Infection, Asthma and Bronchial hyper-responsiveness

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Asthma

- Hallmark of asthma:
  - **chronic inflammation**
  - **bronchial hyper-responsiveness**
  - **reversible airflow obstruction**

Th-2 predominant inflammatory response

Asthma

- Most of asthma present age < 15 years
- First manifestation as
  - acute bronchiolitis
  - wheezing associated respiratory tract infection
- Most common asthmatic trigger is respiratory tract infection

Association between infection and asthma ?

Respiratory tract infection

Asthmatic symptoms
Bronchial hyper-responsiveness

"Early life" factors associate with recurrent wheezing

Risk factors	Protective factors
Genetic polymorphisms (17 q 21, ORMDL3, GSDML, IKZF3)	Genetic polymorphism (TLR3)
Early sensitization to multiple allergen	Exposure to high level of indoor allergen
Low Vit D intake during pregnancy	Growing up on a farm
Chorioamnioitis	Exclusive breast feeding
Prematurity , younger GA	
Early life reduced lung function	
High rate of infant weight gain	
Air pollution /passive smoking	
Early life viral infection	
Early life airway colonization	

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