

Medical Emergencies in the Dental Practice

Medical Emergency	Signs & Symptoms	Treatment	Recommended Equipment & drugs	Prevention & further information
Adrenal Crisis Steroid dependant patients undergoing surgery	Extreme weakness, a serious drop in blood pressure and mental confusion, dizziness, cold & clammy skin. Vomiting +/- diarrhoea. May not have all symptoms	ABCDE approach & Call 999 IM hydrocortisone 100mg, Oxygen Lie flat.	IM hydrocortisone 100mg (<i>not on British National Formulary List for dentists</i>) Oxygen cylinder Face mask & tubing	Treat patients with Addison's in hospital. Check if patient is steroid- dependant. ADSHG surgical guidelines
Anaphylaxis Life threatening allergic reaction	Increasing symptoms since exposure to drug, food or venom. Swelling & discolouration around face, difficulty speaking, coughing ++ tongue tingling/ swelling, breathing difficulties, severe blood pressure drop, fast heart rate, urticarial rash . Stomach cramps. May not have all symptoms	ABCDE approach Call 999 Adrenaline 1:1000 strength. 500mcg adults & >12 300mcg 6-12 years 150mcg < 6 years, Oxygen , Lie flat & raise legs (unless breathing made worse by this). Repeat after 5 minutes if no improvement. Reassure patient.	Adrenaline 1:1000 Available as ampoules or auto injectors (<i>note Epipen contains 300mcg & amps contain 1mg</i>) 1ml syringes & green & blue needles (21g & 23G) if using ampoules. Oxygen cylinder Face mask & tubing	Check patient history for allergies and seriousness of reaction. Treat patients with severe & multiple allergies in hospital. Avoid antigen Latex free equipment Note: treat anaphylaxis promptly as more responsive to treatment in its early phases. Higher incidence of fatalities if patient has Asthma. www.resus.org.uk/anaphylaxis
Asthma Swollen narrowing airways affecting breathing	Breathlessness & expiratory wheeze. Severe (adult): inability to complete sentences in one breath RR > 25/min. HR>110 Severe (child) inability to complete sentences in one breath or too breathless to talk or feed RR> 40, HR >140 (2-5 yrs) RR>30 , HR >125 (>5yrs) Life threatening cyanosis, poor respiratory effort, fall in HR, fall in conscious level/confusion, exhaustion.	ABCDE approach Oxygen Help sit upright Salbutamol Inhaler 2 puffs initially, consider using spacer & repeat as necessary. Call 999 unless rapid improvement to patients normal breathing. Spacer – 5 puffs (more can cause droplet formation) Oxygen high flow 15L/min. Reassure patient	Salbutamol inhaler Spacer Oxygen cylinder Face mask & tubing	www.nice.org.uk/asthma www.brit-thoracic.org.uk Asthma explanation animation www.youtube.com/watch?v=7EDo9pUYvPE Using spacer https://www.youtube.com/watch?v=KNzMdBSpBOA
Cardiac Emergencies Myocardial Infarction = heart attack Can vary from hardly detectable to unsurvivable	Symptoms can vary; commonly: Chest pain, tightness and or heaviness. Pain may radiate to neck, jaw, shoulders, arms (usually left) & back. Pallor & sweating Nausea / vomiting Breathlessness	ABCDE approach Do they have known angina? Is this normal for them? Call 999 Help patient into Comfortable position Aspirin 300mg crushed or chewed, unless known allergy. GTN spray 2 puffs sub-lingually, unless dizzy & light headed. Oxygen guided by pulse oximetry. Keep 94-98%. Reassure patient but ensure AED is available if needed.	Aspirin 300mg tablets GTN spray Oxygen cylinder Face mask & tubing AED (Automated External Defibrillator)	Assume chest pain is potentially life threatening & serious until proved otherwise with hospital investigations. NB. Diabetic patients may experience less pain. NB. Patients with known angina who recover well with GTN & rest may not need 999 call, if it is an unusual presentation of angina call 999.
Hypoglycaemia Low blood sugars	Shaking/ trembling, diabetic patients often aware they are 'going hypo', slurred / vague speech, sweating & pallor, blurred vision, tiredness & lethargy, confusion / aggression, reduced conscious level, seizures	ABCDE approach. Measure blood glucose if possible. Call 999 if patient unresponsive. Co-operative, conscious & able to swallow: 4 x glucose tablets or 1 x gel tube or sweet drink. Impaired consciousness & unable to swallow safely: Administer buccal glucose gel carefully &/or glucagon 1mg IM Children < 25kg can have 0.5mg glucagon.	Glucose gel Glucagon 1mg injection Blood glucose testing kit (recommended)	Normal Blood Glucose Levels: 4-9mmols/L (consistently over 7mmols/L may need GP review) http://www.medicinesforchildren.org.uk/glucagon-hypoglycaemia http://www.cqc.org.uk/guidance-providers/dentists/dental-mythbuster-6-storing-glucagon-injection
Seizures (Epileptic) Fitting	Sudden collapse & loss of consciousness Tonic phase (approx 30 secs) Rigidity & cyanosis Clonic phase (few mins) Jerking movements of limbs, tongue may be bitten, frothing at mouth & incontinence may occur. Post seizure patient may be exhausted, confused & may require oxygen.	ABCDE approach. Ensure safe environment, note time & prevent injury. Do not put anything in mouth, do not restrain. Give oxygen 15 L/min. Once seizure stops, place in recovery position. Check blood glucose & temperature in children if possible. Loosen tight clothing. Prolonged seizure > 5mins or seizures recurring in quick succession call 999 & administer buccal Midazolam . 1 st fit refer to hospital.	Buccal Midazolam 10mg Adult 1-5 years 5mg 5-10 years 7.5mg	Check patient's medical history for careplan regarding time to give Midazolam. Most seizures self-terminate without drugs. Treat in hospital if unstable epilepsy or difficulty monitoring patient's condition. https://pathways.nice.org.uk/.../epilepsy/treating-prolonged-or-repeated-seizures Epilepsy video: www.youtube.com/watch?v=FBEj9H42fa4
Stroke Bleeding or clot in brain	F: facial weakness, smile? Face drooped on side? A: arm weakness, raise both arms equally? S: speech slurred, difficulty speaking T: time, call 999	ABCDE approach, position of comfort, recovery position if losing consciousness. Call 999 Consider oxygen . Do not give them anything to eat or drink.	Oxygen cylinder Face mask & tubing	www.nhs.uk/conditions/stroke/
Syncope Faints	Feels faint/dizzy/light headed. Collapse & loss of consciousness. Sweating low pulse rate & low B/P.	Lie flat & elevate legs, loosen tight clothing, cool air. If unresponsive check for signs of life.		https://www.nhs.uk/conditions/fainting/