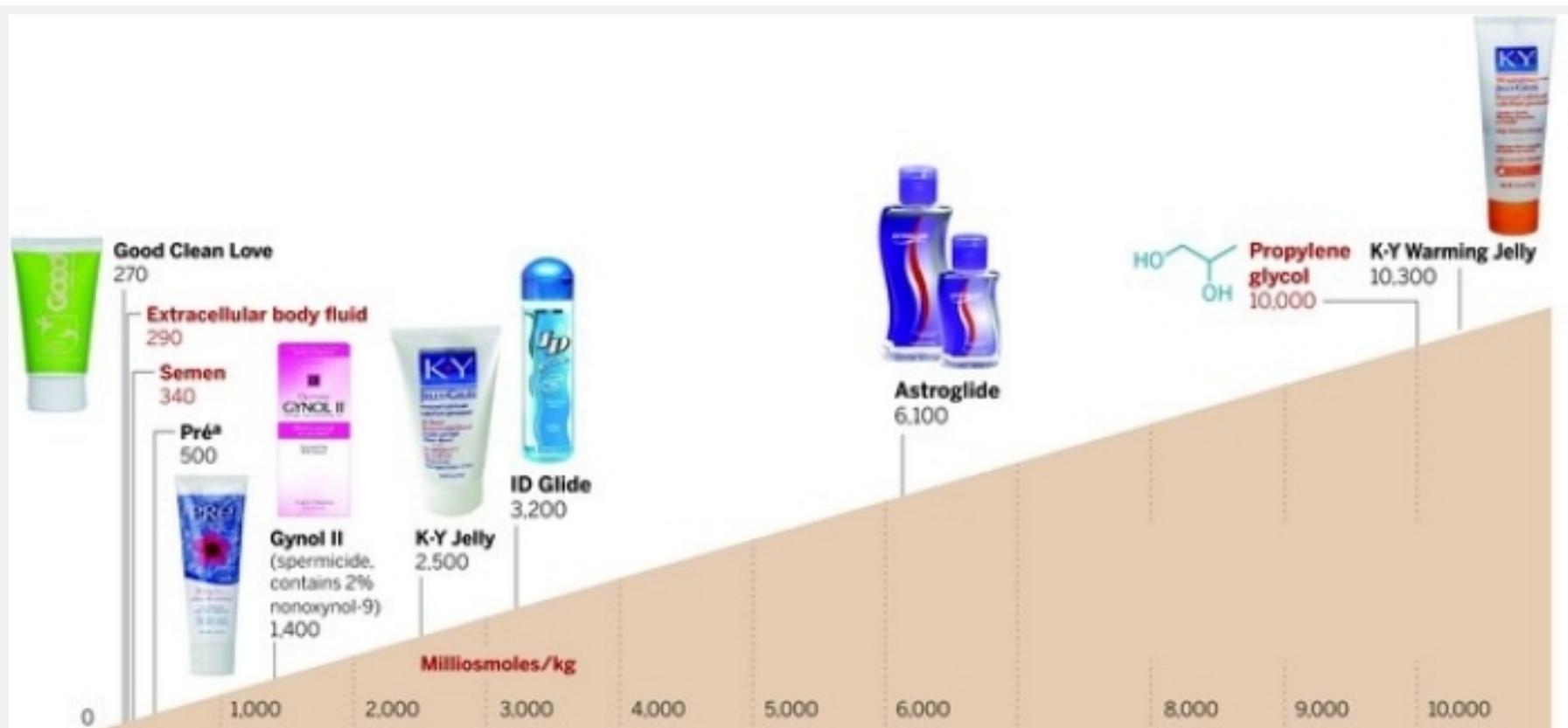


Studies Raise Questions About Safety Of Personal Lubricants

Some experiments find cell damage and increased risk of sexually transmitted infections

By Lauren K. Wolf



SEX AID SURVEY

Many lubricants and their ingredients have overall component concentrations (osmolalities) higher than those of the human body. **SOURCES:** *PLoS One*, DOI: 10.1371/journal.pone.0048328; *BMC Infect. Dis.*, DOI: 10.1186/1471-2334-10-33; *J. Infect. Dis.*, DOI: 10.1086/511279

Although most people will list only K-Y Jelly when asked to recall the names of personal lubricants, hundreds of the products are being used for sex across the globe. These sex aids are designed to make things easier. So it's a little unsettling that experiments carried out in recent years have indicated that some of the products might be smoothing the way for disease transmission.

Used to reduce friction and increase pleasure during intercourse, lubricants are about a \$219 million market in the U.S. alone, according to the Chicago-based market research firm SymphonyIRI Group.

But a handful of studies have called into question the safety of these sex aids, although

none have shown cut-and-dried proof of risk. Some of the experiments have shown that personal lubricants can damage cells lining both the vagina and rectum, potentially making the body more vulnerable to sexually transmitted infections (STIs). And one epidemiological investigation, published early this year, reported that participants who consistently used personal lubricants for rectal intercourse had a higher prevalence of STIs, such as chlamydia, than inconsistent users (*Sex. Transm. Dis.*, DOI:

10.1097/olq.0b013e318235502b

<<http://dx.doi.org/10.1097/olq.0b013e318235502b>>).

Complicating matters is that these same lubricants are being eyed as components of low-cost microbicide gels that could protect people from HIV. The thinking is that because so many people already use the sex aids, they will go right on using them for pleasure as well as protection once a virus-killing drug is added. But the new safety concerns about lubricants have made researchers consider reformulating the gels.

Still, most of the recent lab-based safety studies conducted on personal lubricants fall short of indicting the products. “We have signals that are concerning,” says Jim Pickett, chair of the **International Rectal Microbicide Advocates** **<<http://irma-rectalmicrobicides.blogspot.com/>>** (IRMA) group, a global network pushing for safe and effective STI-preventing products. “But we don’t know what they mean yet. Just because a lubricant causes cell damage in the lab, we don’t know whether that has anything to do with disease transmission in humans in the real world.”

In response, Johnson & Johnson, which dominates the personal lubricant market with its K-Y brand products, says, “We continually review new research as it evolves. K-Y brand products have provided effective lubrication and moisturization for millions of couples and are safe when used as directed.”

Right now, the Food & Drug Administration doesn’t typically require testing of personal lubricants in humans. The agency classifies them as medical devices, so the sex aids have to be tested on animals such as rabbits and guinea pigs. Rectal use of lubricants is viewed by the agency as an “off-label” application—use at your own risk.

According to a spokeswoman, the agency is staying abreast of the ongoing discussion about personal lubricants in the research community. Future decisions, actions, or changes regarding oversight of the sex aids, FDA says, “will be based on a review of the scientific evidence.”

Questions about lubricant safety arose nearly a decade ago when microbicide developers were testing whether the detergent nonoxynol-9 could block HIV transmission. Manufacturers had been incorporating the compound into spermicidal lubricants for years because of its ability to punch holes in the cell membranes of sperm.

In 2002, however, a Phase II/III clinical trial of a nonoxynol-9 vaginal gel failed to protect women from HIV infection. Not only that, but the detergent actually increased the risk of HIV infection in the sex workers tested—women living in countries such as South Africa and Thailand who used the product three or four times per day (*Lancet*, DOI: **10.1016/S0140-6736(02)11079-8** <[http://dx.doi.org/10.1016/S0140-6736\(02\)11079-8](http://dx.doi.org/10.1016/S0140-6736(02)11079-8)>).

Lab work eventually revealed the reason for the paradoxical increase: Nonoxynol-9 is so good at punching holes in cell membranes that it not only bores into sperm but also into the cells lining the vagina and rectum. The mucosal lining of the vagina is a good barrier to infection all by itself, says **Richard A. Cone** <<http://biophysics.jhu.edu/faculty-pages/cone.html>> , a biophysicist at Johns Hopkins University. But if that barrier gets compromised, all bets are off, he explains.

After nonoxynol-9—still used on some condoms today—went from promising microbicide candidate to malevolent cell killer, scientists like Cone began to question the safety of other supposedly innocuous spermicide and personal lubricant ingredients.

Two years ago, Cone and his group at Johns Hopkins published work showing that damaging effects of over-the-counter lubricants seem to depend on a factor called osmolality. Measured in moles (osmoles) of solute per kilogram of solvent, osmolality is a parameter describing the overall concentration of molecular ingredients in a product. After examining mouse vaginal cells, the researchers discovered that, when mice were exposed to high-osmolality lubricants followed by herpes simplex virus, the rodents were more susceptible to infection.

For instance, K-Y Warming Jelly, which has an osmolality more than 30 times the body's own fluid, increased herpes transmission more than ninefold compared with rodents not administered lubricant (*BMC Infect. Dis.*, DOI: **10.1186/1471-2334-10-331** <<http://dx.doi.org/10.1186/1471-2334-10-331>>).

Researchers say that the high osmolality of some lubricants likely causes epithelial cell

damage because of simple physics. “We’re full of sugar, salts, and proteins that make up the constituents in our cells,” explains **Charlene S. Dezzutti** <http://obgyn.medicine.pitt.edu/personnelDetail.asp?pid=2008&id=67&ptype=&pnavcat=2> , a professor in the department of obstetrics, gynecology, and reproductive sciences at the University of Pittsburgh. And there is a certain concentration of those components in the human body.

“So if you eat a big candy bar, there’s a gradient in concentration between your cell insides and cell outsides,” Dezzutti says. To maintain equilibrium, the body reacts by releasing water from its cells to dilute the sugar outside. “When that happens in gut epithelial tissue,” Dezzutti adds, “the cells shrivel up to the point that they look like little raisins under a microscope.”

Similarly, adding hyperosmolar lubricants—those products containing concentrations of components higher than the body’s cells—to the vagina or rectum causes the cells there to shrivel up and come off, Dezzutti says. This may weaken the body’s defenses in these areas, she adds.

The reason many personal lubricants are hyperosmolar, Cone contends, is that they contain large amounts of ingredients such as glycerin and propylene glycol. Without these “humectants,” he says, a water-based lubricant would evaporate more rapidly when spread onto skin, causing an unpleasant cold sensation. Manufacturers have been formulating skin care products with these ingredients for many moons, Cone adds, so the firms assumed they’d work just as well in personal lubricants.

But skin cells on a person’s arm are a far cry from cells in a woman’s vagina—or in the rectum, for that matter.

In 2007, a research team led by **Craig W. Hendrix** <http://www.jhuclinicalpharmacology.org/faculty/hendrix.asp> , a clinical pharmacologist at Johns Hopkins, demonstrated that ID Glide, a hyperosmolar lubricant similar to Astroglide and K-Y Jelly, caused significant damage to the rectal tissue of human study participants. The scientists observed major shedding of cells from tissue samples biopsied 60 to 90 minutes after lubricant application (*J. Infect. Dis.*, DOI: **10.1086/511279** <http://dx.doi.org/10.1086/511279>).

Because human studies of this sort can’t ethically test the effect of lubricant on the

acquisition of STIs, Hendrix and others in the research community must try to find answers to safety questions in other ways. Specifically, they are exposing animals such as monkeys and cultured human tissue to lubricants and pathogens.

Dezzutti and coworkers conducted a test of this sort on cultured human rectal and cervical tissue, publishing their results in *PLoS One* last month (DOI:

10.1371/journal.pone.0048328

<<http://dx.doi.org/10.1371/journal.pone.0048328>>). Although the researchers observed some killing of cells in both types of tissue by hyperosmolar lubricants, they did not observe an increase in HIV infection when the same samples were challenged with virus. Lubricants with osmolalities closer to that of the body, such as agar-based Good Clean Love, didn't damage the tissue samples or boost HIV infection rates.

In separate tests, Dezzutti's team also found that hyperosmolar lubricants and spermicidal gels killed microbes commonly found in the vagina. For example, K-Y Jelly killed all three species of *Lactobacillus* it was applied to. Dezzutti says the bacterial kill off is likely caused by the ingredient chlorhexidine, an antibacterial agent. Unbalancing the natural flora in the vagina is another possible strike against personal lubricants, she adds, because it might lead to infections such as bacterial vaginosis.

Using these cell culture studies to draw conclusions and make recommendations about personal lubricants, though, is dicey at best, Dezzutti says. "This is just a model in a test tube, and it's hard to equate that with real-life activity," she says.

Some studies have even reported no signs of cell toxicity from hyperosmolar lubricants.

When testing a new microbicide on the vaginas of rhesus monkeys, **Ashley T. Haase** **<<http://www.micab.umn.edu/faculty/Haase.html>>** , a microbiologist at the University of Minnesota Medical School, and coworkers didn't see any irritation of the vaginal lining over six months of application (*Antimicrob. Agents Chemother.*, DOI: **10.1128/aac.00989-08** **<<http://dx.doi.org/10.1128/aac.00989-08>>**). The active ingredient in the microbicide, glycerol monolaurate, was delivered in K-Y Warming Jelly.

Johns Hopkins' Cone, on the other hand, did observe cell toxicity in his mouse model with the same glycerol monolaurate/K-Y formulation. His team also saw a 10-fold increase in susceptibility to herpes with the gel.

On the basis of his own research, Cone believes that "virtually all sex lubricants need to be

reformulated.” In the face of all the gaps in available data, other sources interviewed by C&EN are more conservative, not willing to recommend against certain personal lubricants just yet.

“The message about lube safety at this stage has to be in the context of overall risk for STIs,” Hendrix says. “If you use lubricant infrequently and have one partner, you don’t have the same risk” as someone using it four times per day. For people who don’t use condoms and have more than one sex partner, though, “you could hedge your bets thoughtfully and choose a product that has not been shown to cause epithelial cell changes.”

IRMA’s Pickett has a similar view. “We know that the use of lube with condoms ensures that the condoms are used correctly—that they don’t break or slip off during sex,” he says. Although these new results are troubling, “we don’t want to scare people away from using lube” while researchers try to figure out what the data mean.

Meanwhile, more epidemiological tests are on the horizon, and the Centers for Disease Control & Prevention is currently conducting its own studies in monkeys, Pickett tells C&EN. “I’m hopeful and optimistic that in 2013, we’ll be able to fill in the gaps and answer the questions that need answering.”

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Comments

Justin (Wed Dec 12 01:25:37 EST 2012)

So your saying people should just continue to use Lube even though it may be risky? That sounds scary. People should stop using it and maybe condoms should be re-designed until researchers know for sure what the data means. Maybe something should be developed to turn off peoples sex drive.

» **Reply**

Michael (Thu Dec 13 10:10:42 EST 2012)

These studies suggest that perhaps light, vegetable based oils, typically shunned because they are not water soluble like natural body fluids, may be a better base for formulating personal lubricants.

» **Reply**

Melanie (Wed Jan 09 03:54:45 EST 2013)

Any oil (in lotions etc) will break down condoms and are completely inappropriate to use as lube. Oils can also cause infections in women's vaginas. A better option is silicone lube, it is

inert, can be used with condoms and does not dry out. It is perfect for anal sex for this reason, since the anus provides no extra lubrication and a water based lube that dries out could cause abrasion, tearing and increased chance of infection.

» **Reply**

sri (Mon Sep 16 12:27:08 EDT 2013)

Please read IFMBE Proceedings Volume 32, 2010, p 89-91

» **Reply**

god's advocate (Mon Oct 07 14:29:41 EDT 2013)

LIES. Coconut oil is 50% lauric acid. An anti-fungal, anti-viral and anti-bacterial super chemical that is otherwise only found in human breast milk per WebMD.

It's USED for yeast infections, deodorant, cooking oil, shaving cream, hair conditioner, to prevent stretch marks, in place of Lanolin cream for irritated nipples, SEX LUBRICANT, as a supplement in smoothies and teas, for treating viral infections including influenza (the flu); swine flu; avian flu; the common cold; fever blisters, cold sores, and genital herpes caused by herpes simplex virus (HSV); genital warts caused by human papillomavirus (HPV); and HIV/AIDS. It is also used for preventing the transmission of HIV from mothers to children. And.....much.....much.....more.

Look up the information yourselves people! The best option is NOT man-made silicone!

» **Reply**

RavenclawsHermione (Sun May 10 15:24:18 EDT 2015)

Actually, most silicone lubricant will cause condoms to break.

» **Reply**

Phil Dirt (Fri Sep 04 22:57:39 EDT 2015)

And some of the silicone based "body glide" lubes don't come off skin without harsh cleansers. Some even have "Caution: flammable" on the tubes....I'll pass on lubes that hold that much in common with liquid wrench.

» **Reply**

Gens (Tue Apr 12 18:09:44 EDT 2016)

Silicone lubricants are safe to use with condoms.

One silicone lubricant was found to be the very safest of all lubes.

» **Reply**

Brenda (Tue Jul 05 18:05:01 EDT 2016)

That is not correct. Silicone is inert and does not interact with latex or any other materials that condoms are made from. The vast majority of condom manufacturers use silicone based lubricant on their condoms before packaging. This is done because they do not change consistency and become dried out or tacky overtime, as water-based lubricants do.

» **Reply**

CisT (Sat Dec 15 10:11:14 EST 2012)

Although not as intimate, what about any type of skin lotion?

» **Reply**

Kashka (Wed Jan 02 12:39:27 EST 2013)

Skin lotions are for external use only. Using them as a lubricant can cause irritation and infection.

» **Reply**

Jim Williams (Mon Dec 17 11:19:21 EST 2012)

Some lubricants advertize that they are hypoallergenic or "paraben free" Are these any better?

» **Reply**

William (Tue Dec 18 15:46:55 EST 2012)

I compliment Ms. Wolfe on a relevant, inciteful, and informative article about the relevance of chemistry in an increasingly "adult" world.

» **Reply**

kermit (Wed Dec 19 10:29:45 EST 2012)

There are a lot of ways to make organic, natural lubricants. Stuff all over the Web on this. No propylene glycol, no lots of bad stuff.

Xanthan gum, xylitol, flaxseeds...on and on. Oh, also, a whole lot cheaper. Go experiment. Beats killing yourself with commercial products.

» **Reply**

Arnon Clark (Wed Dec 19 10:34:05 EST 2012)

Michael : careful with the recommendations. Vegetable oils degrade latex condoms. Not sure what about its effects on polyisopropylene.

» **Reply**

Ashley (Fri Aug 07 23:32:10 EDT 2015)

Vegetable oils also damage polyisoprene condoms. Only polyurethane condoms (like supra) can be used with oils.

» **Reply**

Rob (Thu Oct 22 18:29:28 EDT 2015)

Check out Castor Oil. 100% compatible with Latex, Polyurethane, and Polyisoprene condoms.

» **Reply**

Artiloop (Wed Dec 19 11:22:13 EST 2012)

Oil-based lubes (including skin lotions, which contain many of the same irritating ingredients as lubes (see paragraphs 18-19)) weaken latex condoms, making them less effective...not a good trade!

» **Reply**

Amber S (Wed Dec 19 12:09:55 EST 2012)

No mention of silicone / dimethicone lubricants, which are entirely different from water-based and very popular...

» **Reply**

JSM (Wed Dec 19 14:19:16 EST 2012)

Thank you for presenting this information in a useful and grown-up manner.

» **Reply**

TC (Wed Dec 19 14:20:36 EST 2012)

So who can we ask to evaluate the osmolality and general safety of our preferred lubes? Sex Grease and Gun Oil for starters . . .

» **Reply**

MC (Thu Dec 20 18:48:16 EST 2012)

Oil based lubricants, aside from degrading condoms, are also more difficult to clean up after and increase risk for yeast infections. Also, it's a really quick way to find out if you are allergic or sensitive to something. Every time you have intercourse, anal or vaginal, you cause tearing and increase your risk for infection anyway. Continue using silicone or water based lubricants along with condoms and you will minimize your risk for STI. That will only leave your mouth susceptible! Good Luck!

» **Reply**

Sex Nerd Sandra (Thu Dec 20 19:43:37 EST 2012)

Use silicone lube. These tests are on water-based lubes. Silicone is neutral from the research I've seen.

» **Reply**

PiB (Sat Dec 22 11:11:14 EST 2012)

Why isn't silicone-based lubricant mentioned in this article? This information is great, but declaring that "lubricants" have had these results, when none of the studies mention silicone-based lubricant, is quite misleading. Silicone-based lubricant has a completely different chemical makeup—it seems strange (and possibly quite uninformed of the author) to leave it out. Even if there's no current research (which I find highly unlikely), it's a possible alternative to the water-based products.

» **Reply**

IC (Fri Mar 21 19:59:22 EDT 2014)

There has been very little research on lube, Period. As per the International Rectal Microbicide Advocates, up to January 2014, there have only been four studies. All of them have been on water based lube. There are four more studies currently ongoing with some to report soon.

The tests that have been used so far have involved dissolving the lubricant in water. Since silicon lubricants don't dissolve in water, they can't directly compare them to water based lubes. New tests need to be designed.

It really is shocking that 30 years into the HIV pandemic, there has been so little research into lubes, their safety, and effect on vaginal & rectal tissues.

» **Reply**

Dina Wilson (Fri Apr 08 20:14:46 EDT 2016)

It is disgusting to me that all of these products are tested on animals, and all of the studies rely on animal testing. The use of animals in product testing and scientific research signifies a belief that humans regard ourselves as superior to animals, which, therefore, we have deemed at our disposal for any kind of use. This is the height of arrogance. All creatures are indispensable to the ecology of our planet, and all have souls.

» **Reply**

Wendy Strgar (Wed Jan 09 10:35:49 EST 2013)

The safest lubricant sited in this study was good clean love. It works, it is not harmful and is recommended for HiV, cancer patients and all forms of pelvic pain and is well tolerated across the board. Free samples are available as well as a wealth of information at the website.

» **Reply**

Kenneth P. (Thu Jan 31 23:26:01 EST 2013)

That's rich, this from the company president. Perhaps it's a cleaner lubricant, perhaps you're a sponsor of this study to help promote YOUR brand.

» **Reply**

Jon (Thu Jan 22 15:47:45 EST 2015)

I searched the FDA.gov database but I could not find Good Clean Love. Does that mean this product is being manufactured and sold illegally without FDA clearance? Personal lubricants are classified as a CLASS II Medical Device meaning any medical claims being made (recommended for HiV, cancer patients, and all forms of pelvic pain) need to have clinical proof to back these claims. Wendy - do you guys/gals have an FDA 510(k) clearance to manufacture and sell Good Clean Love in the United States?

» **Reply**

Suzanne (Sat Feb 09 02:59:55 EST 2013)

Use a Natural / Organic lube

» **Reply**

Rex Schmarte (Wed Mar 27 01:10:12 EDT 2013)

I think this article makes sense. I think I've felt the effect it's describing with certain products, including K-Y. Weird thing is, the nonoxynol-9 thing is OLD NEWS, at least in the gay community, maybe because the consequences are a bit more dire. So why bring it up at all? Makes me a little suspicious about the article's intention, as has been mentioned in other comments.

The only problem I have with silicone lube is it's not as slippery as water-based. The rectum does make its own lube and this is stimulated by distention – stretching the lining. Makes sense if you think about it for a sec, and sex, I've found, has this effect as well. Point is, I've never had a problem with quality water-based lube drying out during sex when used generously.

» **Reply**

Karel Vermeulen (Fri Jun 21 13:54:36 EDT 2013)

A new lubricant: Lubrimaxxx Personal Lubricant has just been tested for its osmolality. Lubrimaxxx result: 855.1 mOsm/kg and Lubrimaxxx Premium with an osmolality of 56.5mOsm/kg, Tested June, 7 2013.

» **Reply**

Erica (Fri Aug 09 19:40:23 EDT 2013)

Just use a NATURAL lubricant. I've always used Carageenan lubricant and have been pleased with it.

» **Reply**

Rob (Thu Dec 19 17:31:26 EST 2013)

Very interesting article indeed. As a lubricant manufacturer, I'm simply amazed at the FDA not making manufacturers go through testing to be able to sell their product. It enters the human body and needs to have testing done to ensure ingredients being used will not have adverse effects on the human body. Suzanne - just because it says Natural/Organic doesn't mean it's good for you. Use EMERITA for example - now includes Propylene Glycol and Pentylene Glycol in their Natural Lubricant and Warming Lubricant. Use Intimate Organics as another example. They include Sodium Hydroxide. If you need a clinically proven lubricant with proven health benefits, check out Simply Slick.

» **Reply**

Connie (Sat Apr 05 23:40:44 EDT 2014)

Looks as though your company also makes claims on your website, that you are FDA approved. In fact, you are NOT registered with the FDA, and have not received a 510(k). This is also interesting; the owner of Simply Solutions, LLC (Simply Slick) John Goepfert is on a list of "Delinquent Taxpayers by Name" on the Wisconsin Department of Revenue website. Seems he owes the state \$161,945.58 in sales tax. A tax cheat? I'm having a hard time believing that honesty is of high priority over at the Simply Slick(ster) HQ.

» **Reply**

Rob (Thu Jan 22 15:43:06 EST 2015)

Simply Slick's 510(k) Clearance:

<http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm?ID=K140304>

» **Reply**

Zara (Thu Jan 09 00:03:29 EST 2014)

The studies themselves DO mention silicone lubricants. It's just the article that leaves them out. "The two iso-osmolar lubricants, Good Clean Love and PRÉ, and both silicone-based lubricants, Female Condom 2 lubricant and Wet Platinum, were the safest in our testing algorithm."

» **Reply**

radtec (Sun Jan 12 13:01:46 EST 2014)

A doctor told me recently that coconut oil is an acceptable lube. I have not tried that yet. Not sure I will...but, that was news to me. I'm guessing you won't want the stuff that has Orville Redenbacher's name on it too. ;)

» **Reply**

Allan besner (Thu Jun 12 07:40:59 EDT 2014)

I think that most people don't use enough lube to have catastrophic results. I would bet that a person would almost have to have an enema if the substance to everyday to have adverse results. The irony of this is when institutionalized many patients have bowel meds administered recall with a healthy or not so healthy dose of lube. Maybe this is what contributes to dependence on these drugs after a long time.

» **Reply**

B Clay (Thu Jan 15 09:01:04 EST 2015)

This is all soooooo very worrying

I just attempted to complain to a company about the ingredients of their product which conned my husband into thinking it was KY Jelly by the package design/colour.

OK it was very much cheaper but it was not satisfactory to use - everything about it was not good. the colour, the odour before and texture/residue left after use.

Very alarmed that when compared to KY ingredients there was various alternative ingredients not included in the KY.

I asked if any customer research had been done as this cheap but unsatisfactory product shd not be on the shelves for sale. The fact that it was so cheap is also another worry.

» **Reply**

Trying to sell Lube Thoughtfully (Wed Feb 04 14:52:39 EST 2015)

For those of you suggesting organic and home made lubricants, While yes these can be excellent options just because you made it at home does not mean that it is not the scary sounding ingredients you see on an ingredient list. Plant cellulose is a common ingredient in natural lubes. It's made naturally, right out of a plant. That does not mean it won't give you a yeast infection.

MOST oils are a terrible idea for lubrication but coconut oil is probably a good option if you aren't using latex condoms or certain sex toys. Like what's been said above, there just isn't much research. There are a few water based lubricants that are free of glycol, glycerin and even claim to be "PH balanced" though they don't say what the PH is or what they balanced it to.

» **Reply**

Ilona sala (Fri May 22 14:53:56 EDT 2015)

Have any of you tried Luvena Enhanced Moisturizer? Contains no estrogen, no glycerin, no harmful preservatives. Hard to find, but has terrific ingredients. Still needs FDA approval, but has been on the market for 5 years.

» **Reply**

Rob (Thu May 28 10:16:28 EDT 2015)

You might want to read this link if you're using any products from Laclede, manufacturers of Luvena feminine care products: <http://www.justice.gov/opa/pr/los-angeles-pharmaceutical-company-barred-distributing-unapproved-prebiotic-feminine-health>

» **Reply**

Dave (Wed Jul 01 09:21:43 EDT 2015)

I did not see any mention of good old saliva. It is a natural body fluid, costs nothing, and can be re-applied as necessary. It doesn't contain any chemical ingredients. Don't say it can cause infection. After all, you are having intimate contact with another body, especially if you aren't using a condom(with a regular partner)

» **Reply**

Passing Through (Mon Oct 19 12:36:52 EDT 2015)

"Don't say it can cause infection."

Saliva can be infected if teeth aren't maintained properly and infected saliva can potentially harm the vagina. Saliva is hardly a perfect remedy for the lube problem.

» **Reply**

Claire Dobie (Thu Jan 07 13:40:07 EST 2016)

No mention here of AloeCadabra, manufactured by Live Well Brands—organic farmers, not Big Pharma. It's a lubricant and moisturizer, 95% high quality aloe and 100% food-grade ingredients. Unless you're allergic to aloe (the healing plant) which is unlikely, this is the most natural lube on the market. Very low osmolality too.

» **Reply**

deb (Tue Aug 02 04:44:51 EDT 2016)

I was turned off to lubricants when I read that they are tested on animals. That's inhumane. Human tissue only please.

» **Reply**