

# Christian Albert Theodor Billroth: Founder of Abdominal Surgery



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The legendary abdominal surgeon — Christian Albert Theodor Billroth — was born April 26, 1829, in Bergen on the island of Rügen, Prussia. His father was a Lutheran minister who died of dysentery when Theodor was 5 years old. His mother, daughter of a Berlin Chancellor of the Exchequer, moved to Greifswald to join her family after her husband's death. It was said that Theodor was “not quick-witted and spoke slowly.” He required tutoring to graduate from Gymnasium (German secondary school) because he had difficulty understanding languages and mathematics. His mother encouraged him to study medicine mainly for financial reasons. He was an excellent pianist and actually accompanied the famous soprano, Jenny Lind, during at least 2 of her concerts. Two of Theodor's grandparents were professional opera singers.

His Professor of Medicine, Dr. Baum, moved from Greifswald to the University of Göttingen, where young Billroth followed and studied microscopy. He subsequently spent time in Trieste studying the nerves of the torpedo fish. Billroth then moved to the University of Berlin, where he studied under Bernhard von Langenbeck and completed his last year of medical school in 1852. His doctoral thesis was a dissertation on pulmonary infections. He subsequently worked in the eye clinic of the famous Albrecht von Graefe and took courses in dermatology from Professor von Hebra. Billroth attempted to become a general practitioner in Berlin but was unsuccessful.

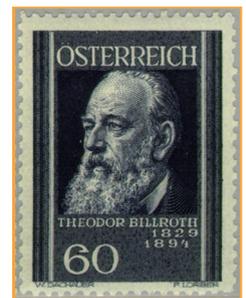
He was subsequently appointed as assistant to von Langenbeck in the surgical clinic in Berlin Charite Hospital at the University of Berlin. Billroth published several papers on pathological anatomy and histology. He married Christine Michaelis, the daughter of a court physician, in 1858, and had three surviving daughters.

He applied for the Chair of Pathology at the Berlin Charite Hospital but Rudolf Virchow was selected instead. Billroth then decided to pursue surgery and was appointed Professor of Surgery at the University of Zurich in 1860 at the age of 31 years. During his 7 years in Switzerland, he studied wound infections and advised regular temperature measurements on postoperative patients. He named the genus streptococcus and studied the antimicrobial effect of the penicillium fungus. He wrote a very successful textbook on general surgical pathology and therapy that went through 16 editions and was translated into 10 languages. He served as a music reporter for a newspaper in Zurich and was noted for his “caustic pen.” It was in Zurich where he met the young composer, Johannes Brahms, who became a close lifetime friend along with the famed music critic, Eduard Hanslick.

In 1867, Billroth was appointed Chair of the Department of Surgery at the University of Vienna by Emperor Franz Joseph I. Billroth performed the first successful esophagectomy in 1872 and the following year did the first total laryngectomy. He was the first surgeon to perform a subtotal colectomy. He also carried out the first successful partial gastrectomy in 1881, in which he removed a carcinoma of the jejunum and connected the stomach to the duodenum (Billroth I procedure). Unfortunately, the patient died of metastases four months later, but the surgery was a considered a success. Subsequently, he successfully attached the partially resected stomach of another patient to the jejunum (Billroth II procedure).

It must be emphasized that Billroth published both positive and negative outcomes of his surgical experiences. He also introduced statistics to surgery as well as the surgical audit emphasizing both the good and poor outcomes

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of his patients. He was easily the most innovative surgeon of his time. He stressed the need for longer apprenticeships in surgery more than a decade before William S. Halsted introduced the residency program for surgery at Johns Hopkins University in Baltimore.

He was an accomplished pianist and while in Zurich had taken viola lessons daily from 5-6 a.m. He frequently had dinner with Brahms and Hanslick and wrote papers until

late at night. Apparently he had a lesser need for sleep than most people.

He ate and drank heavily and had a habit of smoking black cigars. He developed pneumonia in 1887, and then was troubled with shortness of breath. This led to severe congestive heart failure. He died February 6, 1894, at the age of 65 years. He was honored by Austria (Scott# B163) in a set of stamps of famous Austrian physicians issued in 1937.