Background & Objectives

Little is known about whether skin rash was associated with the World Trade Center (WTC) dust cloud on the day of the disaster and continued exposure to dust in damaged homes and office buildings afterwards. The present analysis focuses on 8-30% (n=1210) of residents and area workers. Extent of home or workplace damage to Dust cloud/debris exposure on 9/11

Methods

- Established in 2002 by CDC/ATSDR and the NYC DOHMH
- Monitors the long term mental and physical health effects of 9/11 on directly exposed persons
- Rescue/recovery workers & volunteers
- Residents of lower Manhattan
- Area workers and others present in lower Manhattan on the morning of 9/11
- Students & staff of local schools
- 71,437 people completed the Wave 1 (W1) survey in 2003-04
- 68% of adult enrollees (n=46,602) completed the Wave 2 (W2) survey in 2006-07

Results

9/11-related exposure and post-9/11 skin rash among Lower Manhattan residents and area workers (n=21,280)

<table>
<thead>
<tr>
<th>Dust cloud</th>
<th>Damage to home with dust</th>
<th>Damage to workplace with dust</th>
<th>Dust cloud</th>
<th>Damage to home with dust</th>
<th>Damage to workplace with dust</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>9</td>
<td>12</td>
<td>6</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>5-20</td>
<td>16</td>
<td>19</td>
<td>10</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>20-30</td>
<td>22</td>
<td>22</td>
<td>17</td>
<td>17</td>
<td>16</td>
</tr>
</tbody>
</table>

| 9/11-related exposure and post-9/11 skin rash among rescue/recovery workers and volunteers (n=20,745)

<table>
<thead>
<tr>
<th>Days at WTC site</th>
<th>Cumulative incidence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-7</td>
<td>5</td>
</tr>
<tr>
<td>8-30</td>
<td>10</td>
</tr>
<tr>
<td>&gt;30 days</td>
<td>18</td>
</tr>
</tbody>
</table>

Strengths & Limitations

Strengths: Diverse population of individuals directly exposed to the WTC disaster; range of data on socio-demographic characteristics. Limitations: Selection bias, recall bias, and potential bias due to the non-specificity and subjectivity of skin symptoms.

Summary and Conclusions

- Exposure to dust from the WTC disaster is independently associated with greater self-reported post-9/11 skin rash or irritation at W1, without the influence of probable PTSD and nonspecific psychological distress
- Effect of 9/11 exposures diminished for continued report of skin rash at W2
- Post-9/11 skin rash may be related to acute and long-term exposure to dust, though subjectivity of skin symptoms may bias findings
- Along with other reported health effects, skin rash or irritation may be another 9/11-related health outcome among the exposed population
- Skin protection may be an important consideration for future disaster preparedness

Acknowledgments

This study was supported by NIOSH of CDC; the Agency for Toxic Substances and Disease Registry; and the New York City Department of Health and Mental Hygiene.