



Improving Sexual Health: Vaginal Lubricants, Moisturizers, Dilators, & Counseling

If you have more severe vaginal dryness and related pain, or if lubricants and moisturizers don't work well for you, see your health care provider as other options may be available.

How do vaginal lubricants work?

Vaginal lubricants work by reducing the friction associated with thin, dry genital tissue. Lubricants come in liquid or gel form and are applied to the vagina and vulva right before intercourse; it can also be helpful to apply them to the penis or any body part/instrument inserted into the vagina.

Some lubricants have glycerin and others are glycerin free. *We recommend that you avoid glycerin, flavored lubricants, and warming/tingling lubricants since they may cause irritation.* Glycerin is unhealthy for anyone with diabetes or at risk for diabetes.

The U.S. Food and Drug Administration (FDA) does not do safety testing of lubricants so it is important to educate yourself about the different types. The information in this section will help you be a careful consumer.

Water-based lubricants

Many lubricants are water-based. Some women who use them find that they increase pleasure and do not cause any problems. However, scientific research has shown that some water-based lubricants can cause irritation and damage vaginal tissue. In addition to causing discomfort, this could increase the risk of getting a sexually transmitted infection.

Silicone-based lubricants

Silicone lubricants last longer than water-based lubricants because they are not soaked up by the vaginal tissue. They may need to be rinsed off with water.

In one study, both of the silicone-based lubricants that were tested did not damage skin cells from the lining inside the vagina or rectum. They were among the safest lubricants tested.

Oil-based lubricants

While oils are not marketed to be lubricants, many women use them to increase comfort. Be aware that **latex condoms and dental dams rapidly lose strength when exposed to oil-based lubricants**. We do not recommend oil-based lubricants (such as petroleum jelly and baby oil) because they can cause vaginal irritation.

Irritants that may be present in lubricants

The ingredients listed below are vaginal irritants. Not everyone will be affected, but it is good to be aware of the ingredients in a lubricant before using it.

- Chlorhexidine gluconate
- Nonoxynol-9 or other spermicides
- Propylene glycol (can also cause an allergic reaction but it is not common)
- Perfumes or other scents
- Products that are labelled as warming, cooling, or tingling

Lubricant concentration (osmolality)

Osmolality is a measure of how concentrated a substance is. For example, a tablespoon of honey dissolved in a half cup of water has a higher osmolality than a tablespoon of honey dissolved in a half gallon of water. Osmolality for lubricants is measured in milliosmoles per kilogram of water (mOsm/kg).

Studies have shown that exposure to lubricants with high osmolality dries out and damages the moist tissue lining the vagina and rectum. In addition to irritation and inflammation, the damage may increase the risk of getting a sexually transmitted infection, including HIV (human immunodeficiency virus). In a study that looked at the safety of different lubricants, the safest ones were the silicone-based products and the water-based products with osmolality closest to normal.

Normal osmolality:

- Vagina: 260–290 mOsm/kg
- Colon: 290 mOsm/kg
- Semen: 250–380 mOsm/kg.

To prevent tissue damage, the World Health Organization (WHO) recommends that the osmolality of a water-based lubricant should be less than or equal to **380 mOsm/kg**. The table on pg. 4 shows lubricants that have been tested and meet this guideline.

Lubricant pH

pH is a measure of how acidic or how basic a water-based solution is.

- The pH scale goes from 0 - 14, with 7 being neutral.
- Low pH (below 7) is acidic and high pH (above 7) is basic.
- Normally, the vagina is slightly acidic. This helps prevent infection from yeast or bacteria.

Here are some examples of pH:

	pH	Description
Vinegar	2.5	Strong acid
Vagina	3.8 -4.5	Mild acid

Rectum	7.0	Neutral (pH of pure water)
Bleach	12	Strong base

The following table shows the osmolality and pH of some lubricants that have osmolality less than 380 mOsm/kg, as recommended by the WHO. It is intended to help you be an informed consumer. It is not meant to recommend or endorse any specific product(s). There are many lubricants you can try so you can find the one that works best for you.

Water-soluble vaginal lubricants that meet WHO Osmolality Guideline:

Less than or equal to 380 mOsm/kg

Product name:	Osmolality in mOsm/kg	pH
Slippery Stuff®	13-26 ¹	6.8-6.9 ¹
FemGlide™	15-42 ¹	6.1
BabeLube	19	6.8
System Jo® Personal	61	5.9
Sliquid® Organics Natural	106	4.1-4.4
Aloe Cadabra	118	not tested
Ah!® Yes Water-Based Intimate	154	4.1
Good Clean Love	194-269 ¹	4.7-4.8 ¹
Preseed™	295	not tested
Yes™ But Anal	330	7.8
Restore	340	not tested
Probe® Persona	341	7.7

¹ Range is from more than 1 published study of the lubricant.

Fertility and lubricants

Many studies have shown that some lubricants decrease sperm movement in lab conditions. However, one study followed women over time and did not find any difference in fertility between women using or not using lubricants. This may be because lubricants remain near the vaginal opening or because sperm rapidly moves into the uterus before the toxic effect of the lubricant takes place. Because it may be important for family planning, information about lubricant effect on sperm movement is shown below.

Normal sperm movement:	Normal to mildly decreased sperm movement:	Decreased sperm movement:
<ul style="list-style-type: none"> • Pre-Seed™ Fertility-Friendly Lubricant • Conceive Plus® • BabyDance® • BioGenesis by Good Clean Love® • JO-Actively Trying® 	<ul style="list-style-type: none"> • Canola Oil 	<ul style="list-style-type: none"> • Astroglide® • FemGlide® • Glycerin • KY® Jelly • KY® Sensitive • KY® Tingling (especially severe) • KY® Warming • Olive Oil • Replens Silky Smooth® • Saliva

Silicone-based lubricants (examples)

Femani® Smooth Touch	Thin consistency with long lasting sealing property
Sliquid®-Silver	High quality silicone lubricant; paraben & glycerin free

UberLube®	High quality silicone lubricant; paraben & glycerin free
ID® Millenium	Paraben & glycerin free
System Jo®-Premium	High quality silicone lubricant; paraben & glycerin free
Pink®-Silicone	Paraben & glycerin free

Do Not use silicone lubricants with other products made with silicone, such as sexual “toys” like vibrators. The lubricant may cause damage to the other product.

Hypoallergenic lubricants (organic and chemical-free)

Pink®	Made with water and aloe extract, washes off easily. Glycerin and paraben free, good slipperiness. Can also be used as a moisturizer.
Just Like Me®	Made by Pure Romance, pH balanced, safe for latex condoms.
Good Clean Love® (Almost Naked)	Certified organic, paraben and glycerin-free. Advertises as carbon neutral.

Moisturizers

What are vaginal moisturizers?

Vaginal moisturizers are products that are intended to ease vaginal dryness. They need to be used regularly to maintain moisture. They are absorbed into the skin, increasing moisture in the affected area. Moisturizers may not provide enough comfort during intercourse, so lubricants may still be needed.

One of the downsides of vaginal moisturizers is that they are messy. Because the vagina absorbs what it needs and excretes the rest, you may want to wear a

panty-liner to catch the remaining moisturizer. A list of moisturizers can be found later in this document.

Lubricants and moisturizers will not protect you against pregnancy and sexually transmitted infections.

Moisturizers

<p>Extra Virgin Olive Oil (natural)</p>	<p>Can be used as a moisturizer by placing on finger and rubbing into the vaginal canal. Do not use other food oils as they can trap bacteria.</p> <p>Do not use with latex condoms as they weaken the condom, cause tears, and can cause disintegration of the condom.</p>
<p>Vitamin E Oil (natural)</p>	<p>Can be used as a suppository. Pure vitamin E oil is available in bottle form or capsule form. If you use the capsules, break them open and apply to the vaginal canal. You can apply vitamin E oil one or more times a day.</p> <p>Do not use with latex condoms as they weaken the condom, cause tears, and can cause disintegration of the condom.</p>
<p>Coconut Oil (natural)</p>	<p>Coconut oil can be used on the outside of the vaginal entrance and just inside the edge. Coconut oil is good for rejuvenating dry, irritated tissues and for keeping vaginal dryness at bay. Coconut oil should be pure, without other oils or additives.</p> <p>Do not use with latex condoms as they weaken the condom, cause tears, and can cause disintegration of the condom.</p>
<p>If you are prone to urinary tract infections, yeast infections, or have diabetes, you may not be able to use natural oils.</p>	
<p>Luvena®</p>	<p>A vaginal moisturizer that can be found at your local drug store. It is hormone, glycerin and paraben free.</p>

<ul style="list-style-type: none"> • Use water-based, silicone lubricants, spermicidal gels with latex or polyurethane condoms. • Do not use oil-based lubricants with condoms. 	
Replens®	Estrogen free. Good for post-menopause or after medical treatments (such as chemotherapy and hormone therapy) that dry the vagina. This moisturizer is inserted into the vagina with an applicator 1-3 times per week. Women who choose not to use or cannot use localized estrogen replacement to the vagina often use Replens.
Revaree®	Hormone-free. This is a vaginal insert that is placed with fingers into the vagina every 2-3 days at bedtime. This is a good option post-menopause.
Vajuvenate®	This is a topical vulvar cream intended to reduce itching and irritation on the vulva. It is hormone free and has coconut oil, vitamin E, and shea butter listed as ingredients.

Can I use a spermicidal gel as a lubricant?

While lubricating, spermicidal gels should not be used during oral sex. Some women also experience irritation when they are used externally on the vulva.

What kind of lubricant should I use with a condom?

Many women of child-bearing age use condoms to help prevent pregnancy. In addition, latex condoms help prevent the spread of sexually transmitted infections and HIV. Oil-based lubricants such as baby oil and Vaseline® can weaken condoms causing tears or disintegration. It is best to buy non-lubricated condoms and apply your own lubricant. Many different types of condoms are available:

- **Latex** - must be used with water or silicone based lubricant.
- **Polyurethane** - latex free, thinner and stronger, less constricting fit.

- **Non-latex polyisoprene** – higher sensitivity, without latex.
- **Female condoms, Nitrile FC2 (synthetic rubber)** – available in latex-free material.
- **Natural lamb** – does not protect against sexually transmitted infections. These condoms only help to prevent pregnancy.

Dilators

What is a vaginal dilator?

- Dilators (sometimes called “vaginal trainers”) are used by some women to slowly and gently stretch the vaginal tissue and help with vaginal muscle relaxation. Dilators come in several sizes and are made of plastic or silicone.
- You need to use a lubricant with your dilator. Many women find slow, progressive vaginal dilation a helpful way to return to intercourse.
- For instructions on how to use dilators, please speak with your healthcare provider or sexual health counselor/therapist.

Where to purchase dilators

Hope and Her https://hopeandher.com/	Offers reasonable priced set of 6 hard plastic dilators in graduated sizes with attachable handle for ease of insertion.
Pure Romance https://www.pureromance.com	Offers flexible silicone dilator sets in various sizes.
CooperSurgical https://www.coopersurgical.com	Milex dilators are flexible, silicone dilators in graduated sizes.
CMT (Current Medical Technologies) https://www.cmtmedical.com/	Syracuse Medical Devices vaginal dilators are medical grade, non-latex, rigid plastic dilators. Seven graduated sizes are available.

Soul Source https://soulsource.com	Offers a wide variety of both silicone and rigid plastic dilators.
Brand: TH http://www.amazon.com	Inexpensive plastic dilator set available on Amazon. Search “TH plastic dilators”
Laura Berman Plastic Dilators https://www.amazon.com/Dr-Laura-Berman-Intimate-Basics/dp/B018KUTUA2	Inexpensive plastic dilator set available on Amazon. Search “Laura Berman Plastic Dilator Set”

Is there counseling for sexual health and enrichment at the University of Michigan?

The center for Sexual Health at the University of Michigan is a great resource for patients who would like more information or help with sexual enrichment. Visit their website at:

<https://www.uofmhealth.org/conditions-treatments/sexual-health>

For more information on sexual enrichment aids, visit these websites:

- <https://www.amazon.com>
- <https://www.babeland.com/>
- <https://www.bedsider.org/>
- <http://www.erotica-readers.com>
- <https://www.goodvibes.com/s/>
- <http://www.ohmibod.com>
- <https://smittenkittenonline.com>

Michigan Medicine and its sex therapist staff do not officially recommend use of any one of these products, nor do they recommend any one product over any other products. This is not a list of official recommendations, but a resource for options.

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