



# Phlebotomy: How Does This MPN Treatment Option Work?

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Bart Scott, MD  
Director, Hematology and Hematologic Malignancies  
Seattle Cancer Care Alliance

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**Andrew Schorr:**

How many people have had a phlebotomy? A lot, okay. Did it strike you that it was like out of another age? I mean, it does to me. Does it strike you that way? Okay. So, Dr. Scott, this mechanical approach of simply drawing off blood—how does that work to help us feel better?

**Dr. Scott:**

Right. Well, it reduces your red cell mass. So essentially, the reason why you're doing phlebotomy is to induce an iron deficient state. And that's another important thing that can frequently be not communicated to patients. I have actually seen patients in consultation where they're getting both phlebotomy, and they're taking iron replacement.

And, you know, that's kind of counterintuitive. Because the whole purpose of phlebotomy is to induce iron deficiency, and the iron deficiency reduces your red cell mass. And when you reduce the red cell mass, you reduce the risk for thrombosis. Because one of the, there's many components to increase thrombosis in MPN, and in PV.

But one of the components is, as Dr. Snyder was saying, the high red cell mass, and so you actually get sluggish blood flow. And because the red blood cells are so high, you actually end up moving the, normally the platelets are right in the center, so there's not a lot of interaction with the blood vessel.

But when the red cells are so high, they push the platelets kind of to the periphery when your blood is flowing. So there's more interaction between your platelets, and the surface of your blood vessels called the endothelium. And because the platelets have more interaction with your blood vessels, there's a higher risk of thrombosis. So if we can reduce the red cell mass, you reduce the risk of thrombosis.

**Andrew Schorr:**

Wow. So when people have phlebotomy, they're reducing their risk of stroke.

**Dr. Scott:**

That's all thrombosis, so stroke, pulmonary emboli, DVT, MIs.

**Andrew Schorr:**

Okay, all right. So now you know why you do it? And how often somebody has it will vary?

**Dr. Scott:**

It's widely variable. And, you know, I couldn't sit here and tell you, all of you, how frequently you should be phlebotomized. I can say that the goal should be to get the hematocrit less than 45, but it's going to vary on the patients.

And there's a lot of things that go into it, including honestly your dietary habits. Because the more iron you take in, the more you're going to have to phlebotomize someone to try to induce an iron deficient state.

**Andrew Schorr:**

Okay, so are you telling these people, with these conditions, don't eat spinach?

**Dr. Scott:**

Not all, because this is specifically in relation to PV and a high hematocrit. So, but if you have a high hematocrit, and you're getting phlebotomy, and you're also have a diet that's high in iron, honestly that's a little bit counterintuitive. You're going to counteract the effects of the phlebotomy, and you certainly shouldn't be taking iron replacement and doing phlebotomy at the same time.

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