

Child with Acute Cough (<3 weeks)

Check how serious the illness is!

No Fever, No Tachypnea

No need for CXR

URTI Symptoms

(coryza, rhinitis, sore throat)

URTI

- Cough due to post-nasal drip
- Normal chest auscultation
- Infectious contacts
- VIRAL URTI = MOST COMMON CAUSE OF ACUTE COUGH

Asthma

- Cough worse at night, on exertion, and after URTI
- Wheeze and/or crackles on auscultation
- Symptoms subside with bronchodilators (i.e. SABAs)

Bronchiolitis

- Wheeze and/or crackles on auscultation
- Very common in kids <2, due to RSV infection

No URTI Symptoms

Foreign body aspiration

- History of choking/aspirating?
- Normal CXR does NOT r/o aspiration
- Tx: bronchoscopy

Fever! Tachypnea!

Suspect bacterial pneumonia
→ Do CXR!

CXR: Normal

Croup

- 3mon-3yrs old
- Viral URTI prodrome
- Sudden, nighttime barking cough
- Hoarseness

Foreign Body Aspiration

- Infection of occluded airway can cause fever
- Tx: bronchoscopy

Bronchiolitis

- Mild Fever, if any
- URTI Sx (rhinitis, coryza)
- Wheeze + crackles on auscultation
- Very common in kids <2, due to RSV infection
- X-ray could also show hyperinflation

CXR: Abnormal

Bacterial Pneumonia

- CXR: consolidation
- Child looks unwell
- Organisms: Strep pneumo, Grp A Strep, H. flu, Staph aureus (if <2 or immuno-compromised)
- Tx: Abx (i.e. macrolide)
- If pneumonia is recurrent, and X-rays always the same, suspect congenital abnormality or foreign body!

Atypical or viral pneumonia

- CXR: diffuse white fluffy changes
- Atypical bacteria: mycoplasma or chlamydia
- If viral, child may look less sick

Watch out for acute respiratory failure:

Appearance:

- Fatigued, gasping, anxious
- Somolence/lethargy = severe

Breathing:

- Tachypnea (severe = irregular, apneic breathing)
- Work of breathing ↑ (chest wall retractions/indrawing, nasal flaring, grunting, head bobbing)
- O₂ sat ↓ (<90% on room air)

Circulation:

- Pale, waxen, cyanotic look
- Level of Consciousness ↓

Cough pathophysiology:

Cough is a symptom:

- A physiological lung defense mechanism
- Under voluntary and involuntary control
- Triggered by stimulation of cough receptors on pharynx, larynx, and large airways

Phases of cough:

- Inspiration – to take in enough air to cough
- Expiratory muscles rapidly squeezes lungs, with glottis closed.
- After pressure builds up, glottis opens and air is explosively released out of airway.