

# **Disease, Vermin, and Anti-Semitism: The Significance of Epidemic Typhus in Eastern Europe, 1916-1942**

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*Typhus has long been a stigmatized disease, associated with dirt and poverty due to its mode of transmission through body lice. The disease claimed the lives of millions in Eastern Europe during the early 20th century, exacerbated by conflict, refugee movements, government policies, and racial violence. This paper examines the toll that typhus took on both sides of the Russian Civil War and the hygiene policies put in place to reduce the spread of lice. It also explores the shifts in Soviet hygiene programs and their effects on the epidemic, as well as how the gulag system intensified the spread of the disease. Lastly, it investigates the connections between epidemic typhus and the Holocaust and discusses how fear of the disease helped to shape Nazi 'sanitization' policies and contributed to the mass murder of millions.*

Plagued by epidemics throughout the turbulent twentieth century, Russia's most prolific disease was typhus. In the span of six years, from 1916 to 1923, thirty million people were infected and approximately three to five million were killed. Typhus is spread by the body louse which thrives and spreads easily in dirty, unsanitary conditions. These conditions were common during times of instability and strife, which is why typhus was able to attain such high infection rates during this period. A confluence of catastrophic events, including the First World War, the Russian Revolution, the Russian Civil War, and the influenza pandemic of 1918, strained the country to its breaking point. Conflict and famine, along with the mass movement of troops and refugees, worked to spread typhus across the newly formed Russian Socialist Federative Soviet Republic. Implementing public health measures and receiving international aid was crucial for the new revolutionary government to curb the spread of typhus after the end of the Civil War. However, this victory was short-lived; under Stalin's regime, typhus returned, mainly because of the hardships caused by forced collectivization and the Gulag system. Not only did typhus cost the lives of millions of people, but it also furthered racial and ethnic divides as the fear of lice and disease led to an increase in anti-Semitism. This was reflected not only by the pogroms of Soviet Russia, but also by the delousing programs associated with the Holocaust in Nazi Germany.

Epidemic typhus is caused by the *Rickettsia prowazekii* bacteria and is transmitted to human beings by the body louse *Pediculus humanus corporis*.<sup>47</sup> The bacteria grow in the gut of the louse and are excreted through their feces. When the louse bites the human host, the bites become itchy, and the process of scratching rubs the infective louse feces into the abraded skin, penetrating the body and infecting the new human host. Although the disease cannot move from person to person itself, the body louse acts as the vector, and spreads the *R. prowazekii* bacteria between human hosts via close contact such as prolonged skin contact, hair contact, or through sharing infected bedding or clothes.<sup>48</sup> These modes of transmission are exactly what makes typhus prevalent during periods of conflict. During Russia's Civil War, troop trains and refugee caravans criss-crossed the nation, spreading the disease much further than it would have been able to during times of stability and peace. Epidemic typhus causes body rash, intense fever, nausea, and its complications can cause gangrene, pneumonia, kidney failure, coma, and heart failure.<sup>49</sup> On average, epidemic typhus has a mortality rate of about 40%, but that would most certainly have been higher during the Russian epidemic as there was a scarcity of resources for treatment. Despite a concentrated international effort to create a vaccine for typhus between 1918 and 1920, one was never created during this period.<sup>50</sup> Although there have been several attempts at creating a vaccine since, there remains no effective vaccine available for epidemic typhus even today.<sup>51</sup> Typhus can now be treated with antibiotics, but in the early twentieth century there were no treatment options available apart from good nursing and supportive care -- neither of which could be provided during the Civil War.

Typhus was not a new disease in Russia and numerous epidemics of the louse borne disease had plagued the country throughout its history. Typhus had been a major factor during several wars in Russia, including the Seven Years War, the Napoleonic Wars, and finally on the Eastern Front during the First World War. The typhus epidemic began in Russia in 1916 amongst the military, and by 1917 had started to become a serious problem amongst the civilian population.<sup>52</sup> Following the Bolshevik October Revolution in 1917,

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<sup>47</sup> Yassina Bechah et al., "Epidemic Typhus," *The Lancet Infectious Diseases* 8, no. 7 (2008): 418.

<https://www-sciencedirect-com.ezproxy.library.uvic.ca/science/article/pii/S1473309908701506?via%3Dihub>

<sup>48</sup> Bechah et al., "Epidemic Typhus," 418.

<sup>49</sup> Julia Irwin, "The Great White Train: Typhus, Sanitation, and U.S. International Development during the Russian Civil War," *Endeavour (New Series)* 36, no. 3 (2012): 90. <https://sites.bu.edu/revolutionaryrussia/files/2013/09/The-Great-White.pdf>

<sup>50</sup> Irwin, "The Great White Train," 91.

<sup>51</sup> "Epidemic Typhus," CDC, 2020. <https://www.cdc.gov/typhus/epidemic/index.html>

<sup>52</sup> Clara Cuncell, "War and Infectious Disease," *Public Health Reports (1896)* 56, no. 12 (1941): 551.

[https://www-jstor-org.ezproxy.library.uvic.ca/stable/4583663?pq-origsite=summon&seq=1#metadata\\_info\\_tab\\_contents](https://www-jstor-org.ezproxy.library.uvic.ca/stable/4583663?pq-origsite=summon&seq=1#metadata_info_tab_contents)

anti-Bolshevik forces coalesced under the leadership of Admiral Alexander Kolchak, who assumed command of the many different army groups scattered across the vast nation.<sup>53</sup> The leaders of the armies were made up of high-ranking officials from the Imperial Army still loyal to Emperor Nicholas II, including Anton Denikin, Yevgeny Miller, and Nikolai Yudenich.<sup>54</sup> These forces became known as the White Army, and they established themselves on the peripheries of the country over 1918. The Whites began to launch attacks on the new Soviet government, which by this time had fielded its own military, the Red Army, and had appointed Leon Trotsky as its commander.<sup>55</sup> As the two groups went to war, the conflict pushed typhus cases to hitherto unseen levels: the movement of troops, hospital trains, and the dislocation of millions fleeing the occupying armies provided the perfect transmission routes for lice. Figure 1 shows the growth of typhus cases over the Civil War period, and as a testament to the unprecedented spread the graph must be expressed in logarithmic scale.

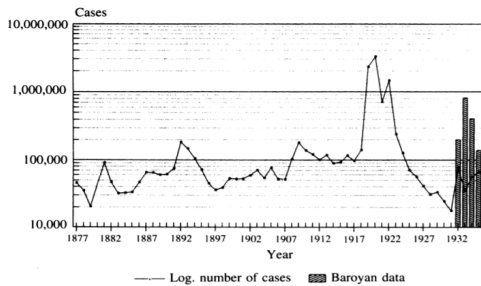


Figure 1. Epidemic typhus cases in Europe 1877-1936.

Source: Patterson, "Typhus and its Control in Russia, 1870-1940."

Thriving off the discord created by the conflict, typhus ravaged both sides. Although the White Army did not properly record any sort of data on the reach of typhus in their lines, it is estimated that they suffered equal -- if not greater -- losses than the Red Army.<sup>56</sup> Soviet demographers estimated that from 1918 to 1920 there were at least 573,000

<sup>53</sup> Jonathan Smele, *Civil War in Siberia: The Anti-Bolshevik Government of Admiral Kolchak, 1918-1920* (Cambridge: Cambridge University Press, 2009), 2-3.

<https://www-fulcrum-org.ezproxy.library.uvic.ca/concern/monographs/6w924c269>

<sup>54</sup> John Swettenham, *Allied Intervention in Russia 1918-1919: And the Part Played by Canada*, Vol. 4;4, (London; New York;: Routledge, Taylor & Francis Group, 2017), 17. <https://doi-org.ezproxy.library.uvic.ca/10.4324/9781315208947>

<sup>55</sup> Swettenham, *Allied Intervention in Russia 1918-1919*, 17-18.

<sup>56</sup> David Patterson, "Typhus and its Control in Russia, 1870-1940," *Medical History* 37, no. 4 (1993): 376.

typhus cases in the Red Army, resulting in approximately 100,000 deaths.<sup>57</sup> Due to the attrition being leveled upon the armies, both belligerents realised that delousing and hygiene practices would be crucial to their ability to remain in the war. The hygiene strategy of the Red Army included building hundreds of bathing and disinfection stations along railways and near the front lines with attached delousing teams.<sup>58</sup> The system succeeded in exterminating massive amounts of lice; in the accounts of some Soviet doctors visiting the delousing stations, a “two inch layer of dead lice covered the floor” after the procedure.<sup>59</sup> The White Army groups spread out around the fringes of the country were not faring much better in their battle against the lice. As historian Paul Weindling writes of the situation in the White Army, “a hospital train was characterized as a ‘train of death’ as its passengers starved, infected one another, and were overwhelmed by vermin and filth.”<sup>60</sup> Unlike the Soviets, however, the White Army was not left alone in this conflict. During the years following 1918, the White Army was supported by the military intervention of the Allies of the Great War, which included Great Britain, France, Japan, the United States, and many other nations.

The spread of disease and the scale of the epidemic provided the Western Allies with an excuse to intervene on behalf of the White Army, with leaders such as Winston Churchill stating that the world was threatened by:

“a poisoned Russia, an infected Russia, a plague-bearing Russia, a Russia of armed hordes smiting not only with bayonet and with cannon, but accompanied and preceded by the swarms of typhus bearing vermin which slay the bodies of men, and political doctrines which destroy the health and even the soul of nations.”<sup>61</sup>

This statement demonstrates not only fears of a spreading epidemic, but the Western fears of socialism, as these leaders believed that the success of the Bolshevik Revolution in Russia would inspire revolutions around the world, undermining the hegemony of the capitalist powers. Although there existed some fear of the typhus epidemic spreading further into Europe, the main reason for the Allied intervention in the Civil War was to restore a Russian government, which would rejoin the fight against the Central Powers. Lenin’s Bolshevik government had signed the Treaty of Brest Litovsk with

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<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1036775/?tool=pmcentrez&report=abstract>

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<sup>57</sup> Patterson, "Typhus and its Control in Russia," 376.

<sup>58</sup> *Ibid.*, 380.

<sup>59</sup> *Ibid.*

<sup>60</sup> Paul Weindling, *Epidemics and Genocide in Eastern Europe, 1890-1945* (New York;Oxford;: Oxford University Press, 2000), 150. DOI: 10.1093/acprof:oso/9780198206910.001.0001

<sup>61</sup> Weindling, *Epidemics and Genocide in Eastern Europe*, 150.

Germany on May 3, 1918, which removed them from the conflict and alleviated some pressure on the Bolsheviks, but it also freed Germany to focus their forces against the Allies on the Western Front. Churchill also further compared Bolshevism to a disease, declaring that “Lenin was sent into Russia by the Germans in the same way that you might send a phial containing a culture of typhoid or of cholera to be poured into the water supply of a great city.”<sup>62</sup> The Allies provided not only military support to the White Army, but also medical aid. The Americans set up numerous field hospitals and typhus isolation wards along the White Army lines, intent on trying to stamp out the disease which crippled military efficiency. The United States even developed a mobile sanitary train, which was intended to be able to bring disinfecting supplies across Siberia and would also act as a mobile delousing station.<sup>63</sup> Within these typhus hospitals and trains, disinfectant teams would spray the ward with chemicals such as sulphur and carbolic acid, and even hydrogen cyanide.<sup>64</sup> Typically, disinfection by use of steam was the most common method and was widely employed by both Whites and Reds on clothes, linens, and people. The disinfection teams in the American hospitals shaved and bathed patients, burned infected mattresses, and sterilized clothes and bedding as well, if possible.<sup>65</sup> With American help, the newly established nation of Estonia was able to bring the typhus epidemic under control within their borders, but Allied victories in the war on lice stopped there.<sup>66</sup> Although the typhus epidemic did not decide the outcome of the Civil War and ultimately led to great losses on both sides, it is certain that the disease had a large role in weakening the White Army forces and leading to Admiral Kolchak’s eventual defeat.

Revolutionary leader Vladimir Lenin and the new Bolshevik government recognized that the survival of the Revolutionary state depended on their ability to control the typhus epidemic. Lenin famously declared, “socialism must defeat the louse or the louse will defeat socialism.”<sup>67</sup> The Soviet hygiene system was largely an extension of their Civil War epidemic strategy, but now it was able to focus their efforts away from the military and towards their citizens. Recognizing the role of the railways in the spread of typhus, the Soviets took special care of trains coming in and out of Moscow by disinfecting around 40-50,000 passengers per day, as well as adding disinfection stations along the railways throughout the country.<sup>68</sup> One key element of Soviet epidemic control was the *banya*, or traditional Russian public bathhouse. Although most of these bathhouses had either fallen into disrepair in recent decades or had been co-opted by the wealthy

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<sup>62</sup> Weindling, *Epidemics and Genocide in Eastern Europe*, 150.

<sup>63</sup> Irwin, "The Great White Train," 91.

<sup>64</sup> Patterson, "Typhus and its Control in Russia," 380.

<sup>65</sup> *Ibid.*

<sup>66</sup> *Ibid.*, 375.

<sup>67</sup> Ethan, Pollock, *Without the Banya we would Perish: A History of the Russian Bathhouse* (New York, NY: Oxford University Press, 2019), 140. DOI: 10.1093/oso/9780195395488.001.0001

<sup>68</sup> Patterson, "Typhus and its Control in Russia," 380.

aristocrats under the tsar, they provided the perfect opportunity for the Soviets to widen their disinfection program.<sup>69</sup> The Soviets had began the push to construct more *banyas* for the citizens of the Russian Socialist Federative Soviet Republic by 1919, and in September of 1920 Lenin passed a decree with the purpose of “decisively fighting epidemics of typhus and relapsing fever and with the goal of widely disseminating to the population the means to attain cleanliness.”<sup>70</sup> The *banyas* were overseen by the People’s Commissariats of Interior and Health, who were tasked with attracting as many people as possible, and was achieved through propaganda.<sup>71</sup> Posters such as Figure 2 equate the White Army and its leaders to parasites, as a Lenin-like figure carrying Red Cross supplies warns his comrades of the new enemy, typhus, and encourages the population to bathe and sanitize their clothing. Figure 3 depicts a scene at a *banya*, emphasising the dangers of dirt and parasites, and reads that “Dirt is the source of illness: wash in the banya and change clothes no less often than one time a week.” The *banya* strategy helped to encourage cleanliness amongst the Russian people, but Lenin’s government was still attempting to deal with the economic turmoil caused by the revolution and other conflicts and looked to the international comm community for help.



Figure 2. “The Red Army has Scattered the White Parasites - Yudenich, Denikin, Kolchak. A New



Figure 3. “Dirt is the Source Of Illness: Wash in the Banya and Change Clothes No Less Often Than One Time

<sup>69</sup> Pollock, *Without the Banya we would Perish*, 131.

<sup>70</sup> *Ibid.*, 141.

<sup>71</sup> *Ibid.*

Calamity has Taken Over - Lice  
 Carrying Typhus! Comrades! Fight this  
 Infection! Destroy the Louse!" (1921)  
 Source: The Wellcome Library.

a Week." (1931) Source: Ethan  
 Pollock, *Without the Banya We Would  
 Perish: A History of the Russian  
 Bathhouse*.

In dealing with the typhus epidemic, the Soviets avoided making public international pleas for aid, as the capitalist Allied powers might perceive Russia as weak and attempt another intervention.<sup>72</sup> Instead, Lenin calculated that Russia's best chance for foreign aid would come from the newly established socialist government in the Weimar Republic. The Bolsheviks began to make overtures towards the more sympathetic German government, and soon a German-Soviet medical relationship was formed.<sup>73</sup> Although many in Germany at the time saw this as a noble mission which could reinvigorate and energize the German spirit from the trauma of defeat in the Great War, historian Paul Weindling believes that there may have been ulterior German motives behind the nation's agreement to provide aid. Weindling argues that "epidemic prevention became an extension of right-wing politics to resurrect a German racial state," and that behind the thin veneer of salvation lay the hidden agenda of expanding German *Lebensraum* in the East.<sup>74</sup> Whether or not this was the true objective, medical supplies provided by the German Red Cross were gratefully received in Russia as they looked towards curbing the spread of the epidemic.

With the implementation of the *banya* system and the arrival of foreign medical aid, typhus cases began to steadily decline in the country. The biggest factor for this was the cessation of conflict and a return to relative stability. This victory over the disease proved to be short-lived, however, as cases started to rise dramatically once again after 1931. The reason for this sudden return of typhus is attributed to the famines and instability caused by Stalin's forced collectivization and Gulag systems. Although Soviet reports to the League of Nations Health Organization did announce a sizable increase in typhus cases, it is likely that these numbers were severely underreported. Reported cases remained in the range of 40-80,000 per year between 1931 and 1937, when the USSR stopped reporting infection rates to the League of Nations. Reports published in the 1960s indicate that typhus cases were well over 200,000 in 1932 and got even as high as over 800,000 in

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<sup>72</sup> Despite the risk of revealing the true extent of Russia's desperation, and although not a member of the League of Nations until 1934, the Soviets continued to report epidemic typhus cases to the League of Nations Health section throughout the Civil War period and beyond until 1937, two years before they were kicked out of the organization. For more information, see Patterson, "Typhus and its Control in Russia."

<sup>73</sup> Weindling, *Epidemics and Genocide in Eastern Europe*, 155.

<sup>74</sup> Weindling, *Epidemics and Genocide in Eastern Europe*, 155-156.

1933, as is demonstrated by the bars labelled Baroyan data in Figure 1.<sup>75</sup> As was the case during the Civil War, Stalin's forced collectivization campaign caused widespread destitution and depravity, and typhus thrived in the chaos of famines and forced dislocation of peasants. Peasants who refused to adapt to the collectivization were detained and deported to exile settlements or into forced labour camps known as Gulags, where disease and starvation ravaged the interned population. Within these Gulags, Soviet scientists conducted medical experiments and research on the prisoners, studying the effects of illnesses which afflicted both the camp and civilian populations.<sup>76</sup> These included nutritional deficiencies, scurvy, tuberculosis, and of course, typhus. Although the experiments in the Russian Gulags do not seem to have been as intent upon lethality as those conducted in Nazi Germany, they echoed contemporary research being conducted in the United States on vaccine efficacy and disease transmission.<sup>77</sup> Soviet doctors chose to study the clinical effects of disease on the prisoner populations rather than provide aid. Despite the poverty and suffering experienced in the countryside under Stalin's reign, epidemic typhus never again reached the levels it had during the 1917-23 period, most likely because of the continued success of the *banya* and disinfection strategies, as well as the presence of a much more stable government.

Epidemic typhus caused widespread suffering and death, but it also deeply changed cultural views, deepening racial and ethnic divides in Russia and beyond. Typhus and other louse-borne diseases spread terror throughout Eastern Europe. This fear stemmed not from the insects themselves, but rather from those who were perceived to be carriers of lice, namely refugees and Jewish peoples. At the height of the epidemic, as millions of people died of disease, hygienic campaigns and propaganda depicted lice and other parasites as terrifying, monstrous enemies of humanity. Over time, this fear of lice began to merge with anti-Semitism, and Jews around the world were increasingly identified as transmitters of the parasites. In Russia, delousing procedures were incorporated into the vicious pogroms<sup>78</sup> which had intensified during the Civil War, with thousands of these riots

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<sup>75</sup> Patterson, "Typhus and its Control in Russia," 381.

<sup>76</sup> Golfo Alexopoulos, "Medical Research in Stalin's Gulag," *Bulletin of the History of Medicine* 90, no. 3 (2016): 363-393.

<https://muse-jhu-edu.ezproxy.library.uvic.ca/article/634472/pdf>

<sup>77</sup> Numerous studies and experiments concerning the spread of infectious disease and vaccine tests were conducted on prison populations and vulnerable minorities in the United States during this time, such as the Tuskegee Syphilis Study, and Jonas Salk's development of the polio vaccine at the Polk State School for the Retarded and Feeble-minded. For more information, see "The U.S. Public Health Service Syphilis Study at Tuskegee,"

<https://www.cdc.gov/tuskegee/timeline.htm> and "The Salk polio vaccine: A medical miracle turns 60,"

<https://www.cbsnews.com/news/the-salk-polio-vaccine-a-medical-miracle-turns-60/>

<sup>78</sup> A Russian term for violent riots against ethnic or religious minorities, especially of Jewish people, with the aim of killing or driving out the victims.



taking place in Ukraine in 1918-1919 alone.<sup>79</sup> Captured Orthodox Jews would have their customary ringlets shaved off, reminiscent of delousing procedures of clearing the body of hair.<sup>80</sup> In the rest of the world, the immigration of Jews and other ‘undesirable’ peoples became restricted in the early twentieth century, as fears intensified that they would cause epidemics like those seen in Russia.<sup>81</sup> The racialized medicine of this era also developed further the perception of Jewish people as pathogenic beings, and soon the lines between Jewish people and lice began to blur as pseudoscience and the rise of extremism in Europe further dehumanized Jewish people. In Germany, the word *Ungezeifer*, or vermin, began to mean not only pests and insects, but Jewish people as well, reducing them to the status of a parasite.<sup>82</sup> The fear of lice also had a noted role in the Holocaust. The relocation of Jewish populations into the Ghettos and forced labour camps was justified as an ‘epidemic control’ procedure, as they wished to keep typhus controlled within the Reich.<sup>83</sup> This mass relocation of people into squalid conditions with little to no food caused an explosion of typhus in the ghettos and camps, killing thousands, which was exactly the hope of the Nazi regime as they looked to liquidate the Jewish population.<sup>84</sup> Zyklon B, the infamous chemical agent which was used by Nazi Germany to kill millions of people, started as a hydrogen cyanide-based pesticide used for delousing. In 1940, an outbreak of typhus in the Auschwitz prison camp necessitated the stockpiling of vast amounts of the chemical to try and control the spread of the disease.<sup>85</sup> Anti-typhus measures in the winter of 1941 instigated the next lethal step in the Holocaust, as experiments proved to the camp’s leader Rudolph Höss that Zyklon B was a more effective killing agent than carbon monoxide.<sup>86</sup> Millions would perish in gas chambers disguised as showers and disinfection rooms. For Nazi Germany, ‘epidemic control’ meant destroying the *Ungezeifer*, and the propaganda of the Reich had long since reduced the Jewish people to nothing but vermin in the eyes of the state. This industrialized killing was the culmination of decades of fear, dehumanization, and racialized science which reduced the killing of millions to a matter of semantics, where disinfection and destruction of lice meant the same thing as massacre and genocide.

Epidemic typhus played a significant role in Eastern Europe’s early twentieth century, infecting tens of millions in major epidemics which swept across Russia and other

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<sup>79</sup> Weindling, *Epidemics and Genocide in Eastern Europe*, 145.

<sup>80</sup> Ibid.

<sup>81</sup> Ibid., 8.

<sup>82</sup> Ibid.

<sup>83</sup> L. Stone, et al., "Extraordinary Curtailment of Massive Typhus Epidemic in the Warsaw Ghetto," *Science Advances* 6, no. 30 (2020): 1-2.

<https://pubmed.ncbi.nlm.nih.gov/32923606/>

<sup>84</sup> Stone, "Extraordinary Curtailment of Massive Typhus Epidemic in the Warsaw Ghetto," 3.

<sup>85</sup> Weindling, *Epidemics and Genocide in Eastern Europe*, 300.

<sup>86</sup> Weindling, *Epidemics and Genocide in Eastern Europe*, 300-301.

nearby nations. The epidemic began during the chaos of the First World War, and the subsequent series of catastrophic overlapping conflicts created the perfect conditions for mass transmission of typhus and other louse-borne diseases. Typhus seriously affected the course of the Civil War, resulting in hundreds of thousands of deaths and forcing the Red and White Armies to focus resources on treating the sick and disinfecting supplies. Even with the intervention of the Allied powers on behalf of the White Army, the White Army was unable to make any serious progress against the epidemic and in the end was defeated by the Red Army. After the conclusion of the Civil War, the Soviet government was free to focus its attention towards combating the epidemic. The state managed case numbers by implementing disinfection strategies such as building delousing stations along major railways, establishing *banyas*, and encouraging hygienic practices amongst the citizenry. However, the scourge of typhus was not eliminated completely, and case numbers began to increase again during Stalin's push for industrialization and forced collectivization campaigns, as well as in the Gulag, where prisoners were subject to medical experimentation. Racial science and anti-Semitism became increasingly associated with fears of lice and disease as violence against Jewish people became more commonplace. Anti-typhus measures in Nazi Germany played a crucial role in the Holocaust, as epidemic control programs were used as justification for the mass deportation of Jewish people into ghettos and camps. Millions of Eastern Europeans lost their lives to this deadly disease in the first half of the twentieth century. Yet beyond this initial death toll, typhus and related government propaganda spread fear and stigmatization, contributing to the mass murder of millions more.

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