Medical Emergencies in the Dental Office: How to Avoid a Bad Day
A Legacy Lecture
The Toto Philosophy
Reality bites!!
You know that you are not having a good day when:
Case # 1

- A 62 y/o anxious female is unsure whether to have local or general anesthesia for the extraction of four erupted teeth. Her past medical history is positive for Type II diabetes and a history of seizures many years ago. She elects local and you inject her with bilateral mandibular blocks for a total of four carpules. After five minutes you are summoned to the operatory by your assistant. The patient is unconscious. What could be happening and what do you do?
People, we have a problem
Felsenfeld's Rules of Medical Emergencies-#1

- If you think that there is an emergency...there is!!!
Four Important Factors for Safely Treating a Patient at Risk for a Medical Emergency

- Preparation
- Diagnosis
- Treatment
- Prevention
Preparation

- **Yourself**
  - Basic Life Support
  - CE Courses
- **Your Staff**
  - Basic Life Support
  - CE Courses
  - Mock Drills
Preparation

- Your Office
  - Emergency Kits
  - Oxygen
  - References
    - Texts
    - Internet
    - Manuals
- Access to Outside Assistance
  - 911
  - Local physician??
Diagnosis

- Early diagnosis of an impending emergency is crucial
  - Seconds count!!!
- Diagnosis
  - Pathophysiology
  - Risk factors
  - Precipitating factors
Treatment

- Early, effective treatment can limit the severity of the medical emergency
  - Position
  - Medications
    - P/O
    - IM
    - IV
  - Other considerations
Prevention
NEVER TREAT A STRANGER
Prevention

- Know who’s at risk!
- Medical history
  - History forms
  - Verbal history
- Physical exam (vital signs)
  - Blood pressure
  - Pulse
Patient Evaluation

- Past medical history
  - Serious illnesses
  - Current medical care
  - Hospitalizations and operations
  - Medications
  - Allergies
- Paint a picture
- Visit every once in a while
Medications

- Predicts diseases
  - Prescription
  - Non-prescription
The sickest patients take the most medications
Prevention

- Obtain appropriate consults
- Alter dental treatment!
Stress Reduction

The patient  The doctor
Specific Medical Emergencies

- Airway emergencies
- Cardiovascular emergencies
- CNS emergencies
- Other emergencies
Specific Medical Emergencies - Overview

- Definition
- Pathophysiology
- Risk Factors
- Precipitating Factors
- Diagnosis
- Treatment
- Prevention
Airway emergencies
Airway Emergencies

- Airway obstruction
- Asthma
- Hyperventilation
Airway Emergencies

- Airway obstruction
- Asthma
- Hyperventilation
Airway Obstruction-Definition

- Mechanical blockage of air exchange
  - Tongue
  - Foreign body
Airway Obstruction - Pathophysiology

- Loss of dental object into oropharynx
  - Object is retrieved from the oropharynx
  - Enters the esophagus and is swallowed
  - Blocks the airway at the vocal cords
  - Enters the trachea and is aspirated
Airway Obstruction-Risk Factors

- Supine patients
- Sedated patients with obtunded gag and cough reflexes
- Lack of airway protection
Airway Obstruction-Precipitating Factors

- Failure of the dentist to adequately protect the patient’s airway
- Neuromuscular compromised patient
  - Stroke patient
  - Cerebral palsy
  - Mental retardation
Airway Obstruction-Diagnosis

- Coughing
- “Crowing” sounds
- Patient reaches for neck
- Inability to speak
- Cyanosis
- Loss of consciousness
- Death
Airway Obstruction - Treatment

- If an object is lost in the oropharynx and the patient is in no distress, transport to the emergency department for localizing radiographs.
- If the patient is coughing, place in Trendelenburg position and allow the patient to cough.
  - Do not attempt to manually retrieve.
Airway Obstruction-Treatment

- If the patient has poor air exchange or has complete obstruction
  - 911
  - Heimlich maneuver from behind standing patient if conscious
  - Abdominal thrusts on supine patient if unconscious
Airway Obstruction-Treatment

- Finger sweeps of mouth to remove expelled object
- Basic life support
- Intubate/cricothyrotomy
Airway Obstruction-Prevention

- Entirely preventable
- Adequate protection of the oropharynx
  - Rubber dam
  - Throat screen
- Ligatures around small dental objects
**Asthma-Definition**

- Extreme airway sensitivity and hyper-reactivity of bronchiolar smooth muscle with attendant bronchoconstriction
Asthma - Definition

- **Extrinsic**
  - Children
  - Allergens
  - Less severe

- **Intrinsic**
  - Adults
  - Stress factors
  - Irritants
  - More severe
Asthma-Pathophysiology

- Response to stimulant
  - Bronchospasm
  - Increased secretions
  - Increased viscosity
- Inflammation
Asthma-Risk Factors

- Patients with a history of asthma
  - Frequency of attacks
  - Last attack
  - Acute and chronic medications

- Visits to emergency dept
- Hospitalizations
- Steroids
- Intubated
Asthma-Precipitating Factors

- Allergy induced
- Exercise induced
- Environmental irritants
- Viral respiratory infections
- Stress induced
Asthma-Diagnosis

- Chest tightness
- Shortness of breath
- Dyspnea
- Wheezing
- Cough
- Hypoxia
- Anxiety
Asthma Treatment

- **Mild**
  - Stop procedure and clear mouth
  - Position sitting upright
  - Administer bronchodilating inhaler (β<sub>2</sub> agonist)
  - Oxygen

- **Severe**
  - 911
  - Epinephrine 0.3-0.5 mg SC/IM/IV
  - Hydrocortisone 100 mg IM/IV
Asthma-Prevention

- Avoid precipitating factors
- Confirm that patient took asthma medications
- Stress reduction
- Avoid narcotics
- Prophylactic bronchodilator
Hyperventilation-Definition

- Increased rate and/or depth of respiration
- In excess of that required for metabolic rate
Hyperventilation-Pathophysiology

- With anxiety, patients may begin to hyperventilate
- Blood CO$_2$ levels fall
- Decreased blood CO$_2$ level results in respiratory alkalosis
- Respiratory alkalosis lowers serum levels of ionized calcium
- Hypocarbia causes vasoconstriction, alkalosis limits release of O$_2$ from hemoglobin, and hypocalcemia causes neuromuscular sensitivity
Hyperventilation-Risk Factors

- Anxious patients
- Patients with a history of hyperventilation
- Metabolic acidosis
- Hypoxia
- Hypercarbia
- Pain
- CNS problems
Hyperventilation-Precipitating Factors

- Stress
- Psychiatric disorders
Hyperventilation-Diagnosis

- Patient restlessness
- Increased respiratory rate
- Increased depth of respiration
- Lightheadedness
- Tingling in hands and feet
- Carpal-pedal spasm
- Increased anxiety
- Loss of consciousness
Hyperventilation-Treatment

- Stop procedure
- Clear all objects from mouth
- Verbally calm the patient
- Rebreathe CO$_2$
  - Paper bag
  - Face mask
  - Hands

- Self-limiting problem
- Diazepam 5 mg IV or midazolam 2 mg IM/IV
- No O$_2$
Hyperventilation - Prevention

- Reduce stress
- Sedation
Cardiovascular emergencies
Cardiovascular Emergencies

- Angina
- Myocardial infarction
- Hypertensive crisis
Angina-Definition

- Transient, substernal pressure or intense pain
- May radiate to arm, neck, jaws or back
Angina - Pathophysiology

- Imbalance between myocardial oxygen demand and supply
- Myocardial stress demands increased oxygen
  - Demand exceeds supply
  - Heart becomes ischemic
- May be vascular spasm
Angina-Risk Factors

- Smoking
- Hypercholesterolemia
- Hypertension
- Coronary artery atherosclerosis
- Diabetes
- Genetics
Angina-Risk Factors

**Determination of severity of disease**
- Quality of symptoms
- Frequency
- Precipitating factors
- Exercise tolerance
- Relieving factors
- Stable or unstable pattern

- Previous MI (when)
- H/O CABG (when)
- H/O angioplasty (when)
- Results of previous tests
- Medications
Angina-Precipitating Factors

- Increased oxygen consumption by the heart
  - Exercise
  - Stress or anxiety
  - Hypoxia (sedation)
  - Blood loss
Angina-Diagnosis

- Severe chest pain-crushing, intense pressure
- Substernal but can radiate or appear elsewhere
  - Jaws
  - Arm-left or right
  - Back
  - Shoulder
- Pallor
Angina-Diagnosis

- Diaphoresis
- Shortness of breath
- Nausea
- Unsettling to patient
- Anginal symptoms may vary between patients
- Anginal symptoms are usually consistent for a given patient
Angina-Treatment

- Semi-Fowlers position
- Check blood pressure
- Do you take Viagra?
- Nitroglycerin 0.4 mg sublingual repeated every 5 minutes X 3
- Oxygen
- Monitor vital signs
- 911 if symptoms are unusual
Angina-Prevention

- When to treat?
  - 6 month rule?
  - When stable
- Confirm that patient took medications
- Stress reduction
- Supplemental oxygen
- Prophylactic NTG
- Limit epinephrine
Myocardial Infarction - Definition

- Same as for angina
- Chest pain unrelieved by nitroglycerin until proven otherwise
- Sustained damage to myocardium from ischemic episode
Myocardial Infarction - Pathophysiology

- Ischemic period to myocardium exceeds ability of muscle to recover
- Muscle necrosis occurs
- Decreased cardiac function
- Arrhythmias
Myocardial Infarction - Risk Factors

- Same as for angina
- History of angina
- Half of all deaths - cardiovascular disease
- Two-thirds of these - coronary artery disease
- Over 1/3 of MI patients die
- 2/3 of these patients die before reaching the hospital
Myocardial Infarction-Precipitating Factors

- Similar to angina
- Recent MI
  - Six month waiting period
- History of MI
Myocardial Infarction-Diagnosis

- Chest pain/pressure is the most common symptom
- Not all patients with MI experience chest pain
- Not all chest pain is of cardiac origin
Myocardial Infarction-Diagnosis

- Angina that is prolonged or not responsive to nitroglycerin
- Pallor
- Shortness of breath
- Unconsciousness
- Weak pulse
- Nausea
Myocardial Infarction - Treatment

- Semi-Fowlers position
- Oxygen
- 911
- Monitor vital signs
- Nitrous oxide/narcotic
- Nitroglycerin
- Aspirin
- MONA
Myocardial Infarction-Prevention

- Same as for angina
Hypertensive Crisis-Definition

- Abnormally high blood pressure creating signs or symptoms for a patient
Hypertensive Crisis - Pathophysiology

- Increased systolic blood pressure creates increased blood flow to brain
- Usually of sudden onset
- Prodromal for CVA
Hypertensive Crisis-Risk Factors

- Atherosclerotic vascular disease
- History of hypertension
Hypertensive Crisis-Precipitating Factors

- Stress
- Failure to take medication
Hypertensive Crisis-Diagnosis

- Headache
- Dizziness
- Confusion
- Numbness
- Loss of limb function
Hypertensive Crisis-Treatment

- Sit patient upright
- 100% O₂
- 911 if symptomatic
- Consider nitrous oxide
Hypertensive Crisis - Prevention

- Check blood pressure before procedure
  - Duh!!!
- Assure medications
- Stress reduction protocols
- Watch epinephrine doses
CNS Emergencies

- Syncope
- Postural hypotension
- CVA
- Seizure
Syncope - Definition

- Transient and reversible loss of blood flow to brain causing decreased sensorium or fainting
- Vasovagal syncope is the most common cause of loss of consciousness in the dental office
- Generally caused by anxiety
Syncope—Pathophysiology

- Stress $\rightarrow$ catecholamine release $\rightarrow$ blood redistribution to skeletal muscle
- Lack of muscle activity $\rightarrow$ lack of cardiac return $\rightarrow$ fall in blood pressure $\rightarrow$ activation of pressure receptors to maintain blood pressure
- Receptors fatigue $\rightarrow$ precipitous fall in blood pressure $\rightarrow$ loss of consciousness
Syncope-Risk Factors

- Patients with a history of fainting
  - Cause?
- Anxious patients
- Young males (rarely children)
Syncope-Precipitating Factors

- Stress and anxiety while immobile (as in dental chair)
- Prolonged standing
- Hot weather
- Hunger
- Funky uniforms
## Syncope-Diagnosis

<table>
<thead>
<tr>
<th>Early Diagnosis</th>
<th>Late Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pale</td>
<td>Loss of consciousness</td>
</tr>
<tr>
<td>Diaphoretic</td>
<td>Possible seizure activity</td>
</tr>
<tr>
<td>Room “feels warm”</td>
<td>BP extremely low</td>
</tr>
<tr>
<td>Nausea</td>
<td>Pulse extremely slow and weak</td>
</tr>
<tr>
<td>Pulse rapid</td>
<td></td>
</tr>
<tr>
<td>BP nearly normal</td>
<td></td>
</tr>
</tbody>
</table>
Syncope - Treatment

- Stop dental treatment
- Remove objects in mouth
- Trendelenburg position
- Raise feet
- Loosen restrictive clothing
- Supplemental oxygen
Syncope-Treatment

- Cool towel to forehead
- Monitor vital signs
- Ammonia vaporole
- At increased risk for a second faint
  - Call it a day
  - Consider premedication/sedation
Syncope-Prevention

- Reduce stress:
  - Short appointments
  - Morning appointments
  - Distraction techniques
  - Patient education and communication
  - Sedation
Syncope-Prevention

- Treat in more supine or slight Trendelenburg position
- Snack before appointment
- Beware the buff dude!!
Postural Hypotension-Definition

- Decreased blood pressure associated with an abrupt change in patient position
- Orthostatic hypotension
Postural Hypotension - Pathophysiology

- Supine to upright position $\rightarrow$ blood pooling in lower extremities $\rightarrow$ decrease in blood pressure
- Pressure receptors act to maintain blood pressure
- Postural hypotension occurs when baroreceptors cannot respond sufficiently to maintain consciousness
Postural Hypotension - Risk Factors

- Patients with decreased blood volumes
- Patients with blunted receptor responses
  - Drugs (antihypertensives, sedatives)
  - Increased age
- Prolonged recumbence
- Pregnancy
Postural Hypotension - Precipitating Factors

- Rapid vertical change in body position in persons at risk
- Dehydration
- Blood loss
- Allergic reactions
- MI
- Not induced by stress
Postural Hypotension-Diagnosis

- Patient feels light-headed upon rapid standing
- Loss of consciousness
- Vital signs differ from vasovagal syncope:
  - Blood pressure low
  - Pulse normal or rapid
Postural Hypotension - Treatment

- Identical to treatment of vasovagal syncope
- Elevate slowly when recovered
- At no greater risk of repeat loss of consciousness than before episode
Postural Hypotension-Prevention

- Do not allow patients at risk to rapidly stand from the dental chair
- Elevate patients slowly and in stages
- Be prepared to physically support the patient if they pass out
Stroke-Definition

- Cerebrovascular accident (CVA)
- Loss of brain tissue secondary to vascular embarrassment
- Reversible or irreversible
Stroke-Pathophysiology

- Brain accounts for about 2% of body weight, yet consumes 20% of oxygen
- Occlusion or rupture of cerebral vessel results in necrosis of brain tissue
  - Aneurysm
  - Thrombus
  - Embolus
- TIA if only ischemic and therefore reversible
Stroke-Risk Factors

- Similar risk factors as for coronary artery disease
  - Hypertension especially important
- Cardiac arrhythmias
- Valvular heart disease
- Carotid artery disease
- History of previous CVA
Stroke-Precipitating Factors

- Sudden rapid increase in blood pressure
- Stress
Stroke-Diagnosis

- Variable presentation, depending on location of cerebral infarct
- Localized weakness
- Numbness
- Aphasia

- Severe headache
- Vomiting
- Seizure
- Loss of consciousness
- Death
Stroke-Treatment

- Stop dental procedure
- Position patient sitting upright (if conscious)
- 911
- Oxygen
- Monitor vital signs
- CPR if needed
Stroke-Prevention

- When to treat?
  - 6 month rule
- Confirm that patient took antihypertensive medications
- Stress reduction
  - Sedation can mask neurologic symptoms
- Judicious use of epinephrine
Seizure-Definition

- Aberrant cortical neural pathway activation
  - Motor activity
  - Sensory activity
  - Mixed
  - Status epilepticus
    - 10-20% mortality rate
Seizure-Epidemiology

- 10% of population will have a seizure
  - Most under age 15
- 2 million epileptics in US (1 in 150)
  - 100,000 new diagnoses annually
  - Bimodal distribution-2/3 over 50
Seizure-Pathophysiology

- Focal source of excessive neuronal electrical discharge in the brain
- Epilepsy
- Fever
- Hypoxia
  - Birth
  - Syncope
- Brain tumor
- Local anesthetic overdose
- Diabetes
- Meningitis
- Stroke
- Head trauma
- ETOH withdrawal
Seizure-Pathophysiology

- Generalized seizures spread to entire brain
  - Absence or petit mal seizures
  - Tonic/clonic or gran mal seizures
- Partial seizures remain focal and localized
Seizure-Risk Factors

- Patients with a history of seizures
  - Frequency
  - Last seizure?
  - Precipitating factors (stress?)
  - Medications
  - Last time serum drug levels were checked
  - Changes in medications since last check
Seizure-Precipitating Factors

- Failure to comply with medications
- Stress
- Other emergency conditions
Seizure-Diagnosis

- Prodromal phase with personality changes
- Aura, depends on the location of the initiating seizure focus
- Loss of consciousness
- Ictal phase (tonic-clonic phase)
- Post-ictal phase
Seizure-Treatment

- Stop dental treatment, all objects out of mouth
- Remove dangerous items from around patient
- Gently restrain and protect patient during ictal phase
- NO tongue blades
Seizure-Treatment

- Supportive therapy during post-ictal phase
- Maintain airway
- Oxygen
- Monitor vital signs
- Consider 911, especially if seizure continues or repeats
- Possible valium 5-10 mg IV or midazolam 2-4 mg IV/IM if seizure continues or repeats
Seizure-Prevention

- Confirm that patient has taken antiseizure medications on day of procedure
- Limit stress
- Sedation
  - Benzodiazepines
  - Barbiturates
Other emergencies
Other Emergencies

- Allergic reactions
- Hypoglycemia
Other Emergencies

- Allergic reactions
- Hypoglycemia
Allergic Reactions - Definition

- An immune response to an allergen
- Re-exposure produces heightened reaction
- May be immediate or delayed
Allergic Reactions - Pathophysiology

- Previous exposure to a foreign antigenic substance caused antibody formation
- Subsequent exposure elicits a heightened antigen-antibody immune response
- Many reported drug reactions are not allergic
Allergic Reactions - Risk Factors

- Patients with known prior allergic reactions
  - Careful history
  - Specifics of previous reaction
  - Timing of the event
  - Treatment required
- Atopic patients
- Patients may demonstrate cross reactivity to medications of a similar chemical structure
Allergic Reactions - Precipitating Factors

- Contact with a substance to which the patient has been previously exposed and to which antibodies have been made, thus sensitizing the patient
Allergic Reactions - Diagnosis

- Contact dermatitis
- Allergic rhinitis
- Urticaria
- Angioedema
- Bronchospasm and edema (asthma)
- Anaphylactic shock
Allergic Reactions - Diagnosis
Allergic Reactions - Diagnosis

- **Timing of the reaction**
  - Immediate
  - Delayed

- **Extent of the reaction**
  - Rash
  - Swelling
  - Respiratory compromise
Allergic Reactions - Treatment

- **Delayed onset skin reaction**
  - Stop dental treatment/medications
  - Assess respiration
  - Consider observation if localized
  - If more generalized, diphenhydramine (Benadryl) 25-50 mg po TID x 2 days
Allergic Reactions - Treatment

- **Immediate skin reaction**
  - Stop dental treatment
  - Assess respiration
  - Diphenhydramine 25-50 mg IM/IV
  - Diphenhydramine 25-50 mg po TID x 2 days
Allergic Reactions - Treatment

- Respiratory or cardiovascular compromise
- Stop treatment
- 911
- Oxygen
- Basic life support as indicated
- Intubation/cricothyrotomy

- Epinephrine 0.3-0.5 mg SC/IM/IV
- Bronchodilator inhaler if wheezing present
- Diphenhydramine 25-50 mg IM/IV
- Hydrocortisone 100 mg IM/IV

- Intubation/cricothyrotomy
Allergic Reactions - Prevention

- Careful medical history
- Don’t use the drug
- Avoid prescribing medications in the same class as those to which known allergy exists
- Prophylactic antihistamines?
  - What are you thinking?
Diabetes - Definition

- Lack of sufficient endogenous insulin to allow glucose to adequately enter cells
  - Quantitative
  - Qualitative
Diabetes-Pathophysiology

- Excess serum glucose causes osmotic diuresis and spills into the urine
- Patients experience polyuria, polydipsia, and polyphagia
- Severe hyperglycemia and hypoglycemia can lead to loss of consciousness and death
- Due primarily to its much more rapid onset, hypoglycemia is of most concern for causing complications during dental treatment
Hypoglycemia
Hypoglycemia - Risk Factors

- Patients with a history of diabetes
- Patients on insulin
  - Insulin shock
- Patients under poor control (brittle diabetics)
Hypoglycemia-Risk Factors

- Severity of disease
- Daily insulin requirements
- Self-test for serum glucose levels
  - Frequency
  - Results
- Hospitalized for poor control
- Frequency of hypoglycemic events
Hypoglycemia - Precipitating Factors

- Increased insulin administration
- Poor glucose intake
  - Normal insulin-inadequate diet
  - NPO
    - Intentional
    - Unintentional
- Increased glucose metabolism
  - Stress
  - Infection
Hypoglycemia-Diagnosis

- Confusion
- Abnormal behavior
- Diaphoresis
- Tachycardia
- Anxiety
- Loss of consciousness
- Seizure
Hypoglycemia - Treatment

- Always treat as hypoglycemia until proven otherwise
- Administer glucose
- If conscious:
  - Juice
  - Cake frosting
- If unconscious:
  - 911
  - Epinephrine 0.3-0.5 mg SC/IM/IV
  - D$_{50}$W IV
  - Glucagon 1 mg IM/IV
  - Cake frosting
Hypoglycemia - Treatment

- Administer glucose
  - Duh!!!
- Conscious patient
  - Oral glucose
    - Sugar solution
    - Juice
    - Soda
    - Tablets
- Cake frosting?
- Felsenfeld’s favorite
Hypoglycemia-Prevention

- Assure appropriate food intake
- Request AM serum glucose level
- Stress reduction
- Have patient bring Accu-check to office
- Keep ‘em sweet
Stupor or Coma?
Why is your patient stuporous?

- Hyperventilation
- Myocardial infarction
- CHF
- Postural hypotension
- Hypertensive crisis
- Local anesthetic toxicity
- CVA
- Hypoglycemia
- Thyroid problems
- Seizure
Why is your patient unconscious?

- Syncope
- Drug overdose
- Postural hypotension
- Seizures
- Hypoglycemic reaction
- Airway obstruction
- Hypertensive crisis

- Acute adrenal insufficiency
- Acute allergic reaction
- Myocardial infarction
- Cardiac arrest
- CVA
- Hyperventilation
- Psychiatric disorder
- Drunk?
Feces occurs!!

But is it gonna happen to you?
Likely to happen

- Syncope
- Postural hypotension
- Angina
- Seizure
- Asthma
- Allergic reaction
- Hyperventilation
Sorta likely to happen

- Hypertensive crisis
- CHF
- Airway obstruction
- Hypoglycemia
- Local anesthetic toxicity
Pretty rare

- Myocardial infarction
- Cardiac arrest
- CVA
- Adrenal insufficiency
- Thyroid emergencies
So what’s happened to me?

- Syncope
- Angina
- Hyperventilation
- Hypoglycemia
- Postural hypotension
- Allergic reaction
- Asthma
- Seizure
- CHF
- Airway obstruction
- Cardiac arrest
911?
So when do you call 911?

<table>
<thead>
<tr>
<th>Cardiac arrest</th>
<th>Airway obstruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status epilepticus</td>
<td>CHF</td>
</tr>
<tr>
<td>Severe bronchospasm</td>
<td>Severe allergic reactions</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>Hypoglycemia-unconscious</td>
</tr>
<tr>
<td>CVA</td>
<td>Thyroid problems</td>
</tr>
<tr>
<td>Hypertensive crisis</td>
<td></td>
</tr>
<tr>
<td>Acute adrenal insufficiency</td>
<td></td>
</tr>
</tbody>
</table>
Emergency Kits

- **Commercial**
  - Convenient
  - Expensive
  - Too many items?
  - Limited selection

- **Custom made**
  - Cheap
  - Familiarity
  - Comfort level with drugs
Custom made
What should you have in your emergency kit?

- Oxygen
- Epinephrine-Anaguard, Epipen; Anakit
- Benadryl
- Sugar/cake frosting
- Ammonia inhalants

- Inhaler-Albuterol
- Nitrospray
- Aspirin
- Paper bag
Felsenfeld's Rules of Medical Emergencies-#2

- The best way to treat an emergency is not to have it
Felsenfeld's Rules of Medical Emergencies - #3

- Anyone who maintains his calm during a medical emergency clearly does not understand the gravity of the situation.
Conclusions

- A medical emergency in the dental office can be a frightening experience for the patient as well as the doctor and staff.
- With proper preparation, prevention, diagnosis and treatment the risk of a disastrous outcome can be greatly reduced.
Conclusions

- Be prepared (yourself, staff, office)
- Obtain a thorough knowledge and understanding of your patient’s medical conditions to determine medical risk
- Alter normal routine dental treatment to minimize risk
- Be alert to early signs and symptoms of an impending medical emergency, and institute early and rapid treatment
ANY QUESTIONS???
“Actually, the term ‘ugly duckling’ seemed too cruel. We prefer ‘attractively challenged’.”
I’m outta here

Private practice

State employee