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Healthy infant appears alert with good muscle tone
Figure 2: Infant, Poor First Impression
Sick infant with poor muscle tone, nasal flaring, retractions

Nasal Flaring
Retractions
Limbs Extended (poor muscle tone)

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Figure 3: Child, Good First Impression
Healthy child appears alert with good muscle tone
Figure 4: Child, Poor First Impression
Sick child with poor muscle tone, nasal flaring, retractions
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Airway suctioning using large-bore rigid suction catheter
Figure 6: Respiratory Distress
Signs of respiratory distress include tripod position, nasal flaring, retractions
Figure 7: Blow-by Oxygen, Child
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Figure 8: Capillary Refill, Foot

a. Press sole of foot firmly

b. Release to check capillary refill time
Figure 9: Capillary Refill, Palm

a. Press fleshy part of hand firmly

b. Release to check capillary refill time

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Figure 10: Shock Position
Proper immobilization on spine board, legs elevated in shock position
Figure 11: Rigid Collar Sizing
Measure from chin to shoulder for proper sizing

Key dimension on patient

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Figure 12: Properly Positioned Collar

Key dimension on collar

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Hold head and neck in line while applying rigid collar
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b. Proportions for child

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Signs indicating possible inhalation injury

- Singed Eyebrows and Eyelashes
- Nasal Flaring
- Soot/smoke from Nasal Passages/oral Region

Retractions

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Figure 19: Head Trauma
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Child properly immobilized in KED
a. Squeeze

b. Release

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c. Release

Figure 24: Squeeze Release Release
Figure 25: E-C Clamp

a. Hand displaying E-C shape

b. E formed with small, ring, and middle fingers; C formed with index finger and thumb

c. E fingers resting on bony ridge of jaw

d. C fingers positioned to hold mask

e. Proper E-C clamp for assisted ventilation
Figure 26: Pediatric Airway
Anatomy of pediatric airway

Epiglottis
(floppier, u-shaped)

Airway
(more anterior and higher)

Tongue

Hyoid bone

Funnel

Vocal cords

Thyroid cartilage

Cricoid ring
(Narrowest)

Trachea
(more flexible)

Posterior

Anterior

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Figure 27: Adult Airway
Anatomy of adult airway
Figure 28: Intubation, School-Age Child
a. Proper placement of laryngoscope blade in airway
Figure 28: Intubation, School-Age Child

b. Obtaining a clear view of vocal cords

c. Anatomy of vocal cords

Laryngoscope
Tongue
Vocal Cords
Glottis
Arytenoids
Figure 29: Intubation, Infant
a. Proper placement of laryngoscope blade in airway
Figure 29: Intubation, Infant

b. Obtaining a clear view of vocal cords

c. Anatomy of vocal cords
Figure 30: Intubation, Detail

a. ET tube insertion between vocal cords

b. ET tube insertion
Figure 31: C-Spine Immobilization for Intubation
Figure 32: Oral Airway Insertion

a. Proper measurement for oral airway insertion

b. Proper oral airway placement

Tip of airway at angle of jaw

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Figure 33: Pediatric Endotracheal Tubes

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Figure 34: Positioning of Endotracheal Tube
Proper ET tube placement in airway

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Figure 35: Sellick Maneuver

a. Anatomy of airway

b. Proper positioning for Sellick Maneuver
Figure 36: Ventilation through Endotracheal Tube

a. Bag-valve-mask with carbon dioxide detector
Figure 36: Ventilation through Endotracheal Tube

b. Bag-valve-mask attached directly to ET tube
Figure 37: Head Tilt/Chin Lift
Figure 38: Modified Jaw Thrust

a. Placement of fingers to lift jaw

b. Placement of hands on mask
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Look, listen, and feel
Figure 40: Brachial Pulse
Brachial pulse check on infant patient
Figure 41: Infant CPR, Finger Technique
Proper finger positioning on infant’s chest for CPR
Figure 42: Infant CPR, Thumb Technique

a. Thumbs on chest, side by side

b. Thumbs on chest, overlapping
Figure 43: Child CPR
Hand placement on chest for CPR
Figure 44: Foreign Body, Conscious Child

a. Proper technique to remove foreign body from conscious child’s airway

b. Placement of dominant hand on child’s abdomen

c. Placement of nondominant hand on child’s abdomen
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**Figure 46: Foreign Body, Infant**

a. Proper hand placement to deliver back blows

b. Proper finger position to deliver chest thrusts
Figure 47: Bulb Syringe

a. Removal of secretions from mouth

b. Removal of secretions from nose

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a. Rubbing back to stimulate response

b. Flicking heel to stimulate response
Figure 50: Measuring for Nasogastric Tube
Insertion depth measured from tip of infant’s nose to xiphoid process
Figure 51: Single Cannula Tracheostomy Tube

- Tube
- Obturator
- Obturator inserted into tube

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Figure 52: Double Cannula Tracheostomy Tube

Inner Cannula

Outer Cannula

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Figure 53: Fenestrated Tracheostomy Tube
Figure 54: Cuffed Tracheostomy Tube

- Tracheostomy Tube
- Obturator
- Cuff
- Balloon

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Figure 55: Suctioning Tracheostomy Tube

a. Insertion of suction catheter to proper depth; suction port remains open

b. Suctioning airway in circular motion as catheter is removed; suction port closed
Figure 56: Tracheostomy Tube Placement

a. Insertion of suction catheter through tracheostomy tube

b. Insertion of suction catheter through stoma into airway

c. Placement of tracheostomy tube in airway

d. Tracheostomy tube in airway
Figure 57: Ventilation through Tracheostomy Tube
Assisted ventilation through tracheostomy tube using bag-valve-mask
Figure 58: Ventilation through Stoma

a. Assisted ventilation through stoma; patient’s mouth closed

b. Assisted ventilation through mouth and nose; stoma covered
Figure 59: Home Ventilator
Infant with tracheostomy
on home ventilator
Figure 60: CPAP
Constant positive airway pressure device for pediatric patients
Figure 61: Gastrostomy Tube and PEG

a. Positioning of gastrostomy tube or PEG in abdomen

b. Detail of percutaneous endoscopic gastrostomy (PEG)

Place to disconnect pump
Tube to feeding source

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Figure 62: Nasogastric Tube
Nasogastric tube with syringe attached for stomach decompression

Syringe for gastric decompression

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Figure 63: Central Intravenous Catheters
Sites for internal and external intravenous catheters
Figure 64: CSF Shunt
Placement of cerebrospinal fluid shunt

Point where shunt dips into ventricles

Point where shunt dips into abdomen

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Figure 65: Infant Patient with Colostomy

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Figure 66: PALS Newborn Resuscitation Pyramid

Dry, Warm, Position, Suction, Stimulate

Oxygen

Establish Effective Ventilation
- Bag-valve mask
- Endotracheal intubation

Chest Compressions

Medications