

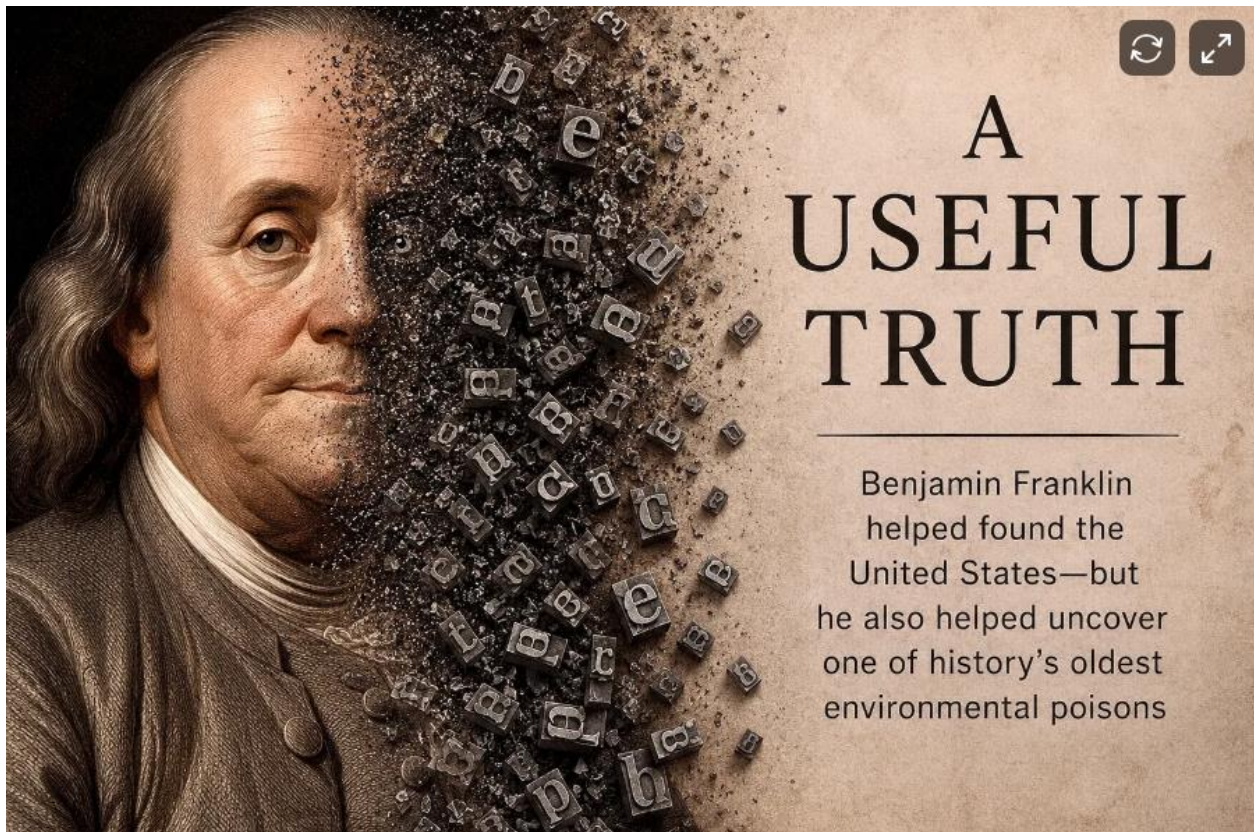


## Benjamin Franklin and a Useful Truth

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***Benjamin Franklin helped found the United States—but he also helped uncover one of history's oldest environmental poisons.***

Benjamin Franklin is one of my favorite figures from the American Revolution—not because he was flawless, but because he seemed endlessly curious about how the world worked and how life might be made a little better, safer, wiser, and more humane.

He was a printer, inventor, diplomat, humorist, scientist, abolitionist, and political strategist. He helped found the United States, the Library Company of Philadelphia, the American Philosophical Society, the Union Fire Company, and the Pennsylvania Hospital. He studied storms, ocean currents, and electricity. He invented bifocals because he was tired of changing glasses.



But on the 250th anniversary of the United States, I find myself thinking about another Franklin. Not the statesman under chandeliers in Paris, but the observant young printer who noticed that certain trades seemed to leave people crippled, sickened, or in pain.

Franklin may have been one of America's first great observers of environmental health.

And he understood something we still struggle to accept today: prevention depends not only on discovering danger, but on whether society is willing to act before more people are harmed.

Franklin learned this lesson painfully. In 1736, his four-year-old son Francis died of smallpox. Smallpox was among the great terrors of the eighteenth century. It killed many who contracted it and scarred countless others. Yet by Franklin's time, inoculation—deliberate exposure to a milder form of the disease—was already proving capable of preventing severe illness and death.

Franklin hesitated. Francis was not inoculated in time. The loss haunted him for the rest of his life.

Years later, Franklin publicly urged parents not to repeat his mistake. He became a strong advocate for smallpox inoculation and published data comparing survival rates among inoculated and naturally infected patients. He had learned, through grief, one of public health's hardest truths: waiting for certainty can carry its own terrible risk.

That same lesson appears again and again throughout Franklin's life. Long before scientists understood toxicology, Franklin was noticing patterns of disease tied to work and environment.

As a young printer in London, he recalled an older worker warning him against the practice of heating the lead metal type near the fire. The man described printers whose hands became weak and useless—a condition called "the dangles." Franklin later remembered experiencing pain in his own hands before abandoning the practice. Today we would recognize this as a likely form of occupational lead poisoning.

Lead saturated eighteenth-century life. It lined pipes and roofs, glazed pottery, sweetened wine and rum, and infused the air of workshops and foundries. Printers handled it daily



through metal type. Painters, plumbers, glaziers, potters, and shipbuilders worked with it constantly.

People knew something was wrong long before they understood why.

Across England and the American colonies, mysterious outbreaks of severe abdominal pain were common. The illness was called “dry gripes,” “dry bellyache,” or “Devonshire colic.” Victims suffered agonizing stomach pain, constipation, weakness, and sometimes paralysis. The disease often appeared seasonally and clustered among particular workers, but its cause remained elusive.

Franklin began connecting the dots.

He recalled hearing stories as a boy in the colonies about “dry gripes” among drinkers of New England rum distilled through lead components. He observed similar illnesses among artisans exposed to lead in their work. In a famous 1768 letter to the English physician Sir George Baker, Franklin listed the trades in which the disease appeared: plumbers, painters, glaziers, potters, and type founders among them.

Baker would later solve one of medicine’s enduring mysteries by tracing Devonshire colic to lead used in cider presses and storage vessels. The illness peaked in autumn after cider production—exactly when contaminated cider was most heavily consumed.

Franklin did not make the final discovery, but he recognized the pattern. The same disease appeared wherever lead entered the body.

It was an early act of environmental epidemiology: observing clusters of illness, tracing common exposures, and identifying a hidden hazard woven into ordinary life.

Franklin also wrote about lead in rainwater collected from roofs lined with lead flashing. He warned about leaden still-heads and “worms” used in rum distillation. He noted occupational illness among stonecutters and painters. Again and again, he returned to the same unsettling realization: useful knowledge often arrives long before society is prepared to act upon it.

In 1786, late in life, Franklin wrote one of the most haunting sentences in the history of public health:



“So sensible is the effect of lead poison that the physicians have long been acquainted with it... and yet it is a long time since the mischievous effect from lead taken internally has been known; and how long a useful truth may be known, and exist, before it is generally received and practiced on ...”

The sentence still feels painfully modern. Franklin understood that the obstacle was rarely ignorance alone. Often the greater obstacle was delay.

The human tendency to normalize familiar harms. The reluctance to disturb commerce. The hope that uncertainty might excuse inaction. The temptation to wait for absolute proof while the damage accumulates quietly in homes, workplaces, and communities.

This may be Franklin’s most overlooked contribution—not merely that he recognized lead as dangerous, but that he recognized the social pattern surrounding dangerous knowledge.

A useful truth may exist for decades before society is willing to practice upon it.

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