

Respiratory assessment in children

Respiratory assessment includes the assessment of airway patency and efficacy of breathing.

A guide to Mild, Moderate, Severe and Life-threatening respiratory features:

	Mild ALL the following:	Moderate accessory muscle use and ANY of the following:	Severe accessory muscle use and ANY of the following:	Life-threatening ANY of the following:
Behaviour	Alert Talks in sentences	Occasional irritability Some limitation in ability to talk - talking in phrases	Agitated, restless, distressed Marked limitation to ability to talk - talking in words only	Drowsy or unconscious Unable to vocalise due to dyspnoea
Posture	Can walk or crawl	Lethargic Tripod sitting	Lethargic Tripod sitting	Collapsed or exhausted
Breathing	Mild accessory muscle use	Moderate accessory muscle use	Severe accessory muscle use	Severe accessory muscle use or poor respiratory effort
Skin Colour	Normal	Pale	Cyanosis	Cyanosis
Respiratory Rate	Normal or mild tachypnoea	Tachypnoea	Tachypnoea	Severe tachypnoea or bradypnoea or apnoea
Heart Rate	Normal or mild tachycardia	Tachycardia	Tachycardia	Cardiac arrhythmia or bradycardia (preterminal sign)

Respiratory Assessment:

Least invasive to most invasive

Start your assessment with the 'hands off' elements allowing the child to assume a position of comfort. With the assistance of caregivers to expose the chest, the following can be done without touching the infant or child:

- Observe the infant or child's behaviour, colour, presence of respiratory muscle recession and categorise accordingly with the table above.
- Obtain the respiratory rate.
- Observe for equal rise and fall of the chest.
- Without a stethoscope listen for any sounds such as coughing, nasal congestion, snoring, grunting, wheezing or stridor.

Finish the respiratory assessment with the 'hands on' elements:

- Ensure the trachea is centred with no deviation.
- Auscultate the chest.
- Obtain and document a full set of observations including heart rate and oxygen saturations.
- Document your findings and seek assistance as required.

Chest Auscultation

- If possible, it is beneficial to wait for a time when the infant or child is not crying to ensure subtle sounds are not missed.
- For younger children you may find it helpful to first let them play with your stethoscope or integrate the use of their toys to build rapport and encourage compliance.
- If old enough, ask the child to sit up in bed or if they prefer on their caregiver's lap.
- Asking the child to take deep breath ("big breaths") auscultate the front and back of the chest. Compare right to left in a 'Z' pattern.
- Note any noises such as wheezing or crackles on the inspiratory or expiratory phase of the respiration cycle.
- Document your findings.





ALERT

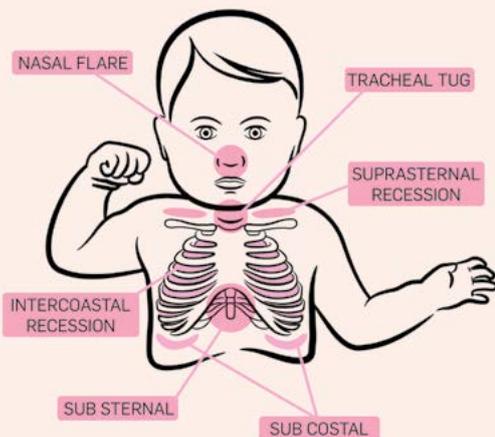
A 'silent chest' is a medical emergency. Seek urgent medical attention. A silent chest is suggestive of little to no gas exchange and is a warning that respiratory failure is imminent.

Children with stridor should be made as comfortable as possible. Take special care not to distress the child as this may exacerbate their symptoms.

Guide to Normal Parameters

Age	 < 1 year	 1-4 years	 5-11 years	 > 12 years
Respiratory rate (RR) (breaths/minute)	21-45	16-35	16-30	16-25
Heart rate (HR) (beats/minute)	100-159	90-139	80-129	60-119

Location of intercostal muscles



Other Signs of respiratory distress in children

- Head bobbing in infants
- Tripod position
- Paradoxical abdominal breathing
- Flat affect
- Absence of cry
- Grunting

When to escalate care

-  Urgently seek medical advice in the child with signs of severe or life-threatening respiratory distress.
-  Seek prompt senior nursing/ medical advice in a child with moderate respiratory distress or worsening symptoms.

For further information:

[Clinical Assessment of the Paediatric Patient – Rapid Assessment / Primary and Secondary Survey / Vital Signs \(QH only\)](#)
[Nursing Standard: Clinical Observations – Considerations in Children \(QH only\)](#)

References:

This Queensland Paediatric Emergency Nursing Skill Sheet was developed by the Emergency Care of Children working group (funded by the Queensland Emergency Department Strategic Advisory Panel) with the help of the following resources:

Children's Health Queensland Hospital and Health Service. (2019b, September 26). Asthma - Emergency management in children. <https://www.childrens.health.qld.gov.au/guideline-asthma-emergency-management-in-children/>

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Hockenberry, M.W., D., Wong's nursing care of infants and children. 10th ed. 2015, Canada: Elsevier.

Queensland Health Statewide ED Nurse Educator Committee, Pearson, N., Cole, T., & Carney, S. (Eds.). (2016). Unit 5 Respiratory. In Queensland Health: Transition Support Program - Emergency. Module 3 - Paediatric Care in the Emergency Department (4th ed., pp. 68–78). State of Queensland (Queensland Health).



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- Supporting consumer rights and informed decision making in partnership with healthcare practitioners including the right to decline intervention or ongoing management.

- Advising consumers of their choices in an environment that is culturally appropriate and which enables comfortable and confidential discussion. This includes the use of interpreter services where necessary.
- Ensuring informed consent is obtained prior to delivering care.
- Meeting all legislative requirements and professional standards.
- Applying standard precautions, and additional precautions as necessary, when delivering care.
- Documenting all care in accordance with mandatory and local requirements.

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