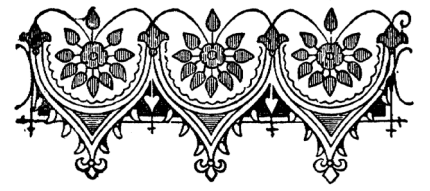


Health & Wellness



Women's Personal Care Products Becoming More Toxic



Dr. Kate Thomsen and Silky

Most reproductive aged women today do not think about potential adverse health effects of using tampons, menstrual pads or feminine care wipes and washes. Currently many young women are taking extended use hormonal contraceptive pills or IUDs to reduce or eliminate monthly bleeding and the need for these products. However, it is estimated that 70 – 85% of US women are using tampons and menstrual pads and 10 – 40% of women are using feminine douches, sprays, washes and wipes. Feminine care products used by women in the US constitute a \$3 billion dollar industry. We know there are acute health issues associated with some of these products such as allergy, rashes and skin irritation. But it is assumed that there are no serious adverse effects or long-term health effects from their use. The problem is in the assumption. First, the matter has not been sufficiently studied – actually barely studied at all. Second, there is no government agency safety testing or monitoring of these products. Third, manufacturers will constantly create a perceived need for products or effects to attain more market share.

The last time women remember (vaguely) that there was an adverse health risk from using tampons was in the early 1980s when an acute illness occurred with tampon use called Menstrual Toxic Shock Syndrome. MTSS occurred in young women with vaginal colonization of TSST-1 producing *Staphylococcus aureus* and the use of tampons made of high-absorbency carboxymethyl cellulose fibers. Vaginal infection brewed in these women, especially with wear-time per tampon of more than 6 hours or overnight use. Symptoms of fever, rash, muscle aches, and gastrointestinal complaints would either be self-limited or lead to low blood pressure, multiple organ failure and death. During the 1980s outbreak, MTSS occurred in 10/100,000 menstruating women in the US. Following removal of the high-absorbency methylcellulose tampons from the market and FDA

“guidance” for manufacturers to recommend wear-time per tampon of less than 8 hours, the incidence of MTSS decreased to 1 – 3 cases per 100,000 menstruating women. No active worldwide surveillance has been done for this infection since 1986 but a study suggested the US incidence of MTSS increased 18% from 2002 to 2003 and a similar incidence increase was reported in 2003 in France. No further investigations have been done.

The point of this review is to emphasize that tampons should not be assumed to be harmless, and that lack of regulation of a product used inside the body, in an area of sensitive and very vascular tissue, is not acceptable. Vulvar and vaginal tissues are more permeable than other skin – more vulnerable to exposure to toxic chemicals and irritants. The walls of the vagina are filled with blood and lymph vessels allowing for direct transfer of chemicals to the circulatory system.

Women's health issues have been overlooked in the past because regulators and researchers often have no lived experience of the issue. In the case of MTSS, this adverse effect of tampon use was acute infection and included 38 deaths. Hard to miss. But long term chronic inflammatory conditions, cancer, autoimmune conditions can be multifactorial and take many years of exposure(s) to develop. Is it possible that tampon use or use of other feminine care products could be risk factors?

Tampons and menstrual pads are classified by the FDA as medical devices. Unlike cosmetics (which have a label) the government does not require manufacturers of medical devices to disclose ingredients to the consumer, nor do they clear or approve individual materials that are used in the manufacturing of tampons and pads.

Tampons are currently made from cotton and/or rayon or other pulp fiber. During the manufacturing process, these fibers should be bleached with an Elemental Chlorine-Free process (ECF) using chlorine dioxide or Totally Chlorine-Free process (TCF) using hydrogen peroxide or ozone. Previously bleaching was done with chlorine gas which contaminated tampons with dioxins and furans. These newer lower elemental chlorine processes dramatically reduce the dioxins and furans but does not eliminate them. Do you know if your tampons are bleached and how they were bleached? It's not on the box.

Additionally, non-organic cotton is usually contaminated with pesticides. 89% of cotton is sprayed with glyphosate (Round-Up, a probable

human carcinogen). Dioxins, furans and pesticide residues have been found in tampons. These chemicals have been linked to cancer, reproductive harm, and endocrine disruption. Studies have shown that the residue levels in tampons are low – less than what would be considered harmful if the chemicals were eaten through contaminated food sources. But is that the right measure of potential harm considering that these “devices” remain in contact with sensitive and vascular vaginal tissue for hours at a time and for several days per month – for years? There have been no studies done of blood or tissue levels of these chemicals during actual use or association studies to determine if there is risk from long term use of tampons.

A 2018 study tested six brands of tampons for over 100 volatile organic compounds. Several VOCs were detected including reproductive toxins, carcinogens, irritants, and neurotoxins. The most frequently found chemical was carbon disulfide, a chemical used in the production of rayon. Not surprisingly, it was only found in the rayon tampons and not in the all-cotton tampons. Seventh Generation and Natracare cotton tampons had no chemicals detected. Carbon disulfide exposure in workers in rayon manufacturing plants has been associated with adverse cardiovascular and neurological impacts as well as menstrual disorders, early menopause, and hormonal disturbances. Sources of the other volatiles include: contamination from fragrances, additives, or the manufacturing process. The plastic applicator is a likely source of plasticizer chemical residue and the string may contain titanium dioxide residue.

A subset of the 2019 NIH Bio-Cycle study suggested associations between tampon use and elevated levels of mercury and oxidative stress biomarkers although the results were not statistically significant.

A woman uses approximately 11,400 tampons in her menstrual life. That's 11,400 times she is exposed to minute amounts of potential chemical toxins.

Menstrual pads can have the same chemical residues as tampons. These “devices” have direct contact with vulvar tissue. Many brands of pads (and tampons) also contain fragrances composed of numerous chemicals in proprietary formulas. Pads also have adhesive strips made of various chemicals which may become volatile when in contact with body heat. Allergic rashes and irritation of vulvar skin from these exposures are well documented.

Long term health risks, as with tampons, have not been studied.

The ever-expanding exposure to the water repellent chemicals of the PFAS class (Per and poly fluoroalkyl substances) now includes menstrual underwear. In 2020 it was found in Thinx underwear and in 2021 it was found in 65% of the available brands of “period underwear”. 2022 testing found PFAS in both tampons and pads. PFAS, “forever chemicals”, can be an intentional ingredient or be present from contamination. Adverse health effects can result from low levels and include: cancer, infertility, birth defects, thyroid hormone dysfunction, weakened immune system, high cholesterol, and high blood pressure during pregnancy. Effects of vaginal and vulvar PFAS exposure has never been studied.

Nanosilver, an antibacterial agent, has been found in menstrual pads and underwear. The manufacturer may advertise “antibacterial” without disclosing nanosilver as the source. It is commonly incorporated in athletic wear (as is PFAS) as well – to promote reduced body odor. Nanosilver particles in contact with the sensitive vulvar and vaginal tissues can create irritation, negative impacts on the beneficial vaginal bacteria *Lactobacillus*, and harm vaginal wall cells. Injured vaginal wall cells give toxins and silver particles easier entry and ability to migrate into the circulation. Effects of this exposure has not been studied.

In 2019 the New York State legislature passed the first law in the country requiring a “label” disclosing all intentionally added ingredients in period products. This has resulted in some manufacturers voluntarily disclosing ingredients on their packaging. Without required pre-market testing and monitoring there are no assurances that these voluntary labels are accurate or complete, or list contaminants. Many disclosures are vague or misleading.

In 2017 the Menstrual Products Right To Know Act was introduced in the US Congress. It was not enacted.

Feminine washes, wipes and sprays are not monitored by governmental agencies and are not required to undergo safety testing. They are classified as “cosmetics”, required by the Food and Drug Administration (FDA) to be free of harmful substances based on assurances from the manufacturer. No samples, paperwork or monitoring data is collected by the FDA. Safety of all cosmetic products and ingredients is assessed by an industry-controlled panel called the Cosmetic Ingredient Review.

These intimate care products can contain a myriad of synthetic chemicals including fragrance, phthalates, parabens, formaldehyde releasers (like Quaternium-15) and allergens. These chemicals have been linked to cancer, birth defects, infertility, and neurologic disorders.

Studies have shown that certain vaginal lubricants used for intercourse can increase the risk of sexual infection transmission. Lubricants one may assume are “clean of chemical toxins” would be water based but these are the ones that increase the risk of STIs. Water based lubricants are hyperosmolar, meaning they pull water out of your cells. The vaginal wall cells shrink and shrivel and the damaged cells allow the passage of bacteria or viruses into the tissues and blood. Silicone based lubricants do not damage the vaginal cells and neither do 2 water-based lubricants (Pre-seed and Good Clean Love). Lubricants containing glycerin raise the vaginal pH which encourages the growth of *Gardenerella* bacteria instead of beneficial *Lactobacillus*. This results in Bacterial Vaginosis which can cause abnormal discharge and odor. Excipients or inactive ingredients in lubricants are considered benign, but they can damage the cells as well and none have been tested.

It has been alleged that Johnson and Johnson knew (since the 1950s) that the talc used in their iconic baby powder was sometimes contaminated with asbestos during the mining process. Asbestos exposure is known to cause ovarian cancer and mesothelioma. It took 70 years (recently with intense public pressure and almost 70,000 plaintiffs) for J&J to stop the global sale of talc containing baby powder. They will transition to a safer corn starch-based formula this year. While not admitting wrongdoing, the company will be paying out almost 9 billion dollars in payouts to plaintiffs who allege that asbestos caused their ovarian cancer or mesothelioma. During all those years, I too thought baby powder was safe. My mother worked for J&J and we always had an abundance of it. Fool me once, shame on you; fool me twice, shame on me. I have very high standards for what I use on my body now - and I read labels (when they're available...)

Resources:
[\(http://www.ewg.org/skindeep/\)](http://www.ewg.org/skindeep/)
<http://www.safe.cosmetics.org>
<https://womensvoices.org>
 Healthy Living App

Dr. Kate Thomsen's office for holistic health care is located in Pennington, NJ.
www.drkatethomsen.com
 609-818-9700