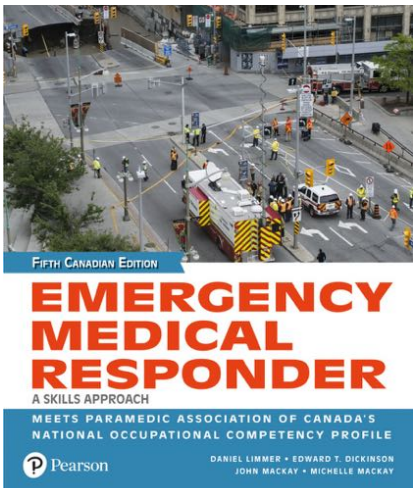
Emergency Medical Responder: A Skills Approach

Fifth Canadian Edition



Chapter 28

Infants and Children

Objectives (1 of 4)

- Describe characteristics associated with the five stages of infant and child development.
- Outline the differences between the anatomy and physiology of the infant, child, and adult patient.
- Describe and demonstrate primary assessment of the infant or child, including the seven common signs and symptoms of early respiratory distress in infants and children.

Objectives (2 of 4)

- Describe and demonstrate secondary assessment of the infant or child, including special considerations for assessing pulse, respiration, blood pressure, temperature, skin condition, and capillary refill.
- Discuss emergency medical care of the infant and child trauma patient.

Objectives (3 of 4)

- Identify the signs and symptoms of shock in cases of trauma or dehydration in infants and children.
- Discuss common respiratory emergencies in infants and children, including croup, epiglottitis, and asthma, and describe their emergency medical care.
- List common causes and describe the management of seizures in infants and children.
- Discuss management of cases of suspected sudden infant death syndrome (SIDS).

Objectives (4 of 4)

- Summarize the signs and symptoms and describe the medical-legal responsibilities of the EMR in cases of possible child abuse and neglect.
- Understand the EMR's own emotional response to a difficult infant or child call and recognize the need for EMR debriefing.
- Demonstrate a caring attitude toward the patient and family when dealing with illness or injury in infants and children, while giving priority to the interests of the patient.

Stages and Ages (1 of 2)

Table 28–1 Childhood Development by Age

Common Term	Age	Characteristics and Behaviours
Infant	Birth to 1 year	Knows the voices and faces of parents May cry to indicate hunger, discomfort, or pain Will want to be held by a parent or caregiver Has difficulty identifying the precise location of an injury or source of pain
Toddler	1–3 years old	Very curious at this age, so possibility of poison ingestion May be distrustful and uncooperative Usually does not understand what is happening, which raises level of fear May be very concerned about being separated from parents or caregivers May be helpful to use a stuffed toy in gaining trust

Stages and Ages (2 of 2)

Table 28–1 *Continued*

Common Term	Age	Characteristics and Behaviours
Preschooler	3–5 years old	Able to talk, but still may not understand what is being said to him or her; use simple words May be scared and believe what is happening is his or her fault Sight of blood may intensify response; sometimes a bandage helps
School age	6–12 years old	Should cooperate and be willing to follow the lead of parents and EMS provider Has active imagination and thoughts about death Continual reassurance is important
Adolescent	13–18 years old	Acts like adult Able to provide accurate information Modesty is important Has fears of permanent scarring or deformity May become involved in mass hysteria; be tolerant and do not get caught up in it

Caregiver Responses to an Ill or Injured Child

- Crying
- Emotional outbursts
- Anger
- Guilt
- Confusion

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 react with anger

Equipment Appropriate for Infants and Children (1 of 2)

- Airway adjuncts in pediatric sizes
- Face masks, oxygen mask, and nasal cannula in pediatric sizes
- BVM with oxygen enrichment attachment
- Bulb syringe for suctioning
- Blood pressure cuff in pediatric sizes

Equipment Appropriate for Infants and Children (2 of 2)

- Pediatric stethoscope
- C-collars in pediatric sizes
- Backboards for infants and children
- New, clean stuffed animals

Scene Assessment

Ask caregivers the following questions:

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

Anatomical Differences in Children

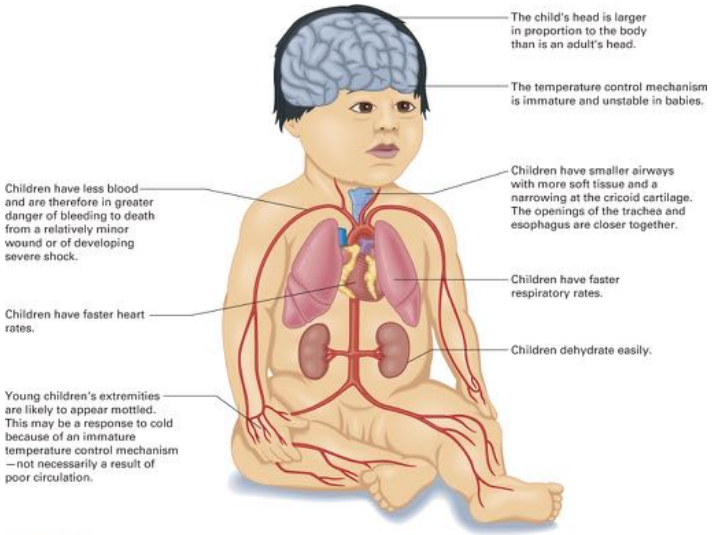


Figure 28–2 The anatomy of an infant or child is not the same as an adult's.

Early Signs of Respiratory Distress

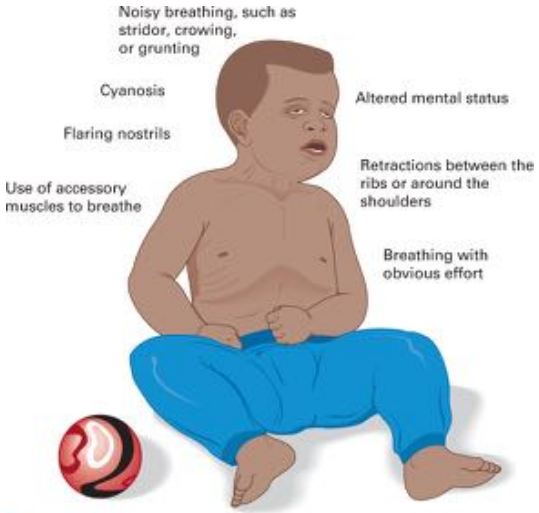


Figure 28–3 Signs of early respiratory problems.

Primary Assessment

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

Table 28–2 Normal Vital Signs for Infants and Children

	Weight		Pulse		Average Blood Pressure	
Age	(lbs.)	(kg)	(average)	Respirations	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	50
6 months	16.5	7.4	100–140 (120)	24–35	89	55
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	62
3 years	31.0	14.5	80–120 (100)	20–30	96	64
4 years	33.6	16.5	65–132 (100)	12–26	96	65
5 years	41.0	19.0	80–110 (100)	12–26	96–98	66
6 years	47.0	21.5	75–100 (100)	12–25	96–98	70
10 years	71.0	32.3	70–110 (90)	12–21	110	74

Assessing Vital Signs

- 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

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

Table 28–3 Anatomical Differences Between Infants or Children and Adults (1 of 2)

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
Baby 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 heat loss and for head injuries in trauma cases
Soft spots on head	Bulging soft spots may indicate intracranial pressure; sunken ones 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

Table 28–3 Anatomical Differences Between Infants or Children and Adults (2 of 2)

Anatomical Differences	Impact on Assessment and Treatment
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

Common Pediatric Emergencies

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

Signs of Shock in an Infant or Child

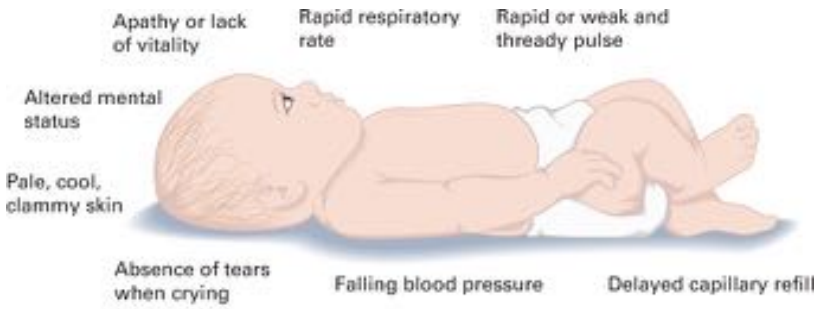


Figure 28–6 Signs of shock in an infant or child.

Adult vs. Infant or Child Airways

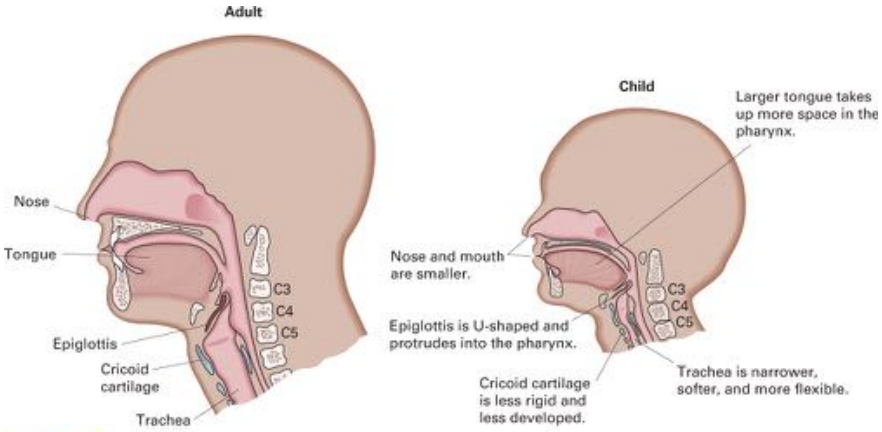


Figure 28–7 Comparison of the airways of an adult and an infant or child.

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

