

WHISTLEBLOWER

(SHOOTING THE MESSENGER—12 YEARS AFTER HE'S DEAD)

When I first began working at Bergen Pines County Hospital in 1970, one of the most popular guest speakers at our weekly Medical Grand Rounds was Dr. Irving Selikoff who lived in nearby Ridgewood but then was working at Mount Sinai Hospital in New York. Selikoff was a compelling speaker and I still can remember some of his slides and anecdotes. By then he was world famous as the individual who had called attention to the health hazards of asbestos to the chagrin of countless industrialists.

In 2003 an English medical historian Dr. Peter Bartrip published a thirty page paper titled "Irving John Selikoff and the Strange Case of the Missing Medical Degrees." Because Dr. Selikoff had died twelve years earlier at age 77, it might have seemed unusual for such an extensive investigation of his medical education to be of any interest, but the article's appearance at this late date was no accident. Peter Bartrip was a professional apologist for the asbestos industry who already had published two books which defended their good faith efforts as caring employers. In this new article Bartrip wrote, "in view of Selikoff's importance to the asbestos question over a period of over thirty years, it's pertinent to inquire about his medical education and qualifications."

Pertinent? When Bartrip remarked upon what he characterized as Selikoff's "patchy and in some respects substandard" medical education, it was an obvious attempt to undermine the credibility of the man who had "played as large a part as anyone in destroying the American asbestos industry." Significantly, Bartrip's article appeared when the terrorist attack on the World Trade Center in September, 2001 was still fresh in everyone's memories. In effect, Bartrip's expose was a perverse misuse of history in order to score points as the asbestos industry geared up for a new round of law suits.

Born in Brooklyn in 1915, Irving Selikoff had an uneventful growing up. When he received his bachelor's degree from Columbia University in 1935, it was a time when it was difficult for Jewish students to gain entrance to American medical schools so like many others of similar background he went abroad. But when he enrolled at the University of Glasgow in Scotland, World War II was breaking out and Americans were strongly advised to return home. Australia seemed to be a safe alternative and Selikoff sailed there in hope of accumulating more credits toward a medical degree. However, because of bureaucratic difficulties encountered there and being unable to return to

Scotland because of the war, he returned home and enrolled in what turned out to be a non-accredited medical school called Middlesex University in Massachusetts. According to Peter Bartrip, Selikoff was never able to display a proper medical certificate which suggested that a man capable of misrepresenting the facts of his education, might equally misrepresent other things—such as the hazards of asbestos.

Diploma or not, in 1943 Irving Selikoff did an internship at Newark's Beth Israel Hospital and then spent two years as a resident at Sea View Hospital on Staten Island, a huge TB hospital. Three years of chest fellowship followed and after receiving a license to practice in New Jersey in 1946, he continued to work part-time at Sea View and in the chest clinic at Mount Sinai Hospital. In 1951 he and two colleagues (Robitzek and Ornstein) began treating 175 tubercular patients at Sea View with two related hydrazides—isoniazide and iproniazide.

Their published results (*JAMA*, 11/8/52) later would be considered a medical landmark. In 1955 Dr. Selikoff and his colleagues shared the Lasker Award, sometimes called the "American Nobel Prize." Interestingly, they found that iproniazide (later withdrawn because of hepatotoxicity) worked better than isoniazide, but both were far more effective than previous treatments, including streptomycin for which Selman Waksman of Rutgers was awarded the Nobel Prize in 1952. An incidental finding noted without further comment by the Sea View investigators was that those patients who received iproniazide had "increased energy and a sense of well-being." A few years later, Nathan Kline working at Rockland State and Bergen Pines, was the first to report on the antidepressant effects of iproniazide and imipramine.

Even before the TB paper appeared, Irving Selikoff had opened a general medicine practice in Paterson and by 1951 was so busy that he invited a younger man, David Roth, to join what they called "The Paterson Clinic. Dr. Selikoff remained with the group for some twenty years, but increasingly became involved as a chest specialist at Mount Sinai Hospital in New York. Then in 1953 something happened which not only would change Irving Selikoff's life, but would lead to his creation of an entire new specialty field.

Dr. Selikoff was contacted by a local lawyer who represented workers at the Union Asbestos & Rubber Company in Paterson. During the 1940s the company, later known by the acronym UNARCO, was producing insulating materials for the Navy using amosite, a form of asbestos mined in South Africa. Of the first seventeen men examined by Dr. Selikoff, fifteen had objective pulmonary abnormalities although all still were

working and seemingly well. Eight years later, four of these men were dead—one of lung cancer, one of stomach cancer, one of mesothelioma and one of asbestosis.

When Selikoff approached UNARCO executives, he was refused permission to study the Paterson workers. He also was unsuccessful in obtaining cooperation from the Johns-Manville Corporation in Manville, New Jersey that was the largest manufacturer of asbestos products and the leading asbestos supplier in the U.S. from the 1920s to the 1970s. So instead of studying workers in factories, he decided to examine those who were working with the material on the outside—installing asbestos tiles, insulation and the like. Their unions in Newark and New York were happy to cooperate and of more than one thousand asymptomatic workers, he found that about half had chest X-ray abnormalities. The extent was directly proportional to duration of exposure: 0-10 years exposure (it didn't matter how much exposure) had 10% abnormalities; 10-20 years 50%; more than 20 years, an amazing 87% and about half of these had progressed to symptomatic disease.

Irving Selikoff's findings were reported in the *Journal of the American Medical Association* in 1964 and noted that men who'd been exposed between 1943 and 1962 had overall increased mortality of about 25%; seven times greater than the predicted incidence of lung cancer; three times more than predicted GI cancer. In 1968, again in JAMA, he reported that asbestos workers who smoked cigarettes had 92 times the risk of dying of lung cancer than age-matched controls. Still later, 30% of wives and children of asbestos workers had abnormal chest X-rays.

During the 1970s and 80s at hundreds of meetings and trials, Dr. Selikoff testified that more than 20 million Americans had been occupationally exposed to asbestos and predicted that over the next 20 years there would be 8 to 10 thousand deaths from it every year just in workers. But you didn't have to be a worker. If you were a worker's family member, or if you lived in a town where there was an asbestos plant, or if you were a child playing with asbestos-coated toys, the risk also was great. In fact, the mineral's danger had been well known to industry as early as the 1930s, perhaps even earlier, but they had deliberately covered-up the evidence—schools and buildings continued to be built without regulation.

In 1986 retired lawyer Charles Roemer, by then in his eighties, testified that as early as 1941, several months before Pearl Harbor, he'd learned from a physician cousin that there were many cases of asbestos-related diseases among workers at the Paterson plant—that was a dozen years before Selikoff began seeing cases. Roemer went to the

Paterson plant manager and together they set up a meeting in New York City with top executives of Johns Manville. The executives freely admitted that their records showed that workers were suffering from lung problems, but they told Roemer that they'd be fools to share this information with the workers: "If our workers are told, they would stop working and file claims against J-M." It was their policy to let workers continue on the job until they quit because of asbestosis or died of some related disease. Roemer was incredulous and asked, "Do you mean to tell me that you would let them work until they dropped dead?" Johns-Manville's president replied, "Yes, we save a lot of money that way."

In response to Irving Selikoff's constant criticisms, industry lawyers and hired-gun consultants tried to discredit him. Acknowledging that he was an effective and self-confident opponent, they variously described him as being ambitious, malicious, unscrupulous, biased, "a dangerous man . . . out to make a name for himself at the expense of the asbestos industry." If such "nonsense" continued, industry leaders feared they'd be regulated out of existence by "sensationalism." So Johns-Manville mounted an orchestrated smear campaign, picturing Selikoff as an advocate for the victims and intent on ruining the industry. His public recommendations to remove asbestos from buildings were characterized as "hysteria", his testimony that even one fiber could kill was mocked as being "fiberphobia."

But thanks to Selikoff's persistence, the message was getting out that persons occupationally exposed to asbestos **fibers** are subject to developing asbestosis, mesothelioma or lung cancer. The environmental movement took off, industry lost its exclusive control of the agenda and their every action was subject to much closer scrutiny by watch dog agencies and the media. There was a huge backlash with increased public awareness about what had been marketed as "the miracle mineral."

During the mid-1980s, of 17,000 law suits filed about half of the plaintiffs had been involved in the defense industry but the federal government refused to admit responsibility. During World War II more than 70,000 workers were spraying asbestos on the hulls of warships at the Brooklyn Navy Yard where the air usually was thick with dust. Asbestos was used in pipes, boilers, insulation, moving gears and the military was in no mood to hear about health hazards. There was a war to be won; for the Navy it was full speed ahead. In 1978 HEW secretary Joseph Califano belatedly admitted that during World War II between 8 and 11 million people were significantly exposed, about half of them in shipyards. What did Califano do about it? He urged workers to stop smoking. OSHA established workplace safety protocols for asbestos and in 1989

continued use of asbestos was banned. However, two years later the ban was revoked except for any new uses that might be introduced later. For many years Congress debated the so-called FAIR Act (Fairness in Asbestos Injury Resolution) but there was no action and in 2009 the matter was dropped altogether. Nevertheless, hundreds of thousands of lawsuits were started, billions of dollars awarded and more than half of asbestos producers went bankrupt.

By the time Irving Selikoff died in 1992, he'd long been recognized not only as the nation's leading expert on asbestos, but was considered by many to be the father of the specialty of environmental and occupational medicine. He'd won numerous awards, founded a major research institute at Mount Sinai and for thirty years was the leading light in the field. You might think that would have been the end of the story, but not so. Nearly a decade after Selikoff's death came the World Trade Center (WTC) disaster.

More than three decades earlier, in 1969, in testimony to executives of Tishman, the WTC's principal contractor, Dr. Selikoff had estimated that 100 tons of asbestos fiber "snow" would be released in the air over the city if spraying of the steel supports continued during construction. He described the work practice being used as the worst he could imagine and predicted that not one man spraying fiber today would be alive in twenty years. Selikoff's authoritative comments so alarmed the builders of the WTC that not only did they cease spraying, but asbestos was removed from some, but not all of the north tower already in construction. It never was made entirely clear how many floors did or did not have asbestos removed, but evidently many tons remained intact. No wonder that when toxic "snow" filled the air during the WTC attack, government and industry officials were eager to reassure the public. No reason to panic the public. Some even argued that the very fact that asbestos was not used throughout contributed to the buildings' collapse, a theory that was not supported by subsequent investigators.

Initial statements from the EPA and other sources proclaimed that the air in lower Manhattan was safe, but this was challenged by independent experts and in later years as the number of defendant companies skyrocketed so too did asbestos lawsuits. In the first months after the WTC disaster, the EPA denied that its authority extended to protect people from indoor exposure to toxic substances, but in 2003 the agency reversed itself and agreed to support cleanup of contaminated apartments in the vicinity.

Today the asbestos controversy continues and the twenty-year latency clock from exposure to symptomatic disease ticks on. So is it any surprise that industry representatives might have realized that it would be convenient to revive the old rumors

that there was something fishy about Irving Selikoff's medical credentials. When Peter Bartrip's article appeared in the *Journal of the History of Medicine*, it was unusual for a scholarly publication because of its innuendos and subjective opinions. Bartrip claimed that Dr. Selikoff had spent his career hiding the fact that he didn't have a bone fide medical degree and that he had taken the secret to his grave. After all, if his education had been fraudulent and "substandard," so too might have been his subsequent research.

That same year, 2003, a \$100 billion trust fund was proposed by industry and their insurers to settle all present claims with the proviso that no new cases would be heard. That would have been a bargain because they anticipated more than \$300 billion in claims with no end in sight. Two decades earlier, a similar trust fund which had been set up by Johns-Manville proved to be terribly underfunded. There were more than a million law suits and dozens of factories went bankrupt, including Johns-Manville. However, in 2001 J-M was purchased by Berkshire Hathaway and continues to make insulation and hundreds of other asbestos containing products; its new public face being that of a model citizen dedicated to public safety.

The WTC disaster notwithstanding, the asbestos industry has had set-backs in court, including in New Jersey. In a 1986 decision, New Jersey's Supreme Court ruled unanimously that manufacturers could not be excused for liability on the basis that they didn't know about its potential danger. The ruling noted, "It is appalling to us that Johns-Manville had so much information on the hazards to asbestos workers as early as the 1930s, and that it not only failed to use that information to protect these workers but, more egregiously, that it also attempted to withhold information from the public."

In 2006 the state's Supreme Court established a precedent in a case of so-called "take home" or second hand asbestos exposure when it ruled against an employer. The victim was the wife of a man who was exposed at work, her exposure came from washing his work clothes and she died of mesothelioma about a year later. In 2009 a Bergen County jury ruled in favor of another man whose wife died of mesothelioma. He'd worked in an Englewood warehouse during the early 1970s and she also had laundered his clothes. An appeals court ruled in favor of the family awarding them a record \$30 million.

If questioning the qualifications, integrity or motives of critics is insufficient, nearly always there will be some element of scientific doubt which can take years or decades to resolve. Without certainty about the danger of a product, there is no obligation for an industry to remove it from the market or to lower exposure to toxic materials. One can

always say that more studies are indicated. Science is a slow, cumulative process and until unequivocal “proof ” exists and there is no “controversy,” industry has a legal reason to delay or disseminate disinformation.

The asbestos industry’s vilification of Irving Selikoff that culminated with Bartrip’s article was rebutted in 2007 in an article by historians Jock McCulloch and Geoffrey Tweedale. Of course, Irving Selikoff was not the first whistle-blower nor will he be the last to have his credibility attacked by industry interests. Tarnishing the reputation of the messenger is standard procedure among industry lawyers and there have been many similar examples of malicious criticism of scientists who called attention to the potential health hazards of radiation, silica, lead and vinyl chloride. But, ironically, now the shoe is on the other foot as attested by ubiquitous ads by “meso lawyers” on television who ask were you in lower Manhattan at the time of the WTC catastrophe?