It’s All About Health

A.M. Aminian, M.D.

Allergy Institute, Fresno, Visalia

Clinical Teaching Faculty UCSF
The Effect of Air pollution on Health

- Respiratory System (Allergies & Asthma)
- Cardiovascular System
- Premature Death
- Poor Quality of Life

Rate/1,000 Persons

Age (years)
- <18
- 18-44
- 45-64
- 65+
- Total (All Ages)

Year
Current asthma prevalence: 20.5 million Americans (6.2 million children)

Nearly Six Million Californians Suffer from Asthma Symptoms or Asthma-like Breathing Problems

Susan H. Babey, Ying-Ying Meng, E. Richard Brown and Theresa A. Hastert

In California, 4.5 million adults, adolescents and children had been diagnosed with asthma (15% of all Californians) in 2003, up from four million (12%) in 2001. This increase is consistent in younger children, adolescents and adults (Exhibit 1). Nationally, 10% of the population has been diagnosed with asthma. Among the 4.5 million Californians diagnosed with asthma, more than 2.5 million suffered from an asthma attack or other asthma symptoms in 2003 (56% of those diagnosed).

An additional 3.4 million Californians who have not been diagnosed with asthma—19% of all Californians—suffer from asthma-like breathing problems. Some of these respondents might have other respiratory conditions, while others are likely to have asthma that has not been diagnosed.

Based on data from the 2003 California Health Interview Survey (CHIS 2003), this policy brief examines the prevalence of lifetime asthma diagnoses and asthma symptoms, as well as the prevalence of asthma-like breathing problems in the absence of an asthma diagnosis. Where possible, it also describes

Exhibit 1
Lifetime Asthma Prevalence by Age and Year, California, 2001 and 2003

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2001</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Ages</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>1-11</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>12-17</td>
<td>17%</td>
<td>19%</td>
</tr>
<tr>
<td>18+</td>
<td>11%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Note: Lifetime asthma prevalence refers to people who have ever been diagnosed with asthma.
Source: 2001 and 2003 California Health Interview Surveys

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10% of San Joaquin Valley Residents have Asthma
Fresno & Kings counties have the highest rate (20%) of Asthma in Children
1 out of 5 Children have Asthma
Number of Asthma Deaths* in US


San Joaquin Valley 1 of 4 regions nationwide with highest rate of Asthma Deaths
Economic Burden of Asthma
Annual Estimated Direct and Indirect Costs of Asthma

• $14 billion in total cost:
  – $9.4 billion direct health care costs
  – $4.6 billion indirect costs (eg, lost productivity)

Cost of Asthma

- Nationally: 14 billion dollars
- In SJV: 3.2 billion dollars
$60 + $60 + $60 + $200 + $60 + $60 = Total per Month: $520
How does Air Pollution affect Health
Outdoor Air Pollution

1. OZONE
2. Diesel Exhaust
3. Tobacco Smoke Exposure
Outdoor Air Pollution

- These Pollutants create and enhance inflammation of the respiratory and cardiovascular systems.

- Air Pollution and Allergen exposure have additive effect on the worsening of the asthma and the allergies.
Outdoor Air Pollution

- **Diesel Exhaust** is an important contributor of Particulate Matter (PM)

- **Diesel Exhaust/Particulate Matters**

- Affect the Immune system to produce and enhance an exaggerated allergic response in asthma and hay fever
How does Air Pollution affect Cardiovascular System
Effect of Air Pollution on Cardiovascular System

Particulate Matter plus High Cholesterol turn on genes that cause Inflammation of the Heart Heart disease and Death
Diesel Pollution caused more than 250 premature deaths in SJV in 2004
More people die prematurely in SJV as a result of Diesel Pollution than Homicide
What can be done to help reducing Air Pollution and help Quality of Life?
• Government’s responsibility
• Individual responsibilities
California Cows Fail Latest Emissions Test

Sorry, but we can not control ourselves.
We expect the government to do everything for us but what about our own individual responsibilities
Fireplace/Woodstove

Air quality forecast: good or moderate.

Learn to burn cleanly at 1-800 SMOG INFO or www.valleyair.org.

Burning Status

Please burn cleanly
WHEN YOU CAN’T BREATHE,

NOTHING ELSE MATTERS.
Thank You