

Tools for assessing air pollutant effects in subjects with asthma:

- Lung Function
- Emergency department visits
- Hospital admissions
- Symptoms
- Medication use
- Biomarkers of effect (FeNO)

Table 2. Relationships of asthma endpoints with pollutant exposures

Asthma endpoint	SO ₂	NO ₂	PM	Ozone
PFTs	++	0	+	++
BHR	+/-	+	*	++
ED/Admissions	*	+	++	++
Symptom/Med use	*	+	+	+
Inflammation	+/-	+/-	*	++
Allergen response ⁺	*	+	*	+/-
Immune effects [#]	*	+	*	+

* indicates no published reports

⁺ Potentiation of allergen response by prior exposure to air pollutants

[#] Immune system changes associated with air pollution exposures

From: Koenig, 1999: JACI