



Can Hydration Influence Hemoglobin Test Evaluation?

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Tamara Lobban-Jones:

So I'm actually going to jump right into it, the first question comes from Ronald. Can hydration influence hemoglobin test evaluation?

Dr. Leclair:

Yes, it's true that in hematology in particular but in others as well, the unit of measure is per volume. Typically, they're 100 milliliters or a liter. And that means—I'll explain that to the U.S. people later—and that means that if I change the volume I'm going to change the answer. So you get up in the morning. You haven't—you haven't moved around much, you haven't had breakfast, you haven't had orange juice or coffee. You're a little on the dehydrated side almost. If you have your blood drawn then for hemoglobin, you will get an answer that will probably be the highest value you have the day.

If you have your blood drawn at 4 o'clock in the afternoon, you've had lunch—well, you've had breakfast, you have lunch. If you're like many people that I know you've had coffee more than once or tea a couple of times. You've moved around. There's a change in your fluids. You can drop your hemoglobin from the morning by as much as a gram to a gram-and-a-half. That's startling when you think about it.

Now, maybe it's not so critical if you started at a 16 and now you're down to a 14.5, because those are pretty much within reference range. No one's going to notice that. But if you started at a 14 and you drop now to a 12.5, that's going to poke somebody's eye. That's suspicious, and yet the only difference is because before you came in you grabbed that one liter bottle of water and chugged it down before you came in to have your blood test taken.

So yes, one of my favorite comments to everybody is if you get diagnosed at 8 o'clock in the morning, keep coming back at 8 o'clock in the morning to have your blood test taken, so it's one less inconsistency to deal with.

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