

## HOW TO CHOOSE THE RIGHT VAGINAL MOISTURIZER OR LUBRICANT FOR YOUR PATIENT

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AND CHERYL IGLESIA, MD (JUNE 2021)

### Which vaginal products to recommend

We applaud Drs. Pennycuff and Iglesia for providing education on lubricants and vaginal moisturizers in their recent article, and agree that ObGyns, urogynecologists, and primary care providers should be aware of the types of products available. However, the authors underplayed the health risks associated with the use of poor-quality lubricants and moisturizers.

Women often turn to lubricants or vaginal moisturizers because they experience vaginal dryness during intercourse, related to menopause, and from certain medications. Vaginal fluid is primarily composed of exudate from capillaries in the vaginal wall. During sexual arousal, blood flow to the vaginal wall increases, and in turn, this should increase exudate. But chronic inflammation can suppress these increases in vaginal blood flow, preventing adequate vaginal fluid production. One such cause of chronic inflammation is using hyperosmolar lubricants, as this has been shown to negatively affect the vaginal epithelium.<sup>1,2</sup> In this way, use of hyperosmolar lubricants can actually worsen symptoms, creating a vicious circle of dryness, lubricant use, and worsening dryness.

In addition, hyperosmolar lubricants have been shown to reduce the epithelial barrier properties of the vaginal epithelium, increasing susceptibility to microbes associated with bacterial vaginosis and to true pathogens, including herpes simplex virus type 2.<sup>3</sup> In fact, hyperosmolar lubricants are a



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serious enough problem that the World Health Organization has weighed in, recommending osmolality of personal lubricants be under 380 mOsm/kg to prevent damage to the vaginal epithelium.<sup>4</sup>

Appropriately acidic pH is just as critical as osmolality. Using products with a pH higher than 4.5 will reduce amounts of protective lactobacilli and other commensal vaginal bacteria, encouraging growth of opportunistic bacteria and yeast already present. This can lead to bacterial vaginosis, aerobic vaginitis, and candidiasis. Bacterial vaginosis can lead to other serious sequelae such as increased risk in acquisition of HIV infection and preterm birth in pregnancy. Unfortunately, much of the data cited in Drs. Pennycuff and Iglesia's article were sourced from another study (by Edwards and Panay published in *Climacteric* in 2016), which measured product pH values with an inappropriately calibrated device; the study's supplemental information stated that calibration was between 5 and 9, and so any measurement below 5

was invalid and subject to error. For example, the Good Clean Love lubricant is listed as having a pH of 4.7, but its pH is never higher than 4.4.

The products on the market that meet the dual criteria of appropriate pH and isotonicity to vaginal epithelial cells may be less well known to consumers. But this should not be a reason to encourage use of hyperosmolar products whose main selling point is that they are the "leading brand." Educating women on their choices in personal lubricants should include a full discussion of product ingredients and properties, based upon the available literature to help them select a product that supports the health of their intimate tissues.

### References

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3. Moench TR, Mumper RJ, Hoen TE, et al. Microbicide excipients can greatly increase susceptibility to genital herpes transmission in the mouse. *BMC Infect Dis*. 2010;10:331. doi: 10.1186/1471-2334-10-331.
4. Use and procurement of additional lubricants for male and female condoms: WHO/UNFPA/FHI360 Advisory note. World Health Organization, 2012. [http://apps.who.int/iris/bitstream/handle/10665/76580/WHO\\_RHR\\_12.33\\_eng.pdf?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/76580/WHO_RHR_12.33_eng.pdf?sequence=1). Accessed December 27, 2021.

Respectfully,  
Members of the Scientific Advisory Board  
for the Sexual Health and Wellness Institute  
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## Drs. Pennycuff and Iglesia respond

We thank the members of the scientific advisory board for the Sexual Health and Wellness Institute for their thoughtful and insightful comments to our article. We agree with their comments on the importance of both pH and osmolality for vaginal moisturizers and lubricants. We also agree that selection of an incorrectly formulated product may lead to worsening of vulvovaginal symptoms as well as dysbiosis and all of its sequelae as the letter writers mentioned.

In writing the review article, we attempted to address the role that pH and osmolality play in vaginal moisturizers and lubricants and make clinicians more aware of the importance of these factors in product formulation. Our goal was to help to improve patient counseling. We tried to amass as much of the available literature as we could to act as a resource for practitioners, such as the table included in the article as well as the supplemental table included online. We hoped that by writing this article we would heighten awareness among female health practitioners about vaginal health products and encourage them to consider those products that may be better suited for their patients based on pH and osmolality.

While there remains a paucity of research on vaginal moisturizers and lubricants, there is even less consumer knowledge regarding ingredients and formulations of these products. We wholeheartedly agree with the scientific advisory board that we as health providers need to help educate women on the full spectrum of products available beyond the “leading brands.” Furthermore, we advocate that there be continued research on these products as well as more manufacturer transparency regarding not only the ingredients contained within these products but also the pH and osmolality. Simple steps such as

these would ensure that providers could help counsel patients to make informed decisions regarding products for their pelvic health.

## DISMANTLING RACISM IN YOUR PERSONAL AND PROFESSIONAL SPHERES

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### Dissenting opinion

“Race is real but it’s not biologic.” “Race is not based on genetic or biologic inheritance.” Am I the only one with a dissenting voice of opinion when it comes to these types of statements?

Scott Peters, MD  
Oak Ridge, Tennessee

### The authors respond

Thank you for your opinion, Dr. Peters. Although it is not completely clear what your question is, it seems that it concerns the validity of the idea that race is a social construct. We will address this question with the assumption that this letter was an effort to invite discussion and increase understanding.

The National Human Genome Research Institute describes race in this way: “Race is a fluid concept used to group people according to various factors, including ancestral background and social identity. Race is also used to group people that share a set of visible characteristics, such as skin color and facial features. Though these visible traits are influenced by genes, the vast majority of genetic variation exists within racial groups and not between them.”<sup>1</sup>

The understanding that race is a social construct has been upheld by numerous medical organizations. In August 2020, a Joint Statement was published by the American College of

Obstetricians and Gynecologists, the American Board of Obstetricians and Gynecologists, and 22 other organizations representing our specialty. This document states: “Recognizing that race is a social construct, not biologically based, is important to understanding that racism, not race, impacts health care, health, and health outcomes.”<sup>2</sup>

This idea is also endorsed by the AMA, who in November 2020 adopted the following policies<sup>3</sup>:

- “Recognize that race is a social construct and is distinct from ethnicity, genetic ancestry, or biology
- Support ending the practice of using race as a proxy for biology or genetics in medical education, research, and clinical practice.”

There are numerous sources that further illuminate why race is a social construct. Here are a few:

- <https://www.racepowerofanillusion.org/resources/>
- <https://www.pewresearch.org/fact-tank/2020/02/25/the-changing-categories-the-u-s-has-used-to-measure-race/>
- Roberts D. *Fatal Invention: How Science, Politics and Big Business Re-create Race in the Twenty-First Century*. The New Press. 2011.
- Yudell M, Roberts D, DeSalle R, et al. *Science and society. Taking race out of human genetics*. *Science*. 2016;351(6273):564-5. doi: 10.1126/science.aac4951.

### References

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3. O’Reilly KB. AMA: Racism is a threat to public health. November 16, 2020. <https://www.ama-assn.org/delivering-care/health-equity/ama-racism-threat-public-health>. Accessed December 27, 2021.