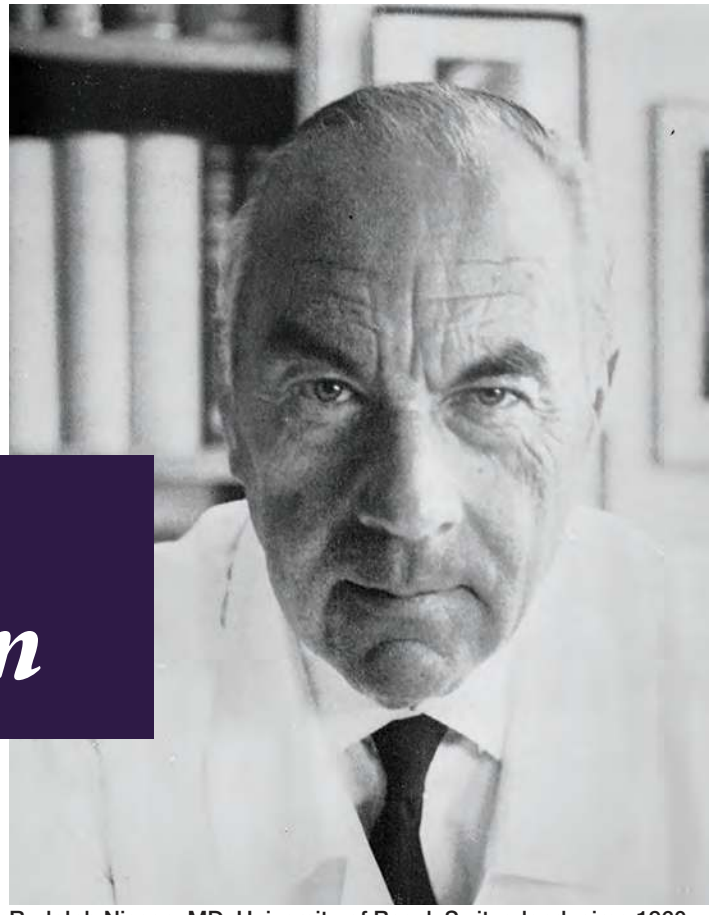
The exile of Rudolph Nissen



Rudolph Nissen, MD, University of Basel, Switzerland, circa 1960.
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Rudolph Nissen (1896–1981), the academic heir-apparent to the prestigious professorship of surgery at the Charité in Berlin, and a Jew, refused to submit to the Nazis as they took power in Germany in 1933. Offered a chance to retain his position at the hospital while all other Jewish physicians and surgeons were fired and all Jews were refused treatment, Nissen chose exile. He and more than 100 German Jewish scientists found refuge in Istanbul where they were key to a program initiated by Kemal Atatürk, founder of the Republic of Turkey and its first president.

Beset by Kemalist requirements to use the Turkish language, official restraints on non-Turkish minorities, and Nazi harassment within Turkey, Nissen again left an untenable situation in 1939, and emigrated to the United States.

Despite rebuilding his professional career with a highly successful private practice in surgery in Manhattan and Brooklyn, in 1952 he left once more to Basel, Switzerland, his final destination as an expatriate.

After the war, he refused offers for positions at major German universities where he was offered a chance to rebuild academic surgery in that country.

During his exile, Nissen devised his most important contribution to surgery, gastric fundoplication for esophageal reflux. The backstory of the operation, a surgical procedure so creative and effective that it is one of a handful of modern operations best known by its eponym (the Nissen fundoplication), demonstrates the endurance of his creativity during the social disorder and tragedy of the Jewish diaspora of the 1930s and 1940s. It is also the story of Jewish émigrés in Kemalist, Turkey, a largely overlooked episode of the Nazi era in world history.

The golden age of German surgery

Many details of Nissen's life come from a biography written by Dorothea Liebermann-Meffert, professor of surgery at the Technical University of Munich, who had access to his papers and memoirs written in German.[1] Nissen was born in Neisse (now called Nysa), a modest-sized town in the historical region of Silésia, then a part of Germany and now in southwestern Poland. Even though his family was Jewish, he received a disciplined Prussian education at the Catholic Gymnasium.[1]

Nissen's future vocation in academic surgery seemed preordained. His father, Franz Nissen, was chief of surgery at the town hospital, where he and his family lived on the first floor of the clinic. "My entire conscious life," the younger Nissen said, "took place in the vicinity of patients and the emanation of operation theaters."[1]

The modest hospital in Neisse was blessed with a superbly trained surgeon in the elder Nissen. Educated in an era of German preeminence in surgery and science, Franz worked under some of the foremost figures of German medical science and surgery including Carl Flügge, Emil von Behring, Johann von Mikulicz-Radecki, and Ernst von Bergmann.[1-3]

After receiving his qualification from the Gymnasium in 1913, Rudolph studied medicine in Breslau and Munich. With the onset of World War I he was conscripted into the German Army as a medical officer. Stationed on the Western Front, he treated soldiers injured during the conflict's heaviest battles. "Many of his friends lost their lives in the conflict," wrote Liebermann-Meffert. "The war made a convinced pacifist of the young military physician."[1]

A promising career during the Weimar Republic

The collapse of the German economy under the Weimar Republic limited Nissen's opportunities for further training. At the end of WWI, Nissen returned to Breslau, just 60 miles away from his family in Neisse, to complete his doctorate in medicine. He wanted to follow his father's example and stay in Breslau to train with Mikulicz-Radecki. With no training position available he spent six months in medicine in Breslau and a year in pathology in Freiburg as he waited for a vacancy in surgery.

With the encouragement of his father, in 1921 Nissen accepted a volunteer position in the department of surgery in Munich under its newly-appointed professor, Ferdinand Sauerbruch, a pioneer in thoracic surgery.[4] Sauerbruch's personality fit the exalted position of professor, with a demeanor described as "fearsome," a "martinet," and having "many of desirable as well as well as several of the undesirable features of a *geheimrat,*"[5] the term traditionally given to the most eminent professors of German universities.

By contrast Nissen was a "shy, hard-working volunteer" at the lowest rungs of the department.[1] To cultivate a good relationship with the *geheimrat* he understood that "there was an unwritten law that new arrivals among the young surgeons should acquaint themselves with the scientific work of their chief."[6] Nissen's academic productivity impressed Sauerbruch, with two publications in his first year in Munich, and four the following year. Duly impressed, Sauerbruch gave Nissen an appointment as assistant. When Nissen reached the rank of associate, in 1926, his resumé had 14 published articles on all areas of clinical surgery, including thoracic surgery, his boss's area of expertise.[1]

When Sauerbruch was named chair of surgery at the Charité in Berlin in 1927, he took his protégé with him as a lecturer. In just three years, Nissen rose to the rank of professor at the age of 34 years on the basis of his international reputation. By 1933, he was on a short list for major positions in German surgery, including the chair at the Ruprecht Karl University Hospital in Heidelberg.[1]

Nissen built a reputation as a bold and innovative surgeon. He was the first Western surgeon to successfully perform a pneumonectomy, reporting the case in 1931, two years before Cameron Haight (ΑΩΑ, University of Michigan Medical School, 1942) at the University of Michigan and Evarts Graham (ΑΩΑ, Washington University School of Medicine in St. Louis, 1922) at Barnes Hospital published their cases in American literature.[7] In 1933, he described total colectomy with ileoanal anastomosis with preservation of the anal sphincter for familial polyposis in the proceedings of the Berlin Surgical Society,[8] 10 years before Owen Wangensteen (ΑΩΑ, University of Minnesota Medical School, 1921) in Minneapolis reported a similar operation in 1943,[9] Mark Ravitch (ΑΩΑ, The Johns Hopkins University School of Medicine, 1950, Alumni) in 1945[10] and more than 40 years before Lester Martin (ΑΩΑ, University of Cincinnati College of Medicine, 1979) at the Cincinnati Children's Hospital established the modern version of the procedure in 1977.[11]

A Jewish surgeon during the Nazi boycott of 1933

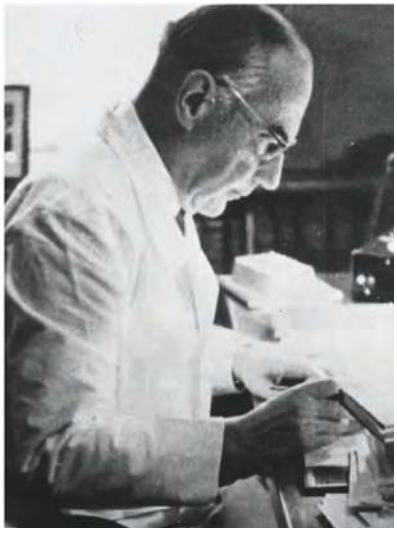
Nissen's rapid academic advancement coincided with Hitler's rise to power from his failed Beer Hall Putsch (1923) to his appointment as chancellor in 1933. What started with mob attacks on Jews on the streets became a government-sanctioned boycott against Jewish businesses and professionals on April 1, 1933, just three months after the Nazis came into power in January. Stationed in front of Jewish stores and offices, Storm Troopers intimidated anyone from entering and doing business.

At the Charité the regulations called for all Jewish surgeons and physicians to be fired, all Jewish inpatients immediately discharged, and the prohibition of Jews as surgical patients.[12] Sauerbruch used his connections with the Nazi hierarchy to get an exception for Nissen. In deference to Sauerbruch's standing and Nissen's service during World War I, Joseph Goebbels, then head of the Nazi party in Berlin, agreed to allow Nissen to keep his position at the Charité.[1] Nissen admitted to being "scared to death."[1]

Ilan Maizlin, a chief resident at the New York Presbyterian-Queens department of surgery, quoted Nissen's memoirs:

> Neither my oath as a physician, nor my understanding of what is right, would allow me to benefit from the guiltless persecution of my colleagues, let alone from limiting of surgical care to those that require it most.[12]

Nissen felt his only option was to resign. No longer safe in Germany, Nissen moved his family to Bolzano, Italy, under the ruse of a vacation in the Italian Alps. On the day of his arrival, and relieved that he was "at some distance from Berlin and things are outwardly calmer and [he could] take a broader view of recent events," he wrote a letter of resignation to Sauerbruch.[1] It was dated April 2, the day after the institution of the boycott and addressed to "*Sehr verehrter, lieber Herr Geheimrat* (My very dear professor)."[1] While expressing gratitude and loyalty to his chief, he could not trust the latter's assurances for his safety if he remained in Berlin. "Such concessions that they did make were made out of respect for you and not for me," he wrote.[1] He was unambiguous about why he was resigning.



Rudolph Nissen, circa 1940. No known copyright

"Since the Jew-boycott, one of the most shameful enactments to besmirch this century, one's attitude has had to change. In the face of this despicable insult to one's personal sense of honor everything else pales into insignificance…."

"My relationship to my former colleagues is now inevitably determined by my own sense of self-respect. I have no choice but to place myself outside the circle within which I was up to now an active member."

"There is a certain tragic irony in the fact that I have to take this decision at the moment when, according to the old rules, I seemed to be professionally established. Any other course would, however, involve jettisoning a man's most precious possession—his pride…."

"I have no illusions about the implications of my decision. I am severing my links with a team of colleagues who gave me not just the opportunity for constantly higher achievement but also for personal development as a human being—and so, in effect, my life its whole purpose."[1]

Nissen thanked Sauerbruch for his mentorship, but his closing sentence was terse. "I cannot, of course, remain in Germany."[1]

The diaspora of German Jewish scientists to Turkey

Nissen's fate became tied to another world figure, Kemal Atatürk, the president of Turkey after the collapse of the Ottoman Empire following World War I and its leader in its war of independence (1919–1923). Atatürk hoped to transform his country from a medieval theocracy to a modern, secular republic through political, economic, and cultural reforms patterned after Western institutions.[13]

A key target was science and higher education. "Modern Western civilization is, in essence, not so much classical and Christian, as scientific," wrote Bernard Lewis, the eminent historian of the Middle East.[13] The fledgling Turkish republic did not possess a scientific mentality. While facts can be taught, the lifeblood of a modern state was the achievements of its trained scientists.

With the expulsion of German Jewish scientists, the timing for Atatürk could not have been better. His administration gave refuge to more than 100 German academic émigrés, and placed them in as heads of departments of science and medicine at the University of Istanbul, the sole institution of higher learning in the country.[14] When Nissen arrived, he found facilities and a faculty far inferior to those he had at the Charité. The annual number of surgical operations performed at the university was 190. By the end of his first year as chief, in 1933, Nissen's department performed 1,500 surgeries.[15]

However, Nissen and colleagues never mastered the Turkish language required of them. When Atatürk died in 1938, his successor Mustafa Inönü navigated an uneasy neutrality when World War II began in Europe in 1939. Corinna Guttstadt, a historian at the University of Hamburg, characterized the Turkish position as a "one-sided neutrality" in favor of the Nazis early in the conflict, supplying Germany with chromium ore necessary for its military industry, allowing the *Kriegsmarine* free passage through its straits, and cooperating with the *Gestapo* in its surveillance of German Jews living in the country.[16]

The Kemalist goal of establishing a national identify led to measures to force assimilation and limit the

rights, property, and movement within the country of non-Muslim and non-Turkish minorities, including Jews. Governmental decrees prevented Jewish immigration. Worse, the government threatened to expel those who had their German citizenship revoked, making them subject to deportation back to Germany for trial under the Nazis.[16]

The non-Jewish German community in Istanbul sided with the Nazis, further isolating the Jewish refugees.[14] The Nissens were criticized for having had their first child born outside the Reich in England. They did not want to risk their second to be born within reach of the Nazis.

In a reprise of the ruse by which he took his family out of Germany, in early summer 1939 Nissen received permission for a speaking tour of the United States. He took his family with him. Still in America on September 1 when Hitler invaded Poland, they never returned to Turkey.[1]

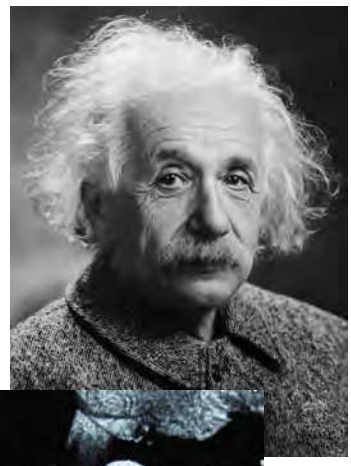
Despite his limited six-year stay in Turkey and the cloudy circumstances of his departure, Nissen left Istanbul with a solid legacy and reputation. He published four textbooks in Turkish and German (required under the terms of his contract), and 62 scientific papers in the Turkish medical literature. Nissen established an academic department of surgery characterized by learning and research. Hanzade Doğan of the department of medical history and ethics at Istanbul University wrote:

> As a result of the presence of the refugee scientists, the Turkish University Reform had achieved its goal—to reach the scientific level of Europe. Although the foreign scientists barely knew Turkish, their input was enormous—the knowledge they transmitted, the research they conducted and the scientific atmosphere they instilled. These refugee professors successfully trained thousands of Turkish students.[15]

America

Living in America with a family of two children, limited mastery in English, and no license to practice surgery, he had to search for a job at the age of 44 years. Through the efforts of Siegfried Thannhauser (AΩA, Tufts University School of Medicine, 1950), professor of medicine at Tufts University and also a Jewish expatriate, Edward Churchill (AΩA, Harvard Medical School, 1919), chair of surgery at the Massachusetts General Hospital, gave Nissen a research position in his department at the Harvard Medical School. Once resettled, Nissen learned enough English to pass the examinations for a medical license in New York.

He built a thriving private practice in Manhattan, especially among the thousands of European immigrants flooding the city. In 1941, Leo Davidoff (AΩA, Harvard Medical School, 1922), a prominent neurosurgeon, persuaded the Maimonides Hospital and Jewish Hospital in Brooklyn to appoint Nissen as chief of surgery at both facilities. In 1944, he was appointed assistant professor at the Long Island College of Medicine (now SUNY Downstate), which partially satisfied his desire to teach medical students and train residents. That same year he and his family became naturalized American citizens, no longer stateless as they had been since their flight from Berlin two decades before.[1]



Top: Portrait of Albert Einstein circa 1939. No copyright or restrictions known; **Lower: Abdominal aortic aneurysm. Milorad Dimic, MD, Nis, Srbia, 2009.** Creative Commons

In December 1948, a frail Albert Einstein was admitted to the Jewish Hospital in Brooklyn with vomiting and abdominal pain from what was thought to be a peptic ulcer but instead a 10-centimeter abdominal aortic aneurysm was found. There were no effective surgical options, which would come the following decade with aneurysmectomy with aortic replacement surgery by Charles Dubost in 1952, and Michael DeBakey (AΩA, Tulane School of Medicine, 1931) in 1958. Knowing that rupture would soon occur, Nissen sought to temporize by covering the anterior two-thirds of the abdominal aorta with cellophane to create an inflammatory rind to bolster the vessel wall and forestall its rupture. The arrangement lasted nearly seven years until the vessel wall finally gave way and Einstein died of a ruptured aneurysm in 1955.[17]

After Nissen's operation Einstein did well and was discharged from the hospital three weeks later. The physicist kept a supply of prints of an old snapshot of himself sticking his tongue out at a bevy of reporters that had pestered

him after a celebration of his 72nd birthday. He signed one of the iconic images and sent it to the surgeon. "To Nissen my tummy," he wrote, "to the world my tongue."[18]

Return to Europe

At the end of the war several German universities approached Nissen and offered him their chairs of surgery to restore their academic programs. Unable to look past Nazi sympathizers still on faculties in German academia, he turned them all down. In 1948 Nissen wrote a letter refusing an offer as professor and surgeon-in-chief at the University of Hamburg:

> The duty to which you call me is a very great one in the current state of things. In order to carry it out, the unreserved cooperation of assistants and students is essential. For my part, an unbiased and unrestricted commitment is also necessary…I doubt whether the same might be provided by the students, who were exposed to the poison of Naziism for over a decade during their most impressionable period of development.[19]

In 1952, at the age of 56 years, Nissen accepted a position as director of surgery at the University of Basel. Nissen was ready to step back from his busy clinical practice in three hospitals, and Basel gave him a more scholarly position where he could practice and teach in his native language, which would allow him the opportunity to express his ideas more fully than he could in English.[1]

Daniel Fults, a neurosurgeon in Salt Lake City, wrote that Nissen brought American ideas to his new position in Europe. Using the American academic model of departments by clinical specialty he brought surgeons with specialty training onto his faculty at the University Hospital of Basel. Nissen asked his Swiss colleagues for candidates in neurosurgery. The chief of neurology suggested that one of his assistants, who had some surgical training, could handle the small cases while more complicated cases could be referred to a hospital in a larger city. Nissen refused, instead hiring a fully trained neurosurgeon. "I could not help myself from remarking," Nissen later wrote, "that there were perhaps 'small neurosurgeons' but no 'small neurosurgery.'" [19]

Nissen also instituted a department of anesthesiology, a discipline in which he believed Europe lagged behind America. He felt that advances in surgery depended on anesthesiologists trained in pharmacology and physiology who were focused on the patient during operations.

Fults wrote that Nissen imported the American model of bedside teaching that he saw during his time in New York, replacing the "entrenched European tradition of endless didactic lectures." [19] Nissen sought to train clinician-scientists who used scientific methods to solve clinical problems, an attitude that foreshadowed evidence-based medical practice. Central to decision-making was the definition of sound clinical indications before recommending surgery, and not to dally once the indications were clear. Nissen wrote, "I believe that more misfortune arises through omission or hesitation in urgent surgery than through operative complications." [19]

In 1953, just one year after his return to Europe, Nissen was offered the chair of surgery at the Medical University of Vienna, the prestigious professorship once held by Theodor Billroth. He turned down the offer and remained at Basel until his retirement at the age of 71 years. He kept a modest private practice for several years before he retired completely. Nissen died in 1981, when he was 84-years-old.[1]

Innovation in exile

Nissen devised his fundoplication procedure in a stepwise progression at each station of his expatriation, a story that he retold in an invited article published in 1970.[6]

In 1937, in Istanbul a 28-year-old man had a bleeding ulcer of the distal esophagus that had penetrated into the diaphragm. Nissen resected the esophagus and cardia and made an anastomosis between the remaining esophagus and the fundus. To reinforce the closure, he invaginated the distal esophageal stump into the fundus, which he then wrapped around the bottom of the esophagus.

Sixteen years later, a relative of the patient gave Nissen an update on his patient's status. Doing well, the man was free from the disabling symptoms of reflux that had contributed to his ulcer.

In 1947, in New York, Nissen saw a 67-year-old man with severe chest pain and dyspnea from a paraesophageal hernia and gastric volvulus in the chest. Nissen judged that he was too frail to withstand a thoracotomy, then the standard approach for the condition. Instead, he used an abdominal incision to reduce the stomach from below the diaphragm. Impressed with the ease of the operation and the patient's prompt and complete recovery Nissen made the abdominal exposure his preferred approach to the esophageal hiatus when it came time to do the first fundoplication.

In 1955, in Basel, Nissen saw a woman with symptoms of severe esophageal reflux but without a detectable hiatal hernia on her radiographs. Nissen remembered

the procedure that he did in Istanbul two decades earlier and did the first fundoplication for reflux disease from an abdominal approach. Soon after, he did another fundoplication on a man who had the same symptoms, again without a hiatal hernia. In both cases the symptoms resolved after surgery.

The Nissen fundoplication was rapidly adopted worldwide in the 1970s. Advanced optics and the development of laparoscopic instruments in the late 1980s and 1990s made the procedure especially amenable to laparoscopic surgery. The Nissen fundoplication became one of the most commonly performed procedures of modern minimally invasive surgery.[20]

Life post-war

After their estrangement the fortunes of Nissen and his mentor Ferdinand Sauerbruch mirrored the divergent fates of their countries. Sauerburch stayed in Nazi Germany and experienced the full range of its rise and fall, from serving as surgeon general of the Reich at its apex to operating in a bombed-out bunker at the Charité in the last days of the WWII.

His conduct during Nazi rule was sufficiently ambiguous to save his life during the postwar war crime tribunals. He had never joined the Nazi party and had opposed a euthanasia program of the mentally and physically handicapped. However, he was head of the Reich Research Council responsible for the approval of human experimentation in the concentration camps. Still professor of surgery at the Charité after the war, his increasingly addled behavior during operations forced his retirement in 1949 at the age of 74 years. He died in 1951.[6]

Nissen was part of the diaspora of German Jewish scientists and intellectuals who escaped Nazi Germany. Their scientific and intellectual achievements transformed the world.

While his accomplishments are less fundamental than nuclear physics and rocketry, Nissen's standing in surgery is reflected by the fact that his fundoplication procedure is among a handful of modern operations known best by its eponym, alongside great names as Billroth, Bassini, Mikulicz, and Whipple.

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