



VENESECTION (PHLEBOTOMY)

Taking blood – called venesection or phlebotomy in medical language – reduces red blood cell counts in people with polycythaemia vera (PV). It has very few risks. If you have polycythaemia vera (PV) you have too many red blood cells. One way to reduce your red cell count that does not require any medication at all is to use this procedure.

Venesection is a simple procedure done just like having a blood draw or making a blood donation – a doctor or nurse inserts a needle into your vein and collects some blood. Patients with PV usually have about anywhere from 350 ml to 500 ml of blood removed during venesection. The amount depends on your height and weight as well as your haematocrit, (blood thickness or packed cell volume level) and your general state of health.

HOW IT WORKS

Phlebotomy (or venesection) is a standard treatment for PV and helps bring your red cell count closer to normal. Your haematologist will ask you to come to hospital to have some blood removed. It works in the short-term since you make up the liquid part of your blood (plasma) quicker than red cells and in the long-term iron stores are reduced slowing down the production of red cells. For this reason, it is very important not to take iron supplements if you are a patient with PV.

You may need regular venesections every few weeks or months until you reach an acceptable blood thickness level. Your target blood thickness (haematocrit) depends on your risk factors, how well you tolerate the procedure and whether you've had any previous complications such as a blood clot. [Evidence based MPN guidelines require a haematocrit of less than .45 for all PV patients.](#) And many haematologists prefer less than .42 for females.

WHY TRY THIS TREATMENT

Phlebotomy has some real advantages for people with PV:

- It works quickly
- It doesn't require any medications
- It has minimal side effects
- It is effective at reducing red cell counts (and thus risks)

With regular venesections, your haematocrit (or packed cell volume) can reach a normal level, allowing your heart to pump blood more efficiently. **However phlebotomy does not reduce white cells or platelet levels.**

TOGETHER WITH MEDICATION

You may need low dose aspirin therapy and/or a cytoreductive treatment such as hydroxycarbamide (Hydroxyurea), pegylated interferon or anagrelide in addition to regular phlebotomies. Your haematologist will work with you to find the best combination for your individual condition.

COMMON SIDE EFFECTS

You may feel tired after giving blood, and you may have some local soreness or bruising, but serious side effects are very uncommon. Some people faint after giving blood. If you feel dizzy or unwell in the 24 hours afterwards tell your team and they may give you some fluid (salt water) to replace volume lost in your blood. This is more likely to happen if you are taking blood pressure tablets and if you have not eaten beforehand.

TIPS FOR COPING WITH VENESECTION

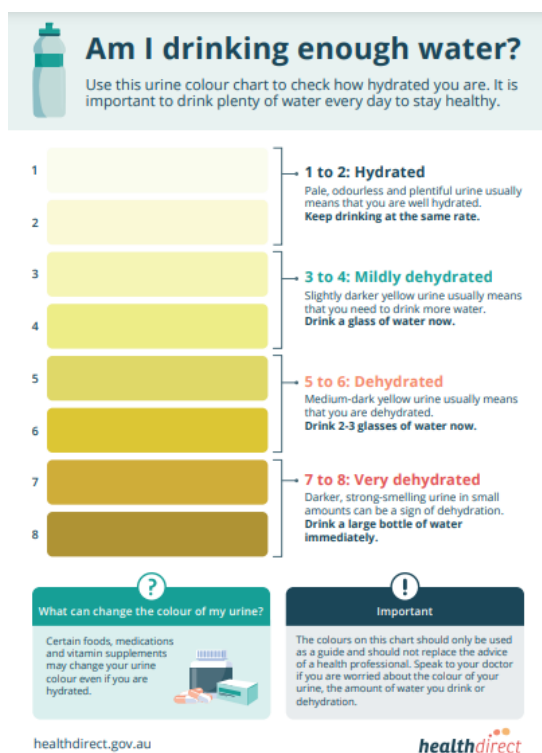
Day prior to venesection: Drink plenty of fluids the day before to stay hydrated.

Are you hydrated?

- Very pale yellow to clear urine – well hydrated
- Pale yellow urine – somewhat dehydrated – drink a glass of water
- Pale honey urine – dehydrated – drink 2-3 glass of water
- Bright yellow – very dehydrated – drink a large bottle of water.



This graphic may assist you in determining if you are sufficiently hydrated:



<https://www.health.nsw.gov.au/environment/beattheheat/Pages/urine-colour-chart.aspx>

12 hours prior:

- Eat something salty in the 12 hours before. You lose about 3 grams of salt with each donation

3 hours prior:

- Drink 3 large glasses of water or juice
- Eat something. Go for savoury and salty foods

In the **2 hours following**, avoid smoking

In the **6 hours following**:

- drink at least 3 good size glasses of juice or water
- avoid strenuous exercise
- don't stand for long periods
- try not overheat (avoid hot showers, being in the sun, hot drinks)

In the **8 hours following**, avoid alcohol.

These are some other tips for coping with phlebotomy shared by people with PV.

- **Take it easy** Plan for a restful time afterwards. You may feel a bit tired so don't schedule too much.
- **Let others know** Tell family members and others you trust that you are having a venesection so you may need a little extra help, for instance if you are caring for young children.
- **Arrange transport** You may be too tired to drive or travel by public transport right after a venesection, especially if you are feeling fatigued for other reasons, eg as a side effect of your MPN.
- **For women** It is best (although not essential) to schedule venesections for a time of the month when you are not menstruating. This will prevent you from feeling excessively tired after venesection.



VENESECTION FAQs

Can I eat and drink normally?

Yes. We recommend that you eat a normal, healthy diet and drink plenty of water.

Can I drink alcohol?

It is safe to drink alcohol in moderation, but we recommend you do not exceed the recommended weekly limits of 21 units of alcohol per week for a man and 14 units for a woman. Please ask your nurse or doctor if you require more information regarding alcohol consumption.

What if I want to have a child?

Venesection or removal of blood is a safe treatment if you are pregnant or planning to father a child. If you are pregnant, you may need fewer phlebotomies during your pregnancy. Please see our pregnancy section for more information on pregnancy in MPNs.

Who will do my venesection?

Your doctor or a specially trained nurse will take blood. Your haematologist will give you instructions about where to obtain this service.

Can I drive?

If you feel faint or fatigued after venesection, for any reason, do not drive.

Do I need to take any special precautions?

Please make the person performing your venesections aware if you have any of the following conditions or are taking any of these medications. **If any of these apply to you, your medical team may need to take special precautions to ensure that venesection can be carried out safely.**

- If you are taking warfarin.
- If you are taking beta-blockers (drugs which control blood pressure).
- If you weigh less than 49kg.
- If you have previously fainted or felt unwell after a blood test or venesection.
- If you are frightened of needles.
- If you have a serious heart condition.

WHAT CAN I DO TO HELP MYSELF IF I HAVE AN MPN?

It's important to take good care of yourself. There are many things you can do to feel better.

- **Don't neglect your general health, particularly your cardiovascular health, including stopping smoking and managing your cholesterol.** It is a good idea to have regular physical checkups, including skin checks, eye health examinations and screening tests for mammograms, cervical cancer and prostate cancer.
- **Be blood clot aware.** Having an MPN puts patients at higher risk of having a blood clot. It's good to know the signs and how to prevent blood clots. See STOP THE CLOT website at: https://www.stopthecLOT.org/learn_more/signs-and-symptoms-of-blood-clots/
- **Have regular skin cancer check ups for both melanoma and non melanoma skin cancers,** especially if you are also on treatment regimes such as hydroxycarbamide (hydroxyurea) or ruxolitinib
- **Good nutrition is important.** Eat a balanced diet including lots of fresh fruit and vegetables, lean protein and whole grains.
- **Drink plenty of water and prevent dehydration** by avoiding excessive alcohol and caffeinated drinks.
- **Maintain a normal weight and maintain your muscle mass** to help keep your cholesterol and blood sugar within normal limits.
- **Exercise is very beneficial** for people with MPNs and helps to fight fatigue. Before starting on any new programme, check with your GP or haematologist and start slowly and gently.
- **Stop smoking.** Ask your GP if you need help.



- **Consider wellness activities** such as yoga, aerobic activity, strength training, meditation, massages, support groups, improved nutrition etc – an international study of hundreds of MPN patients showed wellness activities had a pattern of decreased levels of symptom burden, fatigue, depression, and a higher quality of life for MPN patients. (Survey of integrative medicine in myeloproliferative neoplasms – the SIMM study).

More information on living well with an MPN is available at www.mpnallianceaustralia.org.au.

GENERAL ADVICE

This leaflet is intended to give you general information about having venesections. It is important that in addition to this leaflet you discuss any concerns with your general practitioner or haematologist.