



Emergency Medical Responder

INFANTS AND CHILDREN



Stages and Ages

Infant	Birth to 1 year
Toddler	1-3 years old
Preschooler	3-5 years old
School age	6-12 years old
Adolescent	13-18 years old





Caregivers may offer a variety of responses to an ill or injured child

- Crying
- Emotional outbursts
- Anger
- Guilt
- Confusion



The following techniques may help when dealing with anxious parents:

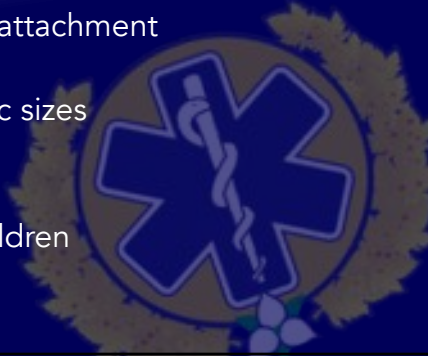
- Make health and safety of patient a priority
- Realize parents may be correct
- Always treat every patient with courtesy
- Let parents stay close to the patient
- Do not reach with anger





Equipment Appropriate for Infants and Children

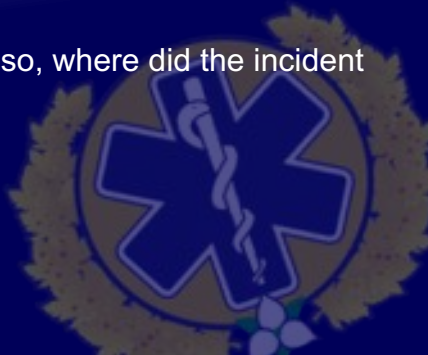
- 1) Airway adjuncts in pediatric sizes
- 2) Face masks, oxygen mask, and nasal canula in pediatric sizes
- 3) BVM with oxygen enrichment attachment
- 4) Bulb syringe for suctioning
- 5) Blood pressure cuff in pediatric sizes
- 6) Pediatric stethoscope
- 7) C-collars in pediatric sizes
- 8) Backboards for infants and children
- 9) New, clean stuffed animals



Scene Assessment

Ask caregivers the following questions:

- 1) Why was EMS called?
- 2) What is the chief complaint?
- 3) Has the child been moved? If so, where did the incident occur?





Anatomical Differences in Children

- Proportionately larger head
- Unstable temperature mechanism in babies
- Smaller airways with more soft tissue
- Lower blood volume
- Faster heart and breathing rates
- More easily dehydrated
- Extremities can normally be a little mottled



Early Signs of Respiratory Distress

- Noisy breathing
- Cyanosis
- Flaring nostrils
- Altered mental status
- Use of accessory muscles to breathe
- Retractions around ribs or shoulders
- Increased effort to breathe





Primary Assessment

- 1) Provide oxygen immediately
- 2) Assess circulation by palpating infant's brachial pulse
- 3) Control external bleeding immediately



TABLE 28-2
NORMAL VITAL SIGNS FOR INFANTS AND CHILDREN

Age	Weight		Pulse (average)	Respirations	Average Blood Pressure	
	(lbs.)	(kg)			Systolic	Diastolic
1-28 days	7.4	3.4	94-145 (125)	30-60	80	46
3 months	12.5	5.7	110-140 (120)	24-35	89	60
6 months	16.5	7.4	100-140 (120)	24-35	89	60
1 year	22.0	10.0	98-160 (120)	20-30	89	60
2 years	27.0	12.4	90-140 (110)	20-30	96	64
3 years	31.0	14.5	80-120 (100)	20-30	96	70
4 years	33.6	16.5	65-132 (100)	12-26	96	70
5 years	41.0	19.0	80-110 (100)	12-26	96-98	70
6 years	47.0	21.5	75-100 (100)	12-25	96-98	66
10 years	71.0	32.5	70-110 (90)	12-21	110	60

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Assessing Vital Signs

Pay attention to

- Brachial pulse in an infant/radial pulse in a child
- Respiration—monitor for a full minute to determine rate
- Blood pressure—use correct BP cuff size
- Temperature—Feel for cold arms and legs, as this may indicate shock
- Skin condition/capillary refill—note skin colour



Assess for Damage to Nervous System

- 1) Determine LOC
- 2) Check pupils
- 3) Examine head, neck, and spine
- 4) Check if patient responds to verbal and painful stimuli
- 5) Check patient's ability to move arms and legs purposefully
- 6) Check if clear or bloody fluid is draining from the ears






TABLE 28-3
ANATOMICAL DIFFERENCES BETWEEN INFANTS OR CHILDREN AND ADULTS

Anatomical Differences	Impact on Assessment and Treatment
Larger tongue	Can block airway
Reduced size of airway	Can become easily blocked
Abundant secretions	Can block airway
Rubly teeth	Can easily dislodge and block airway
Flat nose and face	Difficult to obtain good airway seal with face mask
Proportionally large head	Must maintain neutral position to keep airway open and in-line stabilization of head and neck Greater potential for head injuries in cases of trauma
Soft spots on head	Bulging soft spots may indicate intracranial pressure; sunken eyes may indicate dehydration
Thinner and softer brain tissue	Consider head injury more serious than in adults
Short neck	Difficult to stabilize and immobilize
Shorter and narrower trachea, with more flexible cartilage	Can close off trachea with overextension of the neck
Faster respiratory rate	Muscles fatigue easily, which can lead to respiratory distress
Primarily nose breathers (newborns)	Airway more easily blocked
Abdominal muscles used to breathe	Difficult to evaluate breathing
More flexible ribs	Lungs more easily damaged May be significant injuries without external signs
Heart can sustain faster rate for longer period of time	Can compensate longer before showing signs of shock and usually decompensates more quickly than an adult
More exposed spleen and liver	Significant abdominal injury more likely Abdomen more often a source of hidden injury
Larger body surface	Prone to hypothermia
Softer bones	Can easily bend and fracture
Thinner skin	Consider burns to be more serious than in an adult

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Allowing a child to sit on a parent's lap during assessment may help them to remain calm.





Common Pediatric Emergencies

- Trauma – blunt injury is the most common
- Shock
- Respiratory emergencies
- Cardiac arrest
- Seizures



Signs of Shock in an Infant or Child

- Altered mental status
- Listless
- Rapid respirations
- Rapid and weak pulse
- Delayed capillary refill
- Falling blood pressure
- Pale, cool, clammy skin
- No tears when crying

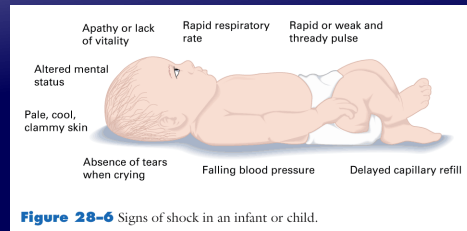


Figure 28-6 Signs of shock in an infant or child.





Adult vs. Infant or Child Airways

Adult structure	Child by comparison
Nose	Nose and mouth are smaller
Tongue	Larger tongue occupies more of the pharynx
Epiglottis	Epiglottis is U shaped and protrudes into the pharynx
Cricoid cartilage	Less rigid and less developed
Trachea	Narrower, softer, and more flexible



Managing a SIDS Call

- Initiate emergency care immediately, unless rigour mortis has set in
- Avoid comments that may suggest blame
- Help parents feel everything possible is being done
- Do not offer false hope
- Obtain a medical history of patient
- Do full patient assessment



Child Abuse Patients

Follow these guidelines:

- If it can be done safely, enter the home and access the child
- Calm parents
- Focus attention on child
- Transport child from scene
- Never confront parents
- Maintain total confidentiality

