

### **EMERGENCY DRUG KIT**

The intention of providing this material is to facilitate the development of your own customized emergency kit. The drugs supplied are to be used consistent with the principals discussed in this course. The addition of an E-cylinder of oxygen with means for delivery is considered essential. Additional drugs and equipment could be added, based on your judgement. Please make note of the expiry dates and arrange to replace the drugs as necessary, through any pharmacy you deal with.

Each emergency kit is contained within one large freezer bag, and contains the following:

- 4 small zipper sandwich bags
- 4 file cards
- 4 syringes (3mL)
- 4 epinephrine ampoules
- 1 atropine ampoule 1 diphenhydramine vile
- 1 salbutamol inhaler
- 1 bottle nitro-glycerine
- ASA

### **CONTENTS OF BAG**

It is suggested they they be arranged as follows:

#### **Allergy/Anaphylaxis bag:**

- Epinephrine ampule (1MI OF 1:1,000) X 2
- Diphenhydramine vial (50 mg/ml)
- syringe x 2
- card

#### **Asthma bag:**

- Salbutamol inhaler
- Epinephrine ampule x 2
- syringe
- card

#### **Angina/MI bag:**

- Nitro-glycerine bottle
- ASA
- card

#### **Syncope/Hypotension bag:**

- Atropine 0.6 mg/mL
- syringe
- card

**EMERGENCY PREPARATION**

- Key office staff should have CPR training
- In-office review of roles
- In-office drills
- Review kit periodically
- Emergency number should be posted
- Have a written emergency protocol in place in the office.
- Assign duties (as an example; modify as appropriate for your office)
  - Member #1: Leader: directs staff  
Stays with patient  
ABC's of CPR as necessary  
If dentist, administers drugs, if required
  - Member #2 Brings emergency kit and oxygen  
Assists with CPR as required  
Checks emergency kit regularly  
Prepares emergency drugs for administration
  - Member #3 Activates EMS (calls 911) if instructed to do so by Member #1  
Meets paramedics at building entrance (as instructed over phone)  
Assists with CPR as required

**EMERGENCY KIT**

- Readily accessible
- Simple organization
- Expiry date notation
- Consider
  - Group drugs by emergency
  - "Baggie" approach
  - Group purchasing

**SUGGESTED READING**

Malamed, S.F. Medical Emergencies in the Dental Office. 5<sup>th</sup> ed., Mosby, 2000

**CARDIAC ARREST**

(if no ECG monitoring)

- Call 911: if it is an MI, early defibrillation is crucial
- CPR
- 100% oxygen
- AED if available
- Epinephrine 1 mg i.v., as long as CPR is not interrupted (airway control and ventilation support is more important than medications)

AED (Automated External Defibrillators)

- Allows early defibrillation
- Now part of BLS training in U.S.
- No need for ECG recognition
- Voice prompts
- Not for children < 9 years

Steps

- Verify cardiac arrest
- Turn on AED
- Place electrodes
- Analyze rhythm
- Deliver shock if advised

**ANGINA**If positive history

1. ABCs & O<sub>2</sub>
2. Nitro-glycerine  
If no relief after 3 -5 minutes:
3. Repeat  
If no relief after 3 – 5 minutes:
4. Repeat  
If no relief after 3 – 5 minutes
5. Call 911 (assume MI)
6. Analgesic:  
Morphine 2mg iv or 5mg im  
Or N<sub>2</sub>O:O<sub>2</sub>  
(if elderly, nitrous oxide may be preferred over morphine)
7. ASA 160 or 325 mg

If negative history

1. ABC's & o<sub>2</sub>
2. Call 911
3. nitro-glycerine
4. repeat
5. repeat
6. Analgesic:  
morphine or  
N<sub>2</sub>O:O<sub>2</sub>
7. ASA 160 or 325 mg

**LOCAL ANAESTHETIC EMERGENCIES**

- psychogenic reactions
- allergic reactions
- toxicity:            -overdose of local anaesthetic  
                              -overdose of vasoconstrictor

**Psychogenic reactions**

- syncope
- nausea, vomiting
- alterations in heart rate or blood pressure
- hyperventilation
- mimic an allergic reaction

**Possible Allergens**

- esters
- methylparaben
- metabisulfite
- specific amide

**Local Anaesthetic Toxicity**

|               |  |
|---------------|--|
| Level:        | Signs  |
| Low:          | sedation, analgesia, antiarrhythmic activity   |
| Intermediate: | light headedness, slurred speech, drowsiness, euphoria/dysphoria, diplopia<br>Sensory disturbances, muscle twitching |
| High:         | disorientation, tremors, respiratory depression, tonic/clonic seizures   |
| Lethal:       | coma, respirator arrest, cardiovascular collapse   |

**Recommended maximum doses of local anaesthetic, with vasoconstrictor,**

| <b><u>Drug</u></b> | <b><u>Maximum Dose</u></b> | <b><u>Maximum # of cartridges</u></b> |
|--------------------|----------------------------|---------------------------------------|
| lidocaine          | 7mg/kg (up to 500mg)       | 13                                    |
| mepivacaine        | 7mg/kg (up to 400mg)       | 11 ( or 7 if plain)                   |
| prilocaine         | 8mg/kg (up to 500 mg)      | 8                                     |
| bupivacaine        | 2mg/kg ( up to 200mg)      | 10                                    |
| articaine          | 7mg/kg (up to 500mg )      | 7                                     |