

# Diagnosis of asthma (in adults, young people and children age 5-16)



**A diagnosis of asthma is made on the basis of a characteristic history\* examination and supporting objective tests.**

(Don't get carried away by the tests!)

Code as "suspected asthma" until diagnosis confirmed

Don't forget occupational asthma

- \*recurrent symptoms with diurnal variation,
- identifiable triggers,
- family/past atopic history,
- lack of symptoms/signs to suggest alternative diagnosis

# DIAGNOSIS OF ASTHMA IN ADULTS IN PRIMARY CARE

## CHARACTERISTIC HISTORY (AND EXAM)

### POSITIVE RESULT IF:

FeNO > 50ppb  
Blood eosinophils "above reference range"

- Post BDR rise in Fev-1  $\geq 12\%$  and 200ml or more or  $\geq 10\%$  predicted normal.
- Mean PEFr Variability over 2 weeks  $\geq 20\%$
- (BDR Reversibility in acute asthma  $\geq 20\%$ )

FeNO=Fractional Exhaled nitric oxide  
PEFR= Peak Expiratory Flow

BLOOD EOSINOPHILS  
or FeNO

SPIROMETRY WITH  
BRONCHODILATOR  
REVERSIBILITY(BDR)  
(or PEFr variability over 2  
weeks if unavailable  
or acute reversibility )

Refer for Bronchial  
Challenge testing

# How to calculate peak flow variability

- Measure peak flow twice daily for 14 days
- Mean of Daily mean variance = (Highest-lowest daily PEFR) / mean daily PEFR x 100%

If we were carrying out 3 days only !

Day 1 : Morning PEFR 400l/min

Evening PEFR 500l/min      Variability =  $500-400 / 450 \times 100\%$  = 22%

Day 2 Morning 430l/min

Variability =  $520-430 / 475 \times 100\%$  = 19%

Evening 520l/min

Day 3 Morning=420l/min

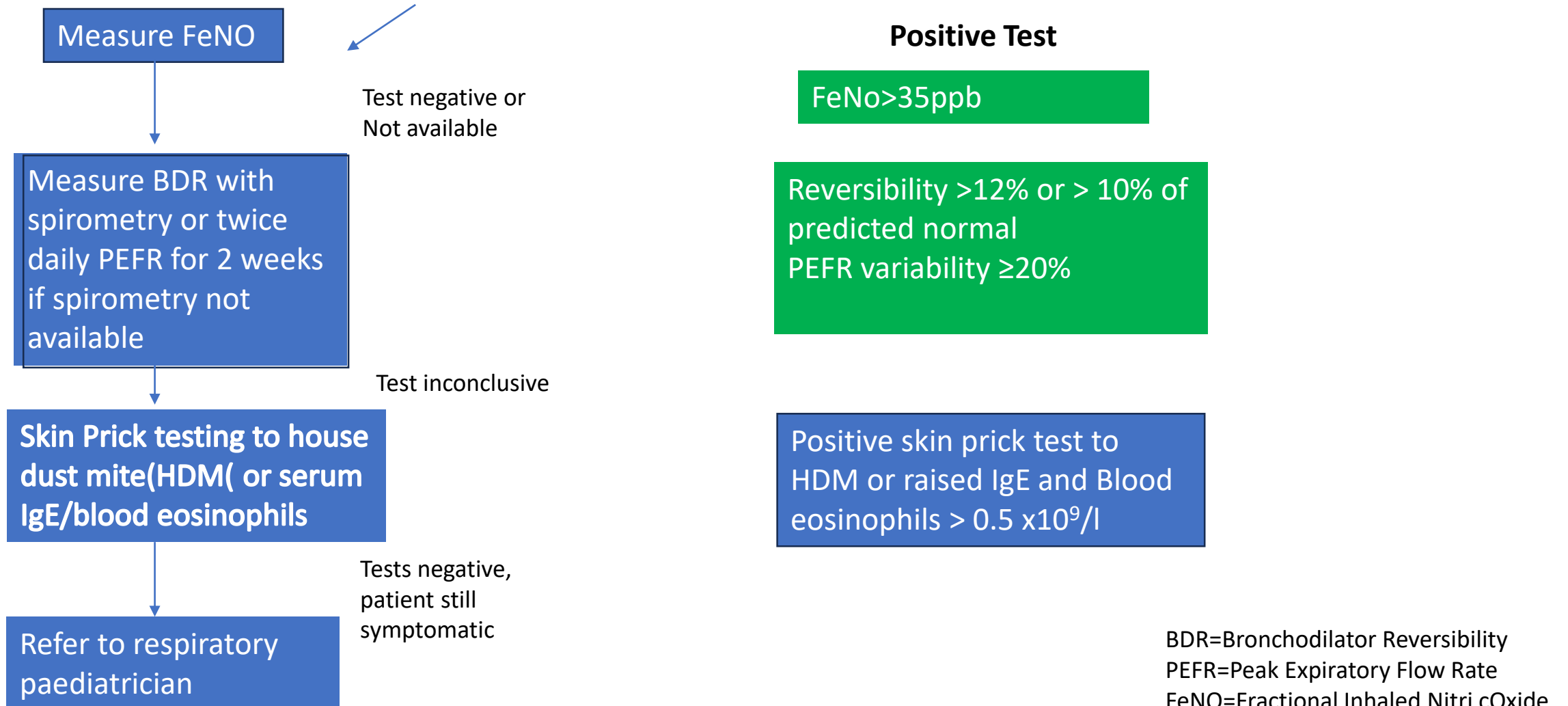
Variability=  $500-420 / 460 \times 100\%$  = 17%

Evening=500l/min

MEAN VARIABILITY = 19.3%      but remember over 14 days!

# Diagnosis of Asthma in Children 5-16

## CHARACTERISTIC HISTORY AND EXAMINATION



# Diagnosis of Asthma in Children Under 5

A diagnosis of Asthma is Made on the basis of the presence of a characteristic history (and exam) and a positive response to a trial of Inhaled Corticosteroids.

The probability of asthma increases where:

- There is **recurrent** cough and/or wheeze (isolated “cough variant “ asthma is rare in children
- There is no failure to thrive (although a child may not be thriving with severe symptoms)
- Symptoms occur in between bouts of viral infections e.g on running, laughing, exposure to potential triggers. (e.g air pollution) and often occur at night
- There is a past or family history of other allergic disease , especially maternal asthma and a past history of atopic dermatitis.
- Examination may be normal or reveal the presence of wheeze. There is an absence of physical signs to suggest an alternative diagnosis

Any Pre-school child with an admission to hospital or 2 or more admissions to an emergency department in a 12 month period should be referred to a respiratory Pediatrician