

# Ignaz Semmelweis

GERMAN-HUNGARIAN PHYSICIAN

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**Alternative Titles:** Ignác Fülöp Semmelweis, Ignaz Philipp Semmelweis

**Ignaz Semmelweis**, in full **Ignaz Philipp Semmelweis** or **Hungarian Ignác Fülöp Semmelweis**, (born July 1, 1818, Buda, [Hungary](#), Austrian Empire [now [Budapest](#), Hungary]—died [August 13, 1865](#), [Vienna](#), Austria), German Hungarian physician who discovered the cause of puerperal (childbed) fever and introduced [antiseptics](#) into [medical practice](#).

Educated at the universities of Pest and Vienna, Semmelweis received his [doctor's degree](#) from Vienna in 1844 and was appointed assistant at the [obstetric](#) clinic in Vienna. He soon became involved in the problem of [puerperal](#) infection, the scourge of maternity hospitals throughout Europe. Although most women delivered at home, those who had to seek hospitalization because of poverty, illegitimacy, or obstetrical complications faced mortality rates ranging as high as 25–30 percent. Some thought that the infection was induced by overcrowding, poor ventilation, the onset of lactation, or miasma. Semmelweis proceeded to investigate its cause over the strong objections of his chief, who, like other continental physicians, had [reconciled](#) himself to the idea that the [disease](#) was unpreventable.

Semmelweis observed that, among women in the first division of the clinic, the [death rate](#) from [childbed fever](#) was two or three times as high as among those in the second division, although the two divisions were identical with the exception that students were taught in the first and midwives in the second. He put forward the thesis that perhaps the students carried something to the patients they examined during [labour](#). The death of a friend from a wound infection incurred during the examination of a woman who died of puerperal [infection](#) and the similarity of the findings in the two cases gave support to his reasoning. He concluded that students who came directly from the dissecting room to the maternity ward carried the infection from mothers who had died of the disease to healthy mothers. He ordered the students to wash their hands in a solution of chlorinated lime before each examination.

Under these procedures, the mortality rates in the first division dropped from 18.27 to 1.27 percent, and in March and August of 1848 no woman died in childbirth in his division. The younger medical men in Vienna recognized the significance of Semmelweis' discovery and gave him all possible assistance. His superior, on the other hand, was critical—not because he wanted to oppose him but because he failed to understand him.

In the year 1848 a liberal political revolution swept Europe, and Semmelweis took part in the events in Vienna. After the revolution had been put down, Semmelweis found that his political activities had increased the obstacles to his professional work. In 1849 he was dropped from his post at the clinic. He then applied for a teaching post at the university in [midwifery](#) but was turned down. Soon after that, he gave a successful lecture at the Medical Society of Vienna entitled "The Origin of Puerperal Fever." At the same time, he applied once more for the teaching post, but, although he received it, there were restrictions attached to it that he considered humiliating. He left Vienna and returned to Pest in 1850.

He worked for the next six years at the St. Rochus Hospital in Pest. An [epidemic](#) of puerperal fever had broken out in the obstetrics department, and, at his request, Semmelweis was put in charge of the department. His measures promptly reduced the mortality rate, and in his years there it averaged only 0.85 percent. In Prague and Vienna, meantime, the rate was still from 10 to 15 percent.

In 1855 he was appointed professor of obstetrics at the University of Pest. He married, had five children, and developed his private practice. His ideas were accepted in Hungary, and the government addressed a circular to all district authorities ordering the introduction of the prophylactic methods of Semmelweis. In 1857 he declined the chair of obstetrics at the University of Zürich. Vienna remained hostile toward him, and the editor of the *Wiener Medizinische Wochenschrift* wrote that it was time to stop the nonsense about the chlorine hand wash.

In 1861 Semmelweis published his principal work, *Die Ätiologie, der Begriff und die Prophylaxis des Kindbettfiebers* (*The Etiology, Concept, and Prophylaxis of Childbed Fever*). He sent it to all the prominent obstetricians and medical societies abroad, but the general reaction was adverse. The weight of authority stood against his teachings. He addressed several open letters to professors of medicine in other countries, but to little effect. At a conference of German physicians and natural scientists, most of the speakers—including the pathologist Rudolf Virchow—rejected his doctrine. The years of controversy gradually undermined his spirit. In 1865 he suffered a breakdown and was taken to a mental hospital, where he died. Ironically, his illness and death were caused by the infection of a wound on his right hand, apparently the result of an operation he had performed before being taken ill. He died of the same disease against which he had struggled all his professional life.

Semmelweis' doctrine was subsequently accepted by medical [science](#). His influence on the development of knowledge and control of infection was hailed by [Joseph Lister](#), the father of modern antiseptics: "I think with the greatest admiration of him and his achievement and it fills me with joy that at last he is given the respect due to him."

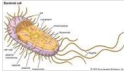
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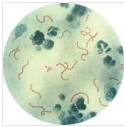
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- association with Rokitansky
  - (In [Karl, baron von Rokitansky](#))
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