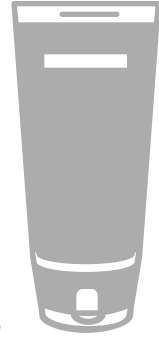


# SLIPPERY SLOPE

## Potential Hazards of Lubricants for Women

Vaginal lubricants are very popular feminine care products. Applied to the vagina, they work to increase lubrication of this sensitive area of the body. And while they can be very effective at reducing discomfort at the time they are used, researchers are becoming increasingly concerned about the potential longer term health effects of exposure to these products. Unfortunately, in many cases, not enough care has been taken to design lubricants that are truly safe and healthy for vaginal tissue.



### What are Lubricants?

Vaginal lubricants are fluid substances designed to offset vaginal dryness or inadequate natural lubrication which can be associated with discomfort or pain. Vaginal dryness is experienced by many women and can result from a variety of conditions such as aging and menopause, breastfeeding, medical conditions such as diabetes and inflammatory bowel disease, and side effects of cancer treatment or other certain medications.<sup>i</sup> When asked in surveys, over 65% of women in the United States report using some form of vaginal lubricant in the previous month.<sup>ii, iii</sup>

### What are the problems with lubricants for women?

*Harsh chemical ingredients found in lubricants can also be toxic to vaginal tissue and its microbiome. The microbiome is the balance of microorganisms that naturally inhabit the vagina.*

Lubricants are generally effective for their intended use – to provide additional lubrication to vaginal tissue during sexual activity to decrease discomfort. However, vaginal exposure to lubricants can also have toxic side effects long after their use that pose considerable risk to a woman's health.

Like other feminine care products, there is a very specific route of exposure to these products as they are applied directly to the vagina. Recent research indicates that many lubricants on the market can have longer term detrimental effects on vaginal tissue. In fact, there is growing consensus among scientists that the vast majority of lubricants need to be reformulated to be safer than they are now.<sup>iv</sup> In 2012, the World Health Organization issued an Advisory Note highlighting their concerns about the pH and osmolalities of lubricants, which included testing results of currently marketed lubricants. These concerns, were complemented by the work of several other researchers shortly after.<sup>v, vi, vii</sup>

### Concerns with lubricants:

**pH:** The pH of a lubricant represents how acidic or alkaline the product is. Ideally, the pH of a vaginal lubricant should be compatible with a healthy pH of the vagina – generally in the range of 3.8-4.5. A high vaginal pH (above 4.5) is associated with increased risk of bacterial vaginosis. Unfortunately, many commercially available lubricants have pH levels far exceeding 4.5.<sup>viii, ix</sup>

**Osmolality:** Osmolality refers to a substance's ability to draw moisture out of tissues and cells. Exposure to a lubricant with a higher osmolality than normal vaginal secretions can result in vaginal tissue which literally shrivels up because the moisture in those cells is pulled out. This process leads to irritation and a breakdown of the mucous membrane barrier which protects the vagina from infection. Disrupted vaginal mucous membranes have been associated not only with irritation and discomfort but also with increased risks of sexually transmitted infections such as HIV. Unfortunately, many currently marketed lubricants have high osmolalities which are detrimental to vaginal tissue.<sup>x, xi</sup>



# TOXIC CHEMICALS FOUND IN LUBRICANTS



Harsh chemical ingredients found in lubricants can also be toxic to vaginal tissue and its microbiome. (The microbiome is the balance of microorganisms that naturally inhabit the vagina.) Vaginal exposure to toxic lubricant ingredients can lead to discomfort, irritation, and increased risk of infection from even short term exposure. Some lubricant ingredients also have the potential to cause longer term chronic health effects including cancer and reproductive problems from repeated exposure over many years.

## Chlorhexidine gluconate

This potent disinfectant chemical has been shown to kill off many strains of lactobacillus, a type of bacteria that, when in balance, are necessary for a healthy vagina.<sup>xii.</sup>

## Parabens (commonly methylparaben and/or propylparaben)

These preservative chemicals have been shown to cause irritation of vaginal mucous membranes.<sup>xiii.</sup> Exposure to parabens is associated with genital rashes.<sup>xiv.</sup> Studies have also linked parabens to fertility problems and endocrine disruption.<sup>xv. xvi.</sup>

## Cyclomethicone, cyclopentasiloxane and cyclotetrasiloxane

Commonly found in silicone-based lubricants, these substances are linked to reproductive harm and uterine cancer in animal studies. Almost no research has ever been conducted to examine the long term impacts of vaginal exposure to these chemicals in women.<sup>xvii.</sup>

## Undisclosed flavors or fragrance

The generic ingredients “flavor”, “fragrance” or “aroma” represent a combination of undisclosed chemicals. Numerous harmful chemicals can be included in flavors, fragrances, and aromas including carcinogens, reproductive toxins and allergens.<sup>xviii.</sup>

### Recommendations: How to find a safer lubricant that meets your needs

- Review the lists of lubricant testing results conducted by the World Health Organization (WHO) and other researchers available at [<http://www.womensvoices.org/osmolality-ph-properties-commercial-lubricants/>]. These lists include brand names of lubricants and the pH levels and osmolalities of each product. The WHO recommends using a lubricant with a pH of 4.5 and an osmolality below 1200 mOsm/kg.
- If your brand of lubricant is not included in these lists, contact the manufacturer to ask about the pH and osmolality of the product and make sure they meet the WHO guidelines.
- Carefully examine the ingredients list for your lubricant and avoid products containing the chemicals of concern listed in this fact sheet.
- Avoid unnecessary “bells and whistles” like colors, fun flavors or heating/cooling/tingling features. The healthiest lube for your vagina is likely to be a simple one.
- Pay attention to any reactions or symptoms after you use a lubricant. Switch brands if you notice irritation. You may be experiencing irritation due to the wrong choice of lubricant.

i.-xviii. A version of this fact sheet including all scientific references is available on our website: [www.womensvoices.org/lubricants-womens-health](http://www.womensvoices.org/lubricants-womens-health)

