Recurrence wheezing is 3 or more episodes in a year

Main causes of recurrent wheezing in children are

- Asthma
- Infections such as bronchiolitis
- Gastro-oesophageal reflux
- Enlarged hilar lymph nodes e.g., TB.

The majority of children with recurrent wheeze have asthma.

Asthma should be diagnosed in any child with a recurrent cough or wheeze that is responsive to bronchodilators.

### Diagnosis

**Consider asthma if:**

- History of:
  - recurrent wheezing
  - chronic cough worse at night
  - colds that “go to the chest”
  - cough occurring after exercise
- Symptoms worse at night
- Symptoms occur or worsen in the presence of:
  - colds
  - animals with fur
  - smoke
  - changes in weather
  - pollen
  - exercise
- A family history of asthma or allergies
- Symptoms improve after giving a bronchodilator

### Classify Type of Asthma

**Classify according to symptoms**

- **Intermittent asthma**
- **Persistent asthma** (symptoms more than once a week or nighttime symptoms more than twice a month).
  - children with persistent asthma should be referred for chronic management

### Treat

**Treatment includes:**

- **Avoid** asthma triggers
- **Prophylaxis** (prevent) attacks
- **Relief** of acute asthma attacks
- **Inhaled** B2 agonist should be used for relief of acute attacks given via:
  - MDI-spacer and face mask in children < 2 years
  - MDI-spacer and mouth piece in children > 2yrs
  - Inhaled B2 agonist should be used as:
    - salbutamol 200-500ug (2-5 puffs) at 1 puff every 10 secs via MDI-spacer or
    - salbutamol solution (1ml in 2ml normal saline) via nebuliser

### Refer

- Children with persistent asthma
- Children with difficult to control asthma
- Children with a poor response to treatment
- Young infants less than 3 months of age
TREATMENT OF AN ACUTE ATTACK OF WHEEZING IN A CHILD WITH RECURRENT WHEEZE

SIGNS OF RESPIRATORY DISTRESS?
- Fast breathing
- Chest in-drawing
  **OR**
- Difficulty talking or drinking
  **OR**
- Uncomfortable or restless
  **OR**
- Lethargic
  **OR**
- Palpable pulsus paradoxus

**YES**
- Oxygen
  - Inhaled B2 agonist or subcut adrenalin (A)
  - **RESPONSE**
    - Observe for 1 hour
    - No distress
      - **HOME on B2 agonist (C)**
      - FOLLOW UP (D)
    - Relapse
      - **NO RESPONSE**
        - Repeat inhaled B2 agonist or subcut adrenalin (A)
        - In addition oral steroids (B)
    - No response
      - **Response**
  - **NO RESPONSE**
    - Home on B2 & oral steroids (C)
    - FOLLOW UP
(A) INHALED BRONCHODILATOR
- Salbutamol nebuliser soln (5mg/ml) or other B2 agonist
  1 ml in 2ml normal saline
  OR
- Salbutamol MDI (100ug/ puff) 5 puffs via spacer given as
  1 puff every 10secs
  OR
- Subcutaneous Adrenalin
  Adrenalin (1:1000) 0.01ml/ kg to max of 0.3ml given
  subcutaneously

(B) ORAL STEROID
- Prednisone (5mg/ tab) 1-2 mg/kg

(C) HOME TREATMENT
- Salbutamol (or other B2 agonist) MDI & spacer 2 puffs
  (200ug) four times a day for 5 days or if unavailable
  Salbutamol 1mg po tds if < 1 yr for 5 days
  Salbutamol 2mg po tds if > 1 yr for 5 days
- Advise not to smoke in house
  AND if 2 inhaled bronchodilator treatments were given
- Prednisone (5mg/ tab) 1-2 mg/kg/day for 5 days
  If more than 2 course of prednisone were required in prior 4
  months, REFER
- No antibiotics are needed for treatment of asthma
- Continue any maintenance asthma therapy

(D) FOLLOW UP
- Caregivers should seek help IMMEDIATELY if:
  - Child’s breathing becomes difficult
  - Child’s breathing becomes fast
  - Child is unable to eat or drink
  - Child becomes lethargic or restless
  - Child becomes blue or very pale
- REFER for long term management of children with persistent
  asthma

Contributors
Guide to diagnosis and management of asthma 'PAWC (MCWH): Provincial Reference Group
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