Menstrual Tampon

By: Horowitz, Rainey Keywords: menstrual hygiene management

Menstrual tampons are feminine hygiene devices, usually made of absorbent cotton, that are temporarily inserted into the vagina for absorbing a woman's blood during menstruation. In 1931, Earl Haas invented the menstrual tampon most commonly used in the twentieth century. Later, Gertrude Tendrich produced the first commercial tampon brand, Tampax, using Haas's patented design. Tendrich and Haas's tampons were made of tightly compacted absorbent cotton, shaped like a bullet, and had a string attached at the base that allowed for easy removal from the woman's body. Some tampons had a plastic or cardboard applicator, while other digital tampons could be inserted with a finger. The invention of the tampon expanded women's options for efficient menstrual flow management solutions and allowed women to continue their normal activities while being active with their partners.

Most women experience menstruation once every twenty to thirty-five days when their uterine lining sheds to prepare the organ for the support of a developing embryo. Menstrual blood leaves the uterus and is expelled from the body via the vaginal canal. Before scientists invented the menstrual tampon in the twentieth century, women across the world engaged in various menstruation hygiene and menstrual management practices. From various materials that they inserted into their vaginas to absorb menstrual blood. In ancient Rome, women made devices similar to tampons from wool, while ancient Egyptian women used vegetable fibers. Women in Africa made such devices from grass, and ancient Japanese women created similar devices from paper.

The word tampon originated from the medieval French word tampion, a stopper. Some of the earliest cotton tampons, made from a mass of cotton with a string attached, were first seen in Europe in the early to mid-twentieth century. Those tampons were used mostly as contraceptives and were thought to prevent the spread of syphilis, gonorrhea, and other venereal diseases. Tampons were first seen as useful devices for women in the 1920s, though not one of them was the potential utility of a tampon in managing menstrual flow. Up until the invention of the modern tampon in 1931, the majority of women throughout the world used various forms of menstrual pads, or pieces of cloth that were placed in a woman's underwear to absorb her menstrual blood. The menstrual pads are also called sanitary napkins. Pads are often limited a woman’s physical activity while menstruating and were considered an inconvenience by many women.

During the late 1800s, inventors created devices similar to tampons; however, it is unclear whether those devices were intended for menstrual flow management or for hygiene purposes by stopping the flow of non-menstrual vaginal discharge. In 1879 in England, The British Medical Journal published an article titled “Dr. Aveling’s Vaginal Tampon-Tube,” which describes the complex design of a tampon applicator made of glass and wood. The hollow applicator contained the tampon-like device, made of cotton and wool, and saturated with chemicals, and tied together with a string. According to historian Ashley Fitters, it is unclear if a doctor, a midwife, or the woman herself would have administered the device. Fitters notes that the success of that device is unknown.

In the early twentieth century, The Nurse’s Dictionary of Medical Terms and Nursing Treatment Compiled for the Use of Nurses defined tampons as plugs of antiseptic wool wrapped around gauze that could be inserted into the vagina and had a string to aid in removal. During the nineteenth century, doctors prescribed some women tampons to absorb non-menstrual discharge from the vagina. Tampons from the early twenty-first century occasionally contained capsules of antiseptic liquid that medical professionals broke to permeate the whole plug before inserting the tampon into the woman’s vagina. Doctors used those tampons to treat gynecological abnormalities or infections in women. Generally, nurses sewed tampons in hospitals. Usually tampons were not available for purchase outside of hospitals.

According to historian Jamie Schultz, in the 1920s, John Williamson allegedly pitched an idea for a tampon that was specifically intended to manage menstrual flow. Williamson was an employee at Kimberly-Clark, a company that manufactures and sells consumer products, including those for hygiene. According to Schultz, Williamson allegedly posed in a condom that he had stuffed with the absorbent portion of a Kotex menstrual pad. He explained his product idea to his father, a medical consultant for Kimberly-Clark, but his idea was eventually rejected.

In 1931, Earl Haas, a physician in Colorado, developed a cardboard applicator that was tampons were meant to absorb menstrual blood. He made the tampon inside the applicator from tightly bound strip of dense cotton that was approximately 0.5 inches in diameter. Haas then gave his tampon to his wife, and the tampon was named the "O.B." tampon, standing for "Ours Business." In 1945, Judith Esser-Mittag, a German gynecologist, developed a tampon that did not require an applicator, a digital tampon. Esser-Mittag's tampon was called a digital tampon because it could be inserted using one's finger, or a digit. The device was eventually named the O.B. tampon. By the 1980s, were were only meant to stay inside the body for several hours. Rely contained pellets of carboxymethyl cellulose, or CMC, a chemical which made the tampon hyper-absorbent. Japan issued legislation, Rely did not have to undergo extensive testing under the new law and was available for sale in the US.

In the 1960s, companies released novel designs for tampons and their popularity increased. Fetters notes that many of those companies gave their tampons names that emphasized the secrecy of experience sexual feelings. According to Fetters, physicians that were considered to be forward-thinkers embraced tampons and recommended them to their patients. Still, other physicians condemned the use of tampons for extended periods of time. In 1978, the Berkeley Women's Liberation Front asserted that tampons were used for religious and political reasons, claiming the tampons would rupture a young woman's hymen that marked her virginity or cause young girls to experience sexual feelings. According to Fitters, physicians who were considered to be forward-thinking embraced tampons and recommended them to their patients. Still, other physicians condemned tampons.

In the 1960s, companies released novel designs for tampons and their popularity increased. Fetters notes that many of those companies gave their tampons names that emphasized the secrecy of menstruation, and discreet concealment of a woman's menstrual period. Some of the common product names were Fibs, Lillettes, and Pursettes. During the 1970s, novel tampons containing deodorants and perfumes gained popularity, though concerns about their safety emerged when some women had allergic reactions to those tampons. In 1973, the company Playtex introduced the first plastic, dome-tipped applicator, which some women considered easier to insert than the vagina.

In the mid-1970s, Congress imposed stricter regulations on tampons made in the US. The Food, Drug, and Cosmetic Act categorized tampons as medical devices instead of cosmetics. That change required tampons to undergo more rigorous testing before being marketed to the public. Unlike cosmetics, medical devices did not need to have a list of chemical contents. As of 2018, tampon manufacturers are not required to disclose a list of ingredients, while products like mascaras and shampoo must have all ingredients listed on the label. In 1976, the commercial goods company Procter & Gamble developed a novel tampon device according to which tampons should be inserted less frequently and could potentially stay inside a woman’s body for the entire duration of the menstrual bleeding. At the time, tampons on the market were only meant to stay inside the body for several hours. Rely contained pellets of carboxymethyl cellulose, or CMC, a chemical which made the tampon hyper-absorbent. Japan banned Rely for use due to its chemical ingredients, but the US did not. Procter & Gamble began testing a small sample of Rely tampons before the new legislation passed in 1976. Because of the shifting legislation, Rely and other external tampons were available in the US, where the new law took effect.

Though Rely experienced commercial success for some time, the use of the product revealed the dangers of leaving a tampon inside the vagina for an extended period of time. In 1978, the Berkeley Women’s Health Collective accused Rely tampons of withholding information about the tampon’s composition and safety. Despite that, during The late 1970s, nearly 25 percent of tampon users were using Rely or a similar hyper-absorbent tampon. By 1980, over 100 menstruation related cases of toxic shock syndrome were reported to the US Centers for Disease Control, or CDC. Toxic shock syndrome is a bacterial infection, which involves bacteria in the body releasing dangerous toxins. The infection is predominantly caused by leaving tampons inside the vagina for too long. Toxic shock syndrome can cause fever, chills, rapid heartbeat, low blood pressure, and fluid in the body. In 1989, the CDC released a report that showed that the use of Rely and other tampons for extended use dramatically increased the risks of toxic shock syndrome. Procter & Gamble recalled Rely tampons shortly after the study was released.

By June of 1983, the CDC had received reports of over 2200 cases of toxic shock syndrome. A 1989 study by researchers Philip Tiernan and Bruce Hanna revealed a link between toxic shock syndrome and the tampon ingredients CMC, polyester, polyacrylate, and rayon. The study showed that tampons made with synthetic fibers could pose a threat of toxic shock syndrome to women who did not change their tampons often enough. Throughout the 1980s, advocacy campaigns for tampons to manufacturers recommended to women to use the minimum absorbency tampons and remove them as directed to prevent toxic shock syndrome. Following that advocacy and the findings of studies on toxic shock syndrome, tampon companies started printing warning labels on tampon boxes advertising the dangers of leaving tampons in the vagina for extended periods of time. In 1989, the US Food and Drug Administration required tampon companies to implement a system of different, labeled absorbency tampons, which different absorbencies on the tampon, so that women could leave their tampon inside. As of 2018, most menstrual tampons do not contain CMC, polyester, or polyacrylate, and some researchers have demonstrated that those chemicals amplify bacterial growth.

In the twenty-first century, the modern tampon design is generally similar across brands. The tampon itself is usually made of absorbent cotton and rayon, a synthetic fiber. The shape of the tampon is a small cylindrical string attached at the bottom. Some tampons have a disposable plastic applicator barrel that holds the tampon inside and a disposable plastic plunger that pushes the actual tampon through the applicator barrel.
out of the applicator when inserting it into the vagina[^1]. Tampons with a cardboard applicator have a similar design to those with a plastic applicator, but are considered more environmentally friendly because their cardboard applicators are biodegradable. Tampons are disposable and meant for one-time use.

To insert a tampon with a plastic or cardboard applicator, the entire applicator barrel is inserted into the vagina and until the plunger component is the only part outside of the woman’s body. The woman then applies pressure to the tampon plunger, inserting the tampon in the vaginal canal. Next, she removes the empty applicator. The tampon can remain in the body from four to eight hours, depending on the type, and some can stay in the vagina[^2] for even longer. As of 2018, tampons are generally separated based on the absorbances, or sizes. The most common names for the sizes are junior/slim/light, regular, super, super-plus, and ultra and they vary in the amount of fluid they can absorb. Women who have heavier menstrual flows can use the super, super-plus, and ultra absorbent tampons so that they do not need to remove and replace the tampons as frequently as they would with junior/slim/light or regular tampons.

Although many women have found tampons to be more convenient and comfortable alternatives to pads for managing menstruation[^3], there are some special risks associated with tampon use that do not apply to pads. When a woman leaves a tampon inside her body for longer than the recommended four to eight hours, she risks developing toxic shock syndrome. The condition can be treated by antibiotics and prevented if the woman only keeps the same tampon in her body for less than the time limit printed on the product label.

In the late 1990s, tampons received criticism from some feminist groups that accused manufacturers of selling tampons, which contained dioxin, a carcinogen, or a cancer-causing agent. In 2000, James Madison University in Harrisonburg, Virginia, hosted the first anti-tampon conference. In the late 1990s, most commercial tampon brands publicly switched from using chlorine bleaching methods that produced dioxin as a byproduct to a chlorine-free bleaching processes that did not produce dioxin. During the twenty-first century, some activists voiced concerns about the environmental impact of using tampons with plastic or synthetic applicators. As a result, tampon companies began producing more environmentally friendly tampon options. Some women began using sponges, organic cotton, and crochet tampons to manage their menstrual flow. As of 2020, it is estimated that seventy percent of US women who menstruate use tampons. Outside of the US, many women use digital tampons that do not require an applicator, although those are less common within the US.

### Sources


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### Subject

- Tampons[^1]
- Tampons--Complications[^1]
- Menstruation[^1]
- periods (menstruation)[^1]
- Menses[^1]
- Menstrual cycle[^1]
- digital tampon[^1]

### Topic

- Technologies[^2]

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- The Embryo Project at Arizona State University, 1711 South Rural Road, Tempe Arizona 85287, United States

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