Figure 9.4. Percent of children ages 0-14 with elevated blood lead levels (≥10 μg/dL) among children tested in selected South Texas locations, 2000-2004. Source: Texas Childhood Lead Poisoning Prevention Program

References


Pesticide Poisoning

A pesticide is any substance or combination of substances that is used for preventing, controlling, or destroying any type of pest. Types of pesticides include not only insecticides, but also herbicides, fungicides, rodenticides, and sanitizers.\(^1\) In the U.S., more than one billion pounds of pesticides are used each year, and more than 16,000 different pesticide products are currently sold nationwide. Although pesticides are useful to society, they also have the potential to cause great harm to humans because they are designed to kill or damage living organisms. Health effects vary depending on the type of pesticide
involved and the level of exposure. Acute, high-level pesticide exposures can cause nausea and vomiting, skin or eye irritation, difficulty breathing, seizures, or even death. Long-term pesticide exposure effects have been associated with changes in neurobehavioral performance, neurological damage and diseases, and certain types of cancers. Children are particularly susceptible to pesticides.

Acute pesticide exposures are most commonly occupational exposures. Each year, about one pesticide-related illness occurs for every 100,000 U.S. workers. Agricultural workers are at especially high risk of pesticide poisoning. The annual incidence of pesticide-related illness among agricultural workers is approximately 18/100,000. This high incidence among persons employed in agriculture is of particular concern for Hispanics, since 88% of all farm workers in the U.S. are Hispanic. Because of pesticide drift, people who live in agricultural areas have a higher risk of pesticide exposure than people who live in non-agricultural areas. Among workers, those ages 20-24 had the highest incidence of pesticide-related illnesses in the U.S. in 1998-1999, and incidence decreased as age increased. For all occupations combined, males have a slightly higher risk of pesticide-related illness than do females; however, among agricultural workers, the incidence of pesticide-related illness in females is higher than the incidence in males.

Pesticide-Related Illnesses in South Texas

Overall, the South Texas population had a slightly higher incidence of pesticide-related illness (1.2 cases per 100,000 persons) than the rest of Texas (1.0/100,000). Hispanics in South Texas had an incidence of pesticide-related illness that was nearly two times higher than the incidence for Hispanics in the rest of Texas (Figure 9.5). In South Texas, the incidence of pesticide-related illness was similar between Hispanics and non-Hispanic whites; however, in the rest of Texas, incidence was higher for non-Hispanic whites than for Hispanics (Figure 9.5).
Figure 9.5. Incidence of pesticide-related illness by location and race/ethnicity, 2001-2005.
Source: Pesticides Exposure Surveillance in Texas (PEST) program

In South Texas, the incidence of pesticide-related illness in the general population was higher in males (1.4/100,000) than in females (0.9/100,000). Residents of non-metropolitan counties in South Texas had a higher incidence of pesticide-related illnesses (1.8/100,000) than did those who resided in metropolitan counties (1.1/100,000). Children under age 10 and adults ages 20-59 had higher incidences of pesticide-related illness than other age groups (Figure 9.6).
Figure 9.6. Incidence of pesticide-related illness in South Texas by age group, 2001-2005.
Source: Pesticides Exposure Surveillance in Texas (PEST) program

Lower incidences of pesticide-related illness were observed in Bexar County (0.6/100,000) and Webb County (0.4/100,000) than in South Texas as a whole (1.2/100,000). The Lower Rio Grande Valley region, however, had a higher incidence of pesticide-related illness (1.8/100,000) than South Texas (Figure 9.7).

Figure 9.7. Incidence of pesticide-related illness in selected South Texas locations, 2001-2005.
Source: Pesticides Exposure Surveillance in Texas (PEST) program
References


Summary – Environmental Health Issues

Table 9.1. Summary table of estimates in South Texas, the rest of Texas, and nationwide* for each of the environmental health indicators analyzed.

<table>
<thead>
<tr>
<th>Health Indicator</th>
<th>Incidence/Prevalence Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>South Texas</td>
</tr>
<tr>
<td>Childhood Lead Poisoning,</td>
<td>2.7% of those tested</td>
</tr>
<tr>
<td>2000-2004</td>
<td></td>
</tr>
<tr>
<td>Pesticide Poisoning,</td>
<td>1.2 per 100,000</td>
</tr>
<tr>
<td>2001-2005</td>
<td></td>
</tr>
</tbody>
</table>

*Nationwide estimates were not available for all health indicators in the table. “----” signifies that no nationwide estimate could be found for the health indicator.