

# NORMALS

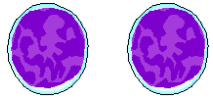
Minimal inflammation  
Short-lived, upper respiratory symptoms only



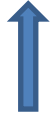
Robust antiviral responses  
Minimal inflammatory response



↑IFN- $\gamma$

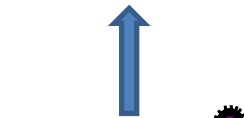


Strong NK cell and  
Th1 cell responses

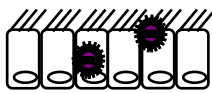


Up-regulation of  
interferon-  
stimulated genes

Robust interferon  
responses



Virus infection of  
epithelial cells

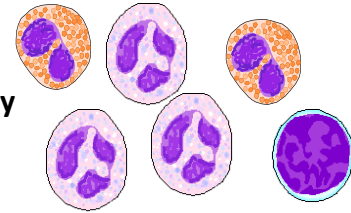


# ASTHMATICS

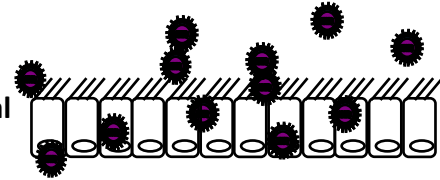
EXACERBATION



Cell necrosis  
Excessive inflammatory  
response



Uncontrolled viral  
replication



Impaired interferon  
responses



Predominant Th2 cells  
↓IFN- $\gamma$



Virus infection of  
epithelial cells

