PROBIOTIC THERAPY HOME INFUSION PROTOCOL

WHAT IS A HUMAN PROBIOTIC INFUSION ?

The human bowel contains a complex population of bacteria containing several hundred different species. The colon itself is densely populated with around 500 species and more than 30,000 subspecies of various normal bacteria. These organisms and the chemicals they produce affect the body and these effects can have both positive and negative impacts on health. The human flora protects us from pathogenic or "bad" bacteria, however if a bad bacterium does implant itself into the population of normal healthy "good" bacteria, it can have a debilitating and sometimes toxic affect on our health. Due to the nature of the bacteria which are able to produce spores, it is difficult to remove the infection which can remain for many years, even a lifetime.

The use of healthy human flora appears to be the most complete probiotic treatment available today. It acts as a broad-spectrum antibiotic capable of eradicating "bad" bacteria and spores, and supplies the "good" bacteria for recolonisation.

This therapy involves the infusion of healthy human donor faeces via enema into the bowel, which is prepared prior to the procedure. This infusion process is repeated for at least five days, depending on the severity of the condition.

The treatment is expected to improve symptoms of Irritable Bowel Syndrome and *potentially* cure the cause of the problem. This however is not guaranteed. The treatment has demonstrated success in treating some of the most difficult cases of Irritable Bowel Syndrome.

DIETARY REQUIREMENTS

You will need to go on a **LOW FIBRE DIET** <u>at least</u> **TWO WEEKS before** beginning the antibiotics and during the course of the antibiotics. The following list gives you an idea of low fibre foods:

 $\hfill\square$ Refined cereals – white bread, pasta, rice cakes and pastries made from white flour

- □ Milk (all forms)
- □ Butter, margarine, oils
- □ Chicken and fish
- □ Egg dishes
- □ Jellies, custards, mousses
- Fruit and vegetables (cut down the amount you eat and discard the peel)
- the following are relatively low in fibre:

Apples	Pears	Melon	Peaches	Cherries	Plums	Grapes
Pumpkin	Zucchini	Marrow	Lettuce	Capsicum	Cucumber	Potato

Foods to AVOID:

- □ Pork
- Processed meats: sausages, ham, salami
- □ Citrus Fruits
- □ Nuts and seeds
- □ Berries and dried fruit

Your diet must change to a <u>HIGH FIBRE DIET</u> after your first probiotic infusion and we recommend you maintain this high fibre diet to enable the new flora to be strong enough to survive and implant. You are able to eat the following:

Anything "wholemeal" – bread, pasta, brown rice, pulses (lentils, beans, chickpeas), muesli, fibre enriched cereals.

- □ All fresh fruit and vegetables, including juices
- \Box All meat, fish and chicken

AVOID the following foods:

- Oysters, shellfish, prawns
- □ Processed meats

EQUIPMENT FOR THE INFUSION

Equipment to be purchased through the Probiotic Therapy Research Centre

This equipment is essential for the infusion. Price on request.

- □ Enema bags
- □ Rectal tips

Equipment to be purchased locally

- Bottles or bags of normal saline.
- □ Lubricant
- □ Latex gloves
- Psyllium husks
- □ Imodium tablets (Loperamide)

You will also need the following

- □ Somewhere to hang the enema bag from, ie nail in the wall.
- □ Funnel
- □ Tissues
- Stool collection device (disposable 'takeaway' container or a potty!)
- Blender

BOWEL PREPARATION

You need to purchase **medication for a COLONIC LAVAGE.** – Usually this is available from a chemist without prescription. This is the same bowel prep you would use if you were undergoing a colonoscopy.

SCHEDULE FOR PROBIOTIC INFUSION

ANTIBIOTICS

You will need to take one or two of the following antibiotics as per the schedule below for a minimum of 10 day. You will be advised accordingly.

TIME	RIFAMPICIN	VANCOMYCIN	FLAGYL
Morning	1 capsule (150mg)	2 capsules (250mg)	1 tablet (400mg)
Night	1 capsule (150mg)	2 capsules (250mg)	1 tablet (400mg)

Your last dose of antibiotics will be
taken
the night before your bowel washout

Diet

You should still be maintaining your low fibre diet at this point. Please refer to diet requirements section.

Bowel wash out...(the day before the first probiotic infusion)

ENSURE YOU HAVE CEASED YOUR ANTIBIOTICS BY THIS DATE

On waking in the morning:

DO NOT EAT any solid foods.

DRINK CLEAR FLUIDS ONLY – eg. clear soups, clear fruit juices, tea, coffee, Bonox, soft drinks.

 \Box Follow the instructions on the back of the packet of the colonic prep starting at 10 am approximately (rather than the time mentioned on the packet).

Drink the colonic prep throughout the day as per instructions on packet.

□ IMPORTANT – please ensure you maintain your fluid intake to prevent dehydration..

COLONIC PREPARATIONS PROMOTE DIARRHOEA

Be prepared to visit the toilet regularly throughout the day DAY ONE OF YOUR PROBIOTIC INFUSION

On Rising

In the morning, on rising, take 2 IMODIUM tablets. You only take these on the first morning of the infusion.

Diet

You will need to start your high fibre diet today as per instructions. You may have a light breakfast before commencing your daily infusions..

Infusion procedure

1. Collect donor stool in appropriate container. Place immediately into the blender with half teaspoon of the psyllium husks and between 100 - 400 mls of normal saline (the volume of saline needed to make mixture 'pourable').

2. This should be blended for approximately 15 seconds.

3. Ensure the white ball in the bag is removed and the white clip is closed on the tubing. Pour this mixture into the enema bag via the red cap. Eliminate as much air as possible and close the red cap.

4. Once preparation is complete, recipient will lie on their LEFT side in the foetal position with lower half of body elevated.

5. Lubricate the rectal tip and gently insert the tip into the anus until you reach halfway of the blue tip.. Slowly unclamp the enema bag after hanging the bag up which will to commence the infusion. Allow 5-10 minutes for infusion.

6. Once infusion has been completed, clamp the tubing and gently remove the rectal tip (still attached to the tubing and bag). Discard the enema bag and tip and 'double bag' for disposal.

7. You then remain on your left side, massaging your abdomen for approximately 10 mins. Repeat this massage, lying on back, stomach and completing on your right side.

8. This procedure is repeated each day for 5 - 10 days approximately.

9. If you difficulty retaining the enema you can take Imodium or codeine as required.

REMEMBER ITS QUALITY NOT QUANTITY

Human Probiotic Infusion

Blood work and stool testing for patients and donors

•	IgG
A)	HEP A > IgM
	HEP B & C, HIV, CMV, EBV, RPR, TOXO SEROLOGY
B)	STOOL TEST FOR: a) CELLS b) PARASITES IN SAF FIXATIVE c) CULTURE INCLUDING CL DIFFICLE & TOXIN, YERSINIA, AEROMONAS & CAMP JEJUNI d) ANTI – ADHESION ANTIBODY FOR E. HISTOLYTICA.
C)	FBC, ESR, B12, FOLATE, TSH, ANA, U& E, CREAT, GLUC, LFTs.

HOME INFUSION PROTOCOL

DONOR INSTRUCTIONS

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SELECTION OF DONORS

Donors are selected by the recipient on the following criteria:

The potential donor must have a healthy bowel motion every day.

No history of bowel problems (eg no constipation, diarrhoea, colitis etc)
 Is not on any medications that may interfere with stool viability (eg antibiotics).

As a potential donor you will be fully screened to ensure that you are free from infection. This involves a blood sample and stool tests as per the enclosed protocol.

DIETARY CHANGES

The person receiving your stool (recipient) will be relying on the donor to pass a bowel motion every day. We highly recommend that you start the following changes at least one week prior to the commencement of the infusion. These changes include :

1. Avoiding foods at risk of contamination

 \Box Avoid shellfish, prawns, oysters and processed meats such as salami, ham and sausages.

 \Box Avoid all antibiotics.

2. You must commence a high fibre diet to improve the quality of your flora

All breads, cereals and grain should be wholemeal. This includes bread, pasta, rice and breakfast cereals.

Eat plenty of fresh vegetables (with the exception of corn).

□ Include beans and pulses in your diet (lentils, chickpeas, beans, hommos)

Eat at least two pieces of fruit per day

Drink at least 1 litre of water per day.

MEAL SUGGESTIONS

Breakfast

 $\hfill \hfill \hfill$

Lunch

Salad sandwich with wholemeal bread and whatever filling you wish and a piece of fruit.

- □ Pasta with vegies
- □ Noodles with vegies

Dinner

- □ Pasta with meat, sauce and vegies
- □ Meat, fish or chicken with two types of vegies or salad and potatoes.
- Stir fried vegies (with or without meat) with noodles or brown rice.
- Brown rice with beans or lentils.

YOUR RESPONSIBILITIES AS A DONOR

As a donor it is vitally important that you understand the instructions mentioned. There are two major points:

1. You need to make sufficient dietary and lifestyle changes for the duration of the recipient's treatment to ensure that you will pass a bowel motion every day.

2. If you experience any of the following, please withdraw from donating:

- Diarrhoea
- □ Vomiting
- Cold / flu
- □ Any antibiotic usage

HOW TO ENSURE YOU "GO" EVERY DAY

This is the biggest concern of the donor. By following the dietary recommendations above ,you should have no problem passing a bowel motion every day.

CONTACT

If there are any questions please contact **Sharyn Leis (SRN)** Probiotic Therapy Research Centre (PTRC) on 612 – 9712 7255 or Centre for Digestive Diseases on 612 – 9713 4011

These "Fecal Transplant At Home – DIY Instructions" are based on the experiences of one person, the anecdotal reports of others and questions most frequently asked by e-Patients. They are not medical advice. Please read the <u>disclaimer</u> and discuss your options with your doctor before doing fecal microbiota transplant (FMT). It is critical that your doctor test your donor before FMT. An outwardly healthy person could carry an asymptomatic parasite or blood borne illness that could wreak havoc in your fragile system.

Introduction

These instructions are for fecal transplant at home using an enema bag or bucket hung on a wall, which will maximise flow up the colon from the force of gravity. If you are in a hurry, syringes and enema bottles can also be used but do try to use the enema bag method as often as possible, for maximum effect. These are solo DIY instructions and do not require assistance from another person.

Shopping List



- Enema bag or bucket. You can buy disposable enema bags, re-useable enema bags or enema buckets on Amazon. There are also specialist stores such as this one in the US or this one in Australia. Sex shops also sell them (!)
- A heavy duty adhesive hook
- A cheap blender or zip lock bag
- Bristol Stool Chart
- Diagram of colon
- Kitchen strainer
- Kitchen funnel
- Distilled water
- Sea salt (optional)
- Silicon gloves if you are squeamish
- Separate dishwashing utensils or a dishwasher
- Personal lubricant or coconut oil
- A big-brown towel or bath
- Tissues
- Paper towels
- Plastic bag
- A large cushion (from a sofa is ideal)

- A timer
- Imodium (also known as Loperamide optional)



Before the Big Day

- Find and test your donor. Opinions differ about the minimum testing required. See <u>here</u> for testing options.
- Read the CDD Home Infusion Protocol for Donor & Recipient
- Read every <u>Frequently Asked Question</u> on this site. Don't be lazy about this. You are putting someone's poop up you. To make an informed decision you must research the possible risks as well as the possible benefits.
- Familiarise yourself with the Bristol Stool Chart so you know what healthy poop looks like (2,3, 4 on this chart).
- Familiarise yourself with the shape and position of your colon so that you understand the direction in which the FMT will flow.



biofilm busters disrupt colonies of pathogenic microbiota, weakening their resistance

- Decide if you are going to use anti-biotics / herbal anti-microbials / biofilm busters etc to kill off bad bugs before FMT. This is not mandatory, opinions differ.
- Decide if you are going to do a bowel-washout (lavage) or not. This is not mandatory, opinions differ. The goal of a washout is to minimise the amount of old poop present at the time of infusion of the new poop. Fasting or low-fibre liquid diets help achieve this.
- If you have IBD take whatever medication you know will control the inflammation.
 Do not do FMT in a flare unless you have no choice.

- Decide where you will do your FMT either in a bath or lying on a towel on the bathroom floor. Avoid doing it on a bed or sofa or in a carpeted area in case you have a spill.
- Purchase supplies.
- Hang a heavy duty adhesive hook on the wall at a height that will allow for the tube to reach your body without too much slack. Too high and the tube will not reach. Too low and you won't get enough flow from gravity.
- Decide if you are going to use distilled water or saline. Opinions differ which is better so you may have to experiment. Some have reported that saline has a laxative effect. Others have reported that saline is easier to hold in.
- Do a practice run with your enema bag using just distilled water.
- Go on a low fibre diet for 2 weeks prior to FMT.
- If this is the first in a series of FMTs you can clear out the contents of your bowel 24 hours prior to FMT by fasting and using a laxative or water diet beforehand DO NOT DO THIS EVERY TIME AS IT WILL DISRUPT GROWTH OF THE NEW FLORA. This step is optional.
- Stop anti-biotics/anti-microbials etc 24 hours before FMT (48 hours if you have not done a bowel wash-out longer if constipated).
- Take medications as usual.
- Leave plastic food containers or zip lock bags with your donor for collection of sample
- If weather is cold leave a microwavable heat pack with your donor so that it can gently keep the sample as close to body temperature as possible while waiting to be collected.

On the Big Day



Prepare your FMT area. Put enema bag, lubricant, tissues, paper towels, plastic bag, diagram of colon & timer within easy reach together with anything you need to be comfortable eg rug and pillow. The cushion should go underneath the towel so that it raises your rear end. This will use gravity to keep the FMT in.

- Assume you will have a spill and make sure paper towels and plastic bag are nearby to dispose of clean-up items. A bath is easier as you can wash the mess away.
- Take Imodium upon waking (unless you suffer constipation).
- Collect sample.
- Do not use sample if it does not look healthy. Sample should look like 2, 3 or 4 on the Bristol Stool Chart.
- Keep sample at room temperature and use within 2-3 hours unless freezing.
- If you are going to freeze some sample, separate it into portions and put it in the freezer.
- Heat distilled water in microwave so that it is tepid (the temperature of a baby's bottle). Too hot will kill the FMT and too cold will be uncomfortable for you to hold in.
- To make saline add ¼ tsp. sea salt to 1 cup distilled water. Do not use table salt with additives.

- Put sample in blender or zip lock bag and lightly mush/blend with water. If blending don't overdo it as too much air will reduce the potency of the sample.
 Zip-lock bags require less clean up than blender-method and expose the microbiota to less turbulence, but the process is somewhat more revolting as you are closer to the poop and have to mush it by hand through the bag. Your choice.
- Add as much water as necessary to make the FMT the consistency of paint. Too thick will block the nozzle and too runny will be harder to hold in and reduce the potency of the FMT.
- Take care not to expose the sample to any more air or water than absolutely necessary as this will reduce its quality.
- Make sure enema nozzle switch is shut. VERY important or it will spurt everywhere!
- Pour FMT slurry into enema bag using kitchen strainer & funnel
- Hang enema bag on hook.
- Lift tube high in the air (to prevent spill), release nozzle to let air out, lower gradually until all air is released. Close nozzle once you can see all air has gone and FMT has reached the nozzle.



use sea salt without additives to make saline and disinfect your FMT equipment Prepare for entry with a little lubricant

- Lie down on your left side making sure your rear is raised on the cushion.
- Lift up your right leg and slowly, gently insert enem

 a nozzle. A little discomfort is normal but do not continue if it is painful. It can help
 to dilate the entry with a finger before insertion.
- Open the enema nozzle switch.

- Feel the FMT flowing. If it's not flowing sit up, carefully holding the nozzle in place and shake the enema bag to get it flowing.
- Lie down and take a deep breath as the FMT flows in. Hold your butt tight. Congratulate yourself for having got this far. Think of all the good bugs that are going to repopulate your gut. Breathe.
- If you feel like you are going to expel the FMT then turn off the enema nozzle. You can put more in later.
- Refresh your memory by looking at the diagram of the colon.
- Lie on your left side for 10 minutes. Massage the FMT gently up your colon.
- Switch off the enema nozzle, then remove the nozzle and put it straight into the plastic bag. Wipe yourself if necessary.
- Lie on your stomach for 10 minutes.
- Lie on your back for 10 minutes. Massage the FMT gently across your colon.
- Lie on your right side for 10 minutes. Massage the FMT gently down your colon.
- If you are having trouble holding it in, don't panic. It doesn't matter if you lose a little. That's what the big brown towel and paper towels are for. Try doing a little at a time, massaging, and then doing some more.
- Try and hold it in for at least 6 hours.
- If you are using a re-useable enema bag, wash it and store it in a bucket of water with 1 lb. / 500g of dissolved sea salt.

After the Big Day

- You will get into a routine with FMT. The first time is the hardest and like everything it gets easier with practice. Hopefully you won't have to do it for too long.
- Only continue the Imodium if you are having trouble holding in the FMT.
- If you suffer from food intolerances and react to the donor's food, use less FMT or ask your donor to modify their diet. A little used frequently is better than a lot used occasionally.
- A high fiber diet will help grow your new microbiota, but don't overdo it. Not all fibers agree with all people. Experiment until you find the right ones. Only take a fiber supplement if you cannot get enough fiber through your diet. If you have IBD you will need to go easy on the fiber until your gut wall can cope, and then introduce it only slowly.
- If you have food intolerances don't try anything that isn't a known safe food (or supplement), for at least 3 months after FMT and then only introduce slowly.
- If you experience die-off or side effects, try a liver tonic to support your liver which may be under pressure from the readjustment occurring in your gut.
- .If you suffer from intestinal permeability (leaky gut) try one of the repair formulas available. It might take a few to find one that has the right mix of ingredients for

you. Perm-a-Vit and Intestinew have a good mix of gut healing ingredients. Customised formulas are also available from some naturopathic practitioners.

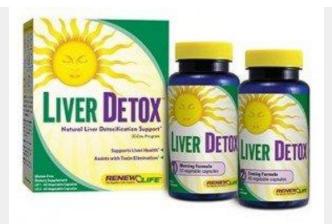
- Get your zinc levels tested and make sure they are on the high side of normal. ZInc is essential for healing. Zinc Lozenges are better than tablets as they bypass the digestive system.
- If you have IBD read the <u>Briggs Protocol</u> which contains a step by step gut repair strategy
- If FMT doesn't work for you, try a different donor or investigate factors that might be disrupting growth of the new flora.



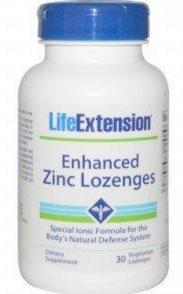
feed your new microbiota fiber



repair your gut wall



help your liver deal with die-off and gut toxins



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Frozen FMT Instructions

Frozen FMT allows you the flexibility that a donor doesn't. But it is reported not to have the same 'hit' as fresh as the quality is compromised by freezing in home refrigerators.

There are three ways to freeze FMT. When you do a fresh FMT you can pour some of the slurry into ice cubes and keep them to use as needed. Add a few drops of liquid glycerol to preserve it, not too much as it is a laxative.

However to maximise the potency of the FMT it is best to freeze the sample without adding water. The more interference (air and water) the more the potency is compromised. To do this, you distribute the sample into ice cubes or cupcake trays. Alternately freeze it whole and break it up later by putting it into two plastic bags and hitting it with a hammer.

The amount of frozen FMT you use will depend on how much you have and when you will next see your donor. There are no hard and fast rules. Considering that pro-biotics come in tiny capsules you really don't need much FMT to make a difference, especially if you are doing it regularly.

To defrost FMT put it in a cup of warm distilled water/saline and keep stirring until it's dissolved. If you find this too revolting then put it in the blender. The water should be warm enough so that the end mix will be tepid, a comfortable temperature to have inside you, but not so hot that the good bacteria are killed. If the mix is too cold once defrosted, simply add a little warm water. Once it's defrosted strain the mix into an enema bag as per above instructions. Where possible, always do FMT when your bowel has been emptied.

We don't yet know how long frozen stool can be kept. One person has used it after 10 months without adverse affects. OpenBiome states that although further research has yet to be done "microbiological culturing experience suggests that samples may be stored for up to 6 months at - 20°C without a significant loss of viability".

How to Make Microbiota Capsules

Discussion Forums

Facebook Fecal Microbiota Transplant Facebook Bacteriotherapy Getting Healthier Now – FMT Yahoo FMT for Crohns & Colitis

Other Resources

<u>FAQs</u> <u>Where to Start – a To Do List</u> <u>Is Fecal Transplant for You?</u> <u>How to Find a Donor</u> <u>CDD Home Infusion Protocol RECIPIENT INSTRUCTIONS</u> <u>CDD Home Infusion Protocol DONOR INSTRUCTIONS</u> Kathy's YouTube video on how to do enema bottle method Michael's YouTube video on how to do enema bottle method

You are welcome to reproduce the above instructions provided you don't make any changes and provide a link to the <u>PoP</u> website.

QUESTIONNAIRE FOR POTENTIAL DONORS

1. When did you last use antibiotics?

2. Have you experienced 'travellers diarrhoea' ?

3. Do you or have you worked within a hospital, health care facility or child care facility ?

4. Please describe your stool quality ie is it soft, hard or runny?

5. How frequently do you go to the toilet in a day ie once per day, twice per day or more, or once every two to three days ?

6. Do you currently have or have you recently experienced any type of abdominal discomfort ie pain / cramping or swelling / bloating ?

7. Do you currently suffer from excessive flatulence (gas)?

8. Do you currently experience nausea or heartburn?

9. Have you ever noticed blood in your stool?

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