



## Radiation and Public Health Project

Joseph J. Mangano, MPH, MBA, Executive Director  
716 Simpson Avenue, Ocean City NJ 08226  
[odiejoe@aol.com](mailto:odiejoe@aol.com)  
[www.radiation.org](http://www.radiation.org)  
484-948-7965

Directors Robert Alvarez  
Christie Brinkley  
Lewis Cuthbert  
Karl Grossman  
Lisa Martino-Taylor  
Mark Meinberg  
Susan Shapiro

---

### **LATEST DATA SHOW SURGE IN PIKE COUNTY PREMATURE DEATH RATES**

Ongoing Exposures from Uranium Enrichment Seen as a Factor

August 27, 2024 – The premature death rate in Pike County, Ohio, which has been rising for decades, is now more than twice the U.S. rate, among the highest of all U.S. counties.

In the period 2021-2023, the mortality rate among Pike County residents age 0-74 was 107% above the U.S. rate, based on 750 deaths. This is a large jump from the 85% excess in the years 2017-2020. The gap between county and national rates has steadily grown since the early 1990s, when the Pike County rate was just 10% higher. Information used to calculate rates is from the U.S. Centers for Disease Control and Prevention (CDC).

Pike County, in southern Ohio, has a population of 27,000. It is the site of facilities that enriched uranium from 1954-2001, for nuclear weapons and nuclear reactors. The U.S. Department of Energy has proposed new facilities involving the continuing generation of radioactivity.

“Causes of the rapid increase in death rates among Pike County’s children, young adults, and middle-aged adults need to be identified,” said Joseph Mangano, who analyzed CDC data. “One potential factor is ongoing exposure to radioactivity released from the Portsmouth Nuclear Site into the local environment.” Mangano is an epidemiologist and director of the Radiation and Public Health Project research group.

Large excesses in Pike County death rates are consistently found for all major causes of death, including cancer, heart disease, lung disease, digestive disease, and nervous system disease. The largest gaps exist among persons age 25-54. Radioactivity can damage any part of the body.

The Portsmouth plant routinely emitted radioactive particles into the local air, soil, and water. These particles included Americium-241, Neptunium-237, Plutonium-238/239/240, Technecium-99, and Uranium-233/234/235/236/238. Each of these isotopes decays slowly and remains in the ecosystem for thousands of years. Uncovered demolition of the giant, contaminated buildings continues.

While the original uranium enrichment operations ended in 2001, Portsmouth still is the site of uranium enrichment using centrifuges, and a new operation to purify depleted uranium for nuclear weapons. Other nuclear operations are proposed for the site, including two experimental nuclear reactors and possibly a nuclear waste reprocessing plant.

Studies published in 2022 and 2023 by Mangano showed that while mortality rates in Pike County were unexpectedly high, those counties closest to Pike were nearly as high. In addition, local rates exceed those in other Ohio counties with similar rates of poverty and other socioeconomic risk factors, but are not close to the Portsmouth plant. <https://radiation.org/rphp-report-finds-soaring-death-rate-near-ohio-uranium-plant/>.

See Report on page 2.

## **MORTALITY RATES, AGE 0-74, PIKE COUNTY OH VS. U.S., 2021-2023**

### **All Causes Combined, By Ten-Year Age Groups**

<b><u>Age</u></b>	<b><u>U.S. Rate</u></b>	<b><u>Pike Co. Rate (no. deaths)</u></b>	<b><u>% Pike Rate vs. U.S.</u></b>
0-24	63.66	76.07 ( 19)	+ <b>19.5%</b>
25-34	164.17	374.49 ( 38)	+ <b>128.1%</b>
35-44	261.39	660.18 ( 55)	+ <b>152.6%</b>
45-54	465.72	1114.32 (112)	+ <b>139.3%</b>
55-64	1001.97	1968.50 (230)	+ <b>96.5%</b>
65-74	1995.72	3102.40 (296)	+ <b>55.5%</b>
Total 0-74, 2021-23	498.02	1003.61 (750)	+ <b>107.1%</b>
Total 0-74, 2017-20	354.49	655.71 (878)	+ <b>85.0%</b>
Total 0-74, 1989-93	454.44	499.46 (599)	+ <b>9.9%</b>
Total 75+, 2021-23	7298.23	8530.22 (563)	+ <b>14.6%</b>

### **By Major Cause of Deaths (accounting for 95% of U.S. Deaths Age 0-74)**

<b><u>Cause</u></b>	<b><u>U.S. Rate</u></b>	<b><u>Pike Co. Rate (no. deaths)</u></b>	<b><u>% Pike Rate vs. U.S.</u></b>
All Cancers	80.11	145.66 (155)	+ <b>81.8%</b>
Accidents, Suicide, Homicide	79.16	157.97 (107)	+ <b>99.6%</b>
Cardiovascular Disease	84.97	172.29 (170)	+ <b>102.8%</b>
Respiratory Disease	23.61	87.93 ( 86)	+ <b>272.4%</b>
Digestive Disease	21.61	48.88 ( 49)	+ <b>126.2%</b>
Nervous System Disease	13.08	23.98 ( 24)	+ <b>83.3%</b>
Infectious/parasitic Disease	9.51	20.70 ( 20)	+ <b>117.6%</b>
Endocrine, nutritional, metabolic	21.06	29.06 ( 26)	+ <b>38.0%</b>
Covid-19	27.61	75.54 ( 74)	+ <b>173.6%</b>

All rates are deaths per 100,000, adjusted to the 2000 U.S. standard. Source: U.S. Centers for Disease Control and Prevention, <https://wonder.cdc.gov>. Population figures used to calculate rates are not finalized, but estimates are likely to be very close to final totals.

## Age-Adjusted Mortality Rate, Age 0-74, Pike County OH vs. U.S., 1989-2023

