

# ***MTF Trans Hormonal Therapy***

HRT Options, Best Practices, and some other semi-related stuff...

*Blog at WordPress.com.*

## **The Injectable Estradiol and Progesterone Shortages of 2018-2019**

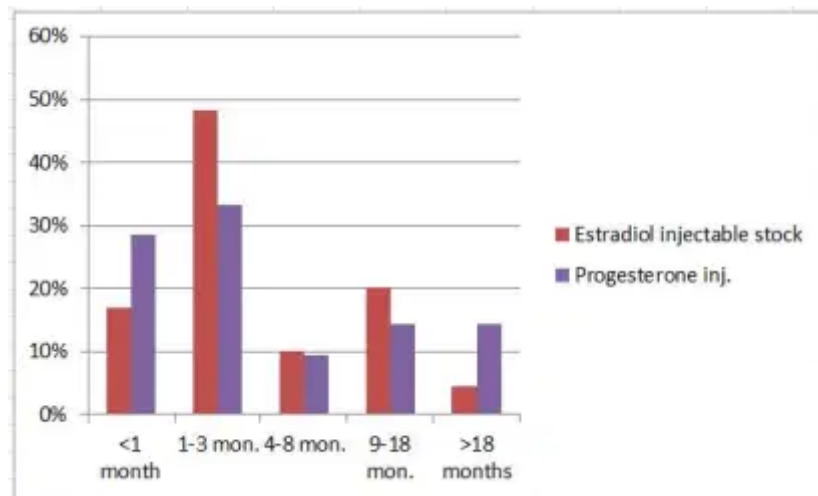
Rev. 6, by Beverly Cosgrove, 1-24-2019

UPDATE 1-24-2019: Perrigo has resumed production of their 20 mg/ml and 40mg/ml estradiol valerate generics, and they are now widely available. However, in Southeast Asia a new fake “Progyon Depot” product is being sold to unsuspecting customers online. See below for description of the fakes, and see the chart for the current status of availability for injectable forms of estradiol.

[Older] UPDATE 9-9-2018: Perrigo states that there is a limited supply of the 40mg/ml generic available. Perrigo also forecasts that the 20mg/ml generic will become available this month, in September.

[Older] UPDATE 6-26: (1) Perrigo has declared, finally, an official shortage, but confirmed that they intend to CONTINUE production of EV in 20mg/ml and 40mg/ml strengths. Their **announcement** (<https://www.ashp.org/drug-shortages/current-shortages/Drug-Shortage-Detail.aspx?id=424>) says “Perrigo has estradiol valerate 20 mg and 40 mg vials on back order and the company estimates a release date of August 2018.” (2) A new shortage of Estradiol Cypionate injection in the Los Angeles area has been reported by patients. (3) One patient in Sweden has reported a shortage of Polyestradiol Phosphate (Estradurin).

**Once again, in 2018 shortages of injectable estradiol appeared.** AMAB trans women who are entirely dependent on injected estradiol were finding that their usual prescription was entirely unavailable. And a sense of panic was setting in.



Survey: “How much stock of estradiol injectable have you accumulated?” in the HRT Hormone Group, showing how extensive personal stockpiling is underway by injectable Estradiol and Progesterone users.

**This is not new.** In 2016, [a massive shortage developed](https://www.out.com/out-exclusives/2016/8/04/exclusive-theres-injectable-estrogen-shortage-thats-leaving-trans-women) (<https://www.out.com/out-exclusives/2016/8/04/exclusive-theres-injectable-estrogen-shortage-thats-leaving-trans-women>) which did not resolve itself until nearly the end of the year. That time, it was Par Pharmaceuticals, who manufactures Estradiol Valerate (“EV”) under license, who could not produce new stock of the brand-name Delestrogen injectable, due to shortage of approved oil for the medium.

**In 2018**, we were in a similar situation.

**Talking to trans women, I often encounter suspicion** that someone (“they”) are conspiring to take discriminatory action against trans people, or alternately to corner the market and raise the prices. However I think it’s wrong to get upset at the manufacturers in this case. Their projections every year are being blown away by new demand, due to the explosion of new trans women taking injections — and every time there is a shortage, there is a new surge in hoarding and over-ordering too. Bad production decisions, exponentially growing demand, personal stockpiling or hoarding, and unexpected shortages of raw materials, are the factors which appear to be to blame, not a conspiracy to deprive trans people of essential hormones.

**First, let me remind you that there are COMPOUNDING PHARMACIES** who can make custom injectables, including estradiol valerate injectable. This article is not about them, but for many, they are a good source. This article is about commercially manufactured sources. I will follow up with an article on compounding pharmacies later.

**For most estradiol injection users who were buying Perrigo generic estradiol, the easiest alternative to locate is the brand name drug Delestrogen**, which costs about 5-8 times as much as the generic. The 40mg/ml strength is not plentiful, but there seems to be a good supply of the 20mg/ml strength.

Injectable	Source	Status	Cost, typical monthly cash, excluding syringes & needles	Comments
Estradiol Valerate, 40mg/ml, 5 ml reusable vial	Generic, by Perrigo	Shortage ended around November 2018.	Walmart: \$14.41 (10 mg per 7 days gluteal IM)	Stock confirmed at multiple pharmacy chains
	Delestrogen (mfg by Par Pharma)	Available	Costco: \$66.50	Stock confirmed at multiple pharmacy chains
Estradiol Valerate, 20 mg/ml, in 5 ml reusable vial.	Generic, by Perrigo	Shortage ended around December 2018.	Walmart: \$20.24	Stock confirmed at multiple pharmacy chains
	Delestrogen (mfg by Par Pharma)	Available	Costco: \$81.61	Stock confirmed at multiple pharmacy chains
Estradiol Valerate 10 mg/ml, 1 ml ampule	Generic, Progynon Depot, by Cadila Healthcare LTD, Ahmedabad, India	Discontinued by Cadila. Large stocks of counterfeit product are now being sold by small operators. Some of the counterfeit has obvious defects in packaging or potency.	---	Avoid. You can assume any of this product being offered for sale is probably counterfeit.
	Generic, Progynon Depot, by Nihon Schering Japan	Discontinued by Nihon Schering, rights passed on to Fuji in 2016	---	Probably no stock can be found at this point.
	Generic, Pelanin Depot, by a manufacturer in Japan	unknown	---	Being sold by individuals from the Philippines
	Generic, Progynon Depot, by Fuji Pharmaceuticals Japan	Available	unknown	Being sold by individuals from the Philippines, Malaysia, or Indonesia
	Generic, Estraval Depot, by Actiza	Apparently a fraud. No product of this type being listed by Actiza. Lab tests indicate that this product may contain no estradiol. For a short time marketed by InHousePharmacy, until large scale complaints from customers forced it to be withdrawn.	unknown	Avoid. You can assume any of this product being offered for sale is a fake.
Estradiol Valerate, 10mg/ml, 5 ml reusable vial	Generic, by Perrigo	Unofficially discontinued, unlikely to be resumed	---	Probably no stock can be found at this point.
	Delestrogen (mfg by Par Pharma)	Available	Costco: \$117.85	Expensive but available.
Estradiol Cypionate, 5 mg/ml, vial of 5 ml	Depo-Estradiol by Upjohn	Available	Walmart: \$24.70	Recommended. However be sure your doctor knows how to prescribe EC properly.
Polyestradiol Phosphate, 40 or 80 mg with solvent ampule	Estradurin (Sweden, etc)	Available	unknown	Easily available in parts of Scandinavian Europe but no success in exporting elsewhere so far
Estradiol Valerate, 5 mg/ml, 1 ml ampule	Neofollin Injection (Czech Republic and Slovakia)	Available	unknown	Easily available in parts of Eastern Europe but no success in exporting elsewhere so far
Estradiol Benzoate, 5 mg/ml, 1 ml ampule	March Pharmaceutical, Ltd Thailand	Available	Approx \$11 (2.5 mg per 3 days gluteal IM)	Being sold by individuals from the Philippines, Malaysia, or Indonesia. This product could be subject to counterfeiting but I've seen no direct evidence of it yet.
Phenokion F containing Progesterone 50 mg, estradiol Benzoate 5 mg, in a 1 ml ampule	Vesco Pharmaceutical, Bangkok Thailand	Available	unknown	Not recommended except as a source of progesterone. Being sold by a few individuals in Thailand, the Philippines, or Malaysia
Duoton Fort containing Progesterone 50 mg, estradiol benzoate 3 mg, 1 ml ampule	T.P. Drug Laboratories, Bangkok Thailand	Available	unknown	
Other unlicensed amateur compounding efforts using Chinese-made powdered estradiol valerate or estradiol cypionate, and sold online, in various strengths and sizes.		Available	As low as \$3.68 (3.5 mg per 7 days IM)	Even though the price is low and the operators sincere, the sterile procedure is not assured by any independent means and the source material has unaudited purity, so this should be only a source of last resort. Do not ask me for connection.

This chart Rev 7, 1-24-2019, B. Cosgrove <https://moderntranshormones.com>

**Warning: counterfeit (fake) drugs.** Those who are seeking alternate sources of the widely used Progynon-Depot, which was discontinued by Cadila Health in India in late

2016, have  
found



Progynon-Depot by Fuji Pharmaceuticals



Pelanin-Depot

individuals selling Progynon-Depot online, but it's known that the currently available product is a counterfeit and in some cases has questionable potency and quality. Buying the "Cadila" brand of Progynon-Depot should be avoided. However, the license to produce Progynon-Depot in Japan, formerly held by Nihon Schering, was **passed on to Fuji Pharmaceuticals** (<https://www.fujipharma.jp/news/050307.html>) in 2015 or 2016, and production is underway currently there. A few individuals have offered the Fuji Progynon-Depot for sale privately, and it seems less likely to be counterfeit. However it remains suspicious that the Fuji brand is not yet being offered by one of the two major online distributors as a replacement for the Cadila brand. The possibility that it is a target of counterfeiters cannot be entirely ruled out yet, or in the future.



**In January 2019 a new fake "Progynon Depot" appeared,**

labeled Estraval and marked as being made by Actiza. This product appeared on dozens of small health and hormone online sales sites, finally being sold by InHousePharmacy.Vu — but an immediate wave of buyer complaints caused the product to be withdrawn. Our group had several who used the product and their lab tests showed little or no estradiol. Note that one way to make an injectable estrogen is to make it with a dangerous and cheap synthetic, Ethinyl Estradiol, which can produce some estrogenic effects but does not register as estradiol in lab tests — such a fraud would endanger the users — but so far, the product seems in many cases to simply have no active ingredients at all.

**In Europe, an estradiol injection source appears to be Neofollin Injectable**, available in the Czech Republic and in Slovakia. One suggested way to obtain it is as follows: take a valid prescription for the first 3-6 months worth and travel to the Czech Republic, and purchase in a pharmacy there. Then in the future, you may be able to get refills from that pharmacy shipped elsewhere in the EU for a small charge. The EV is in ampules, so it is not in the usual packaging. Have your doctor write the prescription based on [this information](http://www.bbpharma.sk/hormones/neofolin-injection). (<http://www.bbpharma.sk/hormones/neofolin-injection>).

**Overall, there are three injectable forms of estradiol commercially available:** Estradiol Valerate (EV), Estradiol Cypionate (EC) and Estradiol Benzoate (EB). These are the three primary oil-soluble esters of estradiol in production. For those in the United States who have been using EV, try the OTHER easy-to-get injectable estradiol: Estradiol Cypionate (Depo-Estradiol, “EC”).

**EC has a number of differences from Estradiol Valerate:**

(1) Its “half life” is about 9 days compared with 6.5 days for Estradiol Valerate. (When injected into the gluteus. Uptake rate is much faster in both cases when injected into the thigh.) (2) Its strength for dosage purposes appears to be approximately 2.5-3.5 times that of Estradiol Valerate, by weight in milligrams. (3) It tends to have slightly lower viscosity than most formulations of EV, so it is faster to inject through very small needles. (4) Peak levels are reached in about 4 days after the injection, compared to 2 days for EV.

**In general, EC seems to be a good choice for IM injection**, especially for those subject to mood swings who would prefer a gentler-rising/falling E2 level for comfort. Ease of

injection due to lower viscosity is another plus. Note that EC is only available in the 5mg/ml strength, which is about equivalent to EV in the 20mg/cc strength.

**We (moderators of the 10000-member HRT group) have observed unexpectedly low levels of estradiol in a few individuals** even after injecting EC properly. We don't have a good explanation yet, but one could theorize that there are a few bad batches of EC being sold — or that a few individuals do not get the usual high efficiency that EC is known for, and would need to increase their dosage. We are trying to find the explanation for this.

**The brand name form of EC is called “Depo-Estradiol”** and is made by Pfizer and can be bought (with cash discount) for about \$118 per 5ml vial of the 5mg/cc. There have been



generics of EC in the past, but none seem to be available at this time. There is an advantage to having it made by the “brand name” manufacturer: often generics are weaker, or more variable in quality compared to brand name drugs.

**Let me give an example of dosing.** Suppose you take 10mg of EV per week. (That's 0.5ml of the 20mg/cc EV, or 1.0ml of the 10mg/cc EV, or 0.25ml of the 40mg/cc EV.) To calculate, take the number of mg of EV (NOT the ml) and divide it by 3 and you get the mg of EC to take. EC is always at the 5mg/cc strength, divide 5 into the result and you get the number of ml of EC to inject. In the above case, 10mg EV divided by 3 gives you 3.3 mg; divide that by 5 and you get .66cc of EC to take.

**What about dosing EC with Progesterone injectable?** If your progesterone is 50mg/cc strength, it combines with EC in approximately EQUAL VOLUME to give a good starting point for determining your own individual best ratio. That is, in the above example, you could round your 0.66cc up to 0.7cc, and add an equal amount of progesterone, also 0.7cc, so you get the magic number of 1.4cc total, weekly, of the mixture. This ratio can be adjusted up or down according to your needs. Even though you can mix your Progesterone and EC in the same syringe, a weekly injection of Progesterone is not useful because of its fast decay time, so a regimen consisting of twice a week Progesterone plus once a week EC would be more suitable one. Keep in mind

that deep muscle injection of Progesterone is required — into the gluteus — not into the thigh, or arm. Tests show that subcutaneous injection of Progesterone is much less efficient than gluteal.

**The third form of estradiol injectable is Estradiol Benzoate (EB).** This form is very short acting, and is in and out of the bloodstream in a matter of about 3-4 days, which requires a twice a week injection schedule at the very least. EB is more commonly used for veterinary purposes, but it is often used by trans women in Southeast Asia. See the Estradiol source table for details. Also, the practical estradiol treatment comparisons in [this article](https://transhormones.wordpress.com/2017/11/16/chart-properties-of-hrt-estrogens/) (<https://transhormones.wordpress.com/2017/11/16/chart-properties-of-hrt-estrogens/>) may be useful.

1/29/2018

## Progesterone Injection

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### Products Affected - Description

Progesterone Intramuscular Injection, American Regent  
50 mg/mL, 10 mL vial, 1 count (NDC 00517-0750-01)

Progesterone Intramuscular Injection, Fresenius Kabi  
50 mg/mL, 10 mL vial, 1 count (NDC 63323-0761-10)

Progesterone Intramuscular Injection, Teva  
50 mg/mL, 10 mL vial, 1 count (NDC 00591-3128-79)

Progesterone Intramuscular Injection, West-Ward  
50 mg/mL, 10 mL vial, 1 count (NDC 00443-9725-01)

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### Reason for the Shortage

- American Regent did not provide a reason for the shortage.
- Fresenius Kabi has progesterone on shortage due to increased demand and manufacturing delays.
- Teva has progesterone on shortage due to supply constraints.
- West-Ward has progesterone on shortage due to manufacturing delays.

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### Available Products

There is insufficient supply for usual ordering.

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### Estimated Resupply Dates

- American Regent has progesterone in oil 50 mg/mL, 10 mL vials for intramuscular injection on back order and the company cannot estimate a release date.
- Fresenius Kabi has progesterone in oil 50 mg/mL, 10 mL vials for intramuscular injection on back order and the company cannot estimate a release date. Check wholesaler for availability.
- Teva has progesterone in oil 50 mg/mL, 10 mL vials for intramuscular injection on back order and the company estimates a release date of 2nd quarter 2018.
- West-Ward has progesterone in oil 50 mg/mL, 10 mL vials for intramuscular injection on back order and the company cannot estimate a release date.

**Progesterone injectable at present is also in short supply.** Unlike the estradiol valerate sources, which have not notified the FDA of an official shortage or discontinuation, the Progesterone manufacturers have indeed reported an



official shortage in online FDA documents. However, in the case of Progesterone there are foreign sources online that are readily available. In particular, these sources of Progesterone, **AllDayChemist** (<https://www.alldaychemist.com/susten-10108.html>) and **InHousePharmacy** (<https://www.inhousepharmacy.vu/p-787-strone-50-injection-im-progesterone-10-ampoulespack.aspx>) are still widely used, so the trans community has not expressed such alarm as in the case of the estradiol shortage.

This chart was made by a member of **the HRT Forum** (<https://www.facebook.com/groups/TransHRT/>) and offers some additional information.

*Injectable Estrogens: A cost comparison of available injectable estrogens, Ver. 1 created 4/24/2018 by B. Rossman*

Drug names + info	Costs/unit					Dose info			Rec Dose		Days of		Cost/dose		Cost/mo
	1	2	3	4	5	Dose	Doses/unit	interval			doses				
<b>Estradiol Benzoate</b> 5mg in 1mL amp, box of 10 ampoule; from FSH	22.32	44.64	66.96	89.28	111.60	2amp/EB + 1amp Phen F	3.75	60	3	180			\$ EB + 5 PhenF	shipping	
<b>Phenoklon F</b> 5mg/EB+50mg/P, box of 3 ampoules; from FSH	8.59	17.18	25.77	34.36	34.36	PhenF = 60 doses	12.5	3					per dose		\$18.72
<i>All prices reflect Walmart pharmacy</i>															
<b>*Estradiol Valerate</b> 20mg/mL, 5mL vial	48.86	80.92	153.07			5mg/EV = 0.25mL	5	20	3.5	70			\$ 2.44 \$ 2.02 \$ 1.91		5/dose months
													2.33 4.67 9.33		5/dose months
													\$20.97 \$17.35 \$16.41		5/mo
40mg/mL, 5mL vial	68.61	128.45				5mg/EV = 0.125mL		40	day	140			\$ 1.72 \$ 1.61		5/dose months
													4.67 9.33		5/mo
													\$14.69 \$13.77		5/mo
<b>*Estradiol Cypionate</b> 5mg/mL, 5mL vial	112.56	218.99	323.99			1.5mg/EC = 0.3mL	1.5	16	5	80			\$ 7.04 \$ 6.84		5/dose months
													2.67 5.33		5/mo
													\$42.16 \$41.09		5/mo
<b>*Progesterone</b> 50mg/mL, 10mL vial; Taken w/ EV	17.2	28.82				10mg/P 0.4mL	20	25	3.5	87.5			\$0.69	\$0.38	5/dose (EV)
: Taken w/ EC						15mg/P 0.3mL	15	33	5	165			\$0.52	\$0.44	5/dose (EC)

\*Costs reflect best prices from GoodRx.com in south-central IN, USA as of 4/23/2018; no insurance available

**So, don't despair! There are many options for estradiol injection still.** As I said at the top of the article, these are only your retail options. You still may have a compounding pharmacy near you which will custom make your EV injectable mixture for you, and I will try to add more information about that option later. And of course, I will attempt to update this article from time to time to reflect the current retail supply conditions.

© MAY 6, 2018 JANUARY 24, 2019 © BEVERLY  
COSGROVE © UNCATEGORIZED

## 20 thoughts on “The Injectable Estradiol and Progesterone Shortages of 2018-2019”

### 1. Estradiol Injections are NOT Expensive! – MTF Trans Hormonal Therapy



May 7, 2018 at 10:17 am @ [Reply](#)

[...] form of injectable estradiol. If not, your costs may be somewhat higher... or not. See this article for [...]

## 2. Angelina Gabrielle Grewen

May 7, 2018 at 12:10 pm @ [Reply](#)

I am currently getting both estradiol and progesterone in pill form. Is there any reason for me to be concerned?

**Beverly Cosgrove**

May 7, 2018 at 2:47 pm @ [Reply](#)

Generally, using injectable estradiol instead of oral pills gives higher safety, better feminization, better T suppression, and fewer side effects — especially because antiandrogens such as Spironolactone are not needed (given the proper regimen). However, progesterone (Prometrium) in capsule form (100 mg) is generally good and it's questionable whether injection of progesterone is better. Be sure by progesterone you don't actually mean medroxyprogesterone, which is not a type of progesterone at all, but a synthetic progesterone substitute which has negative side effects. For an introduction, see my short lecture transcript here.

<https://transhormones.wordpress.com/2018/02/17/4th-annual-socal-lgbtq-health-conference-talk/> and for more in depth discussion, see the other articles located on this site:

<https://transhormones.wordpress.com/>

## 3. Lena

May 20, 2018 at 6:55 am @ [Reply](#)

I sell homemade injectable estradiol valerate 400 mg per 10 ml vial, (40mg/ml strength), \$40/vial, 2 to 9 vials per purchase, about \$6 shipping. Besides myself, 35 other MtFs use it. I'm a post-op MtF in Eastern Europe, run the Russian-language TG discussion mailing list. My email address on my webpage: lena.kiev.ua

## 4. Amy

August 5, 2018 at 11:49 pm @ [Reply](#)

I require some soon. Please inbox me. Thanks

## 5. Amy

August 5, 2018 at 11:51 pm @ [Reply](#)

I require some soon. Please inbox me or email me –  
Thanks

## 1. LenaKiev

August 5, 2018 at 11:57 pm @ [Reply](#)

I don't see a way to inbox you, I don't see your email address. My email address: [Lena@lena.kiev.ua](mailto:Lena@lena.kiev.ua)

1. **Amy**

August 6, 2018 at 12:42 am

My email address is :-

[dc96@hotmail.com](mailto:dc96@hotmail.com)

6. **Jessica Taylor**

August 12, 2018 at 11:27 am @ [Reply](#)

An still no word from Perrigo? This is so disheartening. It's beginning to look as though it will remain the expensive Cypionate cousin or no injectable solution without self compounding. Based on my present dosages, my Estradiol habit is a 200 dollar per month drain on my finances. ) : Soooo ridiculously expensive!

7. **LenaKiev**

August 12, 2018 at 11:46 am @ [Reply](#)

Now I can send already compounded vials. 40 mg/ml, 10 ml/vial, \$60/vial.

Lena

[Lena@lena.kiev.ua](mailto:Lena@lena.kiev.ua)

1. **desertcat10**

October 19, 2018 at 2:08 pm @ [Reply](#)

Lena, I am interested. I have emailed you. Please let me know payment and shipping details via email. Thanks!

8. **Ina**

September 13, 2018 at 6:43 am @ [Reply](#)

Hi! Just wanted to let you know that Estradurin is currently all gone (the only form of injectable estrogen prescribed in Sweden) and is anticipated to be back in stock sometime next year. That's around a whole year without any injectable estrogen available whatsoever.

I'm going to ask my doctor if there are any worthwhile alternatives. Unfortunately, I had an allergic reaction to patches, so the only thing left is pills, but I don't get much effect from those at all, even at high doses.

If anyone knows of the situation in Denmark, maybe some could be found there?

Thanks!

**9. Jessica Taylor**

October 12, 2018 at 7:35 pm @ [Reply](#)

Perrigo seems to not have a clue about their own supply chain. It's presently 10/13/2018 and still nothing but vagueries and false promises. I would think there's something more going on behind this "shortage" and I'm concerned it's more nefarious than I want to think about.

**10. Jess Taylor**

October 19, 2018 at 9:36 am @ [Reply](#)

FWIW, I finally got a IM EV 40 mg./ 5 ml. script filled and the bottle is labeled Perrigo. I'm in Missouri. Maybe they're producing Nation wide again? Who knows as one fill is no long term guarantee, but it leaves me hopeful as the stock was clearly new. Any other women out there getting their scripts finally filled? If you've given up, resubmit to your pharma and if you're filled, post up here. We live in hope!

**11. nandhini anand**

October 21, 2018 at 9:31 am @ [Reply](#)

Reblogged this on [The travails, history, and future experiences of a Transgender woman.](#)

**12. Erin**

January 25, 2019 at 9:52 am @ [Reply](#)

About Estraval. I too noticed that it seem to have 0 effect of Estradiol levels, but I just wanted to mention that is not manufactured by Actiza, it says it's manufactured by Montage Laboratories (another Indian company) for Actiza and that's why they might not have it on their site.

**Beverly Cosgrove**

January 23, 2020 at 6:12 pm @ [Reply](#)

ALL Estraval is fake. No real drug named Estraval exists. It is solely a creation of counterfeiters and should not be purchased. also, the fact that it has no effect on your estradiol levels proves it. Please dispose of what you have or insist on a refund from your source. Please warn others.

**13. Oxean D Freeman**

July 12, 2019 at 5:04 am @ [Reply](#)

hey girls, can i use a IM injection for subcutaneous injection too? Or does it need some different mix?

**1. JT**

July 12, 2019 at 6:04 am @ Reply

The mix is the same.

14. **Generic Injectable Estradiol Gets a Second Source –  
MTF Trans Hormonal Therapy.**

January 22, 2021 at 5:39 pm @ Reply

[...] source for years: Perrigo. But serious shortages of EV, especially in affordable generic form, has plagued transgender patients for years, forcing patients to buy expensive brand-name equivalents costing up to 8 times more, or in some [...]