Menstrual Tampon [1]

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Menstrual tampons are feminine hygiene devices, usually made of absorbent cotton, that are temporarily inserted into the vagina [3] for absorbing a woman’s blood during menstruation [5]. In 1931, Earl Haas invented the menstrual tampon most commonly used in the twenty-first century. Later, Gertrude Tendrich produced the first commercial tampon brand, Tampax, using Haas’s patented design. Tendrich and Haas’s tampon was made of 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 be more physically active while menstruating.

Most women experience menstruation [4] once every twenty-eight to thirty-five days when their uterine lining sheds to prepare the organ for support of a developing embryo. Menstrual blood leaves the uterus [1] and is expelled from the body via the vagina. Before scientists invented the commercial menstrual tampon in the twentieth century, women across the world fashioned devices similar to tampons 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 Indonesian 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, or a cloth stopper. Some of the earliest cotton tampons, made from a mass of cotton with a string attached, were first seen in Europe in the eighteenth and nineteenth centuries. Those tampons were used primarily in parts of the US as a contraceptive device, entering a woman’s reproductive tract to block the egg [1]. In 1880, Paul Mundé, a doctor in the US, described eight distinct uses of a tampon in the vagina [4], 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 used some form 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 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. Avelling’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, saturated with chemicals, and tied together with a string. According to historian Ashley Fetters, it is unclear if a doctor, a midwife, or the woman herself would have administered the device. Fetters 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 surrounded by gauze that could be inserted into the vagina [6] and have a string to aid in removal. During the nineteen centuries, doctors prescribed some women tampons to absorb non-menstrual discharge from the vagina [4]. Tampons from the early twentieth 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 [4]. Doctors used those tampons to treat gynecological infections or abnormalities in women. Generally, nurses sewed the 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 holes 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 tampon applicator device that was meant to absorb menstrual blood. He made the tampon inside the applicator from tightly bound strip of dense cotton that was attached to a string for easy removal. According to Fetters, a female friend had shared with Haas that she inserted a sponge into her vagina [4] to manage her menstrual flow, and he decided to invent a disposable device to replace the bulky menstrual pads that women commonly used during the early twentieth century.

According to Fetters, during the 1930s there was common social discomfort with the idea of women touching themselves at all near their vagina [4]. At the time, many people, including physicians, believed that women touching their reproductive organs during tampon use would cause them to sexually pleasure themselves or break the hymen. The hymen is a membrane of tissue located at the opening of the vagina [3] that many people associate with a woman’s virginity. At the time, in the US and many other parts of the world, a woman’s virginity was considered sacred and kept the woman morally pure before marriage. According to Sierra Vostal, author of Under Wraps: A History Of Menstrual Hygiene Technology, some people considered the use of tampons to render a woman impure and thus some groups discouraged it. According to Fetters, tampons were designed as a tampon that could be inserted into the vagina [4] without the woman having to touch her sex organs directly. He modeled the applicator after telescope tubes, with one smaller tube fitting inside the other, bigger tube.

According to Fetters, in the 1930s tampons were still considered experimental devices. By 1934, 20% of women in the US and 80% of women in England reported that they had used tampons at least once. By 1950, 70% of women in the US and 90% of women in England reported that they had at least tried tampons. Tampons in the United States were not considered a reliable replacement for sanitary napkins, which were considered more reliable and comfortable. However, tampons began to spread in popularity as women became more active and less confined to the home. By June of 1983, the CDC had received reports of over 2200 cases of toxic shock syndrome. A 1989 study by researchers Philip Tierno and Bruce Hanna revealed a link between toxic shock syndrome and tampons made with synthetic fibers. In 1989, the CDC released a study that indicated that tampons made with synthetic fibers could pose a threat of toxic shock syndrome to women who did not change their tampons within the suggested time period. Throughout the 1980s, reproductive health advocates campaigned for tampons to recommend women to use the minimum absorbency tampons and change them at the recommended interval.
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 bullet with a 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 out of the applicator when inserting it into the vagina. 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 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 for even longer. As of 2018, tampons are generally separated based on the absorbencies, 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, 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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