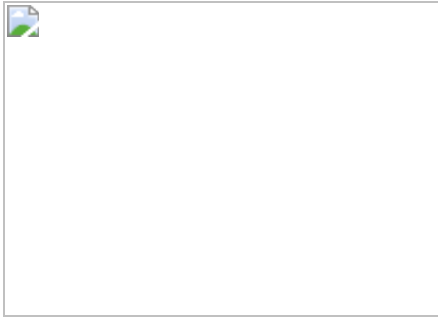




# 177. **Poisoning of Alexander Litvinenko**



Litvinenko at [University College Hospital](#)

[Alexander Litvinenko](#) was a former officer of the Russian [Federal Security Service](#) (FSB) and [KGB](#). After speaking critically about what he saw as corruption within the Russian government, he fled retribution to the UK, where he remained a vocal critic of the Russian state. Six years after fleeing, he was poisoned by two Russians in a suspected assassination.

On 1 November 2006, Litvinenko suddenly fell ill and was hospitalized. He died three weeks later, becoming the first confirmed victim of lethal [polonium-210](#)-induced [acute radiation syndrome](#).<sup>[1]</sup> [Litvinenko's allegations about misdeeds of the FSB](#) and his public deathbed accusations that Russian president Vladimir Putin was behind his unusual malady resulted in worldwide media coverage.

Subsequent investigations by British authorities into the circumstances of Litvinenko's death led to serious diplomatic

difficulties between the British and Russian governments.<sup>[2]</sup> No charges were ever laid but a non-judicial public hearing was put on in 2014–2015, during which the [Scotland Yard](#) representative testified that "the evidence suggests that the only credible explanation is in one way or another the Russian state is involved in Litvinenko's murder".<sup>[3]</sup> Another witness stated that [Dmitry Kovtun](#) had been speaking openly about the plan to kill Litvinenko that was intended to "set an example" as a punishment for a "traitor".<sup>[4]</sup> The main suspect in the case, a former officer of the Russian [Federal Protective Service \(FSO\)](#), [Andrey Lugovoy](#), remains in Russia.

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# Background

Main article: [Alexander Litvinenko](#)

Alexander Litvinenko was a former officer of the [Russian Federal Security service](#) who escaped prosecution in Russia and received [political asylum](#) in the United Kingdom. In his books, [Blowing up Russia: Terror from Within](#) and [Lubyanka Criminal Group](#), Litvinenko described Russian president [Vladimir Putin](#)'s rise to power as a coup d'état organised by the FSB. He alleged that a key element of the FSB's strategy was to frighten Russians by [bombing apartment buildings](#) in Moscow and other Russian cities.<sup>[5]</sup> He accused Russian secret services of having arranged the [Moscow theater hostage crisis](#), through their Chechen [agent provocateur](#), and having organised the [1999 Armenian parliament shooting](#).<sup>[6]</sup> He also stated that the terrorist [Ayman al-Zawahiri](#) was under FSB control when he visited Russia in 1997.<sup>[7]</sup>

Upon his arrival in [London](#), he continued to support the Russian [oligarch](#) in exile, [Boris Berezovsky](#), in his media campaign against the Russian government.<sup>[8]</sup>

Just two weeks before his death, Litvinenko accused Putin of ordering the assassination of [Anna Politkovskaya](#).<sup>[9]</sup>

## Illness and poisoning

On 1 November 2006, Litvinenko suddenly fell ill. Earlier that day he had met [Andrey Lugovoy](#) and [Dmitry Kovtun](#).

Lugovoy is a former bodyguard of Russian ex-Prime Minister [Yegor Gaidar](#) (also reportedly poisoned in November 2006) and former chief of security for the Russian TV channel [ORT](#).

Kovtun is now a businessman. Litvinenko had also had lunch at [Itsu](#), a [sushi](#) restaurant on [Piccadilly](#) in London, with an Italian officer and "nuclear expert", [Mario Scaramella](#), to whom he made allegations regarding [Romano Prodi](#)'s connections with the KGB.<sup>[10]</sup> Scaramella, attached to the [Mitrokhin Commission](#) investigating KGB penetration of Italian politics, claimed to have information on the death of Anna Politkovskaya, 48, a journalist who was killed at her Moscow apartment in October 2006. He passed Litvinenko papers supposedly concerning her fate. On 20 November, it was reported that Scaramella had gone into hiding and feared for his life.<sup>[11]</sup>

For several days after 1 November, Litvinenko experienced severe [diarrhoea](#) and vomiting. At one point, he could not walk without assistance. As the pain intensified, Litvinenko asked his wife to call an ambulance for assistance.<sup>[12]</sup> For several weeks, Litvinenko's condition worsened as doctors searched for the cause of the illness. Surrounded by friends, Litvinenko became physically weak, and spent periods unconscious. A photograph was taken of Litvinenko on his deathbed and released to the public. "I want the world to see what they did to me," Litvinenko said.<sup>[12]</sup>

## Poison

On 3 November 2006, Litvinenko (under the name of Edwin Carter) was admitted for further investigation at [Barnet Hospital](#), London.<sup>[13]</sup> After being moved from his local hospital in north London to [University College Hospital](#) in central London for intensive care, his blood and urine samples were sent to the UK's [Atomic Weapons Establishment](#) (AWE) for testing. Scientists at AWE tested for radioactive poison using [gamma spectroscopy](#). No discernible gamma rays were initially detected; however, a small gamma ray spike was noticed at an energy of 803 kilo-electron volts (keV), barely visible above the background. The BBC reported that by coincidence another scientist, who had worked on Britain's [early atomic bomb programme](#) decades before, happened to overhear a discussion about the small spike and recognised it as the gamma ray signal from the radioactive decay of polonium-210, which was a critical component of early nuclear bombs. On the evening of 22 November, shortly before his death, his doctors were informed the poison was likely to be polonium-210. Further tests on a larger urine sample using spectroscopy designed to detect alpha particles confirmed the result the following day.<sup>[14]</sup>

Unlike most common radiation sources, polonium-210 emits very little gamma radiation (the low intensity gamma ray at an energy of 803 keV is the most prominent), but large amounts of [alpha particles](#) which do not penetrate even a sheet of paper or the [epidermis](#) of human skin, and is therefore relatively invisible to common radiation detectors such as [Geiger counters](#). This explained why tests conducted



by doctors and [Scotland Yard](#) at the hospital with [Geiger counters](#) were negative. Both gamma rays and alpha particles are classified as [ionizing radiation](#) which can cause radiation damage. An alpha-emitting substance can cause significant damage only if ingested or inhaled, acting on living cells like a short-range weapon.<sup>[15]</sup> Hours before his death, Litvinenko was tested for alpha-emitters using special equipment.<sup>[15]</sup>

Shortly after his death, the UK's [Health Protection Agency](#) (HPA) said tests had established that Litvinenko had significant amounts of the [radionuclide polonium-210](#) ( $^{210}\text{Po}$ ) in his body. British and US government officials said the use of  $^{210}\text{Po}$  as a poison had never been documented before, and it was probably the first time anyone had been tested for the presence of  $^{210}\text{Po}$  in their body. The poison was in Litvinenko's cup of tea.<sup>[16]</sup> Those who had contact with Litvinenko may also have been exposed to radiation.<sup>[17]</sup>  
<sup>[18]</sup>

## **$^{210}\text{Po}$ content in the body of Litvinenko**

The symptoms seen in Litvinenko appeared consistent with an administered activity of approximately 2 [GBq](#) (50 mCi) which corresponds to about 10 [micrograms](#) of  $^{210}\text{Po}$ . That is 200 times the [median lethal dose](#) of around 238  $\mu\text{Ci}$  or 50 nanograms in the case of ingestion.<sup>[19]</sup>

The studies of the biodistribution of  $^{210}\text{Po}$  using gamma-ray spectrometry in post-mortem samples were used to estimate intake as 4.4 GBq.<sup>[20]</sup>

## Thallium - initial hypothesis

[Scotland Yard](#) initially investigated claims that Litvinenko was poisoned with [thallium](#). It was reported that early tests appeared to confirm the presence of the poison.<sup>[21][22]</sup> Among the distinctive effects of thallium poisoning are hair loss and damage to [peripheral nerves](#),<sup>[23]</sup> and a photograph of Litvinenko in hospital, released to the media on his behalf,<sup>[24]</sup> indeed showed his hair to have fallen out. Litvinenko attributed his initial survival to his cardiovascular fitness and swift medical treatment. It was later suggested a [radioactive isotope](#) of thallium might have been used to poison Litvinenko.<sup>[25]</sup> Amit Nathwani, one of Litvinenko's physicians, said "His symptoms are slightly odd for thallium poisoning, and the chemical levels of thallium we were able to detect are not the kind of levels you'd see in toxicity."<sup>[26]</sup> Litvinenko's condition deteriorated, and he was moved into [intensive care](#) on 20 November. Hours before his death, three unidentified circular-shaped objects were found in his stomach via an [X-ray](#) scan.<sup>[27]</sup> It is thought these objects were almost certainly shadows caused by the presence of [Prussian blue](#), the treatment he had been given for thallium poisoning.<sup>[23][28]</sup>

## Death and last statement



Grave of Alexander Litvinenko at [Highgate Cemetery](#).

Late on 22 November, Litvinenko's heart failed; the official time of death was 9:21 pm at University College Hospital in London.<sup>[29]</sup>

The [autopsy](#) took place on 1 December.<sup>[30]</sup> Litvinenko had ingested polonium-210, a poisonous radioactive isotope.<sup>[1]</sup> Mario Scaramella, who had eaten with Litvinenko, reported that doctors had told him the body had five times the lethal dose of polonium-210.<sup>[1]</sup> Litvinenko's funeral took place on 7 December at the Central London mosque, after which his body was buried at [Highgate Cemetery](#) in [North London](#).<sup>[31]</sup>

In his last statement he said about Putin:

...this may be the time to say one or two things to the person responsible for my present condition. You may succeed in silencing me but that silence comes at a price. You have shown yourself to be as barbaric and ruthless as your most hostile critics have claimed. You

have shown yourself to have no respect for life, liberty or any civilised value. You have shown yourself to be unworthy of your office, to be unworthy of the trust of civilised men and women. You may succeed in silencing one man but the howl of protest from around the world will reverberate, Mr Putin, in your ears for the rest of your life. May God forgive you for what you have done, not only to me but to beloved Russia and its people.[\[32\]](#)

# Investigation

## Initial steps

[Greater London's Metropolitan Police Service](#) Terrorism Unit has been investigating the poisoning and death. The head of the Counter-Terrorism Unit, [Deputy Assistant Commissioner Peter Clarke](#), stated the police "will trace possible witnesses, examine Mr. Litvinenko's movements at relevant times, including when he first became ill and identify people he may have met. There will also be an extensive examination of CCTV footage."<sup>[33]</sup> The United Kingdom Government [COBRA](#) committee met to discuss the investigation.<sup>[34]</sup> Richard Kolko from the United States [FBI](#) stated "when requested by other nations, we provide assistance" – referring to the FBI now joining the investigation for their expertise on radioactive weapons.<sup>[35][36]</sup> The Metropolitan Police announced on 6 December 2006 that it was treating Litvinenko's death as murder.<sup>[37]</sup> [Interpol](#) has also joined the investigation, providing "speedy exchange of information" between British, Russian and German police.<sup>[38]</sup>

## Polonium trails

Detectives traced three distinct polonium trails in and out of London, at three different dates, which according to the investigation suggests [Andrey Lugovoy](#) and [Dmitry Kovtun](#) made two failed attempts to administer polonium to Litvinenko before the final and successful one. The first attempt took place on 16 October 2006, when radioactive traces were found in all places visited by the FSB operatives

before and after their meeting with Litvinenko. They administered the poison to his tea, but he did not drink it.

Apparently, Lugovoy and Kovtun did not fully realize they were handling a radioactive poison. Journalist Luke Harding described their behaviour as "idiotic, verging on suicidal"; while handling a leaky container, they stored it in their hotel rooms, used ordinary towels to clean up leaks, and eventually disposed of the poison in the toilet. On 17 October, perhaps realizing they contaminated their rooms, they prematurely checked out, moved to another hotel, and left London the next day.

Another unsuccessful assassination attempt took place on 25 October, when Lugovoy and Kovtun flew to London again. They left radioactive traces again in their hotel prior to meeting Litvinenko, but did not administer the poison, perhaps due to security cameras in the meeting room. They again disposed of the poison via their room's toilet, and left London.<sup>[39]</sup>

The third attempt to poison Litvinenko took place at around 5 pm of 1 November in the [Millennium Hotel](#) in [Grosvenor Square](#). The bus he travelled in to the hotel had no signs of radioactivity – but large amounts had been detected at the hotel.<sup>[40]</sup> Polonium was subsequently found in a fourth-floor room and in a cup in the Pine Bar at the hotel.<sup>[41]</sup> After the Millennium bar, Litvinenko stopped at the office of [Boris Berezovsky](#). He used a fax machine, where radioactive contamination was found later. At 6 pm, [Akhmed Zakayev](#) picked Litvinenko up and brought him home to Muswell Hill. The amount of radioactivity left by Litvinenko in the car was

so significant that the car was rendered unusable.<sup>[42]</sup> Everything that he touched at home during the next three days was contaminated. His family was unable to return to the house even six months later. His wife tested positive for ingesting polonium, but did not leave a secondary trail behind her. This suggested that anyone who left a trail could not have picked up the polonium from Litvinenko (possibly, including Lugovoy and Kovtun).<sup>[42]</sup> The patterns and levels of radioactivity the assassins left behind suggested that Litvinenko ingested polonium, whereas Lugovoy and Kovtun handled it directly.<sup>[42]</sup> The human body dilutes polonium before excreting it in sweat, which results in a reduced radioactivity level. There were also traces of Po-210 found at the Hey Jo/Abracadabra bar, Dar Marrakesh restaurant, and Lambeth-Mercedes taxis.<sup>[43]</sup>

Besides Litvinenko, only two people left polonium trails: Lugovoy and Kovtun, who were school friends and worked previously for Russian intelligence in the [KGB](#) and the [GRU](#), respectively.<sup>[42]</sup> They left more significant traces of polonium than Litvinenko, indicating that they handled the radioactive material directly, and did not ingest it.<sup>[42]</sup>

Lugovoy and Kovtun met Litvinenko in the Millennium hotel bar twice, on 1 November (when the poisoning took place), and earlier, on 16 October. Trails left by Lugovoy and Kovtun started on 16 October, in the same sushi bar where Litvinenko was poisoned later, but at a different table. It was assumed that their first meeting with Litvinenko was either a rehearsal of the future poisoning, or an unsuccessful attempt at the poisoning.<sup>[42]</sup>

Traces left by Lugovoy were also found in the office of Berezovsky that he visited on 31 October, a day before his second meeting with Litvinenko. Traces left by Kovtun were found in Hamburg, Germany. He left them on his way to London on 28 October.<sup>[42]</sup> The traces were found in passenger jets<sup>[44][45]</sup> BA875 and BA873 from Moscow to Heathrow on 25 and 31 October, as well as flights BA872 and BA874 from Heathrow to Moscow on 28 October and 3 November.<sup>[46][47]</sup>

Andrey Lugovoy has said he flew from London to Moscow on a 3 November flight. He stated he arrived in London on 31 October to attend the [football](#) match between [Arsenal](#) and [CSKA Moscow](#) on 1 November.<sup>[48]</sup> When the news broke that a radioactive substance had been used to murder Litvinenko, a team of scientists rushed to find out how far the contamination had spread. It led them on a trail involving hundreds of people and dozens of locations.<sup>[49]</sup>

British Airways later published a list of 221 flights of the contaminated aircraft, involving around 33,000 passengers, and advised those potentially affected to contact the UK [Department of Health](#) for help. On 5 December, they issued an email to all of their customers, informing them that the aircraft had all been declared safe by the UK's Health Protection Agency and would be re-entering service.

## **British extradition request**

British authorities investigated the death and it was reported on 1 December that scientists at the [Atomic Weapons Establishment](#) had traced the source of the



polonium to a [nuclear power plant](#) in Russia. On 3 December, reports stated that Britain had demanded the right to speak to at least five Russians implicated in Litvinenko's death, and [Russian Foreign Minister Sergey Lavrov](#) asserted that Moscow was willing to answer "concrete questions."<sup>[50]</sup> Russian Prosecutor-General [Yuri Chaika](#) said on Tuesday 5 December that any Russian citizen who may be charged in the poisoning will be tried in Russia, not Britain.<sup>[51]</sup> Moreover, Chaika stated that UK detectives may ask questions to Russian citizens only in the presence of Russian prosecutors.<sup>[52]</sup>

On 28 May 2007, the British [Foreign Office](#) submitted a formal request to the [Russian Government](#) for the extradition of Andrey Lugovoy to the UK to face criminal charges relating to Litvinenko's murder.<sup>[53]</sup>

## **Extradition declined**

The Russian General Prosecutor's Office declined to extradite Lugovoy, citing that extradition of citizens is not allowed under the Russian constitution (Article 61 of the [Constitution of Russia](#)).<sup>[54][55][56]</sup> Russian authorities later said that Britain has not handed over any evidence against Lugovoy.<sup>[57][58]</sup> Professor [Daniel Tarschys](#), former [Secretary General of the Council of Europe](#), commented<sup>[59]</sup> that the Russian Constitution actually "opens the door" for the extradition, and Russia ratified three international treaties on extradition (on 10 December 1999); namely, the European Convention on Extradition<sup>[60]</sup> and two Additional Protocols<sup>[61][62][63]</sup> to it. Yury Fedotov, Ambassador of the

Russian Federation, pointed out that when the Russian Federation ratified the European Convention on Extradition it entered a declaration<sup>[64]</sup> concerning Article 6 in these terms: "The Russian Federation declares that in accordance with Article 61 (part 1) of the Constitution of the Russian Federation, a citizen of the Russian Federation may not be extradited to another state."<sup>[65]</sup>

## **BBC programme**

On 7 July 2008, a British security source told the BBC's [Newsnight](#) programme: "We very strongly believe the Litvinenko case to have had some state involvement. There are very strong indications."<sup>[66]</sup> The British government claimed that no intelligence or security officials were authorised to comment on the case.<sup>[67][68]</sup>

## **Litvinenko Inquiry**

In January 2016, a UK public inquiry, headed by [Sir Robert Owen](#), found that Andrey Lugovoy and Dmitry Kovtun were responsible for the poisoning of Litvinenko. The inquiry also found that there was a strong probability that Lugovoy and Kovtun were acting under the direction of the FSB, and that their actions were probably approved by both [Nikolai Patrushev](#), Director of the FSB, and President [Vladimir Putin](#).<sup>[69][70]</sup>

## Possibly related events

On 2 March 2007, [Paul Joyal](#), a former director of security for the [U.S. Senate](#) intelligence committee, who the previous weekend alleged on national television that the Kremlin was involved in the poisoning of Litvinenko, was shot near his [Maryland](#) home. An [FBI](#) spokesman said the agency was "assisting" the police investigation into the shooting. Police would not confirm details of the shooting or of the condition of Joyal. A person familiar with the case said he was in [critical condition](#) in hospital. It was reported that while there were no indications that the shooting was linked to the Litvinenko case, it is unusual for the FBI to get involved in a local shooting incident. A person familiar with the situation said [NBC](#) had hired bodyguards for some of the journalists involved in the program.<sup>[71]</sup>

In January 2007, the Polish newspaper [Dziennik](#) revealed that a target with a photo of Litvinenko on it was used for shooting practice by the *Vityaz Training Centre* in [Balashikha](#) in October 2002.<sup>[72]</sup> The centre was not affiliated with the government and trained [bodyguards](#), [debt collectors](#) and private security forces,<sup>[73]</sup> although in November 2006 the centre was used by the [Vityaz](#) for a qualification examination due to their own centre being under renovation.<sup>[73]</sup> The targets were photographed when the chairman of the [Federation Council of Russia Sergei Mironov](#) visited the centre on 7 November 2006.<sup>[72][73]</sup>

Radiation scientist [Matthew Puncher](#), working with colleagues, calculated the amount of polonium inside

Litvinenko's body following his death.<sup>[74]</sup> In 2015 and 2016, he made work visits in Russia. He returned from Russia "changed completely" - deeply depressed and obsessed about his error in a software program. In May 2016, he was found dead in his home with multiple extensive wounds from two kitchen knives. There was no evidence of a disturbance or a struggle. Home Office pathologist Dr Nicholas Hunt could not entirely exclude that someone else had been involved but declared wounds were self-inflicted and a cause of death as haemorrhaging. Such suicides are extremely rare <sup>[75]</sup> - in one study was 8 cases of multiple site wounds for 513,182 suicides.<sup>[76]</sup>

Sergei Skripal Was a former Russian military intelligence officer who acted as a double agent for the UK's intelligence services during the 1990s and early 2000s. In December 2004, he was arrested by Russia's Federal Security Service (FSB) and later tried, convicted of high treason, and sentenced to 13 years in prison. He settled in the UK in 2010 following the Illegals Program spy swap. On 4 March 2018, he and his daughter Yulia, who was visiting him from Moscow, were poisoned with a Novichok nerve agent. As of 15 March 2018, they were in a critical condition at Salisbury District Hospital. The poisoning is being investigated as an attempted murder. He holds both Russian and British citizenship. On 21 March 2018 Russian ambassador to the UK Alexander Yakovenko said that Sergei Skripal is also a Russian citizen. On 29 March, Yulia was reported to be out of critical condition, conscious and talking. A week later, on 6 April, Skripal was said to no longer be in a critical state. He was discharged on 18 May.

# Polonium-210

## Sources and production of polonium

A freelance killer would probably not be able to manufacture polonium from commercially available products in the amounts used for Litvinenko's poisoning, because more than microscopic amounts of polonium can only be produced in state-regulated [nuclear reactors](#).<sup>[42][77]</sup> even though one might extract polonium from publicly available products, such as antistatic fans.<sup>[78]</sup>

As production of polonium-210 was discontinued in most countries in late 2000s, all of the world's legal polonium-210 ( $^{210}\text{Po}$ ) production occurs in Russia in [RBMK](#) reactors.<sup>[42][79]</sup>  
<sup>[80]</sup> About 85 grams (450,000 Ci) are produced by Russia annually for research and industrial purposes. According to [Sergei Kiriyeenko](#), the head of Russia's state atomic energy agency, [RosAtom](#), around 0.8 grams per year is exported to U.S. companies through a single authorized supplier.  
<sup>[check quotation syntax]</sup> The production of polonium starts from bombardment of [bismuth](#) ( $^{209}\text{Bi}$ ) with [neutrons](#) at the [Mayak](#) nuclear reactors in [Ozersk](#), near the city of [Chelyabinsk](#) in Russia. The product is then transferred to the Avangard Electromechanical Plant in the [closed city](#) of [Sarov](#).<sup>[42][81][82]</sup>  
<sup>[83]</sup> This of course does not exclude the possibility that the polonium that killed Litvinenko was imported by a licensed commercial distributor, but no one—including the Russian government—has proposed that this is likely, particularly in regard to the radiation detected on the [British Airways](#)

passenger jets travelling between Moscow and London.<sup>[84]</sup> Russian investigators have said they could not identify the source of polonium.<sup>[85]</sup>

Polonium-210 has a [half-life](#) of 138 days and decays to the stable daughter isotope of lead, <sup>206</sup>Pb. Therefore, the source is reduced to about one sixteenth of its original radioactivity about 18 months after production. By measuring the proportion of polonium and lead in a sample, one can establish the production date of polonium. The analysis of impurities in the polonium (a kind of "finger print") allows identification of the place of production.<sup>[86]</sup> The isotope used in killing of Litvinenko has been traced by a British theoretical physics professor Norman Dombey:<sup>[79][84]</sup>

The Po-210 used to poison Mr Litvinenko was made at the Avangard facility in Sarov, Russia. One of the isotope-producing reactors at the Mayak facility in Ozersk, Russia, was used for the initial irradiation of bismuth. In my opinion, the Russian state or its agents were responsible for the poisoning.

— *Norman Dombey, Supplementary Report by Norman David Dombey*

In addition, Dombey pointed out that Avangard delivers a metallic polonium, which must have been further processed into a solution as used in the Litvinenko assassination, involvement of an [FSB poison laboratory](#) was also likely.<sup>[84]</sup>

## **Possible motivation for using polonium-210**

Philip Walker, professor of physics at the [University of Surrey](#), said: "This seems to have been a substance carefully chosen for its ability to be hard to detect in a person who has ingested it."<sup>[87]</sup> [Oleg Gordievsky](#), the most senior KGB agent ever to defect to Britain, made a similar comment that Litvinenko's assassination was carefully prepared and rehearsed by Russian secret services,<sup>[88]</sup> but the poisoners were unaware that technology existed to detect traces left by polonium-210: "Did you know that polonium-210 leaves traces? I didn't. And no one did. ...what they didn't know was that this equipment, this technology exists in the West – they didn't know that, and that was where they miscalculated."<sup>[88]</sup>

Nick Priest, a nuclear scientist and expert on polonium who has worked at most of Russia's nuclear research facilities, says that although the execution of the plot was a "bout of stupidity", the choice of polonium was a "stroke of genius." He says: "the choice of poison was genius in that polonium, carried in a vial in water, can be carried in a pocket through airport screening devices without setting off any alarms", adding, "once administered, the polonium creates symptoms that don't suggest poison for days, allowing time for the perpetrator to make a getaway." Priest asserts that "whoever did it was probably not an expert in radiation protection, so they probably didn't realize how much contamination you can get just by opening the top (of the vial) and closing it again. With the right equipment, you can detect just one count per second."<sup>[89]</sup>

Filmmaker and friend of Litvinenko [Andrei Nekrasov](#) has suggested that the poison was "sadistically designed to trigger a slow, tortuous and spectacular demise."<sup>[90]</sup> Expert

on Russia [Paul Joyal](#) suggested that "A message has been communicated to anyone who wants to speak out against the Kremlin.... If you do, no matter who you are, where you are, we will find you, and we will silence you, in the most horrible way possible." [\[91\]](#)



# Russian response

## Initial public comments

The poisoning of Litvinenko immediately led to the suspicion that he was killed by Russian secret services.<sup>[92]</sup> Viktor Ilyukhin, a deputy chairman of the Russian Parliament's security committee for the [Communist Party of the Russian Federation](#), said that he "can't exclude that possibility."<sup>[citation needed]</sup> He apparently referred to a recent Russian [counter-terrorism](#) law that gives the President the right to order such actions.<sup>[93][94]</sup> An investigator of the [Russian apartment bombings](#), [Mikhail Trepashkin](#), wrote in a letter from prison that an FSB team had organised in 2002 to kill Litvinenko. He also reported FSB plans to kill relatives of Litvinenko in Moscow in 2002, although these have not been carried out.<sup>[95][96]</sup> [State Duma](#) member [Sergei Abeltsev](#) commented on 24 November 2006:<sup>[97]</sup> "The deserved punishment reached the traitor. I am confident that this terrible death will be a serious warning to traitors of all colors, wherever they are located: In Russia, they do not pardon treachery. I would recommend citizen Berezovsky to avoid any food at the commemoration for his accomplice Litvinenko."

## Further response from Russia

Many publications in Russian media suggested that the death of Litvinenko was connected to [Boris Berezovsky](#).<sup>[98]</sup><sup>[99]</sup> Former FSB chief [Nikolay Kovalyov](#), for whom Litvinenko

worked, said that the incident "looks like [the] hand of Berezovsky. I am sure that no kind of [intelligence services](#) participated."<sup>[100]</sup> This involvement of Berezovsky was alleged by numerous Russian television shows.

Shortly after the incident, Russian government dismissed allegations of FSB involvement in the assassination using the argument that Litvinenko was "not important" and "mentally unstable", implying that the government had no interest in killing such an insignificant figure. However, [Eduard Limonov](#) observed that the same argument was raised after [assassination of Anna Politkovskaya](#), and described Litvinenko death as "very public execution."<sup>[101]</sup>

An explanation put forward by the Russian Government appeared to be that the deaths of Litvinenko and Politkovskaya were intended to embarrass President Putin. Other allegations included involvement of rogue FSB members<sup>[102]</sup> or suggestions that Litvinenko was killed because of his research of certain Russian corporations or state officials,<sup>[103][104]</sup> or as a political intrigue to undermine president Putin.<sup>[105]</sup>

In April 2018, Litvinenko's father Walter told RT News that, although he first thought the Russian government was behind the poisoning, his son's poisoning was "a widely publicized false-flag operation to show the world that Moscow was extremely "cruel," and the way that it allegedly "deals with its enemies."<sup>[106][107]</sup>

# Suspects

## [Andrey Lugovoy](#)

A former [Federal Protective Service](#) officer and millionaire who met with Litvinenko on the day he fell ill (1 November). He had visited London at least three times in the month before Litvinenko's death and met with the victim four times. Traces of polonium-210 have been discovered in all three hotels where Lugovoy stayed after flying to London on 16 October, and in the Pescatori restaurant in Dover Street, Mayfair, where Lugovoy is understood to have dined before 1 November; and aboard two aircraft on which he had travelled.<sup>[108][109]</sup> He has declined to say whether he had been contaminated with polonium-210.<sup>[110]</sup> The [Crown Prosecution Service](#) has charged him with murder and has sent an extradition request to Russia that includes a summary of the evidence, but the only third party to have seen the extradition request, American journalist [Edward Epstein](#), has described the substantiation as "embarrassingly thin."<sup>[111][112]</sup>

## [Dmitry Kovtun](#)

A Russian businessman and ex-KGB agent who met Litvinenko in London first in mid-October and then on 1 November, the day Litvinenko fell ill. On 7 December Kovtun was hospitalized, with some sources initially reporting him to be in a coma.<sup>[113]</sup> On 9 December, German police found traces of radiation at a [Hamburg](#) flat used by Kovtun.<sup>[114]</sup> The following day, 10 December, German investigators identified the detected material as

[polonium-210](#) and clarified that the substance was found where Kovtun had slept the night before departing for London. British police also report having detected polonium on the plane in which Kovtun travelled from Moscow.<sup>[115]</sup> Three other points in Hamburg were identified as contaminated with the same substance.<sup>[116]</sup> On 12 December Kovtun told Russia's Channel One TV that his "health was improving."<sup>[38]</sup>

Kovtun was under investigation by German detectives for suspected [plutonium smuggling](#) into Germany in October.<sup>[38]</sup> Germany dropped the case against Kovtun on November 2009.<sup>[117]</sup>

Vyacheslav Sokolenko

A business partner of Andrey Lugovoy.<sup>[118]</sup>

Vladislav

*The Times* stated that the police have identified the man they believe may have poisoned [Litvinenko](#) with a fatal polonium dose in a cup of tea on the fourth-floor room at the Millennium Hotel to discuss a business deal with Dmitry Kovtun and Andrey Lugovoy before going to the bar. These three men were joined in the room later by the mystery figure who was introduced as Vladislav, a man who could help Litvinenko win a lucrative contract with a Moscow-based private security firm.<sup>[119]</sup>

Vladislav is said to have arrived in London from Hamburg on 1 November on the same flight as Dmitry Kovtun. His image is recorded by security cameras at Heathrow airport on arrival. He is described as being in his early 30s, tall, strong, with short black hair and Central Asian features. [Oleg Gordievsky](#), an ex-KGB

agent, has said that this man was believed to have used a Lithuanian or Slovak passport, and that he left the country using another EU passport. He has also said Vladislav started his preparations in early 2006, "some time between February and April", that he "travelled to London, walked everywhere, and studied everything."  
[120]

Businessman and politician [Boris Berezovsky](#) said in a police interview that "Sasha mentioned some person who he met at Millennium Hotel", but would not "remember whether [his name] was Vladimir or Vyacheslav."<sup>[121]</sup> Litvinenko's friend Alex Goldfarb writes that according to Litvinenko, "Lugovoy brought along a man whom [Litvinenko] had never seen before and who had 'the eyes of a killer.'"<sup>[122]</sup>

### [Igor the Assassin](#)

The code name for a former [KGB](#) assassin. He is said to be a former [Spetznaz](#) officer born in 1960 who is a [judo](#) master and walks with a slight limp. He allegedly speaks perfect English and Portuguese and may be the same person who served Litvinenko tea in the London hotel room. <sup>[citation needed]</sup>

## Other persons related to the case

### [Yegor Gaidar](#)

The sudden illness of [Yegor Gaidar](#) in Ireland on 24 November 2006, the day of Litvinenko's death, has been linked to his visit to the restaurant where polonium was present and is being investigated as part of the overall investigation in the UK and Ireland.,<sup>[123]</sup> Other observers noted he was probably poisoned after drinking a strange-tasting [cup of tea](#). Gaidar was taken to hospital; doctors said his condition was not life-threatening and that he would recover.<sup>[124][125]</sup> This incident was similar to the poisoning of [Anna Politkovskaya](#) on a flight to [Beslan](#). Afterwards, Gaidar claimed that it was enemies of the Kremlin who had tried to poison him.

### [Mario Scaramella](#)

The United Kingdom's [Health Protection Agency](#) (HPA) announced that significant quantities of polonium-210 had been found in [Mario Scaramella](#) although his health was found to be normal. He was admitted to hospital for tests and monitoring.<sup>[126]</sup> Doctors say that Scaramella was exposed to a much lower level of polonium-210 than Litvinenko, and that preliminary tests found "no evidence of radiation toxicity."<sup>[127]</sup> According to the 6 pm Channel 4 news (9 December 2006), the intake of polonium he suffered would only result in a dose of 1 [millisievert](#) (100 [mrem](#)). This would lead to a 1 in 20,000 chance of cancer. According to *The Independent*, Scaramella alleged that Litvinenko was involved in smuggling radioactive material to Zürich in 2000.<sup>[128]</sup>

Boris Volodarsky, a KGB defector residing in London, stated that Evgeni Limarev, another former KGB officer residing in France, continued collaboration with the FSB, infiltrated Litvinenko's and Scaramella's circles of trust and misinformed the latter.<sup>[129][130][131]</sup>

### Igor Ponomarev

Igor Ponomarev was a Russian diplomat whose death was called a possible murder by Paolo Guzzanti.<sup>[131]</sup>

### **Marina Litvinenko**

UK reports state Litvinenko's widow tested positive for polonium, though she was not seriously ill. The Ashdown Park hotel in Sussex was evacuated as a precaution, possibly to do with Scaramella's previous visit there.<sup>[132]</sup> According to the 6 pm Channel 4 (9 December 2006) news, the intake of polonium she suffered would only result in a dose of 100 millisieverts (10 rem), leading to a 1 in 200 chance of cancer.

### Akhmed Zakayev

The forensic investigation also includes the silver Mercedes outside Litvinenko's home believed to be owned by his close friend and neighbour Akhmed Zakayev, then foreign minister of the separatist government in exile of Ichkeria.<sup>[133][134][135]</sup> Reports now state that traces of radioactive material were found in the vehicle.<sup>[136]</sup>

### British police

Two London Metropolitan Police officers tested positive for  $^{210}\text{Po}$  poisoning.<sup>[137]</sup>

### Bar staff

Some of the bar staff at the hotel where the polonium-contaminated teacup was found were discovered to

have suffered an intake of polonium (dose in the range of 10s of mSv). These people include Norberto Andrade, the head barman and a long-time (27 years) worker at the hotel. He has described the situation thus:

"When I was delivering gin and tonic to the table, I was obstructed. I couldn't see what was happening, but it seemed very deliberate to create a distraction. It made it difficult to put the drink down.

"It was the only moment when the situation seemed unfriendly and something went on at that point. I think the polonium was sprayed into the teapot. There was contamination found on the picture above where Mr Litvinenko had been sitting and all over the table, chair and floor, so it must have been a spray.

"When I poured the remains of the teapot into the sink, the tea looked more yellow than usual and was thicker – it looked gooey.

"I scooped it out of the sink and threw it into the bin. I was so lucky I didn't put my fingers into my mouth, or scratch my eye as I could have got this poison inside me."[\[16\]](#)



# Timeline

## Background history

- **7 June 1994:** A remote-controlled bomb detonated aiming at chauffeured Mercedes 600 with oligarch Boris Berezovsky and his bodyguard in the rear seat. The driver was decapitated but Berezovsky managed to survive with severe burns. Litvinenko, then with the organized-crime unit of the FSB, was an investigating officer of the [assassination attempt](#). The case was never solved, but it was at this point that Litvinenko befriended Berezovsky.
- **17 November 1998:** At a time that Vladimir Putin was the [head of the FSB](#), five officers including [Lieutenant-Colonel](#) Litvinenko accuse the Director of the Directorate for the Analysis of [Criminal Organizations Major-General](#) Eugeny Hoholkhov and his deputy, 1st Rank Captain Alexander Kamishnikov, of ordering them to assassinate Boris Berezovsky in November 1997.

## 2006

### October 2006

- **7 October:** The Russian journalist and Kremlin critic [Anna Politkovskaya](#) is shot in Moscow.
- **16 October:** Andrey Lugovoy flies to London.
- **16–18 October:** Former KGB agent Dmitry Kovtun visits London, during which time he eats two meals with

Litvinenko, one of them at the Itsu sushi bar (see 1 November 2006).<sup>[113][138]</sup>

- **17 October:** Litvinenko visits "Risc Management", a security firm in Cavendish Place, with Lugovoy and Kovtun.<sup>[139]</sup>
- **19 October:** Litvinenko accuses President Putin of the Politkovskaya murder.
- **28 October:** Dmitry Kovtun arrived in [Hamburg](#), Germany from Moscow on an [Aeroflot](#) flight. Later German police discovered that the passenger seat of the car that picked him up at an airport was contaminated with polonium-210.
- **31 October:** Dmitry Kovtun comes to London from Hamburg, Germany. German police found that his ex-wife's apartment in Hamburg was contaminated with polonium-210.<sup>[140]</sup>

## November 2006

- **1 November:** Just after 3 pm, at the [Itsu](#) sushi restaurant on Picadilly, Litvinenko meets the Italian security expert [Mario Scaramella](#), who hands alleged evidence to him concerning the murder of Politkovskaya. Around 4:15 pm, he comes to the office of Boris Berezovsky to copy the papers Scaramella had given him and hand them to Berezovsky. Around 5 pm he meets with the former KGB agents Andrey Lugovoy, Dmitry Kovtun and Vyacheslav Sokolenko in the Millennium Hotel in London. He later becomes ill.<sup>[141]</sup>  
<sup>[142]</sup>
- **3 November:** Litvinenko is brought into [Barnet Hospital](#).

- **11 November:** Litvinenko tells the [BBC](#) he was poisoned and is in very bad condition.
- **17 November:** Litvinenko is moved to [University College Hospital](#) and placed under armed guard.
- **19 November:** Reports emerge that Litvinenko has been poisoned with thallium, a [chemical element](#) used in the past as a [rat poison](#).
- **20 November:** Litvinenko is moved to the [Intensive Care Unit](#). The police take statements from people with close relation to Litvinenko. A [Kremlin](#) speaker denies the Russian government is involved in the poisoning.
- **22 November:** The hospital announces that Litvinenko's condition has worsened substantially.
- **23 November:** 9:21 pm: Litvinenko dies.
- **24 November:** Litvinenko's dictated deathbed statement is published. He accuses President Vladimir Putin of being responsible for his death. [The Kremlin](#) rejects the accusation. The [HPA](#) announces that significant amounts of polonium-210 have been found in Litvinenko's body. Traces of the same substance are also found at Litvinenko's house in [North London](#), at [Itsu](#) and at the Millennium Hotel.
- **24 November:** [Sergei Abeltsev](#), [State Duma](#) member from the [LDPR](#), in his Duma address he commented on the death of Litvinenko with the following words: *The deserved punishment reached the traitor. I am sure his terrible death will be a warning to all the traitors that in Russia the treason is not to be forgiven. I would recommend to citizen Berezovsky to avoid any food at the commemoration for his crime accomplice Litvinenko*<sup>[97]</sup>

- **24 November:** The [British police](#) state they are investigating the death as a possible poisoning.
- **28 November:** [Scotland Yard](#) announces that traces of polonium-210 have been found in seven different [places in London](#). Among them, an office of the Russian billionaire Boris Berezovsky, an avowed opponent of Putin.
- **29 November:** The HPA announces screening of the nurses and physicians who treated Litvinenko. The authorities find traces of a radioactive substance on board [British Airways](#) planes.
- **30 November:** Polonium-210 traces are found on a number of other planes, most of them going to Moscow.

## December 2006

- **1 December:** An [autopsy](#) is performed on the body of Litvinenko. [Toxicology](#) results from Mr Litvinenko's [post-mortem examination](#) revealed two "spikes" of radiation poisoning, suggesting he received two separate doses. <sup>[108]</sup> Scaramella tests positive for polonium-210 and is admitted into a hospital. Litvinenko's widow also tests positive for polonium-210, but was not sent to the hospital for treatment.
- **2 December:** Scotland Yard's counter-terrorist unit have questioned [Yuri Shvets](#), a former KGB spy who emigrated to the United States in 1993. He was questioned as a witness in Washington in the presence of FBI officers. Shvets claimed that he has a "lead that can explain what happened."

- **6 December:** Scotland Yard announced that it is treating his death as a murder.<sup>[37]</sup>
- **7 December:** Confused reports state that Dmitry Kovtun was hospitalized, the reason has not yet been made clear.
- **7 December:** Russian [Office of the Prosecutor General](#) has opened a criminal case over poisoning of Litvinenko and Kovtun by the articles "Murder committed in a way endangering the general public" (убийство, совершенное общеопасным способом) and "Attempted murder of two or more persons committed in a way endangering the general public." <sup>[143]</sup>
- **8 December:** Kovtun is reported to be in coma.<sup>[113]</sup>
- **9 December:** German police find traces of radiation at [Hamburg](#) flat used by Kovtun.<sup>[114]</sup>
- **9 December:** UK police identify a single cup at the Pines Bar in the Millennium Hotel in [Mayfair](#) which was almost certainly the one used to administer the poison.<sup>[144]</sup>
- **11 December:** Andrey Lugovoy is interrogated in Moscow by UK Scotland Yard and General Procurator's office of the Russian Federation. He refuses to reveal any information concerning the interrogation.<sup>[145]</sup>
- **12 December:** Dmitry Kovtun tells a Russian TV station that his "health [is] improving." <sup>[38]</sup>
- **24 December:** Mario Scaramella was arrested in Naples on his return from London, on apparently unrelated charges.<sup>[146]</sup>
- **27 December:** Prosecutor General of Russia [Yury Chaika](#) accused [Leonid Nevzlin](#), a former Vice President of [Yukos](#), exiled in [Israel](#) and wanted by Russian authorities

for a long time, of involvement in the poisoning, a charge dismissed by the latter as a nonsense.<sup>[147]</sup>

## 2007

### February 2007

- **5 February:** Boris Berezovsky told the [BBC](#) that on his deathbed, Litvinenko said that Lugovoy was responsible for his poisoning.<sup>[148]</sup>
- **6 February:** The text of a letter written by Litvinenko's widow on 31 January to Putin, demanding that Putin work with British authorities on solving the case, was released.<sup>[149]</sup>
- **8 February 2007:** Update to HPA ([Health Protection Agency](#)) investigation of polonium 210 incident.<sup>[150]</sup>

### May 2007

- **21 May:** Sir [Ken Macdonald](#) QC ([Director of Public Prosecutions](#) of [England and Wales](#) ) say that Lugovoy, should face trial for the "grave crime" of murdering Litvinenko.
- **22 May:** Macdonald announces that Britain will seek extradition of Lugovoy and attempt to charge him with murdering Litvinenko. The Russian government states that they will not allow the extradition of any Russian citizens.<sup>[151]</sup>
- **28 May:** The British [Foreign Office](#) formally submits a request to the [Russian Government](#) for the extradition of Lugovoy to the UK to face criminal charges.<sup>[53]</sup>

- The [Constitution of Russia](#) forbids extradition of Russian citizens to foreign countries (Article 61), so the request can not be fulfilled.<sup>[152]</sup>

Extradition requests had been granted in the past (For example, in 2002 Murad Garabayev has been handed to [Turkmenistan](#).<sup>[153]</sup> Garabayev's extradition was later found unlawful by the [Russian courts](#) and he was awarded 20,000 Euros in damages to be paid by the Russian government by the [European Court of Human Rights](#).<sup>[154]</sup>) Article 63 does not explicitly mention Russian citizens, and therefore does not apply to them, but only to foreign nationals living in Russia. Article 61 supersedes it for the people holding the Russian citizenship.

- **31 May:** Lugovoy held a news conference at which he accused [MI6](#) of attempting to recruit him and blamed either MI6, the Russian mafia, or fugitive Kremlin opponent Boris Berezovsky for the killing.<sup>[155]</sup>

## July 2007

- **16 July:** The British Foreign Office confirms that, as a result of Russia's refusal to extradite Lugovoy, four Russian diplomats are to be expelled from the Russian Embassy in London.<sup>[156]</sup>
- **17 July:** Russia's deputy foreign minister, Alexander Grushko, threatens to expel 80 UK diplomats.<sup>[157]</sup>
- **19 July:** The Russian Foreign ministry spokesman, Mikhail Kamynin, [announced the expulsion](#) of four UK diplomats from the British Embassy in Moscow.<sup>[158]</sup>

## October 2007

- **27 October:** Stephen Wright and David Williams of the British *Daily Mail* newspaper reported that Alexander Litvinenko was an [MI6 agent](#) and was receiving a [retainer](#) of £2000 per month when he was murdered and that the current head of MI6 Sir [John Scarlett](#) was involved in his recruitment, quoting unnamed "diplomatic and [intelligence](#)" sources.<sup>[citation needed]</sup> Such claims have been denied by Marina Litvinenko<sup>[159]</sup> and [Oleg Gordievsky](#).<sup>[160]</sup>

## December 2008

- In a **16 December 2008** interview, when asked by the Spanish newspaper [El País](#) if Litvinenko could have been killed in the interests of the Russian state, Lugovoy – wanted by British police on suspicion of the murder of Litvinenko – replied that he would order the assassination of anyone, for example, [President Saakashvili](#) of [Georgia](#) and the KGB defector [Gordievsky](#), in the interests of the Russian state.<sup>[161][162]</sup>



## Comparisons to other deaths

### Deaths from ingesting radioactive materials

According to the [IAEA](#), in 1960, a person ingested 74 MBq of [radium](#) (assumed to be  $^{226}\text{Ra}$ ) and this person died four years later.<sup>[163]</sup> [Harold McCluskey](#) survived 11 years (eventually dying from [cardio respiratory failure](#)) after an intake of at least 37 MBq of  $^{241}\text{Am}$  (He was exposed in 1976). It is estimated that he suffered doses of 18 Gy to his bone mass, 520 Gy to the bone surface, 8 Gy to the liver and 1.6 Gy to the lungs; it is also claimed that a [post mortem](#) examination revealed no signs of cancer in his body. The October 1983 issue of the journal *Health Physics* was dedicated to McCluskey, and subsequent papers about him appeared in the September 1995 issue.<sup>[164]</sup>

### Similar suspicious deaths and poisonings

See also: [List of journalists killed in Russia](#)

Comparisons have been made to the alleged 2004 poisoning of [Viktor Yushchenko](#), the alleged 2003 poisoning of [Yuri Shchekochikhin](#) and the fatal 1978 poisoning of the journalist [Georgi Markov](#) by the [Bulgarian Committee for State Security](#). The incident with Litvinenko has also attracted comparisons to the poisoning by radioactive (unconfirmed) thallium of KGB defector [Nikolay Khokhlov](#) and journalist [Shchekochikhin](#) of [Novaya Gazeta](#) (the *Novaya Gazeta* interview with the former, coincidentally, prepared by Russian journalist Anna Politkovskaya, who was later found

shot to death in her [apartment building](#)).<sup>[165]</sup> Like Litvinenko, Shchekochikhin had investigated the Russian apartment bombings (he was a member of the [Kovalev](#) Commission that hired Litvinenko's friend [Mikhail Trepashkin](#) as a [legal counsel](#)).

KGB defector and British agent [Oleg Gordievsky](#) believes the murders of [Yandarbiev](#), [Yushenkov](#), Shchekochikhin, [Tsepov](#), Politkovskaya and the incident with Litvinenko show that the [FSB](#) has returned to the practice of political assassinations,<sup>[166]</sup> which were conducted in the past by [Thirteenth Department](#) of the [KGB](#).<sup>[167]</sup> A comparison was also made with [Roman Tsepov](#)<sup>[168]</sup> who was responsible for the personal security of [Anatoly Sobchak](#) and Putin, and who died in Russia in 2004 from poisoning by an unknown radioactive substance.<sup>[169][170]</sup>

FSB special forces officers from [Alpha Group](#) and [Vypel](#) were seen to be using Litvinenko photos for target practice in shooting sessions just before his poisoning, according to Russian journalist [Yulia Latynina](#).<sup>[171]</sup>

## 177. References in popular culture

- [60 Minutes](#) aired a segment entitled "Who Killed Alexander Litvinenko?" on 7 January 2007. A transcript is available online.<sup>[172]</sup>
- [Thriller](#) writers [Frederick Forsyth](#) and [Andy McNab](#) claimed that the killing of Alexander Litvinenko is a classic case of fact being stranger than fiction and that they would be fighting a losing battle if they offered a Litvinenko-style story to a publisher.<sup>[173]</sup>
- In the television series [Chuck](#), a flash by [Chuck Bartowski](#) indicates [The Ring](#) poison expert Jack Artman was involved in the poisoning of Litvinenko.<sup>[174]</sup>
- In the 2014 television series [Forever](#) (episode 15), a king is assassinated with polonium and the assassination of Alexander Litvinenko specifically mentioned.
- The Polonium Restaurant (a Polish restaurant in [Sheffield](#), England, owned by Boguslaw Sidorowicz and named after his folk band in the late 1970s) experienced increased interest and business as a result of internet searches for the phrase *polonium restaurant*.<sup>[175][176][177]</sup>
- [Rebellion: the Litvinenko Case](#) is a documentary about Litvinenko's activities and death.
- [1000 Ways To Die](#) features a story similar to Litvinenko's death, which also involves a spy being poisoned with radioactive materials.
- An opera "The Life & Death of Alexander Litvinenko" by [Anthony Bolton](#), libretto [Kit Hesketh-Harvey](#). World premiere 16 July 2020 at [Grange Park Opera](#) in [Surrey](#), England.

## See also

- [Active measures](#)
- [Extrajudicial killing](#)
- [Georgi Markov](#)
- [List of crimes involving radioactive substances](#)
- [Litvinenko Justice Foundation](#)
- [Poison laboratory of the Soviet secret services](#)
- [Russia – United Kingdom relations](#)
- [Poisoning of Sergei and Yulia Skripal](#)
- [Nuclear terrorism](#)
- [Terrorism in Russia](#)

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Moscow, Buinaksk, and Volgodonsk. In the aftermath of these attacks, which claimed 300 lives, a new war was launched against Chechnya. Putin, the newly appointed prime minister who was put in charge of that war, achieved overnight popularity. Yeltsin resigned early. Putin was elected president and his first act was to guarantee Yeltsin immunity from prosecution." ([PDF Archived](#) 27 September 2011 at the [Wayback Machine](#)

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190. [Russia and Islam are not Separate: Why Russia backs Al-Qaeda Archived](#) 19 December 2007 at the [Wayback Machine](#), by Konstantin Preobrazhensky. According to Preobrazhenskiy, "At that time, Litvinenko was the Head of the Subdivision for Internationally Wanted Terrorists of the First Department of the Operative-Inquiry Directorate of the FSB Anti-Terrorist Department. He was ordered to undertake the delicate mission of securing Al-Zawahiri from unintentional disclosure by the Russian police. Though Al-Zawahiri had been brought to Russia by the FSB using a false passport, it was still possible for the police to learn about his arrival and report to Moscow for verification. Such a process could disclose Al-Zawahiri as an FSB collaborator. In order to prevent this, Litvinenko visited a group of the highly placed police officers to notify them in advance."

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