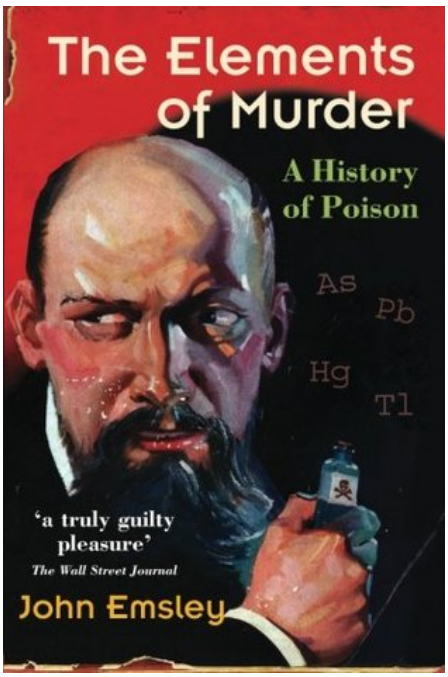

The Elements of Murder: A History of Poison

John Emsley

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Was Napoleon killed by the arsenic in his wallpaper? How did Rasputin survive cyanide poisoning? Which chemicals in our environment pose the biggest threat to our health today? With The Elements of Murder, John Emsley answers these questions and offers a fascinating account of five of the most toxic elements--arsenic, antimony, lead, mercury, and thallium--describing their lethal chemical properties and highlighting their use in some of the most famous murder cases in history. In this exciting book, we meet a who's who of heartless murderers. Mary Ann Cotton, who used arsenic to murder her mother, three husbands, a lover, eight of her own children, and seven step children; Michael Swango, who may have killed as many as 60 of his patients and several of his colleagues during the 20 years he practiced as a doctor and paramedic; and even Saddam Hussein, who used thallium sulfate to poison his political rivals. Emsley also shows which toxic elements may have been behind the madness of King George III, the delusions of Isaac Newton, and the strange death of King Charles II. In addition, the book examines many modern day environmental catastrophes, including accidental mass poisonings from lead and arsenic, and the Minamata Bay disaster in Japan. Written by a leading science writer, famous for his knowledge of the elements and their curious and colorful histories, The Elements of Murder offers an enticing combination of true crime tales and curious science that adds up to an addictive read. Features A gripping cavalcade of murder, mayhem, and malevolence-- and a cornucopia of engaging scientific facts about the five most deadly elements

The Elements of Murder: A History of Poison Details

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From Reader Review The Elements of Murder: A History of Poison for online ebook

Melinda says

This book is unique and very worthwhile to read! I would count it as a 'living book' about chemistry. Living because while it explains the chemistry behind many elements known now to be poisonous, it is told not from a dry technical perspective but within the context of people that were affected by living with medical treatments that were actually poisonous dosing and other situations where they came in contact with these various elements.

Each element is explained from a chemical structure perspective, how it reacts chemically and why, how it was discovered and what it does to the human body. It is a book with real history in it, because as the author explains the chemical properties this is done in conjunction with many different "sudden deaths" in the past that can now probably be diagnosed as due to poison.

For those who are interested in murder mysteries, some of the stories read indeed like Agatha Christie. Some of the people discussed include Napoleon (death by arsenic, but probably because there was arsenic in the paint in the wallpaper where he was staying?), the madness of King George III (lead poisoning combined with a genetic illness?), and many others. Elements examined include mercury (implicated in the death of Charles II who had his own basement laboratory with little to no ventilation), arsenic, antimony, lead, thallium, and another chapter of miscellaneous elements.

VERY interesting! It makes you REALLY appreciate living in the current day and age...instead of in the past when food was stored in containers that had lead glaze on them, or drinking from bottles sealed with lead solder, or eating from canned food that had been tainted with lead solder when sealed, or were given medical treatments that included arsenic or mercury.... YIKES!

Kate says

A very interesting book -- I mean, where else could I have ever learned about the guy who poisoned the Coke of his noisy neighbors with thallium? The breadth of the book was perfect for the sort of scope the author wanted to achieve, trying to reach the academically competent, especially those with a knowledge of chemistry. Tackling the biggest names in the history of poison, Emsley makes a valiant effort at balancing chemical information with human interest stories. My problems with the book are these: the first being that Emsley needed a second opinion on what information is footnote-worthy -- there were moments when he shared anecdotal information like who directed the movie based on the life of such-and-such a poisoner; the second is the appalling number of typos and awkwardly (and at times grammatically incorrect) written sentences...It was hard to push through with the book at times because of the writing style. I understand that the author's specialty is chemistry rather than the English language, but it made it rough going at times... Overall, an enjoyable and unique read.

Roderick says

This is a terrific book. It's entertaining and easy to read. Elmsley manages to convey scientific information without ever getting difficult. I read this years ago and I'm still telling people about it.

A.L. Butcher says

This is not your run of the mill true crime book, it’s a good deal more – with scientific analysis of the poisonous elements and interesting chapters on other uses. Each element only has one or two murder cases discussed in detail, and the rest comprises of more scientific information, such as a particular element’s place in the natural world, whether we need it to survive and medical or industrial uses. There are cases discussed dealing with accidental imbibing, including historical hypotheses (such as Napeoleon’s arsenic-laced wallpaper, Roman emperors and lead poisoning, and unsolved cases where poisons may have been involved. Some of these deaths turned the course of history (such as the mental illness and infertility of many of the Roman leaders, the madness of King George III, and the death of Bonaparte.

It’s interesting to trace the history of such elements, some of which were (or are) used in a medical capacity. One such example is Fowlers Solution – a medicinal tonic and treat-all which was arsenic-based; overdoses were a reality and adding a little extra to the mix was not unheard of. This concoction was responsible for more than one end – a helping hand was given or self-inflicted. James Maybrick (who was at one point considered a candidate for Jack the Ripper), was poisoned with arsenic. He was, by many accounts a self-dosing hypochondriac and was using Fowlers Solution, amongst other ‘medicenes’. His wife, Florence, was tried for his murder (after distilling arsenic from flypapers – also a Victorian practice to produce a face wash). Florence had an affair (or a couple) and was mostly tried on this behaviour, proving the hypocrisy of the time as James had a mistress and five illegitimate kids. Did she do it? The jury thought so but many advocates of her cause say she was innocent and the poison was taken by James himself, or planted by family members who didn’t like her. My point is – there were legitimate uses for poisons in the right quantities.

The rising technology and scientific method in the 19th century led to arsenic, antimony and other poisons being more easily traceable. Many of the symptoms of the poisoning would resemble other illness, particularly gastrointestinal disorders, dysentery etc. at a time when food hygiene and personal hygiene were rather lacking.

See links for Marsh Test

https://en.wikipedia.org/wiki/Marsh_test

Mercury based medicine came to be used in the treatment of syphilis, but mercury and mercury vapour are toxic. In many cases the mercury would kill the patient if the syphilis didn’t. Mercury was often seen as a wonder element; it was even thought to prolong life in China and Tibet, and the ancient Egyptians used balms and tonics made from mercury compounds, and the Romans used mercury cosmetics.

This unusual element was at one time thought to be First Matter, from which all other metals derived, and alchemists used it (and were poisoned by it) in the search for transmutation.

Its unusual properties gave an almost mythic status but this dangerous metal caused all sorts of unpleasantness. Mercury usages in industry include use in batteries, dentistry, paper and paint manufacturing, and gold and silver mining. Artists used vermillion paint, which is made from cinnabar (a

mercury compound) and it’s thought many of Van Gogh’s mental health illnesses could be linked to mercury poisoning from his paints.

The wiki page for mercury poisoning states: ‘ Common symptoms of mercury poisoning include peripheral neuropathy, presenting as paresthesia or itching, burning, pain, or even a sensation that resembles small insects crawling on or under the skin (formication); skin discoloration (pink cheeks, fingertips and toes); swelling; and desquamation (shedding or peeling of skin).

Mercury irreversibly inhibits selenium-dependent enzymes (see below) and may also inactivate S-adenosyl-methionine, which is necessary for catecholamine catabolism by catechol-O-methyl transferase. Due to the body’s inability to degrade catecholamines (e.g. epinephrine), a person suffering from mercury poisoning may experience profuse sweating, tachycardia (persistently faster-than-normal heart beat), increased salivation, and hypertension (high blood pressure).

Affected children may show red cheeks, nose and lips, loss of hair, teeth, and nails, transient rashes, hypotonia (muscle weakness), and increased sensitivity to light. Other symptoms may include kidney dysfunction (e.g. Fanconi syndrome) or neuropsychiatric symptoms such as emotional lability, memory impairment, or insomnia.

Thus, the clinical presentation may resemble pheochromocytoma or Kawasaki disease. Desquamation (skin peeling) can occur with severe mercury poisoning acquired by handling elemental mercury.’

https://en.wikipedia.org/wiki/Mercury...

https://www.medicinenet.com/mercury_p...

Thallium:

Thallium was used in medicine as a ringworm treatment – one of the effects is hair loss so a patient would be given thallium so any ringworm or other parasites could be treated. It was the standard use for hair removal for 50 years. Thallium is used to make lenses, in smelting, and insecticides. There have been ancient and modern cases of it being used for evil. For me the most interesting case example was the Graham Young case, as the man in question came from a town not far from where I grew up (Bovingdon). I’m familiar with the case from previous books but this account was detailed and complimented the scientific accounts of this metallic poison.

https://en.wikipedia.org/wiki/Graham_...

The great Agatha Christie used thallium as the murder element in her story The Pale Horse – where she describes the effects of this poison, which was little known at the time.
http://www.independent.co.uk/news/sci...

Overall as a book on poisons and murder this is certainly one of the better offerings. The author clearly has done a good deal of research, and chosen suitable but not always common cases to review. The scientific side of the poisons is rarely put forward in such books. Perhaps not a book for the casual reader, as some knowledge of chemistry would be a help.

Recommended for true-crime buffs, historians, and those who enjoy the science of crime.

5 stars.

BrokenTune says

He was 32-years-old but had gone grey, which he jokingly said was due to quicksilver. Although there is no connection between the two, there is a link between the body burden of several metals and their level in hair. Mercury, lead, arsenic, and antimony, are particularly attracted to the sulphur atoms in the keratin of hair and so it is possible by the analysis of a strand of hair to show whether that person had been exposed to a large dose of these toxic metals. Newton's alchemical experiments appear to have reached a climax in the summer of 1693 when he wrote an account that is a combination of bizarre alchemical symbols and comments and is known as the Praxis [Doings] and this showed how unbalanced he had become. Isaac Newton was well known for being temperamental. Criticism of his work aroused in him an abnormal hatred of a rival and his feuds with other eminent scientists of the day such as Robert Hooke and Gottfried Leibniz were more emotional than rational. At times, Newton withdrew into virtual isolation and in 1693, when he was 50-years-old, his behaviour became so abnormal that his sanity was even questioned.

The Elements of Murder was fun, but it was a book with shortcomings. I don't like to start out pointing at the issues with a book but bear with me:

1. The book does not cover that many elements. In fact, only five (all of them metals) get serious page time: Mercury, Lead, Antimony, Arsenic, and Thallium. There is a section at the end of the book that covers some more elements, but most of these entries do not even extend beyond a single paragraph.

2. Arsenic, Thallium, and Antimony are covered in other books (such as the fabulous A is for Arsenic), which made much of the information in this books seem like old news.

3. Some of the writing is ... dubious. There is something wrong with the flow of the narrative. I can't put my finger on what it was, but I had to read some paragraphs several times to understand what the author was talking about. There were also a couple of paragraphs where the author alluded to something but then suddenly dropped the thought in what seemed mid-sentence and then moved on to something new.

Yes, this book could have done with better editing.

But...here is why I still enjoyed the book:

The introduction about the history of alchemy and that first chapter on mercury were fabulous!

Emsley explains the properties and history of mercury, its uses, and its impact on the environment. He also goes to describe famous people who experimented with it, and how mercury has been responsible for various deaths. This part was really interesting and packed full of history and hard science. I loved it.

However, in parts, it seemed like the author wanted to write a book about mercury only, and then felt compelled to add more chapters.

I would still recommend the book on the chapter about mercury alone, but I do recommend to find it in a library.

Katie Anne says

Fascinating look into the ways people have use different elements to poison others or have accidentally gotten sick. The author does an all right job at combining both science and stories. But the style is a little formal and I wish to have any more stories and a little less science. If you want to learn a little bit more about the elements and how they impact the body, then this book is for you.

Greg says

I was expecting this to be a true crime book, and there are certainly aspects of that in the book, but really it's more than that. It's a scholarly look at several elements (mercury, antimony, lead, arsenic, and thallium) and their negative effects on the generations that either knowingly or unknowingly encountered them.

Emsley really did his research, this book overflows with details - both historical and technical. He seems like both a chemist and a historian, but unfortunately not a story teller. The prose is at times difficult to stay with, but fortunately this book doesn't need to be read in sequence. Each 'poison' gets its own section that really stands alone - Emsley never tries to tie any of them together other than the introductory chapter basically telling you that they're all bad and behind countless mysterious deaths over time - both high profile and banal.

One thing to remember about this book is that it's about poisonous ELEMENTS and not all poisons. So high profile poisons like cyanide or snake venom or other fast-acting poisons aren't discussed in this book. The elements Emsley describes all kill by slow accumulation that doctors almost always misdiagnosed.

The utter cluelessness of the doctors is staggering in this book. Throughout history they have consistently failed to diagnose poisonings on a regular basis. It was not until after most of the victims died that poisoning was diagnosed - always a little too late.

A weakness of the book was the Euro-centrism of the true crime stories. They almost always took place in England, or on rare occasions France or Germany. Maybe that's where poisonings were popular over the ages - but I think Emsley limited himself too much here (he is British after all). There were just a few stories that took place outside of Europe, such as rare cases in Japan or the US.

The book was well researched, but it was difficult to get engrossed in it.

Luis Brudna says

Gostei bastante do foco nos elementos químicos tóxicos e perigosos. Pena que algumas histórias de assassinatos são bastante arrastadas e com muitos detalhes para quem está mais interessado na química.

Katie Bee says

This isn't as solely focused on murder as I expected it to be - while there are certainly murders by poisons *involved*, this is more of a science book than a true crime book. Not that is really a bad thing! It works well and learning about accidental poisonings from poisonous elements, as well as deliberate poisonings, was interesting.

Katherine Addison says

This is more chemistry than I've thought about since tenth grade.

The Elements of Murder is a much more scientifically in-depth book than Poison: An Illustrated History. In fact, I think it's rather misnamed. It's a *history* of the heavy metals arsenic, antimony, thallium, lead, and mercury; the uses human societies have put them to; and the (frequently horrifying) consequences thereof. Minamata Bay, anyone? And *then* it is also a history of the use of these heavy metals for murder. He discusses the terrible death of Sir Thomas Overbury, who was poisoned ineptly for months before his murderers finally managed to kill him with a corrosive sublimate enema. (Corrosive sublimate = mercury chloride). It is the most utterly Jacobean murder imaginable. He analyzes the case against Florence Maybrick (arsenic), reviews the career of Drs. Pritchard and Palmer (antimony), describes the malevolent ingenuity of George Chapman (Severin Klosowski, not the gentleman whose translation of Homer was so inspiring to Keats), and finishes the book with Graham Young (thallium), the most persevering serial poisoner yet discovered. Lead, for all that it is horrifically toxic, is also wildly unpredictable, and so not of much use to poisoners, although Emsley does find Louisa Jane Taylor (whom William Roughead would almost certainly describe as an attaching damsel), who committed murder with sugar of lead (lead acetate).

Emsley explains the chemistry of heavy metals clearly, and provides a chilling panorama of their effects as *unintentional* poisons.

R K says

DNF

Went into this expecting to be told the history of poisons (where they came from, how they were used, invented?, comparison to today's poisons? anything?!?!) Instead what I got was a book filled with famous incidents where said poison was used over and over again....Not to mention the author only included incidents that occurred in England and America....Other countries where barely mentioned....

I don't have time to put myself in misery.

Jenny says

Reading this made Ryan nervous!

Katie says

This is a very weird book by someone who knows a lot of basic chemistry and BASICALLY NOTHING about how humans work. (And only some things about how sentences work. What happened to the editor on this, I dread to think.) I did finish it, because some of the facts were genuinely interesting, and I'd recommend it to anyone wanting to know more about exciting ways the world can kill you, but it's... not good.

Tracey says

Each section focuses on a specific element/poison. Emsley discusses its place in history, how it affects the human body & describes famous cases of its use. He avoids getting overly-scientific, providing additional information in an appendix; and is very in-depth in the historical overview of each element so far.

This book has confirmed some info I already knew ("mad as a hatter" = mercury poisoning) as well as provided new insights (arsenic poisoning from green dye in wallpaper in Victorian times).

Unfortunately, the details of the poisonings all kind of ran together in my mind eventually. Perhaps focusing on one or two famous cases for each element would have been a better approach.

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dejah_thoris says

Excellent history of poisons written for the layperson, similar to the Poisoner's Handbook but with a narrower focus solely on elemental poisons. Some additional information is referred to in the Glossary, but the references aren't as annoying as the ones in Vanity, Vitality, and Virility because they're much smaller, not bolded, and much less frequent. Emsley is a British author, so most of the monetary amounts are in pounds sterling. Aside from that nuance, this was a great easy read with lots of good cases to remind you of the effects of various elements and how they are detected.
