

Twilight Sleep ^[1]

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Twilight Sleep (*Dammerschlaf*) was a form of childbirth first used in the early twentieth century in Germany in which drugs caused women in labor to enter a state of sleep prior to giving birth and awake from childbirth with no recollection of the procedure. Prior to the early twentieth century, childbirth was performed at home and women did not have anesthetics to alleviate the pain of childbirth. In 1906, obstetricians Bernhardt Kronig and Karl Gauss developed the twilight sleep method to relieve the pain of childbirth using a combination of the drugs scopolamine and morphine. Twilight sleep contributed to changing childbirth from an at home process to a hospital procedure and increased the use of anesthetics in obstetrics.

By the 1860s, women began requesting anesthesia during childbirth, but physicians at the time did not have much evidence on the benefits. As a result, physicians began to research possible anesthetic drugs that could be used during childbirth. In 1902 Richard von Steinbüchel, an Austrian physician, recommended the use of scopolamine, a drug that caused patients to enter a semi-conscious state and experience amnesia, or the inability to recall events. Steinbüchel conducted research on the combination of morphine, a narcotic pain reliever, and scopolamine to determine the efficacy of the drug mixture as a general birth anesthetic. According to Gilbert Geis, author of *In Scopolamine Veritas*, Steinbüchel sought to reduce the pain of childbirth without rendering the pregnant woman completely unconscious. Historians came to refer the mental state produced by the combination of morphine and scopolamine during childbirth as twilight sleep.

In the early twentieth century, Bernhardt Kronig and Karl Gauss continued Steinbüchel's research and further examined the combination of morphine and scopolamine as an anesthetic during childbirth. While researching scopolamine, Kronig and Gauss recorded the preferred dosage to create a sedated state as well as the problematic side effects that were associated with the drug. Kronig and Gauss noted that many women in twilight sleep exhibited slowed pulse, decreased respiration, and delirium. After their research, Kronig and Gauss presented their findings.

In 1906, Kronig and Gauss presented their research on the effects of scopolamine at the National Obstetrics Conference in Berlin, Germany. Their findings showed that using scopolamine resulted in fewer complications during childbirth and a faster recovery. At the conference, Kronig and Gauss received skepticism from other physicians. Despite opposition from other physicians, Kronig and Gauss continued their research and began publishing their results. After the conference, many wealthy German women started to travel to Freiburg, Germany, where Kronig and Gauss worked, to undergo twilight sleep during childbirth. According to physician and historian Mark Sloan, twilight sleep was a popular choice among pregnant women because it provided painless childbirth. Eventually, a team of physicians from Berlin investigated twilight sleep during delivery. According to Sloan, the research trials were poorly designed. From those research trials, twilight sleep was deemed unsafe because it showed no positive effects. Despite the results of the research trial, Kronig and Gauss continued their work on twilight sleep.

By 1907, Gauss used twilight sleep with all his pregnant patients. At the Women's Clinic of the State University of Baden in Baden, Germany, Gauss began the process of twilight sleep once a woman first experienced labor pain. First, he injected the laboring woman with a mixture of morphine and scopolamine. The ratio of scopolamine to morphine in the mixture depended on the person. After he gave the first injection, Gauss gave subsequent injections of scopolamine only, to inhibit memory formation during labor and delivery. While scopolamine prevented memory formation, it did not prevent pain, therefore to reduce the screaming and thrashing of women during labor, Gauss placed the pregnant women in a dark room and covered their eyes with gauze. In addition, Gauss restrained the pregnant woman on a padded bed using leather straps and inserted oil-soaked cotton into her ears to eliminate the woman's hearing. Following the delivery, the woman would have no memory of the labor or delivery.

As twilight sleep's popularity grew, the Women's Clinic of the State University of Baden had the lowest maternal and neonatal death in Baden. Eventually, pregnant women from the United States began traveling to Germany to receive twilight sleep during childbirth. In 1912, a woman from the United States documented her experience delivering under twilight sleep. The woman, Cecil Stewart, visited Freiburg to give birth to her second child. According to historian Judith Walzer Leavitt, Stewart described twilight sleep as a fairy tale and ended up staying at the clinic for a month because of how much she enjoyed the clinic. As twilight sleep grew more popular, Marguerite Tracy and Constance Leupp, two editors of the *McClure's Magazine* in the United States, traveled to the Women's Clinic of the State University of Baden from New York City, New York.

Once Tracy and Leupp arrived at the women's clinic in 1913, they spent a few days observing the clinic from the outside. Then, Tracy and Leupp approached the clinic to interview staff and doctors. According to Sloan, the editors were turned away and given no reason why they were not allowed to interview the staff or the doctors. After they were refused interviews, Tracy and Leupp began asking local women about the birth experiences at the clinic. Local women gave positive feedback, commenting on the quiet birthing suites, considerate staff, and waking from a refreshing sleep after childbirth. After receiving comments from the

local women, Leupp visited secondhand bookstores and located copies of Kronig and Gauss' research papers. To translate the papers into English, Leupp hired an English translator from the local school to assist her. According to Sloan, it took Leupp several weeks to translate the research papers and, later, she understood the process of twilight sleep better than the majority of physicians. To glean more information about what happened in the hospital, Tracy and Leupp sent a pregnant woman named Mary Sumner Boyd to give birth at the clinic in 1913. In the clinic, Gauss treated Boyd with twilight sleep, though he was unaware that Boyd was sent by Tracy and was working undercover. Boyd was attended by Gauss, who was unaware that Boyd was undercover. Boyd later reported her experience to Tracy and Leupp.

In May 1914, Tracy and Leupp published an article, in which they presented twilight sleep as a medical advancement and disregarded the controversy over the use of scopolamine in obstetrics. The article also criticized the medical field for withholding information about twilight sleep from the patient. By June 1914, newspaper and magazines in America were pressing American obstetricians to follow their German colleagues and to adopt the method of twilight sleep to provide painless childbirth to women in America.

Later in 1914, the National Twilight Sleep Association or NTSA formed when twilight sleep became a form of delivery method in the United States. Boyd, who started the NTSA, reached out to influential friends to help spread how positive her twilight sleep experience was. One of the members of the NTSA was Bertha Van Hoosen, a Chicago obstetrician, who was a prominent medical advocate for twilight sleep in the United States. Hoosen used twilight sleep at Mary Thompson Hospital in Chicago, Illinois. However, later in the summer of 1915, the demand for twilight sleep started to decrease.

Twilight sleep began to decline in 1915 due to several problems. One of those problems was the complexity of performing twilight sleep accurately. The measurements of morphine and scopolamine had to be precise and the risk of overdose was high. Furthermore, the number of women seeking twilight sleep had outnumbered the number of physicians willing to provide the method of delivery. As a result, physicians began tasking untrained nurses to administer the morphine and scopolamine, which led to a high number of errors.

In addition to the other problems that contributed to the decline in twilight sleep, the death of Francis Carmody in August 1915 furthered the decrease in demand for twilight sleep. Carmody was one of the leading advocates in the United States for twilight sleep, but died giving birth to her third child with twilight sleep. According to Sloan, Carmody's husband, a lawyer in Brooklyn, New York, and doctor claimed that the death was caused by a hemorrhage and was unrelated to twilight sleep. Although twilight sleep was not the cause of death, twilight sleep decreased within fifteen months of Carmody's death.

After the demand for twilight sleep declined by 1916, physicians and researchers sought other methods of anesthesia to relieve pain for women during labor.

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