

# **Appendix to The CDSS Medical Emergency Preparation, Equipment, and Drug Kit Standard**

This resource can be utilized as a reference and customized according to the practices, circumstances, and judgement of the dentist(s), individual to each facility.



The College of  
**Dental Surgeons**  
of Saskatchewan

## Medical Emergency Response Legend:

Position (P)

**ABC or CAB (Airway Breathing Circulation or Compression Airway Breathing) - Cardiopulmonary Resuscitation (CPR)**

**D Diagnose (911), Defibrillate (AED), Drugs (Oxygen and Emergency Specific Drugs),**

Vital Signs Monitoring (blood pressure, pulse oximeter, glucometer)

## CPR ALGORITHM

- clear re-closable plastic bag to contain:
  - emergency specific instruction card to employ method over memory

### **CPR ADMINISTRATION**

**ABC (Airway Breathing Circulation)**

Or

**CAB (Compression Airway Breathing)**

Compressions Adult (30:2)

Compressions Child (15:2)

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## AED ALGORITHM

- clear re-closable plastic bag to contain:
  - emergency specific instruction card to employ method over memory.

### **AED ADMINISTRATION**

1. Verify a cardiac emergency.
2. Perform and do not interrupt **CPR** (compressions).
3. Turn on **AED**.
4. Expose the chest (cut away clothing, hair removal with razor or expired pads, dry the skin).
5. Placement of electrode pads as per manufacturer's instructions:
  - Adult (upper right clavicle sternum borders, lateral left sub nipple and axilla).
  - Children (central chest and central back)
6. Follow the **AED** audio and visual instructions commands.
  - Maintain **CPR** as necessary.

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## OXYGEN ALGORITHM

- clear re-closable plastic bag to contain
  - emergency specific instruction card to employ method over memory

### OXYGEN ADMINISTRATION

1. Attach one end of **oxygen** tubing to mask and the other end to the **oxygen** source.
2. Open the **oxygen** source with the wrench key.
3. Turn the regulator valve to the flow necessary for the appropriate mask type below:
  - A **Bag Valve Mask** requires a flow of **15-25 L/min**;
  - A **Non Rebreather Mask** with a reservoir bag requires a minimum flow rate of 10 L/min, with **12-15 L/min** recommended;
  - A **Simple Mask** requires a flow of **6-10 L/min**;
  - A **Nasal Cannula** requires **1-6 L/min** depending on oxygen saturation and patient distress.
4. Ensure the mask reservoir bag is inflated before placing the mask on the patient.
5. Placement of mask over patient's face, covering both nose and mouth.
6. Slip elastic band over patient's head below the ears and adjust for comfort.
7. Pinch mask nose clip to provide a seal.

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## CARDIAC ARREST ALGORITHM

- clear re-closable plastic bag to contain:
  - emergency specific instruction card to employ method over memory

### CARDIAC ARREST Symptoms:

Brief seizure activity; Agonal breathing; No breathing; Unresponsive; No pulse.

### CARDIAC ARREST

1. **911**
2. **Position – supine** (hard surface head below feet)
3. **CPR – ABC / CAB** Adult (Compressions 30: Breaths 2); Child (Compressions 15: Breaths 2)
4. **AED** (ASAP – early defibrillation is crucial)
5. **Oxygen Bag Valve Mask** at 15 to 25 L/min

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## ANGINA AND MYOCARDIAL INFARCTION ALGORITHM

- clear re-closable plastic bag to contain:
  - nitroglycerin
  - ASA 160-325mg (non-enteric coated)
    - The appropriate aspirin should be selected so there is no delay in the bioavailability of the aspirin.
  - emergency specific instruction card to employ method over memory

### KNOWN HISTORY ANGINA Symptoms

History; Pain; Localizing pain; Blood pressure (BP) increase; Nitroglycerin effective.  
Angina has the potential to progress to cardiac arrest.

### KNOWN HISTORY ANGINA

1. **Position** – semi-prone and comfortable
2. Vital Signs Monitoring
3. **ABC / CAB**
4. **Oxygen Non-Rebreather Mask** 12 to 15 L/min
5. **Nitroglycerin** – allow 5 minutes
6. Blood Pressure Assessment between each dose of nitroglycerin to reduce hypotension risk.
7. If no relief, repeat **nitroglycerin** – allow 5 minutes
8. Blood Pressure Assessment between each dose of nitroglycerin to reduce hypotension risk.
9. If no relief, repeat **nitroglycerin** – allow 5 minutes
10. If no relief after 3 doses – **911**
11. **ASA 160-325mg** chew and swallow

\*Nitroglycerin Possible Contraindication\*

BP<90/60 and Pulse<50

Erectile dysfunction medications within 24 to 48 hours

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  - ASA 160-325mg (non-enteric coated)
    - The appropriate aspirin should be selected so there is no delay in the bioavailability of the aspirin.
  - emergency specific instruction card to employ method over memory

### NO HISTORY ANGINA / MYOCARDIAL INFARCTION Symptoms:

No history; Severe crushing pain; Radiating pain to arm, neck, jaw, shoulders; BP decrease; Toothache; Nausea and vomiting; Shortness of breath; Sweating; Dizziness; Sense of doom; Palpitations; Nitroglycerin not effective.

Angina has the potential to progress to cardiac arrest.

### NO HISTORY ANGINA / MYOCARDIAL INFARCTION

1. **Position** – semi-prone and comfortable
2. Vital Signs Monitoring
3. **ABC / CAB**
4. **911**
5. **Oxygen** flow necessary for the appropriate mask type
6. **Nitroglycerin (ONLY if the patient has a prescription for nitroglycerin)** – allow 5 minutes
7. Blood Pressure Assessment between each dose of nitroglycerin to reduce hypotension risk.
8. If no relief, repeat **nitroglycerin (ONLY if the patient has a prescription for nitroglycerin)** – allow 5 minutes
9. Blood Pressure Assessment between each dose of nitroglycerin to reduce hypotension risk.
10. If no relief, repeat **nitroglycerin (ONLY if the patient has a prescription for nitroglycerin)** – allow 5 minutes
11. If no relief after 3 doses – **ASA 325mg** chew and swallow

#### \*Nitroglycerin Possible Contraindication\*

Nitroglycerin dosing should be given ONLY if the patient has a prescription for nitroglycerin.

The benefits of nitroglycerin do not always outweigh the risk of hypotension.

BP<90/60 and Pulse<50

Erectile dysfunction medications within 24 to 48 hours

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## ALLERGY AND ANAPHYLAXIS ALGORITHM

- clear re-closable plastic bag to contain:
  - epinephrine ampule 1:1000/mL X 2 or Epi-Pen auto-injector
  - diphenhydramine vial 50 mg/mL
  - cetirizine 10mg
  - syringe x 2
  - emergency specific instruction card to employ method over memory

ANAPHYLAXIS SYMPTOMS		
<b>NO</b> Known Allergen Exposure	<b>Likely</b> or Known Allergen Exposure	<b>Known</b> Allergen Exposure
<b><i>Sudden onset of symptoms with Rash/Hives/Itching and either:</i></b>	<b><i>Sudden onset of 2 or more symptoms:</i></b>	<b><i>Sudden onset of either:</i></b>
<b>Respiratory Symptoms:</b> Shortness of breath Wheezing / cough / stridor / voice change	<b>Respiratory Symptoms:</b> Shortness of breath Wheezing / cough / stridor / voice change	<b>Respiratory Symptoms:</b> Shortness of breath Wheezing / cough / stridor / voice change
<b>Cardiovascular Symptoms:</b> Blood pressure <90 systolic Weakness / dizziness / syncope	<b>Cardiovascular Symptoms:</b> Blood pressure <90 systolic Weakness / dizziness / syncope	<b>Cardiovascular Symptoms:</b> Blood pressure <90 systolic Weakness / dizziness / syncope
	<b>Skin and Mucus Membrane:</b> Rash / hives / itching Swelling of: face / lips / mouth / tongue / throat	
	<b>Gastrointestinal Symptoms:</b> Vomiting / stomach pain / cramping / diarrhea	

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## ALLERGY AND ANAPHYLAXIS ALGORITHM

- clear re-closable plastic bag to contain:
  - epinephrine ampule 1:1000/mL X 2 or Epi-Pen auto-injector
  - diphenhydramine vial 50 mg/mL
  - cetirizine 10mg
  - syringe x 2
  - emergency specific instruction card to employ method over memory

### ANAPHYLAXIS

1. **Position** – supine (head below feet)
2. **ABC / CAB**
3. **911**
4. **Epinephrine** 1:1000 (0.5mL intramuscular) or **Epi-Pen auto-injector**  
Repeat every 10 minutes as necessary
5. **Oxygen** flow necessary for the appropriate mask type
6. **Diphenhydramine** 50mg (1mL intramuscular)
7. Vital Signs Monitoring

### NON-ANAPHYLAXIS

1. **Position** – semi-prone and comfortable
2. Vital Signs Monitoring
3. **Cetirizine** 10mg (one dose)

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Vital Signs Monitoring (blood pressure, pulse oximeter, glucometer)

## HYPOGLYCEMIA AND HYPERGLYCEMIA ALGORITHM

- clear re-closable plastic bag to contain:
  - oral glucose gel or other form
  - emergency specific instruction card to employ method over memory

### HYPOGLYCEMIA Symptoms:

Warm sweaty skin; Heart rate (HR) increase; Hungry; Irritability; Tremors; Weakness.

### HYPOGLYCEMIA CONSCIOUS

1. **Position** – semi-prone and comfortable
2. **Oral Glucose** (Adults 20g, Children 15g)
3. **Oxygen** flow necessary for the appropriate mask type
4. Glucometer monitoring if available and Vital Signs Monitoring

### HYPERGLYCEMIA Symptoms

Dry mouth and skin; Thirsty; Fruity smell breath; Frequent urination.

### HYPERGLYCEMIA CONSCIOUS

1. **911**
2. **Position** – semi-prone
3. **ABC / CAB**
4. Glucometer monitoring if available and Vital Signs Monitoring

### HYPO/HYPER GLYCEMIA UNCONSCIOUS

1. **911**
2. **Position** - supine (head below feet)
3. **ABC / CAB**
4. **Oxygen** flow necessary for the appropriate mask type
5. Glucometer monitoring if available and Vital Signs Monitoring

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## SYNCOPE AND HYPOTENSION ALGORITHM

- clear re-closable plastic bag to contain:
  - emergency specific instruction card to employ method over memory

### SYNCOPE AND HYPOTENSION Symptoms:

Warm fuzzy feeling; Sweating; Pallor; Faint feeling; BP decrease; HR increase.

### SYNCOPE AND HYPOTENSION

1. **Position** - supine (head below feet)
2. Vital signs monitoring
3. **ABC / CAB**
4. **Oxygen** flow necessary for the appropriate mask type
5. Refer to medical physician

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## ASTHMA ALGORITHM

- clear re-closable plastic bag to contain:
  - salbutamol inhaler
  - inhaler aerochamber with mask
  - epinephrine ampule 1:1000/mL X 2
  - syringe x 1
  - emergency specific instruction card to employ method over memory

### ASTHMA Symptoms:

Wheezing during exhaling; Rapid breathing; Shortness of breath; Difficulty breathing and talking; Coughing; Anxiety.

**Mild to moderate symptoms:** Expiratory wheezing without inspiratory wheeze / Speaks in full or partial sentences / Shortness of breath at rest / Respiratory rate less than 40/min

**Severe or near Death:** Distant wheeze or silent chest / Single word sentences or cannot speak / Respiratory rate greater than 40/min or failure to breathe effectively / Confused or unresponsive

## ASTHMA

1. Position – semi-prone and comfortable
2. Vital Signs Monitoring
3. **Salbutamol** Inhaler with inhaler aerochamber  
**4 to 8 dispenses within 1 to 2 minutes and repeat every 20 minutes** up to three times if effective.

If symptoms unresolved or progress, then add:

4. **911**

**If patient is Severe or Near Death Administer:**

5. **Epinephrine** 1:1000 (0.5 of 1mg/ml intramuscular)  
Repeat every 10 minutes as necessary

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## STROKE ALGORITHM

- clear re-closable plastic bag to contain
  - emergency specific instruction card to employ method over memory

### STROKE Symptoms:

FAST – Face droop, Arms weakness, Speech slur, Time. **911** ASAP

Severe sudden headache; Confusion; Weakness or numbness on one side – arms or legs; Blur vision; Dizziness.

### STROKE

1. Position - (paralyze side down)
2. **ABC / CAB**
3. **911**
4. **Oxygen** flow necessary for the appropriate mask type
5. Vital Signs Monitoring

**\*NO ASA** or **nitroglycerin**

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## OVERDOSE BENZODIAZEPINE ALGORITHM

- clear re-closable plastic bag to contain:
  - flumazenil ampule 0.5mg/5mL x 2
  - syringe x 1
  - emergency specific instruction card to employ method over memory

### OVERDOSE BENZODIAZEPINE Symptoms:

Slurred speech; Drowsiness or unconsciousness; Confusion; Shallow or slow breathing; Uncoordinated movements.

### OVERDOSE BENZODIAZEPINE

1. **911**
2. **ABC / CAB** - maintain open airway with head tilt, chin lift or jaw thrust.
3. **Oxygen** with Bag Valve Mask 15 to 25 L/min if breathing not effective
4. Position – Supine (head below feet)
5. **Flumazenil** (3ml intramuscular)  
Repeat (1mL intramuscular) every 1 minute as necessary to a maximum 10mL
6. Vital Signs Monitoring

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## OVERDOSE OPIOID ALGORITHM

- clear re-closable plastic bag to contain:
  - naloxone intranasal 4mg or naloxone IM
  - emergency specific instruction card to employ method over memory

### OVERDOSE OPIOID Symptoms:

Unconsciousness or unresponsiveness; Pinpoint pupils; Slow shallow or stopped breathing; Cold clammy skin; Blue or purple lips; Vomiting; Slow or undetectable pulse.

### OVERDOSE OPIOID

1. **911**
2. **ABC / CAB** - maintain open airway with head tilt, chin lift or jaw thrust.
3. **Oxygen** with Bag Valve Mask 15 to 25 L/min if breathing not effective
4. Position – Supine (head below feet)
5. Vital Signs Monitoring
6. **Naloxone** intranasal (1 dispense)  
**Ensure the patient receives oxygenation and does not stay apneic while naloxone is administered.**  
**Naloxone should only be administered once the patient is properly oxygenated.**

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## SEVERE LOCAL ANESTHETIC TOXICITY ALGORITHM

- clear re-closable plastic bag to contain:
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### SEVERE LOCAL ANESTHETIC TOXICITY Symptoms:

Excitation follow by depression; Agitation; Seizure; Coma.

### SEVERE LOCAL ANESTHETIC TOXICITY

1. **911**
2. Position – Supine (head below feet)
3. **ABC / CAB – Airway**
4. Seizure monitor and protect
5. Vital Signs Monitoring

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## SEIZURE ALGORITHM

- clear re-closable plastic bag to contain:
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### SEIZURE Symptoms:

Petit mal: blank stare

Myoclonic: repetitive muscle jerking

Atonic: loss of postural tone with collapse to the floor

Grand mal (90%): tonic clonic rigid and shaking

### SEIZURE PETIT MAL

1. Seizure – allow to occur
2. Position – Supine with head and airway protection
3. **> 5 minutes 911**
4. **ABC / CAB**
5. **Oxygen** flow necessary for the appropriate mask type
6. Vital signs Monitoring

### SEIZURE GRAND MAL

1. Seizure – allow to occur
2. Position – Supine with head and airway protection
3. **911**
4. **ABC / CAB**
5. **Oxygen** flow necessary for the appropriate mask type
6. Vital Signs Monitoring