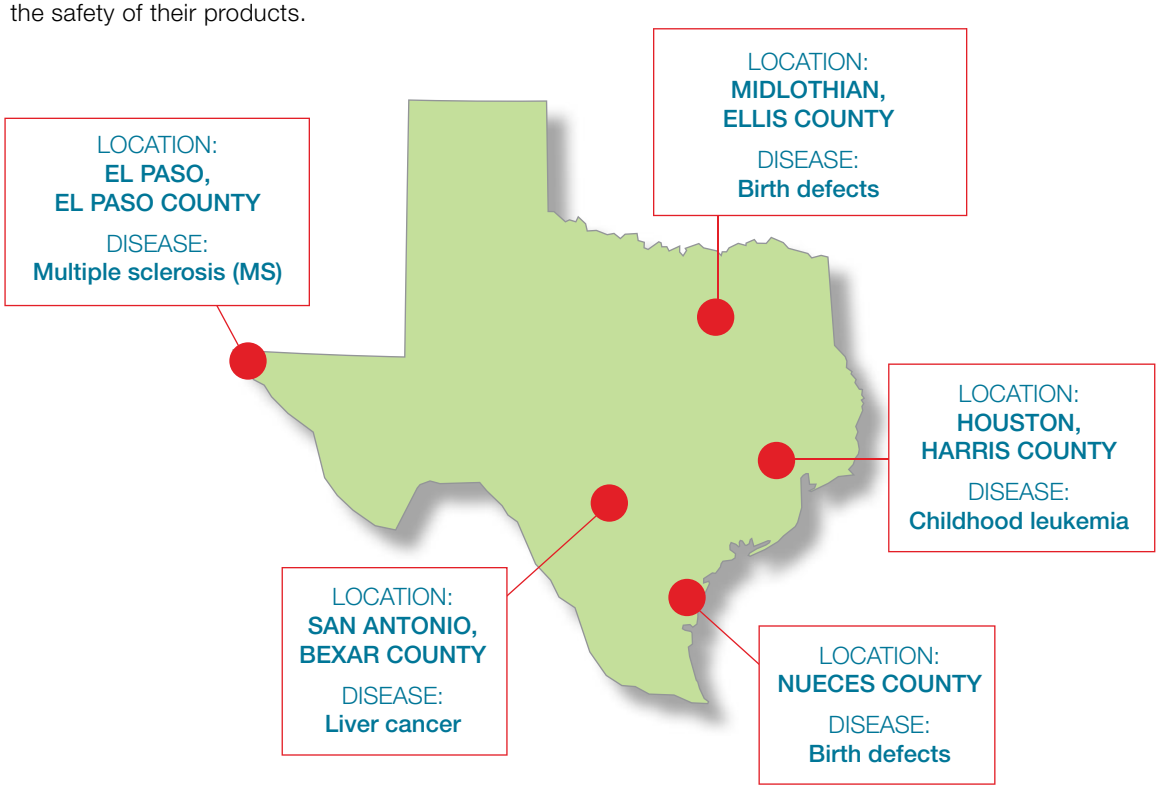
Stop disease clusters. Protect people. Control toxic chemicals.

Disease Clusters in **Texas**

An unusually large number of people sickened by a disease in a certain place and time is known as a 'disease cluster'. Clusters of cancer, birth defects, and other chronic illnesses have sometimes been linked to chemicals or other toxic pollutants in local communities, although these links can be controversial. There is a need for better documentation and investigation of disease clusters to identify and address possible causes. Meanwhile, toxic chemicals should be identified and controlled through reform of the Toxic Substances Control Act, so these chemicals don't pollute communities and sicken people.

Investigations of disease clusters are complex, expensive, and often inconclusive, partly due to limitations in scientific tools for investigating cause-and-effect in small populations. Preventing pollution is the best way to avoid creating additional disease clusters. Strategies for prevention include: (1) Directing and funding federal agencies to swiftly assist state and local officials, and investigate community concerns about potential disease clusters and their causes; (2) Reducing or eliminating toxic releases into air, water, soil and food through stronger environmental controls and tough enforcement of those requirements; and (3) Requiring chemical manufacturers to ensure the safety of their products.

Texas has suffered from at least five disease clusters confirmed by health authorities. Most have afflicted children with cancers or birth defects. Although environmental contaminants are implicated, experts have been unable to pinpoint an exact cause. Regardless of the cause, disease clusters can devastate communities with anxiety and emotional and financial difficulties, including high medical costs and lowered property values, as well as the tremendous burden of the disease itself.



NRDC
THE EARTH'S BEST DEFENSE
www.nrdc.org

NDCA
National Disease Clusters Alliance
www.clusteralliance.org

LOCATION: **El Paso, El Paso County**
DISEASE: **Multiple sclerosis (MS)**
In 1996, the Agency for Toxic Substances and Disease Registry (ATSDR) and the Texas Department of State Health Services (TDSHS) found a two-fold increased risk of developing multiple sclerosis (MS) in people who had attended Mesita Elementary School in El Paso. The school is located one mile from an ASARCO smelter facility. Environmental sampling has shown elevated levels of lead, zinc, arsenic, cadmium, and SO_2 in many areas of El Paso. Although the causes of MS are unknown, the disease is believed to be caused by a combination of genetic and environmental factors.

LOCATION: **Houston, Harris County**
DISEASE: **Childhood leukemia**
Researchers from the University of Texas's School of Public Health found that children who live within two miles of the Houston Ship Channel have a 56 percent greater chance of getting leukemia than children living elsewhere. The elevated rates of childhood leukemia were found in census tracts with the highest benzene and 1,3-butadiene levels in the air. The Houston Ship Channel is the largest petrochemical complex in the United States and a Rice University study released in 2006 showed that Houston had the highest air concentration of benzene and 1,3-butadiene in the country. Benzene and 1,3-butadiene are known to be human carcinogens.

LOCATION: **Midlothian, Ellis County**
DISEASE: **Birth defects**
An investigation by TDSHS confirmed a cluster of Downs Syndrome in Ellis County from 1991 to 1994. Residents are concerned about air pollution from three cement plants and one steel-recycling mill and are also documenting birth defects in animals born in the area. The ATSDR is restarting a second health assessment after the first was criticized by academic scientists for using inadequate air monitoring information, discounting evidence showing that some airborne chemicals exceeded federal health standards, and disregarding residents' respiratory complaints. The health assessment is investigating the higher rates of health problems, including leukemia, birth defects and childhood total cancer and the high incidence of respiratory problems in Ellis County when compared to the rest of the state.

LOCATION: **Nueces County, including Corpus Christi**
DISEASE: **Birth defects**
In 2006, the TDSHS found that Nueces County had a birth defect rate that was 84 percent higher than the rest of Texas. A follow-up study explored the relationship between the rate of birth defects and several industrial sites in the county. Researchers were not able to find a direct link to a particular site, but they found that mothers living near refineries and chemical plants had babies with high rates of life-threatening birth defects of the abdominal wall and diaphragm. Living near an old incinerator was linked to other serious birth defects such as narrow anal and intestinal canals or obstructed or narrow urinary tracts. Additionally, researchers found mothers living near a battery plant had higher rates of five different birth defects.

LOCATION: **San Antonio, Bexar County**
DISEASE: **Liver cancer**
Researchers at Southwest Texas State University found a cluster of liver cancer deaths in Bexar County and its adjacent counties using statewide cancer mortality data from 1990 through 1997. About 14 zip codes in San Antonio encompass a plume of polluted groundwater linked to Kelly Air Force Base. Local groups allege that the groundwater was polluted with waste containing benzene, perchloroethylene, and trichloroethylene, all known carcinogens. ATSDR is investigating and has stated that the community may have been exposed to higher levels of contaminants in the past.