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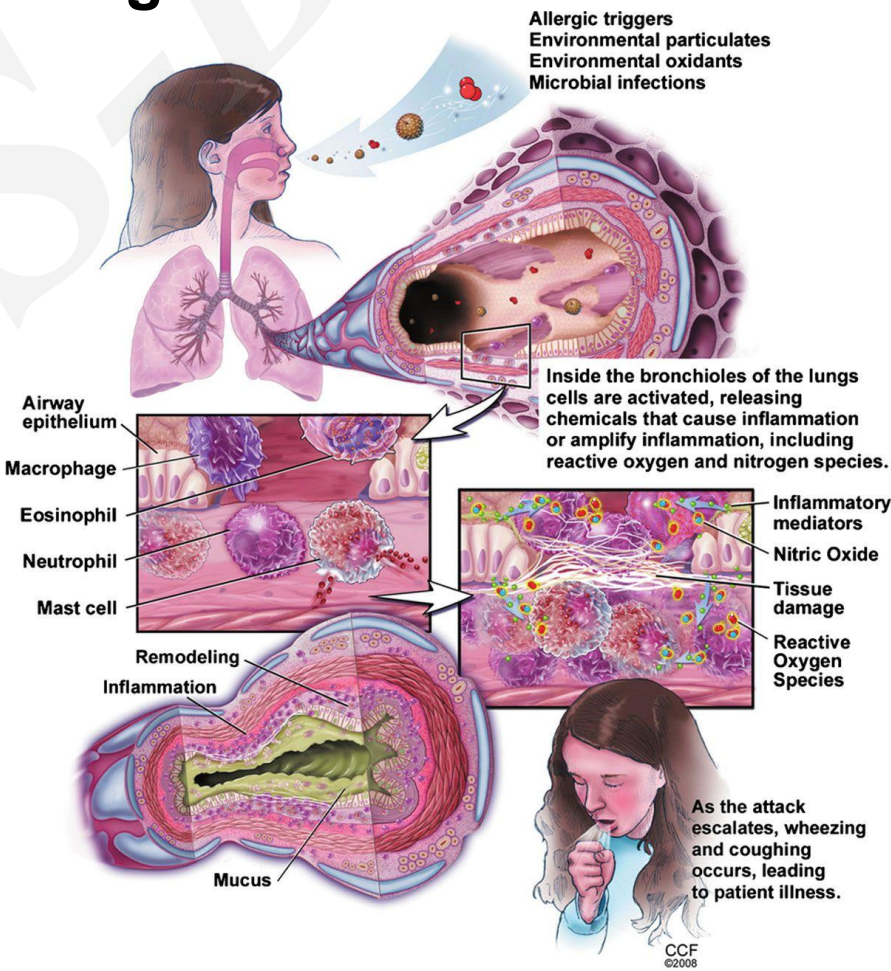
# Protective effects of methane-rich saline on mice with allergic asthma by inhibiting inflammatory response, oxidative stress and apoptosis

**Key words: Asthma, Methane-rich saline, Antioxidation, Anti-inflammation, Anti-apoptotic**

# Research Summary

**The current study mainly focus on the protective effects of methane-rich saline (MRS) on an animal model of asthma. And the possible mechanism underlying the properties of methane-rich saline are as following:**

- **Decrease the oxidative stress**
- **Inhibit inflammation cytokine**
- **Ameliorate apoptotic activities**




Pic. Resource: Comhair SA, Erzurum SC: Redox control of asthma: molecular mechanisms and therapeutic opportunities. Antioxid Redox Signal. 2010, 12: 93-124. 10.1089/ars.2008.2425.

# *Innovation points*

**A series of comprehensive studies were conducted to show the results.**

**1. Methane-rich saline ameliorates the airway hyper-responsiveness in asthmatic mice.**

**2. Methane-rich saline attenuates inflammatory cell infiltration in asthmatic mice.**

**3. Methane-rich saline decreases inflammatory cytokines in asthmatic mice.**

**4. Methane-rich saline attenuates oxidative stress in lung tissues.**

**5. Methane-rich saline exerts anti-apoptotic effects in asthmatic mice.**