

Injected!

The Plutonium Files: America's Secret Medical Experiments During the Cold War

By Eileen Welsome
Delacorte Press, 1999
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R. C. Longworth

From April 1945 to July 1947, 18 men, women, and children were injected with plutonium by doctors working with the Manhattan Project. None of the subjects was told what was being done, and none gave informed consent. They were chosen because the doctors believed them to be mortally ill, although many lived for years, even decades, with the plutonium working its damage in their bodies.

The experiments were covered up for 40 years: When they became public, the government apologized but not a single doctor or hospital was publicly blamed. The plutonium injections ended after 27 months, having achieved little.

But other experiments, for the Manhattan Project and the Atomic Energy Commission (AEC), continued into the 1970s. In Nashville, scientists at Vanderbilt University gave pregnant women radioactive cocktails. Prisoners in Oregon and Washington had their testicles radiated with neutrons. At the University of Cincinnati, nearly 200 patients were irradiated over a 15-year period. In Massachusetts, 74 boys at a Dickensian state school for unwanted or homeless boys were fed oatmeal laced with radioactive iron or calcium. The University of Chicago, one of the three sites for the plutonium injections, also fed solutions of strontium and cesium to 102 subjects with the assistance of Argonne National Laboratory. Again, no one told the victims

what was going on, nor did anyone ask their consent.

The purpose of the experiments was to judge the effect of radioactivity on the human body. When they began, the Manhattan Project was close to exploding the first atomic bomb. Employees at Oak Ridge and Los Alamos worked with radioactive materials, yet no one knew the long-term effects of radiation on healthy people or on their genes and reproductive capacities. Experiments on animals were inconclusive and unsatisfactory. To protect the health of atomic workers, it was decided to begin human experiments.

In pursuit of this goal, many American doctors violated not only the Hippocratic Oath but the Nuremberg Code, American Medical Association guidelines, and U.S. government regulations. Crimes were committed and, in the end, damages paid, mostly to survivors. As late as 1985, body parts were being severed from cadavers, usually without the knowledge of the next of kin, for shipment to Los Alamos where they were analyzed for plutonium content. More than 15,000 human bodies were raided for this project, which was called Operation Sunshine. At a 1954 conference in Washington D.C., Willard Libby, winner of the Nobel Prize, lamented the shortage of bodies of persons, especially children, who had been exposed to radioactivity. "If anybody knows how to do a good job of body snatching," Libby said, "they will really be serving their country."

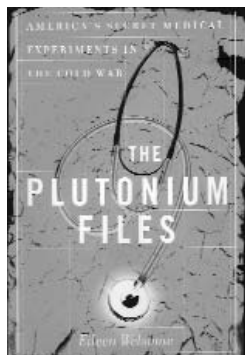
This is a horrifying story and it is told with quiet rage by Eileen Welsome, a reporter for the *Albuquerque Tribune* who won a Pulitzer Prize in 1994 for her reporting on the plutonium experiments. News of these and other experiments had leaked out ear-

lier, but they received little public attention. Welsome's achievement was to pierce the closed files and classified records that were part of the medical cover-up of the experiments. It is not possible to read *The Plutonium Files* without mounting fury, as Welsome tells of the violation of human bodies and spirits by scientists in whom this nation places its trust. Her book is a powerful indictment of an important part of the Manhattan Project and a warning of the evil that supposedly high-minded people can do when convinced of their own superiority and devoted to a goal that blinds them to simple humanity.

Through some inspired sleuthing, Welsome gives real names and faces to subjects who were known to officialdom only as CHI-2 or HP-8. CHI-2 was Una Macke, the second Chicago subject, a cancer sufferer who died soon after the injection. HP-8, which stands for Human Product-8, was Janet Stadt, a scleroderma victim who received 1,000 rems of radiation during her lifetime. ("My mother," her son later told government investigators, "went in for scleroderma, which is a skin disorder, and a duodenal ulcer, and somehow she got pushed over into this lab where these monsters were.")

Welsome melds the story of these experiments with the better-known cases of U.S. servicemen deliberately exposed to atomic bomb blasts, Utah ranch families who lived downwind from nuclear tests, Marshall Islanders exposed to radiation, and the luckless Japanese fishermen aboard the *Lucky Dragon*, the trawler caught in the fallout from the giant U.S. hydrogen bomb test in 1954. These stories are included because they reveal the same arrogance, willful ignorance, and total disregard for human lives that underlay the plutonium experiments.

The doctors and scientists knew that radioactive materials were dangerous—"potentially extremely poisonous," as Arthur Compton said in 1944. They didn't know how dangerous they were, and they were determined to find out, and so, as Welsome writes, "they violated a fundamental right that belongs to all competent adults: the



right to control one's own body."

There is documentary evidence that Robert Oppenheimer and other Manhattan Project scientists approved the experiments (although Welsome found no signs that Gen. Leslie Groves, who told Congress in 1945 that radiation sickness is "a pleasant way to die," ever knew about them.)

The government covered up the plutonium experiments until 1993 when then-Energy Secretary Hazel O'Leary, spurred by Welsome's stories, reversed this policy. President Bill Clinton then ordered federal agencies to open any records dealing with the plutonium experiments or any other human radiation experiments. The resulting investigation, undertaken by the president's Advisory Committee on Human Radiation Experiments, turned up much of the information on other experiments that is included in this book.

Most of the subjects, Welsome writes, "were the poor, the powerless, and the sick—the very people who count most on the government to protect them." Clarence Lushbaugh, a

collaborator on the radiation project, told the author that the director of the project in Cincinnati, Eugene Saenger, picked his subjects from the "slums" because "these persons don't have any money and they're black and they're poorly washed. These persons were available in the University of Cincinnati to Dr. Saenger. . . . I did review what he was doing, and I thought it was actually well done." Welsome adds that, in Cincinnati, 62 percent of the subjects were African-American.

So was the very first plutonium recipient, a construction worker named Ebb Cade, who was injured in a traffic accident on his way to work at Oak Ridge and ended up in the army hospital there. Scientists had decided to begin the plutonium experiments and Cade—there is no other way to put it—happened to be handy. A month after Cade was injected in 1945, Wright Langham, a Los Alamos chemist who was a driving force behind the experiments, told a meeting of Manhattan Project doctors in Chicago that "the subject was an elderly male whose age and general health

was such that there is little or no possibility that the injection can have any effect on the normal course of his life." Cade, in fact, was 55 and, apart from partial blindness caused by a cataract, reasonably healthy. He died eight years later of a heart attack.

The third subject, a house painter named Albert Stevens, was chosen to be injected at the University of California Hospital in San Francisco because he had terminal cancer. But the diagnosis was wrong and Stevens lived another 21 years. For the next two decades, scientists collected Stevens's urine and stool samples to check the amount of plutonium in his system. He knew he was part of an experiment, but assumed it was part of his treatment for his arrested cancer. Incredibly, Stevens lived out his life unaware that he did not have cancer and had never had it.

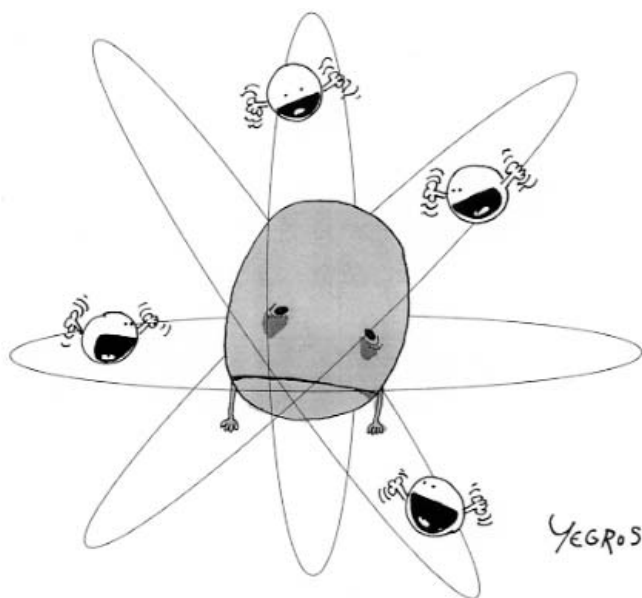
This medical deception is of a piece with the story of one of the University of Rochester patients, Eda Schultz Charlton, a 49-year-old woman who went to the university hospital with minor ailments. As Welsome writes, "[Charlton] was not terminally ill, she was not even chronically ill, she may not have even been seriously ill." But she was injected with plutonium, according to government documents. Her 314 pages of medical records at the hospital, however, do not mention anything about plutonium. Over the years, she suffered from depression, fatigue, arthritis, nausea, spasms, and other illnesses that may or may not have been caused by the plutonium. She finally died in 1983, 37 years after the injections.

But the most appalling part of Charlton's story is that her doctor, Christine Waterhouse, had been recruited as Charlton's primary physician by Dr. Samuel Bassett, one of the overseers of the plutonium experiment at Rochester. Apparently under Bassett's instructions, Waterhouse "cared" for Eda Charlton for 29 years without ever telling her that she had been injected with plutonium.

Welsome says that even the Rochester scientists called their program "a production line." Unknowing



"I studied ethics, but not at the university level."



"I'm not touching you! I'm not touching you!"

patients were given an average of five micrograms of plutonium, which was five times the safe limit set by Manhattan Project scientists. Eleven patients were injected at Rochester and there probably would have been more had it not been for inconveniences like Christmas. "No one seems to want to be in the hospital on that particular day," Bassett grouched. "I will do what I can, however, to keep the production line going."

Three of the 11 Rochester patients, like Charlton, lived another 30 years with plutonium in their bodies. For most of those years, it was assumed that all the subjects had been terminally ill and had died quickly. It is one of

the major merits of Welsome's work that she dug up the patients' names and found out what really happened to them. As a 1947 AEC document makes clear, the secrecy and cover-up were ordered because publicity "might have an adverse effect on public opinion or result in legal suits." Moreover, the doctors and scientists themselves knew they were doing something that, if not outright criminal, would look bad in the light of day. One assistant in the Chicago experiments, according to a classified 1946 report, was Leon Jacobson, who later became chairman of the Department of Medicine at the University of Chicago's Pritzker School of Medicine. Jacobson told investigators in 1974 that he was not involved in the experiment and "knew very little about it, next to nothing"—not a very convincing denial.

The plundering of body parts of radiation victims reached ghoulish proportions. Cecil Kelley, who was killed in an accident at Los Alamos, was not so much buried as distributed. Bits of his corpse went to the army, to Oak Ridge, and to other researchers around the nation. His brain was shipped out in a wide-mouthed mayonnaise jar. What was left was eventually given a military burial by the government, which also promised to pay for his children's college education.

The promise was never kept.

The committee convened by President Clinton eventually issued a controversial 1995 report that blamed everyone—and, hence, no one. It found that bad things were done, but refused to condemn those who did them. "Wrongs were committed," it said, "by very decent people who were in a position to know that a specific aspect of their interactions with others should be improved."

Clinton swept aside the report's mealy-mouthed language, proclaiming that the experiments "failed both the test of our national values and the test of humanity." But nobody heard him. Two hours after his statement, the O. J. Simpson verdict was announced and the media paid little attention to the fate of the hundreds of Americans who had been used as guinea pigs by their government.

Welsome's book is a powerful attempt to give those victims their day in court. "Thousands of Americans were used as laboratory animals in radiation experiments funded by the federal government," she writes. They were not the victims of the military, nor of faceless, low-level bureaucrats who were "just doing their jobs." The experiments were threads woven uncomfortably tightly into the fabric of the Manhattan Project itself.

"The Manhattan Project veterans and their protégés controlled the information," she says. "They sat on the boards that set radiation standards, consulted at meetings where further human experimentation was discussed, investigated nuclear accidents, and served as expert witnesses in radiation injury cases."

In a sense, as Welsome notes, the verdict on the plutonium experiments was handed down 2,500 years ago by Hippocrates—"I will give no deadly medicine to anyone if asked"—and 52 years ago by James McHaney, the chief prosecutor at the Nuremberg trials: "It is the most fundamental tenet of medical ethics and human decency that the subjects volunteer for the experiment after being informed of its nature and hazards. This is the clear dividing line between the criminal and

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what may be non-criminal. If the experimental subjects cannot be said to have volunteered, then the inquiry need proceed no further." ■

R. C. Longworth, a senior writer for the Chicago Tribune, is a member of the Bulletin's Board of Directors.

The volunteers who didn't

Undue Risk: Secret State Experiments on Humans

By Jonathan D. Moreno
W. H. Freeman, 1999
347 pages; \$24.95

Michael Flynn

A compendium of state-sponsored experiments carried out on unwitting human subjects, *Undue Risk* chronicles the history of unethical medical experimentation in the United States from World War II to the present. Jonathan Moreno, a professor of biomedical ethics at the University of Virginia, is an excellent candidate to tell this story. In 1994, Moreno was appointed senior staff member of the Advisory Committee on Human Radiation Experiments, the special committee set up by President Bill Clinton in response to Eileen Welsome's investigation of government radiation experiments during the Cold War (see above).

Though this book covers some of the same terrain as Welsome's *Plutonium Files*, Moreno includes chemical and biological warfare experiments in his investigation. He also surveys the grim history of human experimentation in several other countries, including the Soviet Union, Nazi Germany, Japan, South Africa, and Iraq.

Most of the cases recounted in the book—including the Manhattan Project's plutonium injections, army "field

tests" of bacteriological agents in U.S. cities, and the CIA's LSD experiments—are well known. Moreno, however, uses these cases to explore the evolution of U.S. government policies regulating human experiments. Based on personal interviews, previous investigations, and government documents made available to him as a member of the advisory committee, Moreno presents a behind-the-scenes look at the government's struggle with medical ethics and its often half-hearted attempt to impose guidelines on human experimentation.

A central theme of the book is the clash between the government's need to undertake human experiments for national security purposes and the moral dilemmas such experiments present. Moreno writes, "A paradox of human experiments is that they often must be done to learn about the dangers of some agents, in spite of the general ethical obligation not to expose people to harm."

However, many government agencies that undertook medical-military experiments during and after World War II not only ignored the ethical subtleties of their experiments, but failed to implement the cardinal rule of human experimentation—that subjects volunteer for an experiment after being informed of its nature and risks.

Moreno places much of the blame for this failure on the government's inability to implement rigid policies governing human experiments. An example of this is the ethics policy established by Defense Secretary Charles Wilson in 1953. The policy, which was based heavily on the Nuremberg Code, was intended to govern human experiments undertaken by the various branches of the Defense Department.

The policy was not well-received within the national security establishment. Moreno writes, "Medical and military critics in the Pentagon were opposed to any written policy that threatened to restrict human experi-

ments for national security needs." As it turned out, the critics' concerns were not warranted because the policy was ignored. During the years that Wilson's ethics policy remained the official Defense Department code, the military undertook hundreds of experiments that clearly violated its fundamental tenets.

According to Moreno, part of the problem with Wilson's policy—and with other policies that came later—was that it was shrouded in secrecy. Possibly because of its references to "the sensitive subject of unconventional warfare," the policy had a "top secret" designation that prevented it from being properly disseminated among the many agencies involved in human experimentation. He writes, "Critics asked how it was expected that scientists, including many university professors on contracts whose careers depended on publishing [the results of their experiments], could be guided by a top-secret document!"

Another problem with Wilson's policy was that it failed to adequately address ethical issues. Moreno explains, "[The policy made clear] that there had to be subject consent but [it was] vague about how much risk people could be asked to accept in the name of national security research."

One Defense Department agency, the army's Chemical Corps, had a particularly difficult time resolving this ethical dilemma. Because of a perceived need for improved protection against aerosolized microbes, in 1955 the corps' advisory board recommended that "tests on human subjects with biological agents be given a high priority." The recommendation provoked widespread debate in the corps about how to determine what level of risk was appropriate in the experiment. One lieutenant colonel asked, "How can we develop and standardize [biological] and [chemical] agents when higher authority requires human dose-response data, yet these agents are considered by medical authorities to be too dangerous for human experimentation?"

Despite the shortcomings of the Wilson policy, it is clear that much of

