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# Physician defends inmate experiment

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The doctor who conducted radiation research on prisoners at Walla Walla during the 1960s says his experiments resulted in significant medical findings regarding the effects of radiation on the male reproductive system.

"We have been able to use the information in helping answer the questions of men who sustained injuries in industrial accidents regarding the radiation doses they received in the accidents," said Dr. C. Alvin Paulsen.

"I feel good about the way the program was carried out," Paulsen added. "I appreciate that it is controversial, but I treated these men as I would any other of my own patients."

Between 1963 and 1971, under a grant from the U.S. Atomic Energy Commission, Paulsen exposed the testicles of 64 volunteer Walla Walla inmates to X-ray radiation.

A U.S. Department of Energy official said some of the inmates sustained cell damage from the tests. The official said DOE ended human tests — except those related to medical treatment — in 1975.

The radiation doses given to the inmates ranged from 7.5 rads to

400 rads. Four hundred rads is an extreme radiation dose, Paulsen said.

"Only two of our subjects received that high a dose," Paulsen said. "I would say for the majority, the top dose was 100 rads."

But even 100 rads, he added, is a much higher dose of radiation than

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patients would receive in most X-ray procedures.

At the same time, Dr. Carl Heller, who is deceased, conducted a similar research program at the same time that used 67 Oregon State Prison inmates as subjects.

"I've never seen all the data, so I can't tell you exactly how it differed from our program," Paulsen said. "But his doses tended to be a little higher."

Each inmate in the Walla Walla program received a single dose of radiation with a standard X-ray therapy machine, and was then monitored over a period of several years. Paulsen said the X-ray dose was a painless procedure.

The research program "met or exceeded all of the applicable government regulations of the day," Paulsen said, "including the U.S.

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# Inmate (Co)

X Surgeon General's Feb. 8, 1966, policy statement regarding the use of human test subjects. In addition, the program was reviewed by the clinical investigation committee of the University of Washington School of Medicine."

The research program was mentioned in a document distributed to reporters at a news briefing at the Hanford Nuclear Reservation Monday. But the experiments have been reported "both in scientific and popular literature" several times before.

# "This is about the sixth time this has been discovered," Paulsen said. "But I think it is important each time it does come up that it be dealt with in a straightforward fashion."

Paulsen is a professor of medicine at the University of Washington Health Sciences Center, and is a nationally known fertility researcher. His areas of expertise are endocrinology and andrology. Andrology is the study of male sexual dysfunction.

→ Paulsen said Wednesday the research program was his idea, not the AEC's or Hanford's.

"I was called over to Hanford in consultation in 1961 when there was an accident during processing at Hanford and three men were exposed to both neutron and gamma radiation.

"It became apparent to me that I really wasn't in a position — even though I had worked on male reproduction for many years — to answer their questions as to whether or not there was recovery and if so what were the details of the recovery."

Paulsen said he set up a program to monitor those three men.

"But because of the fact I felt information was lacking, and after consultation with a wide variety of people, I considered it a reasonable approach to do a study in human beings."

It took a year of consultation and debate with other doctors, including his colleagues at the University of Washington, to decide how the program should be conducted, Paulsen said. He submitted the resulting proposal to the AEC — the forerunner of today's U.S. Department of Energy — and it was funded.

"The reason for the selection of inmates," Paulsen said, "was that I was counseled that if it was an im-

portant program to do in human beings, we should try and identify a population where we could get full follow-up."

He said notices of the program were put up at the institution. The notices described the program, and suggested interested prisoners should see their prison counselors. The program was limited to men who were in prison for "long-term stays" and who would agree to have a vasectomy before they left the penitentiary.

"One of the committees I consulted with suggested I include only those men who would agree to a vasectomy because some studies in inbred mice suggested there could be a problem with genetic effects," Paulsen said. "All the prisoners agreed to that, but I told the committee that we couldn't guarantee some wouldn't change their mind."

A few of the prisoners eventually did refuse to have the vasectomies, "but they weren't penalized for that," Paulsen said. Involvement in the program did involve a small amount of monetary compensation. He said it did not involve any promises of reduced time or preferential treatment in the institution.

"I thought it was very important that those things not be involved," Paulsen said, adding that he would have questioned the voluntary aspect of the program if such incentives had been offered.

Paulsen said it was not at all uncommon at that time to use inmate populations for medical research. That changed in 1978 when federal regulations governing human experimentation were revised. The regulations now require that biomedical research involving prisoners must have a direct benefit to the prisoners participating in the research.

Even if the regulations regarding inmate research had not been changed, Paulsen doesn't think similar research would be allowed today.

"I think people's concerns regarding radiation and other factors have changed," he said. "It is doubtful such a program could be carried out today."

Paulsen's Walla Walla research program ended in 1971. While he monitored the men's medical conditions from 1963 to 1971, he said they have not been monitored since then.

"It is very difficult to say what

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has happened to them since," he said. "All I know is that the men were informed they should contact me if they ever had any problems they felt might be related to the testing."

Over the years, Paulsen said, three of the men have contacted him and he has treated them.

"They inquired about various conditions related to their reproductive systems," he said, adding that none of the inquiries involved cancer or life-threatening conditions. Out of consideration for their privacy, he said he would not detail the conditions.

"It would be difficult to establish that the problems were related to the testing," Paulsen said.

The research showed that radiation doses do affect sperm production, with the amount of time it took for sperm production to return to normal being related to the amount the radiation dose. For the

highest doses, he said, it took from two to three years for the sperm production to return to its pre-dose levels.

But Dr. James Robertson, program manager for DOE's research department, said a 1974 scientific report on the Walla Walla tests said cells of inmates who received doses of 200-300 rads were "overtly damaged."

"They weren't visibly damaged but there was a decreased number," said Robertson, whose office oversaw the human experiments.

The report, titled "Effect of Graded Doses of Ionizing Radiation on the Human Testes," said prisoners getting doses from 400-600 rads sustained "visible" cell damage, he added. Only two Walla Walla inmates received such high doses.

Robertson said DOE tried to follow the inmates' medical condition, but some resisted.

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