

BEST NURSING PRACTICE IN THE SCHOOL ENVIRONMENT, PART 1

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OBJECTIVES

FOLLOWING THE PRESENTATION, DEMONSTRATION AND PRACTICE, THE SCHOOL NURSE WILL BE ABLE TO:

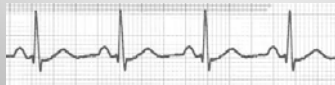
1. ASSESS PULSES
2. ASSESS ABNORMAL BREATH SOUNDS
3. DEMONSTRATE USE OF EPI PEN, INSULIN PEN, GLUCAGON INJECTION
4. ADMINISTER A BREATHING TREATMENT USING A NEBULIZER
5. DEMONSTRATE HOW TO USE A METERED DOSE INHALER
6. DEMONSTRATE TRACHEOSTOMY CARE AND SUCTIONING
7. DEMONSTRATE AND DISCUSS PULSE OXIMETRY



REGULAR RHYTHM

• ASSESSMENT

1. CIRCUMSTANCES INVOLVED: AFTER MEDICATION, PHYSICAL ACTIVITY, EMOTIONAL SITUATION
2. PULSE AMPLITUDE
3. SKIN COLOR AND TEMPERATURE
4. BLOOD PRESSURE SCHOOL AGE: 90 – 105 / 55 – 65



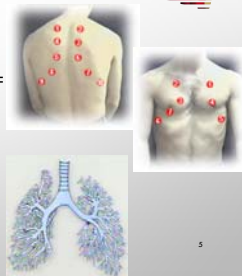
DURING ASSESSMENT

1. HAVE STUDENT SITTING UPRIGHT AS POSSIBLE
2. BREATHE SLOWLY IN THROUGH NOSE AND OUT THROUGH MOUTH
3. LISTEN ANTERIORLY AND POSTERIORLY
4. COMPARE BREATH SOUNDS BEFORE AND AFTER INHALER AND/OR BREATHING TREATMENT
5. RESPIRATORY RATE, RETRACTION PRESENT, NASAL FLARING, SKIN OR NAIL COLOR EVALUATED
6. O₂ SATURATIONS NEED TO BE 92% OR GREATER



LUNG SOUNDS

- **VESICULAR** – PERIPHERAL LUNG; SOFT AND SWISHING SOUND
- **BRONCHIAL** – TRACHEA AND BRONCHI; LOUDER, COARSER AND OF LONGER DURATION THAN VESICULAR
- **BRONCHOVESICULAR** – STERNAL BORDER OF THE MAJOR BRONCHI; MODERATE IN PITCH AND INTENSITY



ADVENTITIOUS BREATH SOUNDS

- **COARSE CRACKLES** – DISCONTINUOUS, EXPLOSIVE, INTERRUPTED. LOUD, LOW IN PITCH. PULMONARY EDEMA, PNEUMONIA
- **FINE CRACKLES** – DISCONTINUOUS, EXPLOSIVE, INTERRUPTED. LESS LOUD THAN COARSE CRACKLES. LOWER IN PITCH, AND OF SHORTER DURATION. HEART FAILURE, ATELECTASIS
- **WHEEZE** – CONTINUOUS, OF LONG DURATION; HIGH PITCHED, MUSICAL, HISSING. NARROWING OF AIRWAYS, ASTHMA, COPD. HEARD ON INHALATION AND/OR EXHALATION.
- **RHONCHI** – CONTINUOUS, OF LONG DURATION, LOW PITCHED, SNORING. PRODUCTION OF SPUTUM (CAN BE CLEARED WITH COUGHING OR SUCTIONING)



FREE HANDOUTS



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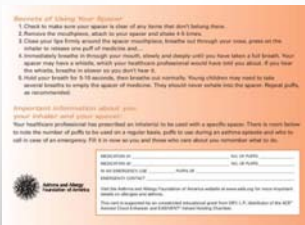
aafa

FREE HANDOUTS



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FREE HANDOUTS



Asthma and allergy foundation of American
<https://secure.aafa.org>

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RELIABLE RESOURCES FOR ASTHMA INFORMATION

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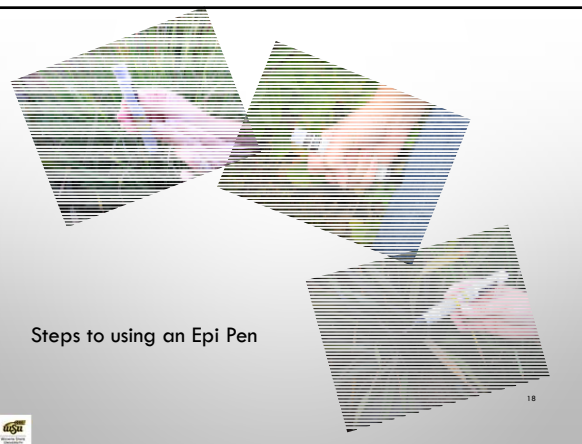
- ACTION FOR HEALTHY KIDS
- ALLERGY & ASTHMA NETWORKS/MOTHERS OF ASTHMATICS
- ALLES AGAINST ASTHMA
- AMERICAN ACADEMY OF ALLERGY, ASTHMA, AND IMMUNOLOGY
- AMERICAN ACADEMY OF FAMILY PHYSICIANS
- AMERICAN ACADEMY OF PEDIATRICS
- AMERICAN COLLEGE OF ALLERGY, ASTHMA, AND IMMUNOLOGY
- ASSOCIATION OF SCHOOL BOARD OFFICIALS
- ASTHMA & ALLERGY FOUNDATION OF AMERICA
- AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS
- CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) HEALTHY YOUTH
- CDC NATIONAL CENTER FOR ENVIRONMENTAL HEALTH
- ENVIRONMENTAL LAW INSTITUTE
- HEALTHY SCHOOLS CAMPAIGN
- HEALTHY SCHOOLS NETWORK
- NATIONAL ASSOCIATION OF EDUCATION HEALTH INFORMATION NETWORK
- NATIONAL ASSOCIATION OF SCHOOL NURSES
- NATIONAL ASSOCIATION OF STATE BOARDS OF EDUCATION
- NATIONAL SCHOOLS BOARDS ASSOCIATION
- NHI/BI: NATIONAL ASTHMA EDUCATION AND PREVENTION PROGRAM
- SCHOOL-BASED HEALTH ALLIANCE
- U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) - INDOOR AIR QUALITY

EMERGENCY INJECTIONS

- EPI PEN
 - EPINEPHRINE INJECTION IS USED TO TREAT LIFE-THREATENING ALLERGIC REACTIONS CAUSED BY INSECT BITES, FOODS, MEDICATIONS, LATEX, AND OTHER CAUSES
 - SYMPTOMS INCLUDE: WHEEZING, SHORTNESS OF BREATH, TACHYPNEA, HIVES, ITCHING, SWELLING, STOMACH CRAMPS, DIARRHEA AND LOSS OF BLADDER CONTROL
 - EPINEPHRINE IS A SYMPATHOMIMETIC AGENT; IT WORKS BY RELAXING MUSCLES IN THE AIRWAYS AND TIGHTENING THE BLOOD VESSELS



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Steps to using an Epi Pen

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AUVI Q

- EPINEPHRINE INJECTION
- SIMILAR TO EPI-PEN
- SMALLER DEVICE
- TALKS USER THROUGH PROCESS OF ADMINISTRATION
- CAN ORDER CARRY PACKS
- FREE TO SCHOOLS PROGRAM
- TWO DOSAGE CHOICES
- EASY TO INJECT



• KAL'EO

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EMERGENCY INJECTIONS

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1. GIVEN TO THE PERSON TAKING INSULIN FOR THEIR DIABETES WHO IS HYPOGLYCEMIC WITH LOSS OF CONSCIOUSNESS
2. MIXING OF A PRE-FILLED SYRINGE TO A VIAL OF POWDERED GLUCAGON IS DONE JUST PRIOR TO INJECTION
3. SMALL CHILDREN (UNDER 20 KG OR 44 LBS) ARE GIVEN ½ ML (HALF THE SYRINGE); OLDER CHILDREN OR ADULTS ARE GIVEN 1 ML (THE WHOLE SYRINGE)
4. GIVE IN A LARGE MUSCLE: THIGH, OR ARM.

• GLUCAGON EMERGENCY KIT

- GLUCAGON IS A HORMONE THAT RAISES THE LEVEL OF GLUCOSE IN THE BLOOD
5. May cause vomiting, so place student on their left side prior to injecting
 6. Blood glucose checks every 10 – 15 minutes following injection
 7. Stored at temperature less than 90°
 8. When the student is conscious and can swallow, give fast acting glucose and follow with protein depending upon time of next meal



EPILEPSY

- WWW.EPILEPSY.COM
- COURSES FOR SCHOOL NURSES FOR CEU
- SEIZURE ACTION PLAN – SAMPLE FROM THE EPILEPSY FOUNDATION

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DIASTAT/DIAZEPAM RECTAL GEL

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- DIAZEPAM RECTAL GEL IS USED TO STOP SEIZURES. THE DOSAGE TO BE GIVEN IS PRESCRIBED BY THE STUDENT'S PHYSICIAN. THE MEDICATION COMES PREPACKAGED AND READY TO BE ADMINISTERED RECTALLY.

o Directions for Administration

- ❖ Place the student having seizures on their side
- ❖ Apply lubricating jelly to the rectal tip
- ❖ Insert the syringe tip into the anus until the rim is snug against the opening
- ❖ Inject contents, and hold buttocks together for short period of time, 3-5 seconds



DIASTAT NASAL SPRAY

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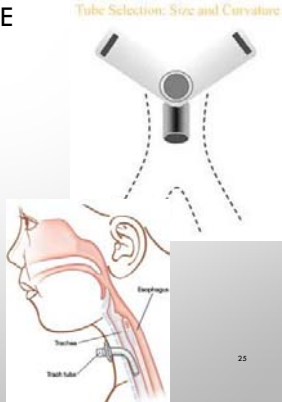
- EFFICACY GOOD
- EASIER TO GIVE
- TRANSIENT SIDE EFFECTS
- VOLUME OF FLUID INTRODUCED
- ABSORPTION VS LOSS



TRACHEOSTOMY CARE

Tube Selection: Size and Curvature

- CLEAN PROCEDURE
- WASH HANDS
- SUPPLIES:
 - SPLIT GAUZE DRESSINGS (STERILE)
 - STERILE H₂O OR NS
 - STERILE Q TIPS
 - TRACH TIES



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TRACHEOSTOMY CARE


- SIGNS THAT A CHILD NEEDS TO BE SUCTIONED:
 - RATTLING MUCUS SOUNDS FROM THE TRACH
 - FAST BREATHING
 - BUBBLES IN TRACH OPENING
 - DRY, RASPY BREATHING OR WHISTLING NOISE FROM TRACH
 - ANY SIGN OF RESPIRATORY DISTRESS



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SUCTIONING OF TRACHEOSTOMY

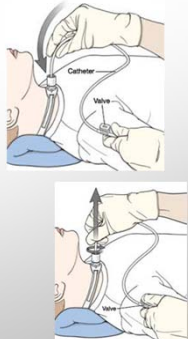
- STERILE PROCEDURE
- WASH HANDS
- SUPPLIES:
 - STERILE CATHETER KIT
 - SUCTION MACHINE
 - SUCTION SET AT 80 – 120 MMHG



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SUCTIONING OF TRACHEOSTOMY

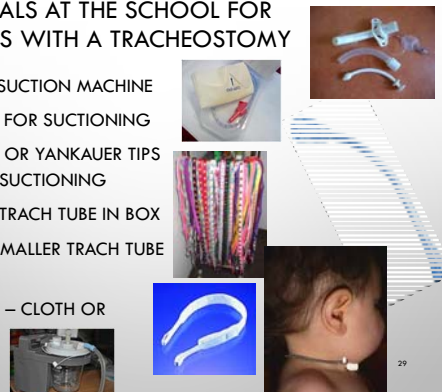
- APPLY INTERMITTENT SUCTION FOR UP TO 10 SECONDS
- ROTATE CATHETER AS IT IS WITHDRAWN
- ENCOURAGE STUDENT TO COUGH
- RINSE CATHETER WITH STERILE H₂O OR SALINE BEFORE SUCTIONING AGAIN
- **OR**
- CLEAN/SUCTION MOUTH WITH CATHETER
- **DO NOT** USE CATHETER FOR TRACH SUCTIONING AFTER BEING IN STUDENT'S MOUTH



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MATERIALS AT THE SCHOOL FOR STUDENTS WITH A TRACHEOSTOMY

- PORTABLE SUCTION MACHINE
- CATHETERS FOR SUCTIONING
- CATHETERS OR YANKAUER TIPS FOR ORAL SUCTIONING
- SAME SIZE TRACH TUBE IN BOX
- ONE SIZE SMALLER TRACH TUBE IN BOX
- TRACH TIES – CLOTH OR VELCRO



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REFERENCES

EPINEPHRINE INJECTION – WWW.NCBI.NLM.NIH.GOV/PUBMEDHEALTH/PMH00002111

HOW TO READ SPO2, KONICA MINOLTA SENSING, INC., WWW.WINDWARD.HAWAII.EDU/FACTSTAFF/MILLIEFSKY-M/ZOOL%20142L/ABOUTPULSEOXIMETRY.PDF

GLUCAGON EMERGENCY KIT – WWW.CHILDRENWITHDIABETES.COM/D

HOW TO USE YOUR INHALER – ASTHMA.CA/ADULTS/TREATMENT/SPACERS.PHP

NEBULIZER TREATMENTS: HOW DOES A NEBULIZER WORK – WWW.BUZZLE.COM/ARTICLES/PORTABLE-NEBULIZER-MACHINE.HTML

DIAZEPAM RECTAL – WWW.NCBI.NLM.NIH.GOV/PUBMEDHEALTH/PMH0000316

FUNDAMENTALS OF NURSING 2013. ELSEVIER MOSBY. CLINICAL NURSING SKILLS & TECHNIQUES. 8TH ED. MOSBY.

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