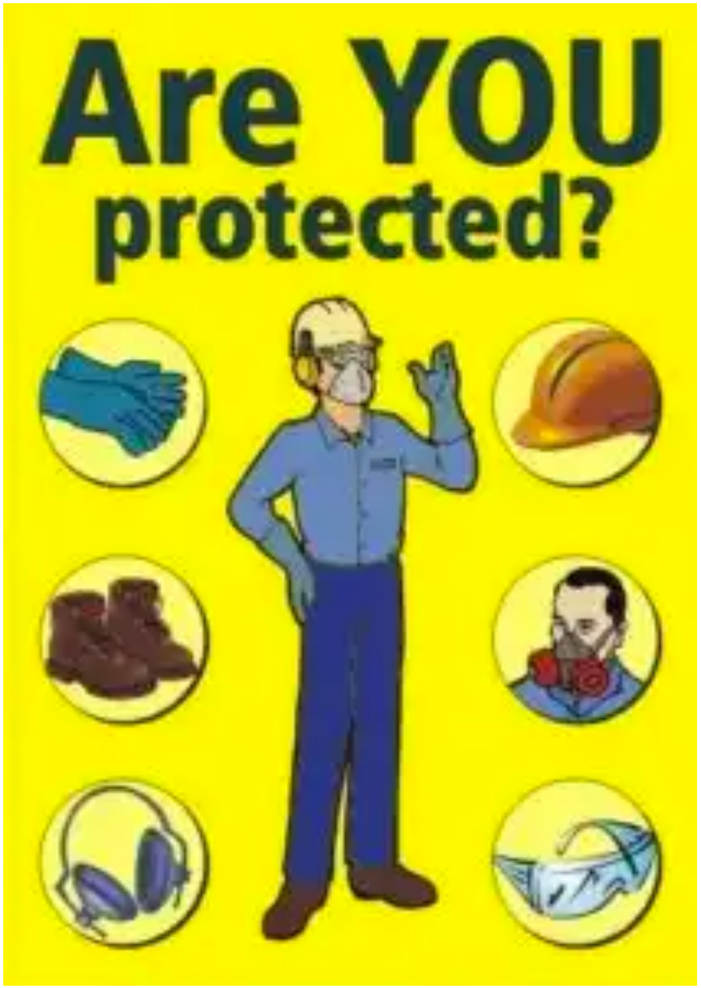
Medication	2-drug regimen	3-drug regimen
Zidovudine (AZT)	300 mg twice a day	300 mg twice a day
Stavudine (d4T)	30 mg twice a day	30 mg twice a day
Lamivudine (3TC)	150 mg twice a day	150 mg twice a day
Protease Inhibitors		1st choice : Lopinavir/ritonavir (LPV/r) 400/100 mg twice a day or 800/200 mg once daily with meals 2nd choice : Nelfinavir (NLF) 1250 mg twice a day or 750 mg three times a day with empty stomach 3rd choice : Indinavir (IND) 800 mg every 8 hours and drink 8–10 glasses (≥ 1.5 litres) of water daily

Note: If protease inhibitor is not available and the 3rd drug is indicated, one can consider using Efavirenz (EFV 600 mg once daily). Monitoring should be instituted for side effects of this drug eg CNS toxicity such as nightmares, insomnia etc.

* Fixed Dose Combination (FDC) are preferred, if available. Ritonavir requires refrigeration.

Precautions

- Hand hygiene
- PPE and universal precautions
- Immunisation



Safe & Safety practices

7 Steps of Handwashing

Follow before and after touching every patient

Step 1

Squeeze a small amount of sanitiser gel/soap over left palm and dip all fingers of right hand into left palm, and vice versa

Step 2

Palm to palm

Step 3

Right palm over left dorsum and left palm over right dorsum

Step 4

Palm to palm, fingers interlaced

Step 5

Backs of fingers to opposing palms with fingers interlocked

Step 6

Rotational rubbing of right thumb clasped in left palm and vice versa

Step 7

Rotational rubbing of right wrist and vice versa.
Rinse and dry thoroughly.

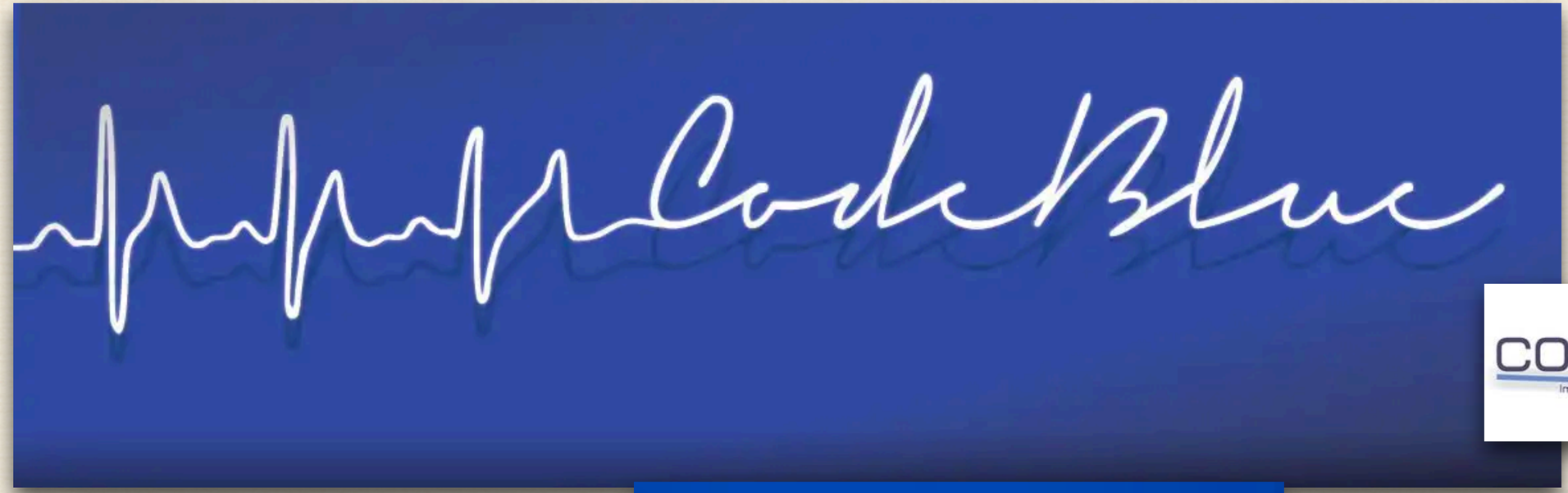
Emergency response team for dental office

- BLS/ACLS training
- PA system
- Crash cart
- Documentation
- Audit

Crash Cart

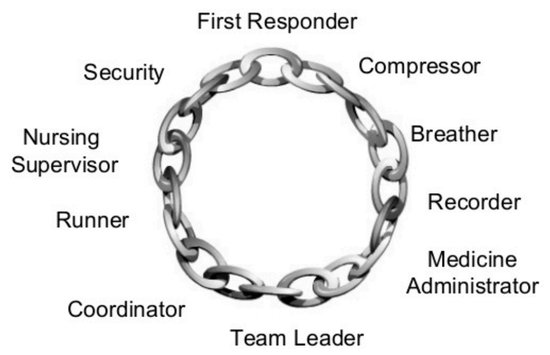
- Defibrillator
- Breathing equipment/ air supplies
- Emergency drugs
- IV supplies and tubing

Emergency Code in Dental practice



codeblue
Improving Efficiency Delivering Excellence

Code Blue Team



9

a human innovation angels active network group of emergency life savers

Eight **A** s are summaries major medical emergencies in dental office

1.Arrest (Cardiac/Respiratory)

2.Airway obstructions- FB

3.Anaphylaxis

4.Angina

5.Adverse reaction

6.Altered sensorium

7.Abnormal heart rhythms

8.Adrenal cortical insufficienc

You need it in dental office …

ADRENALINE

ADRENALINE

www.drvenu.blospot.in

- Thank you so much

This site is intended for healthcare professionals

Medscape

Dental Management in the Medically Compromised Patient

Updated: Jan 06, 2015
Author: Jeff Burgess, DDS, MSD; Chief Editor: Arlen D Meyers, MD, MBA more...

a human innovation angels active network group of emergency life savers