

Information on Menstrual Period Products in the United States

[Over a quarter of the world's population](#) is of reproductive age, with [over 300 million people globally menstruating \("on their period"\) each day](#). Education on menstrual health and hygiene is important to help people make well-informed choices based on their needs and preferences.

In 2020, people spent approximately [\\$37 billion](#) on menstrual products globally. This accounts for both single-use and reusable menstrual products. While the majority are using single-use menstrual products (such as pads and tampons), reusable products (such as period cups and underwear) are starting to become more popular. You can choose your preferred menstrual product(s) by weighing the pros and cons as they relate to cost, health and safety, comfort and satisfaction, and environmental impacts.

Cost

The Comparison of Menstrual Period Products in the United States table below provides an estimate of how much a person spends, on average, for each product. Reusable products cost more upfront than disposable products. However, they end up saving you money in about a year or so, compared to disposable products.

Health and safety

Dioxin: Dioxins are toxic chemical pollutants found in the environment, such as in the soil and food chain. Dioxin can be formed through the bleaching process, including while making tampons and pads. However, the amount of dioxin in these products is very low today as manufacturers have modified their bleaching process. [Studies](#) show that dioxin levels in tampons sampled are well below the Food and Drug Administration's standard for exposure. Period cups do not contain dioxin; neither do reusable period underwear, but do check that these are free from [chemicals known as PFAS](#).

Toxic Shock Syndrome (TSS): TSS is a life-threatening illness related to a toxin made by certain bacteria. [TSS occurs in roughly one in 100,000 menstruating people](#) in the United States. It is associated with high-absorbency tampon use. Fortunately, the number of TSS cases related to tampons has declined given the changes in how tampons are now made. There have been rare reports of TSS with period cup use. TSS can be avoided by changing tampons and period cups regularly. Never leave them in for [longer than recommended](#).

Comfort and satisfaction

Some people have difficulty inserting a tampon or period cup into the vagina, but most are fine with some practice, whether or not they have had sex before. [In one randomized study](#), overall satisfaction was lower in the cup-user group compared to the tampon-use group after one month, but then higher at month two and three. At the end of the study (month three), cup-users ranked their satisfaction related to wear, leakage, insertion, convenience and comfort all higher than tampon-users, but lower related to removal. Meanwhile, over 90% of users said they would continue to use the cup and recommend it to others.

Reusable underwear is available in variable absorbencies and styles. They can be used alone, or in combination with cups or tampons in place of disposable panty liners. Reusable pads are also available, though they are less widely used than other products in the United States.

Environmental impacts

The environmental impact of menstrual products can be estimated by looking at Life Cycle Assessments (LCAs). This is a tool that looks at several categories for the entire life of the product—from the use of natural resources to greenhouse gas emissions (the major contributor to global warming and climate change). [One study](#) estimated that reusable menstrual cups have 34% less greenhouse gas emissions than disposable tampons and pads after one year. Though reusable products require water to wash or sterilize, the overall environmental footprint in the United States is still significantly lower than disposable products. The main benefits of the reusable menstrual products come from reducing raw material preparation and product manufacturing, even much more than reducing landfill waste. Figure 1 below is a summary of the study's findings.

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Comparison of Menstrual Period Products in the United States

Period Product	Cost	Health and Safety	Comfort and Satisfaction	Environmental Impacts
<p>Disposable Pad A single-use absorbent material worn on underwear</p>	<p>~\$40 per year \$160 per four years</p>	<p>If dioxin is present, it is at very low levels</p>	<ul style="list-style-type: none"> • Easy to obtain and use • Less convenient for activities like swimming 	<p>Bigger impact than reusable cups</p>
<p>Disposable Tampon A single-use absorbent material inserted into the vagina</p>	<p>~\$60 per year \$240 per four years</p>	<p>If dioxin is present, it is at very low levels</p> <p>Uncommon Toxic Shock Syndrome</p>	<ul style="list-style-type: none"> • Relatively easy to use • Some have difficulty inserting it, but most can with practice 	<p>Bigger impact than reusable cups</p>
<p>Reusable Period Cup A reusable item made of medical grade silicone inserted into the vagina to collect fluid</p>	<p>\$20-40 per cup Based on three cups per person, with cups lasting four+ years: \$60-120 per year \$60-120 per 4-10 years</p>	<p>Doesn't have dioxin</p> <p>Rare Toxic Shock Syndrome</p>	<ul style="list-style-type: none"> • May take a couple periods/months to insert and remove with ease • May need to try more than one cup to find the right size • Some find it inconvenient to wash 	<p>Smaller impact than disposable products</p> <p>Requires water to wash and sterilize</p>
<p>Reusable Period Underwear A reusable absorbent underwear</p>	<p>\$10-35 per underwear</p>	<p>Doesn't have dioxin</p>	<ul style="list-style-type: none"> • Absorbency differs by brand; generally for light to medium flow • Available in different colors and styles, from thongs to athletic shorts 	<p>Smaller impact if reusable underwear used longer and disposable products used less</p> <p>Can be used in combination with tampons or cups instead of liner</p>

Figure 1. Summary of Environmental Impacts of Menstrual Products ([Hait and Powers, 2019](#))

		Products considered in study		
		Single-use pad	Tampon with applicator	Menstrual cup
Study scope	Materials	LDPE, wood pulp, paper	LDPE, PP, Rayon, polyester	Silicone
	Functional unit	One year of coverage for one woman		
	Number used	240	240	0.1 (reusable for 10 years)
	Weight [grams]	10	Approximately 5.5	Approximately 16
	Geographic region	USA		
	Life cycle stages	Cradle-to-grave		
	End of life assumptions	Landfill	Landfill	Landfill
Indicators	Resource depletion			
	Eutrophication			
	Acidification			
	Ecotoxicity			
	Human toxicity (non-cancer)			
	Human toxicity (cancer)			
	Climate change (with biogenic)			
	Climate change (without biogenic)			
Method	ILCD			
Other comments	Sensitivity analysis evaluated the influence of major assumptions, including changing the electricity from US average to Texas electricity mix, relative composition of absorbent material and with and without applicator			
Reviewed	Peer-reviewed journal			

Highest relative impact

In-between (neither highest nor lowest)

Lowest relative impact

Source: (UNEP 2021). United Nations Environment Programme (2021). Single-use menstrual products and their alternatives: Recommendations from Life Cycle Assessments.

More Resources on Period Products

- [Center for Young Women’s Health: Tampons and Pads](#)
- [Center for Young Women’s Health: Eco-friendly Period Products](#)

Additional Sources

- DeVito MJ, Schechter A. [Exposure Assessment to Dioxins from the Use of Tampons and Diapers](#). *Environmental Health Perspectives*. Jan. 2002
- Hait A, Powers SE. [The Value of Reusable Feminine Hygiene Products Evaluated by Comparative Environmental Life Cycle Assessment](#). *Resources, Conservation and Recycling*. 19 Aug. 2019
- Howard C, Rose CL, Trouton K, et al. [Flow \(Finding Lasting Options for Women\): Multicentre Randomized Controlled Trial Comparing Tampons with Menstrual Cups](#). *Can Fam Physician*. June 2011
- United Nations Environment Programme (2021). [Single-use menstrual products and their alternatives: Recommendations from Life Cycle Assessments](#).