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Health Legacy of Uranium Mining Lingers 30 Years Later

Many past uranium workers and residents in the western U.S. have fallen through the cracks of federal compensation programs designed to help those affected by uranium

By Nathan Rice and The Daily Climate

On a dark night in 1967, Reed Hayes stepped out onto the gangway over the uranium thickener tank. He was replacing a light bulb during the graveyard shift at the now-demolished Atlas [uranium mill](#) in Moab, Utah. He stumbled, reached desperately for the safety line, and grabbed nothing but air. A worker on the previous shift forgot to secure it.

"All of a sudden I go plop!" Hayes recalled. "I go clear to the bottom. I'm in nitric acid, sulfuric acid, uranium yellowcake, and caustic soda. If I hadn't been a good swimmer, I probably would not have gotten out of there."

Since that day 43 years ago, Hayes has suffered from persistent skin problems. On the day of his interview for this story, he called from the emergency room to reschedule.

"Every once in a while it flares up real bad," he explained.

Like many past uranium workers and residents in the American West, Hayes has fallen through the cracks of federal compensation programs designed to help those affected by uranium. Of the 25 federally recognized uranium illnesses, eight qualify for compensation. His isn't one of them.

To date, the federal government has spent more than \$7 billion compensating people made sick by the government-run nuclear program that fueled the Manhattan Project and the Cold War arms race. As the nation gears up for a [nuclear revival](#), stories like Hayes' bring lessons from the past into sharp focus. Gone are the days of government secrecy about uranium's harmful effects, of unregulated uranium production and kids playing in radioactive mill tailings. But widespread health impacts from the last uranium boom still plague communities around the West, and victims are still fighting for recognition.

Help may be on the way. A bill introduced by [Senator Tom Udall](#) (D-N.M.) and [Congressman Ben Ray Lujan](#) (D-N.M.) would expand the federal Radiation Exposure Compensation Act, making it easier for uranium workers and residents downwind from nuclear test sites to get federal cash and medical help.

At age 73, Hayes may finally get the help he believes he deserves. In April, after decades of paying his own medical bills, the U.S. Department of Labor started covering his treatment. He is still vying for compensation through RECA.

Linda Evers of Grants, New Mexico is hoping for the same. After high school in 1976, she went to work crushing ore in the Kerr-McGee uranium mill. During her seven years at the mill, she had two children with birth defects. Then, at age 41, 16 years after she left the mill, she was diagnosed with a degenerative bone disease. At the time, she thought her thumbs had dislocated. The doctor said there was nothing left to put back in place.

"My bones didn't have any joints or ligaments or anything," recalled Evers. "But what can you do?"

A promotional graphic for "Decade 2 education" by Scientific American. The text "Join the New Conversation in Science Education" is written in a blue, cursive font at the top. Below it, "Decade 2" is in a large, bold, black font, with "education" in a smaller, blue, cursive font underneath. To the right of "Decade 2" is the "SCIENTIFIC AMERICAN" logo. At the bottom, a grey button contains the text "Click here for a multimedia discussion with experts".

Her doctor attributed her bone disease to [radiation](#). But like thousands of uranium workers who worked after 1971, she was not eligible for compensation because new safety regulations were put in place that year. Those rules were slow to be enforced, she said, leaving workers vulnerable to uranium exposure into the 1990s.

As vice-president of the [Post-71 Uranium Exposure Committee](#), Evers has documented the health impacts of her fellow victims and lobbied Congress for compensation. A study conducted by the group found uranium-related health problems in 72 percent of more than 1,000 New Mexico uranium workers who had started working after the 1971 cutoff.

"All of this comes right back to our radiation exposure," Evers said. "[Nuclear power](#) is not clean. It is devastating out here to the water, the environment, the people. You take it to your nuclear plants and it runs all clean and pretty there, but you don't see the devastation that comes with getting it out of the ground."

"For a lot of families, it's life and death," Evers continued. "It just angers me that these people have been ignored for so long."

The new bill would finally compensate those so-called "post-71" workers. "This [bill] would be a blessing to so many folks in the uranium-impacted world," said Evers.

But many who may have been affected by uranium sit outside the bill's reach – such as Evers' children. Her son was born with a digestive abnormality that almost led to starvation before surgery at two months old. Her daughter was born without hips and developed a bone disease in adulthood. A study of the nearby Shiprock area found increased birth defects near uranium sites, suggesting a wider trend. Others throughout the Southwest's uranium country have similar tales.

In Grand Junction, Colo., radioactive mill tailings were used as building materials, causing increased risk of lung cancer, according to the Environmental Protection Agency. A day's drive east, in Cañon City, Colo., a federal health study is investigating the link between sick residents and contamination from the nearby Cotter uranium mill. The Navajo Nation in the Four Corners region banned all uranium activity in 2005 due to rampant community health problems associated with what the tribe calls "the yellow monster."

No compensation is allocated for the many family members and residents of uranium communities who may have been exposed to uranium without ever entering a mill or a mine.

The new bill would provide \$15 million to study the connection between uranium and illness in non-working residents and families. If a population-level trend is found, it could potentially lead to help in some future RECA bill. But studies take time – something that many sick uranium victims don't have.

"The sad scenario," said lawyer Keith Killian, "is that it has taken a long time for there to be political motivation to do this." Killian's office has represented about 2,500 uranium victims seeking federal compensation, including Reed Hayes. "If the bill passes, it will affect a fraction of the people who could have used it 20 or 30 years ago."

Over the years, victims ineligible for compensation have tried to take matters into their own hands, and with limited success. In one recent case, 179 residents (or their survivors) of the old uranium milling town of Uruan, Colo., sued mill owner and operator Union Carbide Corporation for causing various cancers and other illnesses. In August 2009, a federal appeals court ruled with Union Carbide, claiming the victims lacked evidence of "factual causation."

Proving exactly what caused a cancer is next to impossible in the laboratory, let alone the courtroom. Most of the limited health studies of non-working residents have failed to draw strong, population-level connections between uranium and health problems. These studies are often hampered by incomplete health records, lack of uranium exposure data, and failure to detect residents who have moved, according to Johnnye Lewis, research professor in pharmaceutical sciences at the [University of New Mexico](#) in Albuquerque.

Lewis is leading research using more comprehensive methods. Preliminary results, she said, have linked increased rates of kidney diseases and [autoimmune disease](#) with proximity of residents to uranium mines in New Mexico's Navajo Nation.

To the north, in Monticello, Utah, Fritz Pipkin believes he has lived the connection between uranium and illness for the last 60-some years.

Pipkin grew up in Monticello, where a uranium mill operated for 20 years until closing in 1960, leaving a pile of tailings and contamination that became a Superfund clean-up site in 1986.

"The pollution was unbelievable," Pipkin said. "I remember my father replacing the screens in the windows and doors because they would just crumble and fall out. It would make the chrome on your automobile rust."

Pipkin, like other children who played in the sandy, radioactive mill tailings, was eventually diagnosed with leukemia. He helped form the Victims of Mill Tailings Exposure group and secured federal funding to screen residents for health problems.

"We are trying to help the ones who lived on the other side of the fence," Pipkin said. "Wives and children and the residents of the town who fall through the cracks.... [The mill] was owned entirely by the federal government and they don't want to compensate us."

His network of former Monticello residents stretches from California to New York "They say, 'Don't stop. We know that mill caused our cancer,' " said Pipkin.

A 2007 Utah Department of Health study confirmed that assertion – almost. The study found increased rates of lung, bronchial and stomach cancers among Monticello residents and deemed the mill a "plausible" cause. So far, however, such findings have not been enough to spur government aid.

If the proposed compensation bill passes, further studies could close the information gap and bring help to Monticello residents.

"But that's way down the road," said Pipkin, whose leukemia is in remission.

"If it happens at all."

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This article originally appeared at [The Daily Climate](#), the climate change news source published by Environmental Health Sciences, a nonprofit media company.

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