
Markov Clinic Remote Patient Instructions

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This document details how I became a remote patient of the [Markov Clinic](#) and obtained Dr Igor Markov's autovaccine therapy for ME/CFS. It was created in response to requests by several ME/CFS patients to write up the process.

This document should not be considered medical advice. For medical advice, you may like to consult your doctor, or consult Dr Igor Markov if you become his patient.

The information presented here has been checked over by the Markov Clinic. The clinic mention that the details in this document (like prices, etc) may be subject to change.

The author is an ME/CFS patient who lives in the UK, and can be contacted via the [Phoenix Rising ME/CFS forum](#) (forum member name "Hip").

If you are thinking of getting autovaccine therapy for your ME/CFS, you may like to record your progress on the Phoenix Rising ME/CFS forum, on one of the [Markov threads](#).

Dr Igor Markov's Autovaccine Treatment of ME/CFS

Executive Summary

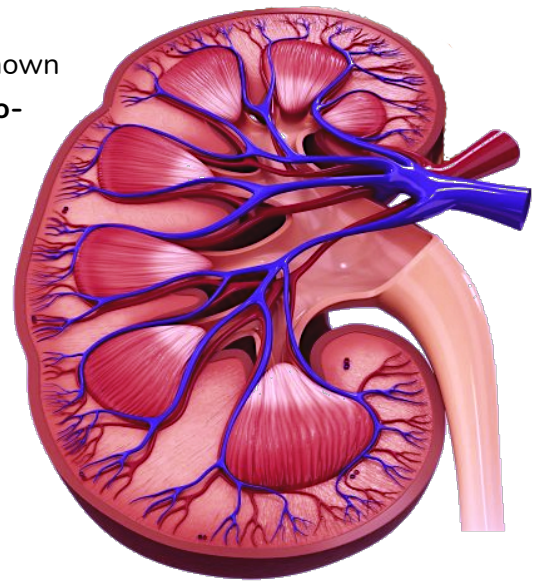
Dr Igor Markov of the [Markov Clinic](#), Kyiv, Ukraine says he has discovered both the cause and the cure of ME/CFS. Dr Markov demonstrated that most ME/CFS patients have high levels of bacterial toxins in their blood (toxemia) which he believes cause ME/CFS. These toxins have been detected in over 800 ME/CFS patients using a commercial toxemia lab test available in the Ukraine. Many bacterial toxins are present in the blood of ME/CFS patients, not just the LPS toxin.

Dr Markov thinks these toxins come from a bacterial dysbiosis in the patient's kidneys. Dysbiosis is where harmful bacteria become overgrown in a bodily organ.

Dr Markov asserts that kidney dysbiosis is a previously unknown medical condition, which he discovered and has named **nephro-dysbacteriosis**. Nephrodysbacteriosis is not to be confused with a kidney infection: dysbiosis is an overgrowth of harmful bacteria, rather than an active infection.

Patients with nephrodysbacteriosis have bacteria in their urine, which can be detected with a suitably sensitive urine culture. Dr Markov has found that almost all ME/CFS patients have bacteria in their urine.

To treat ME/CFS, Dr Markov isolates the bacteria causing the nephrodysbacteriosis from the patient's urine, and produces an autovaccine (autogenous vaccine) from these bacteria.



Dr Markov Says ME/CFS is Caused by a Bacterial Dysbiosis in the Kidneys

An autovaccine is a custom vaccine made from the patient's own bacteria, and is designed to stimulate the immune response against those bacteria. The autovaccine is given to the patient, and this immunization slowly clears the kidney dysbiosis.

With this autovaccine therapy, Dr Markov observes 93% of ME/CFS patients are fully and permanently cured (meaning that all their ME/CFS symptoms disappear, and they require no further treatment). Though it typically takes 2 to 3 years of autovaccine therapy for ME/CFS patients to reach the cured state, because it takes time to clear the dysbiosis in the kidneys. However patients who have had ME/CFS for less than 3 years are cured much faster, usually within 6 months.

Dr Markov finds that antibiotics do not help clear the nephrodysbacteriosis (and can actually make the kidney dysbiosis worse).

Dr Markov's published study on his autovaccine treatment for ME/CFS is [here](#). Further papers from Dr Markov (such as his ME/CFS blood toxicological study) can be purchased on [this webpage](#).

A good introduction to Dr Markov's kidney dysbiosis theory of ME/CFS and his autovaccine treatment given in the first post of [this thread](#).

Dr Markov has named the condition of having high levels of bacterial toxins in the blood from a kidney dysbiosis the **chronic bacterial intoxication syndrome** (CBIS).

Autovaccine Therapy From the Markov Clinic

Autovaccine therapy for ME/CFS can be obtained by visiting Dr Igor Markov at the Markov Clinic in Kyiv, and having some autovaccines made which the patient can then bring home with them. The patient can arrange for a nurse to inject these vaccines, or can inject the vaccines themselves.

However, the clinic has recently started taking on remote patients whose autovaccines are prepared by the clinic's bacteriology department, and then shipped to the patient by international courier.

This remote patient approach is workable in countries where citizens are allowed to import prescription medications for personal use, such as the UK, US, Australia, Netherlands and Belgium. In countries such as France, Germany and Italy, importing prescription medications for personal use requires a license from the health ministry (this license might be given if patients write to their health ministry).

The legality of importing prescription medications in each country is detailed [here](#).

Overview on How to Become a Remote Patient of the Markov Clinic

To become a remote patient of the Markov Clinic, these steps are followed:

[1] The process begins with a **remote medical consultation** with Dr Igor Markov by **email** (cost \$300), or by **video conference** using Zoom (\$300). Dr Igor Markov does not speak English, only Russian and Ukrainian, so for English-speaking patients, the video conference will be accompanied by a third person who is a professional translator (or possibly accompanied by Dr Markov's brother, Dr Oleg Markov, who speaks English). There is an extra charge of \$100 to \$200 for this translation during the video call (unfortunately interpreters have high fees). So email consultation is cheaper than a video consultation.

A consultation with Dr Igor Markov is initiated by contacting the clinic on admin@vitacell.com.ua and paying the clinic via Western Union (payment details [below](#)).

For an email consultation, Dr Igor Markov will ask you to send some relevant extracts of your medical history, and the results of any treatments you have had. If there are no medical details available, then he will ask you to describe in your own words your main symptoms, their patterns of emergence and disappearance, your test results, your previously established diagnoses, any drugs you use for treatment, and your subjective response to those drugs (with your response to any antibiotic treatment of especial interest).

[2] Dr Markov will ask you to perform some **high-sensitivity urine culture tests** at home (detailed [below](#)), using a urine dipslide product which can be bought online. A dipslide is a small plastic device that you expose to your urine, and it captures and grows any bacteria present in your urine. The clinic need these captured bacteria in order to manufacture your autovaccines.

If you prefer, you can begin the remote patient process with a dipslide urine culture before you book your medical consultation. This is because if no bacteria can be detected in your urine, it may not be possible to have autovaccine treatment (although sometimes when no bacteria are found, Dr Markov can make autovaccines using bacteria isolated from the patient's nasopharynx). So before spending money on the medical consultation, you may like to first check that you can capture bacteria with some dipslides.

[3] Once your urinary bacteria have been captured on the dipslides, these dipslides are shipped to the Markov Clinic by fast (3- or 4-day) international courier, using special Category B shipping for biological samples (how to ship the dipslides is detailed [below](#)).

When they receive your dipslides, the clinic's bacteriology department will identify the bacteria on them (there is a \$40 identification charge for each bacterial species identified). They will then manufacture a customized autovaccine for you from these bacteria, and/or prescribe one of the clinic's off-the-shelf vaccines to target the identified bacteria.

[4] Once your vaccines and autovaccines are ready (it takes 10 to 14 days to manufacture an autovaccine), the clinic will ship these to you using the FedEx courier. To facilitate this shipment, it is necessary to open a FedEx account online, following the instructions given [below](#). This is so the clinic can charge the vaccine shipping costs directly to your Fedex account.

The clinic will send you sufficient vaccine doses to cover your first 6 months of treatment. The cost of 6 month's worth of vaccines is in the order of \$1000, depending on how many vaccines have been prescribed to you (each vaccine ampoule is \$30, so a course of 10 injections is \$300). Payment for the vaccines is by Western Union.

In the UK, there is no import tax on prescription medications, so there will be no duty to pay for Dr Markov's vaccines.

[5] Once you receive your vaccines, these are injected at specific doses and at specific bodily locations, and according to a timing schedule provided by Dr Markov (overview [below](#)). Typically the vaccines are injected once every two days. It is straightforward to learn how to inject these vaccines yourself.

[6] Along with your vaccines and/or autovaccines, Dr Markov may prescribe you some additional supplements and medications, which you can buy yourself. The total cost of these may be up to about \$150. Some online pharmacies and websites which sell these additional items are listed [below](#).

Performing a Home Urine Culture Test to Capture Bacteria

This section details how to perform Dr Markov's high-sensitivity urine culture test. Note that a regular urine bacterial culture test that your doctor might give you is not sensitive enough for isolating the bacteria causing the kidney dysbiosis, since regular urine tests are only designed to detect an active urinary tract infection, but not a kidney dysbiosis. In the latter there are fewer bacteria in the urine, thus a more sensitive test is required.

Necessary Equipment

- **Urine dipslides** with CLED and MacConkey agar (approx cost: \$30 for a box of 10)
- **Digital egg incubator** that can be set to 36°C (approx cost: \$30). This is optional.

To perform Dr Markov's high-sensitivity urine culture test at home, you will first need to buy a box of urine dipslides (not to be confused with urine dipsticks, which are a different thing).

Dipslides possess a flat plastic paddle onto which two or more agars are attached. Agar is a jelly-like growth medium for bacteria. The bacteria in your urine will attach to the agar and start growing.

There are many types of agar, but for urine testing, a dipslide which has CLED and MacConkey agars is used. The image shows two dipslides with CLED agar (green) on one side of their plastic paddle, and MacConkey agar (orange) on the other side.



Urine Dipslides



A Digital Egg Incubator

CLED and MacConkey urine dipslides can be purchased from the websites detailed in the [table](#) at the end of this document. At the Markov Clinic they use [Diaslide](#) brand dipslides, but this brand is not available to buy online.

Optionally, for optimal culturing of the bacteria on your dipslides, you may consider buying a \$30 digital egg incubator (egg hatcher) to incubate your dipslides.

The model of egg incubator with a domed top shown in the image can be bought on Amazon or eBay in the US and UK, and works well for culturing purposes.

Performing Dr Markov's High-Sensitivity Urine Culture Test

The urine culture test is performed using your morning urine when you wake up. This test is repeated three days in a row, using a fresh dipslide each day. You may need to do additional days of urine testing if you did not capture bacteria during the first three days. If you are taking antibiotics, Dr Markov says wait at least one month after completion of the antibiotics before you perform these urine tests.

To perform a urine culture test, when you get up in the morning, Dr Markov advises to first wash the area around your urethra with mild soap and warm water, to help remove any bacteria on the skin which could be flushed into the urine stream and contaminate the urine sample.

Take a dipslide out of its plastic housing tube, holding the dipslide by the tab handle at its end (being careful not to touch the dipslide plastic paddle or agars with your fingers, as this can contaminate the agar with bacteria from your skin). Note that the dipslide paddle and agars should not be placed on any surfaces or touch any object, as that can also contaminate the agars with bacteria from those surfaces. Do not touch the inside of the housing tube either, for the same reason.

Pass some urine into the plastic housing tube, using the urine that comes out when you have almost finished urinating (the end-of-stream urine). It is important to use the urine that you pass when you first wake up in the morning, as this increases the sensitivity of the test (maximizes the chances of capturing bacteria). Dr Markov says it is also important to use fresh warm urine, as he notes that warm urine increases the sensitivity of the test by at least 2.5 times.

When the plastic tube is nearly filled with urine, place the dipslide into the tube, with the agars immersed into the urine for around 20 seconds. After that, pull out the dipslide, and discard the urine down the toilet. Then replace the dipslide back in its plastic tube housing, and incubate the dipslide for 24 hours or more, so that the bacteria can grow on the agar. When incubating, it is best to leave the lid of the dipslide slightly loose, to allow air in (bacteria need oxygen to breathe).

You can incubate your dipslide at a warm room temperature (something like 25°C would be good), but faster and more reliable growth may be obtained if you incubate at a temperature of 36°C. For this, you can use an egg incubator. Dipslides are normally placed in a professional dipslide incubator at 36°C, but these cost around \$300, and a \$30 egg incubator works just as well.

The egg incubator shown in the image is easy to use: just set the digital display to 36°C, and make sure the temperature sensor black wire is pointing vertically upwards into the dome area, as shown. It is a good idea to place some water in the water trough of the egg incubator, in order to maintain high humidity inside (high humidity can help prevent the dipslide agars drying up; if the agar dries it will kill the bacteria growing on it, and the clinic needs live bacteria).

After a dipslide has been in the egg incubator for 24 hours, it should be removed, and left at room temperature for further incubation. This is to prevent the agar drying out in the warm egg incubator.

If you have a warm area in your home which is close to 36°C (such as on top of a hot water tank) and this area does not get much hotter than 36°C, you may be able to use this instead of an egg incubator.

Examining the Dipslide for Bacterial Growth

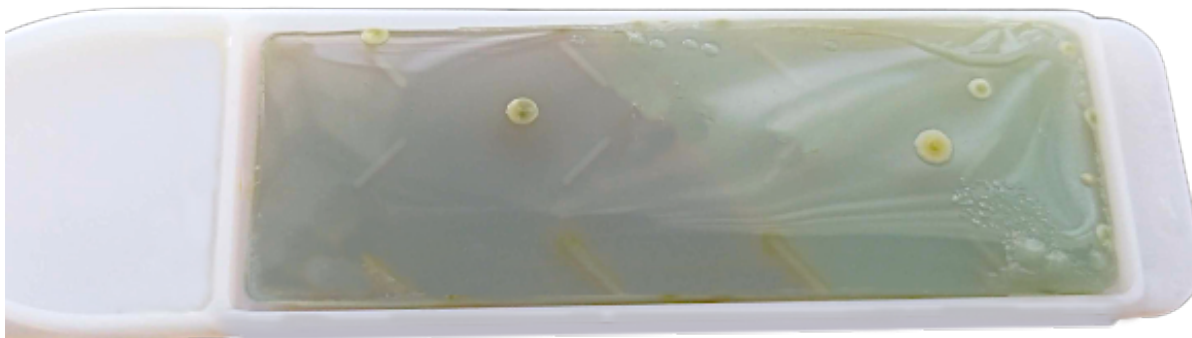
After the dipslide has been incubating for 24 hours, you may begin to see bacterial growth on the agar (though sometimes it can take 72 hours or more before the growth manifests). Bacterial growth can look like a cluster spots on the agar (these are individual bacterial colonies). Sometimes there may be only two or three spots of bacterial growth which appear. Bacterial growth on the agar can also look like a dull haze, turning the normally shiny surface of the agar into a matte surface.



Dipslide Covered With Hundreds of Spots (Bacterial Colonies)



Dipslide Showing Dull Matte Bacterial Growth On the Right Side



Dipslide Showing a Few Spots of Bacterial Growth

Note that the green CLED agar will change color to yellow if there are any lactose-positive bacterial species growing on it. CLED agar is designed to do turn yellow in the presence of such bacteria. The second dipslide image above shows an example of the green color turning to yellow as a result of lactose-positive bacteria growing on the agar.

The agar on a dipslide may shrink slightly at the edges after a few days, due to drying out.

After incubating a dipslide for 72 hours and the bacteria are growing, the dipslide should be placed in a refrigerator (at around 4°C if possible), until such time as you are ready to ship the dipslides to the Markov Clinic. Placing the dipslide in the fridge will help preserve the bacteria (at temperatures around 4°C, bacteria can survive for several weeks in the fridge).

Ensuring You Have Captured the Most Dominant Bacterial Species

When you perform a urine culture test with a dipslide, you may capture the same species of bacteria that you caught in an earlier dipslide test on previous days, or you may capture a new species of bacteria that you have not caught before.

Individual species of bacteria will often come out on different days of dipslide testing; so on the first day you may get one particular species growing on your agar, and on the next day with a new dipslide you might have a different species of bacteria appearing. Or you might get the same bacteria from yesterday appearing twice. And sometimes two or more species might appear on the same dipslide on the same day. It's somewhat random which species may appear on the dipslide on any given day.

Dr Markov says you will typically find 2 or 3 different bacterial species in the urine of ME/CFS patients, and these bacteria which appear will be the dominant bacterial species causing the kidney dysbiosis.

He says it is important to capture these 2 or 3 dominant species, as an autovaccine must be made for each one. Several days of dipslide testing are required to try to capture all the culprit bacteria; and in some patients, it can take longer.

How do you know when you have caught a different bacterial species to the ones you previously captured? And how do you know when you have caught all the culprit dominant species on your dipslide?

There is no easy way to tell, as it requires laboratory testing to determine the identity of the bacterial species on the agar (the Markov Clinic bacteriology lab does this identification once you ship them your bacteria on the dipslides).

However, you can obtain some clues about the species present on the agar from the appearance of the bacterial colonies: those colonies which have a different color or size to colonies previously observed may well be a new species that you have not captured before.

The most common bacterial species that Dr Markov finds in the urine of ME/CFS patients are: Enterococcus faecalis, Escherichia coli, Staphylococcus, Klebsiella, Streptococcus, Proteus, and several others.

Because of the difficulty in knowing whether you have captured all of your dominant species of bacteria, it may be a good idea to send the Markov Clinic say 5 or 6 different dipslides which you have exposed to your urine, and on which bacteria are growing. This will increase the chances that the clinic can find the requisite 2 or 3 dominant species somewhere on those dipslides.

Once the Markov Clinic have your live bacteria, they will custom manufacture your autovaccines from these bacteria. In some cases, such as when Staphylococcus bacteria are found in the urine, the clinic does not make an autovaccine for Staphylococcus, but will prescribe their own off-the-shelf Staphylococcus vaccine called Staphylo-Primavac, which is just as effective as an autovaccine.

Safety Issues When Handling Bacteria

Bacteria found in the urinary tract are classified as biosafety level 2 organisms, and they can cause infections in yourself and others. The fact that you have these bacteria in your urinary tract does not preclude these bacteria from creating infections elsewhere in your body. So some care must be exercised when handling dipslides on which live bacteria are growing.

If you happen to touch the bacteria growing on the agar with your fingers, wash your hands. If any objects or surfaces come into contact with these bacteria, disinfect those surfaces.

To dispose of dipslides containing bacterial growth, you can fill the plastic tube with a disinfectant like a bleach solution, and place in the dipslide in the tube. The dipslide can then be thrown in the dustbin.

Shipping Your Dipslides to the Markov Clinic

Necessary Equipment

- **Rigid cardboard shipping box** about 28 x 20 x 5 cm (11 x 8 x 2 inches) in size, to hold the dipslides
- **Ziplock bag** (or any other sealable plastic bag) to contain all the dipslides you want to ship
- **Transparent plastic documents pouch** to be attached to the outside of your shipping box

Shipping Biological Samples by Category B

Biological samples such as the live bacteria growing on the dipslides need to be shipped by Category B (UN 3373). Sending biological substances by Category B involves packing the items in a secure way, and labelling the parcel appropriately. Packing a Category B item is explained in [this video](#).

FedEx will accept Category B shipments from individuals, and UPS may do so also. But DHL do not accept Category B items from individual persons.

Category B shipping regulations state that the words "Biological Substance Category B" must be displayed on the outside of the parcel in large letters, and the parcel must display the UN 3373 diamond-shaped symbol. Regulations state the outside of the parcel must also display the sender's name and address, and display the details of an emergency contact person (your name and international telephone number can be used for these emergency contact details).

On the page below, you will find a ready-made parcel label, containing the Category B wording and the diamond symbol, the Markov Clinic address in English and Russian, and an area where you can write the sender's name and address (that's you), as well as the emergency contact person (that's you also). You can print out this label and attach it to the back of your parcel; the front of your parcel is reserved for your FedEx or UPS shipping label (waybill).

Category B regulations state that a biological substance must be placed in a closed container called the primary receptacle. The dipslide in its plastic tube is a closed container, so acts as a primary receptacle. The primary receptacles must then be placed inside a secondary packaging. A sealed plastic bag, such as a ziplock bag or plastic food bag, is fine to use as secondary packaging (it says so [here](#)).

The secondary packaging (the sealed plastic bag) is then placed in a rigid cardboard shipping box. Category B rules state the parcel must be rigid, so a soft padded envelope will not do here.

Category B shipments need a packing list (itemized list of contents) placed within the parcel, but outside of the secondary packaging. The lower half of the page below contains a ready-made packing list that you can print and place in your parcel.

You do not need a cold pack for temperature control in your parcel. Just ship at room temperature. Label each of your dipslides with your name, so that the clinic knows who they belong to.



Biological Substance
Category B

Recipient (Получатель):

Dr Artem Markov
4-B Raisy Okipnoi St
Office 31
Kyiv 02002
UKRAINE

д-р Артем Марков
вул. Раїси Окіпної, 4-Б
Офіс 31
Київ 02002
УКРАЇНА

Recipient phone (Телефон получателя):
+380 93 0550551

Emergency Contact Name & Telephone
(Имя и телефон для экстренной связи):

Sender Name & Address
(Имя и адрес отправителя):



PACKING LIST

SHIP TO:	SHIP FROM:	DATE:
Dr Artem Markov	_____	_____
4-B Raisy Okipnoi Street	_____	
Office 31	_____	
Kyiv 02002	_____	
UKRAINE	_____	

ITEM DESCRIPTION	QUANTITY
Dipslide with CLED & MacConkey agar, containing human urinary tract bacteria	

Booking a Shipment With the FedEx or UPS Couriers

To ship your dipslides to the Markov Clinic, you can book a courier shipping on the [FedEx](#) or [UPS](#) websites. It is best to register an account on these websites (FedEx prices are 40% cheaper if you register for an account, and UPS require you to have an account before you can ship).

When booking a shipment, you can either arrange for the courier to pick your parcel up from your home on a given date (this only costs a few dollars), or you can take your parcel to a local courier drop off point (typically found within high street shops).

When taking to a local drop off point, bring in the parcel in the morning if you want your parcel to be picked up on that same day. You can ask the shopkeeper at your local drop off point what time the courier van usually comes to collect the parcels, and then bring in your parcel before that time.

Your local FedEx drop off points are shown [here](#). UPS local drop off points [here](#).

The Markov Clinic recommend you ship dipslides on Monday morning, using a 3- or 4-day express service, so that the parcel arrives at the clinic on Thursday or Friday of the same week. If you ship midweek, the parcel may arrive at the clinic at the weekend, when nobody is there to receive it.

Also, some couriers are not operational over the weekend, so your parcel may be delayed if you ship in the middle of the week, and this longer transit time increases the chances the bacteria may dry out and die. So the clinic recommend Monday morning as the best time to ship.

The cost of 3- or 4-day shipping is around \$50 to \$70, but some couriers may charge a lot more (for example \$250) if you phone them up and tell them you are shipping a Category B item. However, when filling out the shipping details on the website, the website does not ask whether the item is Category B, so hopefully there should be no extra charge when arranging shipping via the courier websites.

Filling Out the Shipping Details

When filling out the parcel shipping details on the FedEx or UPS website, use the following address and contact details (do not include "Markov Clinic" in the address, as this causes customs issues):

Contact name	Dr Artem Markov
Street address	4-B Raisy Okipnoi Street, Office 31
Town	Kyiv
Post code	2002
Country	Ukraine
Clinic telephone	+380 93 0550551
Email	a.markov29@gmail.com

The FedEx or UPS website will ask you for details of the individual items you are sending, in order to automatically create you a commercial invoice for your shipment (which you will then need to print out).

For the invoice item description, you can use: **Dipslide with CLED MacConkey agar, containing urinary tract bacteria**. And then specify the quantity of these dipslides that you are shipping.



Plastic Documents Pouches

This is so customs officials can take the invoices out of the pouch and read them without having to open the parcel. If you do not attach 3 copies of the invoice to the outside of your parcel, your parcel will be held up in customs. Make sure the invoices are secure in their plastic pouch and do not slip out.

You will also need to print out the shipping label (waybill), and attach that label firmly to the front of the parcel. An example of a shipping label is shown on the right. The shipping label contains all the information the courier needs to get your package to its destination, including the recipient address, and a scannable barcode.

When you ship your parcel, you will be emailed a tracking number, and by clicking on the link provided with this number, you can follow the progress of your parcel online, as it makes its way to Kyiv.

Optionally, for this dipslide item you can specify a harmonized system (HS) code of: **9018 90 84 00**, which is the HS code for a medical device. HS codes are used for calculating import taxes. (In fact imports to the Ukraine of a value not exceeding €100 are not taxed, so the clinic will not pay duty on the dipslides you send them).

For the value of each dipslide item, you can say: **\$2**.

Once you have set up your shipment on the FedEx or UPS website, you will need to print 3 copies of the commercial invoice that is automatically generated by the website, and attach these invoices to the outside of your parcel in a transparent plastic documents pouch.



An Example of a Shipping Label (Waybill)

Paying the Markov Clinic Fees by Western Union

Markov Clinic fees for international patients are paid through Western Union. You can conveniently pay using the [Western Union website](#).

On the Western Union website, once you have set up an account (which is free), select the "Send Money" option at the top of the page, and fill out the following details:

Your receiver's country	Ukraine
Send amount	Adjust send amount so receiver gets the correct payment
Receiver currency	USD (US dollars). Select USD, and <u>not</u> UAH.
How does your receiver want the money?	Cash
How would you like to pay?	Pay online
Receiver's first name	Igor
Receiver's last name	Markov
Email address	(None)
Phone number country code	380
Phone number	93 0550551
Purpose of transaction	Medical expense
Source of funds	(Choose as appropriate)
Receiver's address (if needed)	4-B Raisy Okipnoy Street, Office 31, Kyiv 02002, UKRAINE

Once you send the money, Western Union will give you a 10-digit MTCN number, which you send to the Markov Clinic by email, and that number allows the clinic to retrieve the money you sent them.

When you email the MTCN number to the Markov Clinic, in the email you should also state:

- The full name of the sender of the money
- The country the sender is located
- The amount of money transferred
- The date of the money transfer

Terms of Payment

The Markov Clinic have these terms of payment: 100% prepayment is required. Payment should be in US dollars (USD), not in the Ukrainian currency (UAH). So in the Western Union money transfer, the receiver gets the money in USD. Any commissions, such as Western Union fees, paid by the sender.

Opening a FedEx Account to Facilitate Autovaccine Shipment

Once the Markov Clinic have received your bacteria on the dipslides, and have received your payment for the vaccines, they will commence manufacture of a set of autovaccines for you (it takes 10 to 14 days to produce the vaccines), and/or prescribe you one or more of their off-the-shelf vaccines, and ship those vaccines and autovaccines to you by FedEx. Shipping transit time will typically be 3 or 4 working days.

To facilitate this shipment of your vaccines, you will need to open a FedEx account via the [FedEx website](#), as the clinic charges the autovaccine shipping costs to your FedEx account.



Opening a FedEx account requires that you provide FedEx with a debit/credit card number during the sign up process.

Once you have opened this account, give the Markov Clinic your 9-digit FedEx account number. On the FedEx site, your FedEx account number is here: **Account > FedEx Administration > FedEx Accounts**.

That's all you need to do in order to facilitate the shipping of your autovaccines.

The clinic will then charge the vaccine shipping costs directly to your FedEx account, and you will receive an invoice from FedEx by email when FedEx charge your card for the shipping costs (it will be around \$65). Your card is automatically charged by FedEx, so you do not need to do anything.

For this autovaccine shipping, you will also need to pay \$80 fees for the clinic's customs broker (the clinic use a local customs broker in the Ukraine to organize their international shipping); but this payment will be included in the Western Union payment that you make for your autovaccines.

Administering the Vaccines

Necessary Equipment

- **Hypodermic needles** 30 gauge yellow (0.3 mm), length 13 mm (approx cost: \$15)
- **Sterile syringes** 1 to 3 ml in volume (approx cost: \$15)



Yellow 30 Gauge
13 mm Needle

Available [here](#) and [here](#) in the US. [Here](#) and [here](#) in the UK.

There are two different locking systems used for needles and syringes: Luer slip and Luer lock. Either is fine, but whichever you go for, you should buy needles and matching syringes from the same system.

Opening the Vaccine Ampoules

Dr Markov's vaccines and autovaccines are supplied in a box of typically 10 sealed glass ampoules (vials), though some vaccines come with a different quantity of ampoules. The ampoules in one box represent one course of vaccination. The image shows an opened box of Dr Markov's autovaccine, with doses increasing from 0.1 ml on the left, to 1.0 ml on the right (the dose in each ampoule is marked).



An Opened Box of 10 Autovaccine Ampoules

To open an ampoule, the neck is snapped off in the manner shown in [this video](#) and [this video](#). The white dot on the ampoule is used to align the ampoule correctly for snapping open (there is a scratch on the glass near this dot, which allows the ampoule break open cleanly). It is important to have the dot in the right position when snapping opening the ampoule, otherwise the ampoule may shatter, and the contents will be spilled and lost.

Once the ampoule is opened, attach a sterile needle to a sterile syringe, place the needle into the liquid within the ampoule, and draw up this liquid into the syringe by pulling the syringe plunger, as shown in [this video](#). Do not touch the needle with your fingers (that contaminates the needle with bacteria). The air within the syringe should be expelled before injection.

Injecting the Vaccine

The Markov Clinic will provide precise instructions explaining how their vaccines and autovaccines are injected. They are administered using slowly increasing doses, according to a specific schedule, and at specific bodily locations. The instructions vary for each vaccine, but generally, they are injected once every two days (but sometimes there is a longer time between injections).

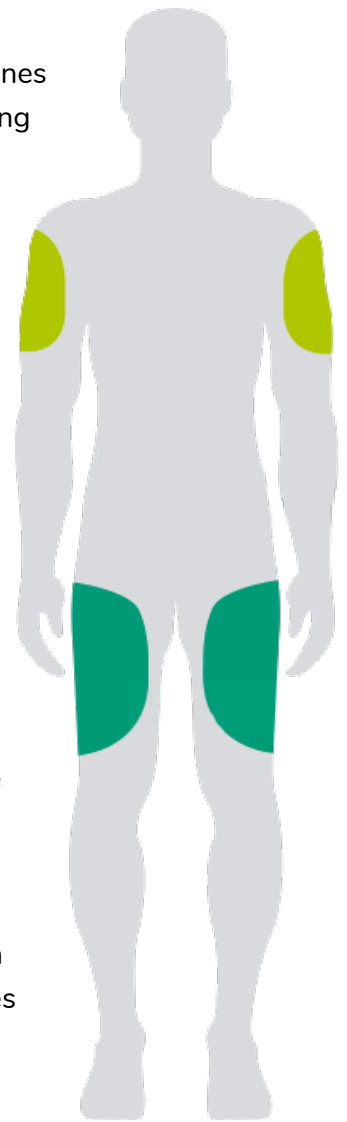
For autovaccines, the instructions say the first injection of the course of 10 injections is performed intradermally on the inner surface of the forearm.

An **intradermal injection** is one which goes just beneath the skin surface, with the needle tip going only 3 mm deep. For this type of injection, the needle is pushed in at an angle of 10 degrees to the skin, see [this video](#).

After the first intradermal injection, all subsequent injections of the course of autovaccine are performed subcutaneously into the upper arm and thigh areas, rotating these sites according to the pattern: right upper arm > right thigh > left thigh > left upper arm. A 3 to 4 cm patch of red skin around the intradermal injection site may appear the next day; this is normal.

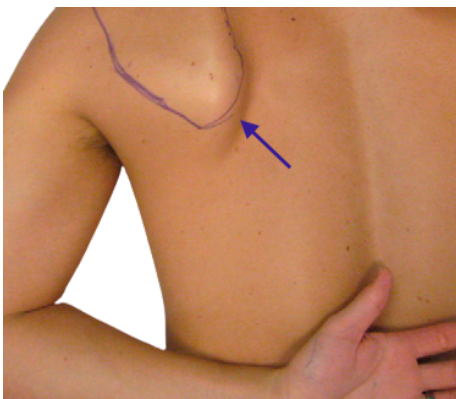
Subcutaneous injection is demonstrated in [this video](#). The technique involves pinching the skin between the thumb and forefinger to create a mound, then pushing in the needle from the side of the mound, so the tip of the needle does not go down too deep (no more than 5 or 6 mm below the skin surface).

The Markov Clinic say the belly area is not to be used for subcutaneous injection. The clinic has been using the upper arm and thigh injection sites for decades, and they know that these sites work, so recommend sticking to those.



Upper Arm and Thigh
Sites For Subcutaneous
Injection of the
Autovaccine

Injecting Staphylococcus Vaccines



Shoulder Blade Injection

If Dr Markov has prescribed you his Staphylo-PrimaVac Staphylococcus vaccine, instructions say this vaccine is injected under the lower part of the shoulder blade (scapula), rather than in the upper arms and thighs. If this vaccine is not injected under the shoulder blade, it will not stimulate the immune system properly.

To inject under the shoulder blade, the arm is placed in the chicken wing position shown in the image, in order to raise the shoulder blade. The needle is then inserted at the point shown by the arrow, and in the direction indicated by the arrow, pushed in parallel to the patient's back (not pushed towards the chest).

The Autovaccine Treatment Schedule

A single course of the vaccine or autovaccine therapy involves 7 to 10 subcutaneous injections, typically with one injection given every other day, in increasing doses, over a period of 20 days (the precise number of injections and the exact administration schedule is given in the instructions document that the clinic will provide you for each vaccine).

In between injections, the instructions say the box of vaccine ampoules should be stored in the fridge, ideally at a temperature of 6 to 8°C. Be careful not to freeze, as freezing damages the vaccine (so do not place the vaccines right next to the cooling plate inside the fridge, as this can go below freezing point).

Once you start injecting a particular course of vaccines, the Markov Clinic advise that it is undesirable to interrupt it; the course should be followed to completion.

After each full course of vaccination is administered, there is a rest period of 3 to 4 weeks, where patients do not receive any further injections. After this rest time, the next course of vaccination begins. The instructions provided by the clinic will explain what rest periods you need to take.

Patients are typically given 2 or 3 courses of vaccination, with one course for each bacterial species found in their urine culture (these vaccines target the most dominant bacterial species in their kidney dysbiosis).

Including the rest periods, these 2 or 3 courses will take a few months to administer, and together they represent one cycle of the autovaccine therapy. When the cycle is complete, there is a long break where no further vaccinations are given for 3 or 4 months. But during this break period, the immune system will be fighting the bacteria targeted by the vaccines.

Including the breaks, one full cycle of treatment takes about 6 months. When that cycle is complete, a new cycle of treatment begins, which requires a new set of vaccines.

The Markov Clinic observe that ME/CFS patients who have had their illness for more than 3 years tend to require 4 to 6 treatment cycles in order to be fully cured (that equates to 2 to 3 year's treatment). Whereas ME/CFS patients who have had their illness for less than 3 years may be cured after only one treatment cycle (just 6 month's treatment).

Even if it takes 2 to 3 years to reach the cured state, Dr Markov says noticeable improvements in health begin during the first cycle of vaccination. So there should be early indications that the treatment is working. He says there are often ups and downs in health level during treatment, but the overall health direction over time is upwards.

Note that the Markov Clinic will only send you and charge you for the vaccines used in one treatment cycle. For the next treatment cycle, you will need to buy another set of vaccines, and have them shipped to you.

Where to Buy Dipslides

Recommended Dipslide Sellers

For Dr Markov's urine culture, you need a box of 10 urine dipslides with CLED and MacConkey agars.

In the UK, inexpensive suppliers of such dipslides include: [Dimanco](#), [Aurosan](#) (also on [Amazon DE](#)), [DocCheck Shop](#) (slow shipping).

There are not many urine dipslide sellers in the US, and the few that there are tend to be expensive. [MFI Medical](#) is a good option. [Blue Care](#) is cheap, but shipping is extremely slow (taking months).

In Germany, there are a large number of dipslide suppliers, and many of these suppliers can deliver to the whole of Europe; see the table below for these.

List of Dipslide Sellers Around the World

The table below lists websites which sell the CLED and MacConkey urine dipslides. Any product in the table is acceptable for Dr Markov's urine culture test. All these products have the required CLED and MacConkey agars, but a few products have a third additional agar. A third agar such as Enterococcus agar can be advantageous.

For each dipslide seller in the table, the country in which the seller is located is given, and the countries that the seller ships to are detailed.

Sellers of Urine Dipslides

Seller	Seller Location	Countries Shipped To	Product Name	Agars on Dipslide	Cost For Box of 10	Notes
MFI Medical	USA	Global	Uricult	CL MC PY	\$54	US shipping free
Serfinity Medical	USA	US Only	Uricult	CL MC PY	\$68	US shipping \$5
Medical Products	USA	US Only	Uricult	CL MC PY	\$61	US shipping \$10
Blue Care	US•EU•HK	Global	UrinAX	CL MC	\$21	Shipping \$8
Blue Care	US•EU•HK	Global	UrinAX	CL MC EN	\$23	Shipping \$8
Diachel	Greece	Global	Uritest 2	CL MC	€47 for 20	UK shipping \$6
Diachel	Greece	Global	Uritest 2	CL MC EC	€54 for 20	UK shipping \$6
Dimanco	UK	UK Only	Dimanco	CL MC	£11	Shipping £10
Dimanco	UK	UK Only	Dimanco	CL MC3	£11	Shipping £10
Zoro	UK	UK Only	Dimanco	CL MC	£28	Free shipping

Zoro	UK	UK Only	Dimanco	CL MC3	£28	Free shipping
Amazon DE	Germany	EU + UK	dip-M	CL MC MT	€21	UK shipping \$13
Aurosan	Germany	EU + UK	dip-M	CL MC MT	€13	UK shipping \$14
Praxisdienst	Germany	EU + UK	UrinAX	CL MC	€11	UK shipping \$33
Praxisdienst	Germany	EU + UK	UrinAX	CL MC EN	€11	UK shipping \$33
P&W Med	Germany	EU + UK	ServoCult	CL MC	€9	
P&W Med	Germany	EU + UK	ServoCult	CL MC CE	€9	
DocCheck Shop	Germany	EU + UK	ServoCult	CL MC	€9	UK shipping \$6
DocCheck Shop	Germany	EU + UK	Uricult Plus	CL MC EN	€12	UK shipping \$6
Mibius	Germany	EU, not UK	Oxoid	CL MC	€21	
Meddax 24	Germany	EU, not UK	Uricult	CL MC	€13	
Meddax 24	Germany	EU, not UK	Uricult Plus	CL MC EN	€12	
MSG Med	Germany	EU, not UK	Uricult	CL MC	€10	
CLS Med	Germany	EU, not UK	Uricult Plus	CL MC EN	€10	
LMT Med	Germany	DE•CH•AT	Uricult	CL MC	€10	
Praxindo	Germany	DE•CH•AT	Uricult	CL MC	€9	
Praxindo	Germany	DE•CH•AT	Uricult Plus	CL MC EN	€9	
Praxindo	Germany	DE•CH•AT	ServoCult	CL MC	€6	
Intermed	Germany	DE•NL•AT	UrinAX	CL MC MT	€9	
Preismed	Germany	DE•AT	UrinAX	CL MC MT	€6	
Henry Schein Med	Germany	DE•AT	ServoCult	CL MC	€7	
Hygiene Partner24	Germany	DE Only	Oxoid	CL MC	€20	
DOXS Med	Germany	DE Only	ServoCult	CL MC	€7	
DOXS Med	Germany	DE Only	Uricult	CL MC	€9	
DOXS Med	Germany	DE Only	Uricult Plus	CL MC EN	€10	
DOXS Med	Germany	DE Only	UrinAX	CL MC EN	€5	
Schubert Med	Germany	DE Only	UrinAX	CL MC	€5	
Schubert Med	Germany	DE Only	ServoCult	CL MC	€7	
Schubert Med	Germany	DE Only	Uricult	CL MC	€9	
Schubert Med	Germany	DE Only	Uricult Plus	CL MC EN	€11	
IFLb Services	Germany	DE Only	Uricult	CL MC	€9	
IFLb Services	Germany	DE Only	Uricult Plus	CL MC EN	€9	
IFLb Services	Germany	DE Only	UrinAX	CL MC	€5	

IFLb Services	Germany	DE Only	ServoCult	CL MC	€7	
Medical Budget	Switzerland	CH•LX	Uricult Plus	CL MC EN	€19	
Trade Med	Netherlands	NL•DE•BE	Uricult	CL MC	€10	
Med Vakhandel	Netherlands	EU, not UK	ServoCult	CL MC	€11	
Med Vakhandel	Netherlands	EU, not UK	Uricult	CL MC	€13	
My Medical	Denmark	DE+Nordic	Uricult	CL MC	Kr140	
Cromakit	Spain	Spain Only	Uritest EC	CL MC EC	€23 for 20	
Sanilaboshop	Spain	Spain Only	Uritest EC	CL MC EC	€15 for 20	
Sanbio	Netherlands	Global	Dimanco	CL MC	€22	Companies only
TCS Biosciences	UK	Global	Dimanco	CL MC	£11	Min order 100 boxes
Gem Scientific	UK	Global	Dimanco	CL MC3	£10	Min order 10 boxes
Dip Slides	UK	Global	Dip-Slides	CL MC	£14	Min order 80 boxes

The abbreviations (CL, MC, EN, etc) for the agars listed in the above table are detailed below.

Purpose of Each Agar

- **CLED** agar (CL) is designed to turn yellow where lactose-positive bacteria grow on it, but remain the same color where lactose-negative bacteria grow.
- **MacConkey** agar (MC) is designed to produce pink colonies where lactose-positive bacteria grow on it, and off-white opaque colonies where lactose-negative bacteria grow.
- **MacConkey No.3** agar (MC3) has the same properties as regular MacConkey, but in addition is a selective agar on which only gram negative bacteria grow. So if a bacterium grows on MacConkey No.3 agar, it will be a gram negative bacterium.
- **Enterococcus** agar (EN) is a selective medium for detection of the Enterococcus species bacteria (though group B Streptococcus may also grow on this medium).
- **E.coli** agar (EC) is a selective medium for detection of the Escherichia coli bacteria.
- **Cetrimide** agar (CE) is a selective medium for detection of the bacterium Pseudomonas aeruginosa.
- **Polymyxin** agar (PY) is a selective medium for detection of the bacterium Bacillus cereus in food samples (it is not useful for capturing urinary tract bacteria).
- **Malt** agar (MT) is used for the cultivation of fungi and yeast (it is not useful for capturing urinary tract bacteria).

Additional Supplements and Medications

List of Sellers

Along with your vaccines and/or autovaccines, Dr Markov may prescribe some additional supplements and medications to take. These items you will need to obtain yourself, and this section details some online sellers of these items.

The international pharmacy otc-online-store.com is a good place to buy these items, as it is a reliable and long-established seller of Russian pharmaceuticals (does not need a prescription).

Suppliers of the Additional Supplements and Medications

Medication	Russian Name	Description	Sellers	Picture of Product
IRS-19	ИРС-19	A bacterial lysate nasal spray which stimulates the immune response against a range of bacteria, including Enterococcus, Klebsiella pneumoniae, Streptococcus, and Staphylococcus.	OTC • Buy-Pharm • Google	
Imudon	Имудон	A bacterial lysate lozenge which stimulates the immune response against a range of bacteria, including Enterococcus, Klebsiella pneumoniae, Streptococcus, and Staphylococcus. It must be sucked under the tongue.	OTC • Buy-Pharm • Google	
Sextaphage	Секстафаг	Bacteriophage product which targets a range of bacteria (Staphylococcus, Streptococcus, Escherichia coli, Proteus, Pseudomonas aeruginosa and Klebsiella pneumoniae).	OTC • Buy-Pharm • Google	
Lysobact	Лизобакт	A lozenge containing lysozyme, an antimicrobial naturally present in the body. Take sublingually, as bioavailability is 1% orally, but 36% sublingually.	OTC • UKRStore • Google	

Canephron	Канефрон	Herbal supplement beneficial for inflammatory diseases of the urinary tract. Contains the herbs rosemary, lovage and centaury.	OTC • UKRStore • Buy-Pharm • Amazon US • Amazon UK • Google	
Phytolysin	Фитолизин	Herbal diuretic and anti-inflammatory.	Buy-Pharm • Amazon UK • Google	
Krenfors	Кренфорс	Herbal antimicrobial and anti-inflammatory for urinary system.	Google	
Trinephron	Тринефрон	Herbal supplement beneficial for inflammatory diseases of the urinary tract. Contains the herbs rosemary, lovage and centaury.	Google	
Urolesan	Уролесан	Herbal product for infections of the urinary tract and kidneys.	UKRStore • Buy-Pharm • Google	
Cystone	Цистон	Herbal antimicrobial and anti-inflammatory for kidneys.	Amazon UK • UKRStore • Buy-Pharm • Google	