# Subjected To Medical Experimentation:

# Pennsylvania's Contribution To "Science" in Prisons

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## Introduction

"These two young doctors from the University of Pennsylvania came into the prison and laid me on a table for about 45 minutes. The doctors cut me on both sides of my lower back and inserted something - something like medical gause - and then stitched me up. Ten days later they called me back, opened the stitches on one side and took the packing out and stitched me up again. After another ten days, they called me back and did the same thing to the other side. I was never given an anesthetic and never told what they were doing or putting in me, but I did get $10 for each cut."(1)

For Withers Ponton, his unusual ordeal with the university doctors in white lab coats and the strange things they did to him that resulted in two-inch scars on each side of

his abdomen, was just another day in the life of a prison guinea pig. As an unsentenced inmate in the Philadelphia County Prison System in the late 1960's, Ponton was desperate to earn any money he could as the months went by and his trial date approached. Fortunately for him - at least monetarily - he was incarcerated in Pennsylvania and was thereby afforded ample opportunity to become a dollar-a-day recruit for what was reputed to be medical science. "Pons," as he was affectionately called by his fellow prisoners, took part in "at least 25 biopsies," numerous patch tests, diet drinks, and a variety of other medical experiments during his 40 months in Philadelphia's infamous Holmesburg Prison. "Hell, I needed the money," he explained. "Every day I went over to H block to see if they could use me."

Withers Ponton is neither unique nor known as someone with a predilection for self-abuse. Thirty years ago, however, he and many similarly situated young men in Pennsylvania's prisons believed they had reason to become unquestioning subjects for experimentation. It was an era in which authority went unchallenged, scientific advancement was encouraged, and men of medicine were given great latitude in their pursuits. Everyone - including children, geriatrics and prisoners - was expected to share in the struggle. It was Cold War science in America and many ethical principles were either dislodged or disregarded in the process. The use of captive populations, the lack of proper procedures for informed consent, the absence or subversion of institutional review boards, and numerous other indiscretions were committed in the quest of advancing science and fostering progress.

Many of the more notorious examples of scientific abuse have been recorded over the years. The Tuskegee Syphilis Study where 399 uneducated, Black, Alabama sharecroppers were used in a four decade-long experiment is perhaps the best known example of such unethical behavior by the medical community, but it is certainly not the only one.(2) The use of retarded children for radioactive isotope experiments at a Massachusetts orphans home and the use of hospital patients for Manhattan Project plutonium experiments are just two additional examples of the medical profession's insensitivity to vulnerable, institutionalized populations.(3) As scholars and investigative journalists continue to explore the relatively new field of human experimentation studies, more and more examples of improper behavior by doctors will be uncovered. But it is safe to assume that America's prisons - though generally shunned by bioethics scholars - will be a veritable gold mine of opportunity for historical research because prisoners were the bulk of the testing material in postwar America.

**Early 20th Century Experimentation on Prisoners**

In February, 1915, a dozen Mississippi prisoners from Rankin Prison Farm made medical history by participating in an experiment designed by Dr. Joseph Goldberger of the U.S. Public Health Service. The prisoners were used to determine if pellagra could be induced in "white adult males, the one group in the population that statistics had shown was least likely to contract the disease."(4) A devastating public health dilemma that killed thousands of Southerners each year; pellagra, Goldberger theorized, was a dietary protein deficiency that resulted in the 4D's - dermatitis, diarrhea, dementia, and death.

After receiving a promise of a pardon by Governor Earl Brewer, the inmates, many of them convicted murderers, volunteered to become experimental guinea pigs. By progressively limiting their diet, the men grew increasingly ill and complained of pains in their backs, sides, and legs, along with lethargy and dizziness. By mid-September the first skin lesions began to appear and in short order each of the men showed the distinctive rash of pellagra. Though the prisoners cursed the "hellish experiment," it resulted in their freedom.

Several years later on the West Coast, another series of prison experiments would begin that would make the Mississippi medical trials pale by comparison. In an effort to renew lost youth and regain lost potentialities, Dr. L.L. Stanley began "transplanting testicles from recently executed convicts to senile and devitalized men." The experiments, which began in 1918 and ended four years later, were conducted on hundreds of prisoners and occasionally wild animals.(5) Dr. Stanley recognized how "fortunate" he was to have a prison laboratory and ensured those skeptics that his surgical transplants were "practically painless and harmless."(6)

Not all prison medical experiments were as scientifically questionable as Stanley's. In Colorado, two inmates were chosen from dozens of volunteers to take part in tuberculosis experiments at Denver's National Jewish Hospital in 1934. The inmates admitted they didn't "exactly relish the idea of making an experiment out of [themselves]," but the chance "to win time off" their sentences proved too attractive to turn down.(7) The men ultimately survived the experience and were once again rewarded with a pardon, however, some in the local community opposed the deal and argued, "we fail to see any

excuse for releasing upon the community two life-term fellows because they didn't get tuberculosis when inoculated with a preparation of microscopic bugs."(8)

The use of prisoners as raw material for medical experiments prior to 1940 was rare and thought to be practiced by unsophisticated, pseudo-scientific eccentrics. An event, however, was about to occur that would dramatically transform medical experimentation and thrust prisoners in the forefront of scientific study.

**The Impact of World War II**

With men and material mobilized for action, the defeat of Nazi Germany and Imperial Japan became America's objective. Hospitals, colleges and corporations made their own contribution and were handsomely rewarded for their services. Research sites emerged across the country and large scale facilities that could test dozens of people at one time became the optimum goal. Prisons began to host a variety of experimental initiatives, including purified beef blood as a new source of plasma; sleeping sickness, sand-fly fever, and dengue fever; and several major malaria studies.(9) The Stateville (Illinois) malaria experiments received prominent coverage in Life Magazine and two chapters in *Life Plus 99 Years*, the autobiography of Nathan Leopold, one of the infamous killers from the Leopold and Loeb case.(10) At the conclusion of the Stateville studies, Governor Adlai E. Stevenson granted commutations of sentence or paroles to 317 of the 432 convicts, including 24 murderers.(11)

The nation's federal prison system also participated in the war effort. At Atlanta Federal Penitentiary, for example, over 600 inmates volunteered to become "human guinea

pigs and undergo malarial infection and treatment with new drugs that were untried on the human system."(12) Other federal prisons hosted studies on gonorrhea, gas gangrene, and airborne infection.(13)

**Postwar Scientific Expansion**

Interestingly, the use of American prisoners as raw material for medical experimentation did not diminish with the cessation of international conflict. As medical historian, David Rothman, has observed, "a utilitarian ethic continued to govern human experimentation - partly because the benefits seemed so much greater than the costs, and partly, too, because there were no groups or individuals prominently opposing such an ethic."(14) Called "the gilded age of research" by Rothman, the medical-pharmaceutical complex threw itself at scientific exploration with a passion.(15) Unfortunately, the zealous nature of the quest led to insult and injury to many of the test subjects, as well as, to violations of some ethical principles.

The Nuremberg Code, for example, a proscribed set of rules designed by American jurists at the 1947 "Doctors' Trial" in Germany to protect volunteer test subjects involved in scientific experiments, was easily and often circumvented by American physician/researchers.

Though a fair and impartial reading of the Code would seem to prohibit the use of prisoners for experimental study, doctors in postwar America argued that the strict code of medical conduct was designed to prevent only repugnant brutalities exhibited by Nazi physicians and was not applicable to American medicine. As the *Journal of the American*

*Medical Association* reported in 1948, medical experiments in penal institutions could be "ideal" if certain practices were employed.(16) The upshot, regrettably, was a universal code of conduct for scientific research that went unrecognized for over a quarter-century in the country of its origin.

Postwar research in the United States flourished. Governmental support for scientific study was impressive. In 1945, the National Institutes of Health received $700,000. By 1955, that stipend had risen to $36 million, and ten times that just a decade later. By 1970, a staggering $1.5 billion had been awarded to some 11,000 grant applicants, nearly one-third requiring some form of human experimentation.(17) Clearly, money could be made through scientific research, and that was not counting the huge economic potential of the corporate sector The pharmaceutical industry grew tremendously during the postwar years, and research laboratories that had access to unlimited human test subjects could reap tremendous benefits. As one doctor said describing the spirit of the times, "everybody was breaking their neck to get on the gravy train." For physicians with medical practices in prisons, "it was like a gold mine."(18)

Some of the more entrepreneurial members of the medical community became captivated by the prospects of making money through prison science. Austin Stough, for example, directed prison medical programs in Oklahoma, Alabama, and Arkansas, and made a handsome profit - in a good year he would gross close to $1 million - but the inmates did less well financially and were often "sickened and some died."(19) Stough formed business relationships with many pharmaceutical companies, but he became best known for his plasmapheresis programs - which enabled plasma to be drawn away from

blood and the remaining red blood cells reinjected back into the donor - thereby allowing prisoners to contribute blood many more times a year. Though process was an economic boon for Dr. Stough, it proved less profitable and safe for the test subjects.

The 1950's witnessed an explosion in prison experimentation. Private and public sector organizations were exploring an array of maladies, treatments, and drugs that ran the gamut from syphilis and hepatitus to LSD and influenza.(20) Doctors at the Sloan-Kettering Institute, for example, were searching for clues to the body's natural immunity process. Why, they wanted to know, were some organisms seemingly immune to cancer? In order to carry out their delicate experiments, the researchers traveled to Ohio State Penitentiary and utilized over 100 inmate/volunteers as test subjects.(21) Informed of the possible negative consequences, the volunteers were duly nervous. "I'd be lying if I said I wasn't worried," said one prisoner. "You lie there on your back, knowing you've got cancer in your arm, and you just think. Boy, what you think about."(22) The doctors tried to assuage the patients' fears by arguing that "any cancer that took would spread slowly...and could be removed surgically." In a recent interview, one of the researchers, Dr. Chester Southam, a long-time Pennsylvania resident said, prisoners were most desirable subjects because they were a "stable group of people" that contributed to the "assurance of continuity." Constancy and cohesion were key factors difficult to duplicate with other types of test populations that were "unrestrained, unrestricted."(23)

Many experiments conducted on prisoners, especially the more dangerous ones, were unknown to the general public. At the Virginia State Penitentiary in Richmond, for example, inmates were recruited for flash burn studies in order to test what might "result

from atomic bomb attacks." Interestingly, the volunteers were all "prisoners on sentence for homicide or attempted homicide" and were offered "a remission of their sentences" if they completed their obligations to the experiments.(24) Aware of the political fallout from negative publicity, the prison superintendent "informed all the inmates and staff members that no publicity should be given to the experiment being carried on...and the inmates should not have visitors, uncensored mail going in or coming out...and by all means they should not have the privilege of the use of the telephone."(25)

By the 1960's medical experiments in prisons were commonplace, and prisoners were the guinea pigs of choice for a cross section of corporate and government researchers. Retarded children, hospital patients, and unsophisticated minority sharecroppers were still grist for the research mill, but men behind bars had special appeal. They weren't going anywhere and nobody really cared what happened to them. They were throwaway people who could be used and abused with less fear of public outrage if something untoward should occur to them. In Oregon and Washington, for example, prisoners were used for dangerous radiation experiments between the early 1960's and the early 1970's. Designed to "determine how much radiation U.S. astronauts could bear during space flights," the Atomic Energy Commission funded a lengthy series of experiments that irradiated the testicles of dozens of state prisoners.(26)

**Prison Experiments in Pennsylvania**

The radiation studies in Oregon and Washington, the cancer studies in Ohio, and the flash burn studies in Virginia, are just a few of the numerous prison experimentation programs in postwar America. It would appear that at least half of the states had penal institutions that cooperated in allowing prisoners to be used as medical guinea pigs. According to Jessica Mitford, one of the first investigative journalists to inform the general public about the questionable practice of using incarcerated Americans as raw material for science, 24 states were still utilizing prisoners as late as 1973, a time when many jurisdictions were rethinking their position on the controversial practice.(27) Every section of the nation and every level of government was represented: from county jails to state prisons, and federal penitentiaries.

Interestingly, however, the state with the most prisons involved with the medical experimentation phenomenon was Pennsylvania. While most of the states on the Food and Drug Administration's list supplied to Mitford include only one or two facilities, the Keystone State had nine: Bucks County Prison, Doylestown; Lancaster County Prison, Lancaster; Holmesburg Prison, Philadelphia; Philadelphia House of Correction, Philadelphia; Berks County Prison, Reading; Northhampton County Prison, Easton; Chester County Farm, West Chester; Delaware County Prison, Thornton; and Lebanon County Prison, Lebanon.

One can speculate on the reasons accounting for Pennsylvania's concentrated involvment in human experimentation, but a logical explanation would have to incorporate

the tremendous concentration of university medical schools and pharmaceutical companies in the state, particularly in the Southeast region. As a hotbed of medical research activity, the Philadelphia area generated many possibilities and opportunities for an array of interested parties including, entrepreneurs, scientists, doctors, students, and test subjects.

One prison that dramatically underscores this point is Holmesburg. Built during the last decade of the 19th century, the county prison in the Holmesburg section of Philadelphia first permitted medical research in the early 1950s. A history of the prison as a medical research facility, shows that physicians of the University of Pennsylvania's Department of Dermatology initially utilized the site for rudimentary medical studies.(28) On entering the grim walled facility, doctors were no doubt impressed by the idle collection of humanity that seemed ideal for dermatologic study. As one physician graphically described the scene, "It was like a farmer seeing a fertile field for the first time."(29)

Apparently less than impressed with the recently enunciated principles of the Nuremberg Code calling for the exclusion of coerced populations in medical experiments, respected members of the dermatological community at Penn, encouraged their peers and students to pursue penal institutions more aggressively as viable scientific testing grounds. "Inmates," in the eyes of one esteemed professor, Dr. Frederick D. Weidman, a former president of the American Dermatological Association, were "splendid" as "test subjects." In fact, he argued, "We have not been alive enough to the wealth of test material that there is in penitentiaries..."(30)

Such a utilitarian attitude was not uncommon throughout the medical research community at this time, but the practice quite possibly rose to its zenith in Pennsylvania. And Holmesburg Prison may have been the prototype for such dubious experimental endeavors. In its early years as a human gold mine for researchers, Holmesburg played host to a selection of rather routine dermatological studies by both professors and their students. However, as the years passed the program began to evolve into a much wider and opportunistic research initiative. Corporate representatives came calling with intriguing and lucrative experimental protocols, and were rarely turned away. By the late 1950s the inmates were participating in a laundry list of consumer product studies that included hair dyes, toothpaste, eye drops, shampoos, detergents, deodorants, sun tan lotions, and diet drinks. More academically oriented experiments were still being performed, but now one could easily mistake the program for a private sector test laboratory catering to the needs of the burgeoning pharmaceutical industry.

Relationships with profit oriented corporations had usually been kept at arms length by the more conservative and tradition-bound members of the academic community, but that was about to change Dr Albert M. Kligman, a young dermatologist who had acquired a doctorate in mycology prior to earning his medical degree, was quick to see the potential of a prison research unit Collaboration with the region's drug companies could result in numerous advantages, including reaping the spoils of their growing economies. As a former Chairman of the University of Pennsylvania's Dermatology Department stated, "In the beginning it was not the right thing to do. The university considered work with pharmaceutical companies as unsuitable. It was not part

of the university thing to do. But the pendulum was starting to swing. Kligman was on the cutting edge."(31)

Dr. Kligman's capacity for combining medicine with more entrepreneurial pursuits led to many interesting business relationships and questionable experimental ventures. In 1964, for example, Dow Chemical Corporation contracted Dr. Kligman to apply specific amounts of dioxin to the foreheads and backs of Holmesburg inmates in order to discover the "threshold exposure for the induction of chloracne by TCDD in man."(32) Though Dow, a Michigan based company, had a prison research program nearby and university personnel in proximity, they still decided to come to Pennsylvania, because Kligman and Holmesburg had earned a national reputation and the respect of the corporate giants.

Dangerous dermatologic investigations, however, were not the only scientific studies engaged in by Dr. Kligman. Even those subjects far afield from the doctor's area of expertise, such as internal medicine and psychopharmacology, were undertaken for a fee. R.J. Reynolds, for example, sought out Kligman and his limitless supply of test subjects in the mid-1960s when the tobacco company learned that smoking could alter the body's normal tryptophan levels and trigger "ortho-aminophenols," compounds thought connected to bladder cancer.(33) Inmates were recruited and the tests initiated, with apparently little concern for the non-dermatological nature of the experiment or the potential outcome.

Another example of such cavalier clinical research was Dr. Kligman's extensive work on chemical warfare agents for the military. Started in 1964 and lasting throughout the decade, physicians for the U.S. Army's Chemical Corps contracted Dr. Kligman to test

a series of potent incapacitants at the county prison. Subjects were taken to special trailers brought inside the prison's walls and injected with an assortment of experimental agents. The impact of those agents left many of the men with everything from "impair[ed] thinking and blurred vision" to "frightening hallucinations."(34) As one inmate recalled, "guys came back to population and didn't remember their names. Guys would fade in and out of consciousness. They didn't seem to know anything: who they were or where they were. Guys told me they had violent, ugly trips - dogs as big as horses, worms like alligators. Some of the guys beat themselves up and would punch themselves in the head. Some of the guys would come back to the blocks and tell of horrific trips: eaten by giant spiders; living in the 13th century. Another guy said he was hung and killed."(35) Although the Army also pursued studies at Holmesburg that were non-psychopharmaceutical in nature, such as unusual skin hardening experiments, the prison trailers developed a particularly ominous reputation inside the jail.

**Incentives for Inmate Participation**

Though many Holmesburg prisoners feared the medical experiments and refrained from participating, it was not unusual to see 80 or 90 percent of the 1,200 person institution participate in one or more tests. According to the inmates the reason was simple - money. Prison jobs were few, the pay poor and other economic alternatives non-existent, except, of course, for the University of Pennsylvania medical tests. "Hell, I needed the money," said one prisoner matter-of-factly. "Everyday I went down to H Block to see if they could use me."(36) Another inmate said, he "didn't worry" about test

repercussions; his overriding concern at the time was that he "needed the money."(37) During the 1950s and 1960s, prison wages could top out at 15 cents per day. The economic rewards as a guinea pig looked handsome by comparison. In fact, the prisoners earned a pittance, but the orchestrator of the program made considerably more.

The uniform attitude by the Holmesburg prisoners is at variance with some earlier investigations of inmate motivations for participating in scientific experiments. Past studies have suggested an array of reasons, including patriotism, altruism, an interest in scientific advancement, early release, and better living conditions.(38) At Holmesburg, however, money was not the prime factor, it was the only factor. "They did it for the money, pure and simple," said one test subject. "No one took tests for patriotic duty or because they were good people. They were doing it for financial gain."(39)

**Pennsylvania's Open Door Policy**

Though the penal institutions of Philadelphia County were a natural for such medical initiatives, the surrounding counties were equally hospitable. And on at least one occasion, a doctor moved his human research program from one penal facility to another in order to obtain relief from any bureaucratic misunderstandings. According to another University of Pennsylvania dermatologist, Dr. Milton Cahn, he, too, conducted drug studies at Holmesburg for various pharmaceutical firms at approximately the same time as Dr. Kligman. Though smaller in scale and more specialized than Dr. Kligman's program, Cahn still had major corporate clients who believed the prison was "an ideal place to do...studies" and repeatedly asked, "Would you check out this drug?"(40) Corporate

clients ranged from Hoffman-Larouche and Parke-Davis to Pfizer and Smith, Kline & French. Unfortunately, the program was seriously disrupted and almost terminated by the FDA's investigation of a Dr. Kligman experiment whose data were falsified and published in the *Journal of the American Medical Association*.(41)

Realizing that his own research endeavors were being confused with Dr. Kligman's larger and more controversial testing program, Cahn relocated his own research operation to the House of Correction, another Philadelphia jail nearby. "We abandoned Holmesburg," said Cahn. "I knew we had to find our own penal institutions for scientific studies." Shortly after, Cahn's research group departed Philadelphia and established new bases of operation in the prisons of Bucks and Lancaster Counties. Fortunately for Cahn and his coporate clients, other penal officials in the commonwealth saw the importance of his work.

**The End of Prison Experiments**

By the early 1970's, attitudes regarding human experimentation were quickly changing. The use of vulnerable populations as guinea pigs for scientific studies began to take on a negative connotation as retarded children, geriatrics, hospital patients, and even prisoners were now viewed as requiring protection, not exploitation. Several events during the preceeding years fostered this change in perspective, but one of the most critical was the shocking revelation of the Tuskegee Syphilis Study. The government's and the medical community's complicity in a four decade-long experiment on 399 uneducated, Black, Alabama sharecroppers sensitized a nation to the fact that even brilliant doctors can

sometimes commit horrendous acts. Combined with several other unsettling events of that period running the gamut from the Vietnam War, Watergate, Attica, and the growth of various domestic peoples movements (civil rights, womens' rights, prisoners' rights), the public began to question government officials and other authoritative figures, including the insular world of physicians. Others in the health care field also came under scrutiny and criticism. At widely covered congressional hearings in 1973, the pharmaceutical industry was pressured to admit that prisoners, a key element in their research operations, were used by them for economic gain.(42) The imprisoned, in fact, were cheaper than chimpanzees.(43)

Though the March, 1973 hearings in Washington drew a cross-section of prominent spokespersons, both for and against human experimentation from the ranks of industry, medicine, law, and letters - the only two actual test subjects to testify were interestingly, from Pennsylvania. Allan Lawson and Leodus Jones, former prisoners in the Philadelphia and state penal systems, held a lengthy exchange with Senate Labor Committee Chairman Edward M. Kennedy (D-MA) that underscored "the vicious circle" inmates are in.(44) Imprisoned and desperate for money, the prisoners have no alternative but to submit to experimentation. All they were doing, argued Lawson, was "trading [their] bodies for money," thereby making "any claim of voluntary participation ...in human experimentation a cruel hoax."

The Senate hearings, as well as, the growing chorus of opponents to penal experimentation began to resonate at home. County prison boards in Pennsylvania recognized it was time to terminate their once prized human research programs, and one

by one the formerly flourishing medical units closed their doors. "It's absolutely shut down in every respect," said one board chairman. "There is no phasing out, no completing any cycles. We're rid of it."(45)

The popular use of vulnerable populations for scientific research in postwar America is a sad commentary about our inability to learn the lessons so clearly demonstrated by doctors in Nazi Germany. Far too often, American physicians found the retarded, the poor, the uneducated, and the imprisoned attractive subjects for experimentation. Pennsylvania was disproportionately represented in numerous, heinous experiments on helpless inmates in the name of science. Thousands of prisoners participated in hundreds of experiments in various prisons throughout the state. Regrettably, nearly three decades passed before America complied with the principles enunciated in the Nuremberg Code in 1947. Though some may claim scientific advances such as Retin A were gained through the Holmesburg experiments, and many researchers attained great wealth and prominence, the prisoners were generally left with physical scars, horrible memories, and a fear of scientists and physicians.