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HEALTH | ESSAY

Blood Pressure, a Reading With a Habit of Straying

By GINA KOLATA NOV. 30, 2015

Measuring blood pressure seems so straightforward. Stick your arm in a cuff for a few seconds, and there they are: two simple numbers, all the information you need to know whether you are in a healthy range or high enough that you should be taking one of the many cheap generic drugs that can bring down your blood pressure.

But the reality is more confusing, as I discovered recently when I tested mine.

It turns out that blood pressure can jump around a lot — as much as 40 points in one day in my case — which raises the question of which reading to trust.

Ever since I wrote about a woman who was in denial about her high blood pressure until she had a stroke, I have been worried that my blood pressure might creep up without my knowing it. I became interested again when I reported that a large federal study of people at high risk for a heart attack or stroke found that bringing blood pressure well below the current national

guidelines — a systolic blood pressure below 120 millimeters of mercury instead of 140, or instead of 150 for people older than 60 — significantly reduced the death rate and the rate of heart attacks, strokes and heart failure. The results were so compelling that guideline committees are expected to revise their recommendations.

A week after that study was published, I decided to check my blood pressure with a home monitor before a coming physical examination. The first night, I was startled to find that my systolic pressure was a scary 137. The next night, it was only 117. The next morning, before I saw my doctor, it was a terrifying 152. At the doctor's office, it was 150. I measured it again that night, and it had plummeted to 110. And my diastolic pressure, the lower number, was a rock-bottom 60 that evening.

It seemed unreal. Did I have hypertension because my pressure had hit 152 in the morning? But if I took a drug to bring it down, what would happen if my pressure was trying to go down to 110 in the evening?

I asked a few experts.

“Short answer is, you are normal,” said Dr. David McCarron, a research associate at the University of California, Davis, adding that anyone whose pressure goes down to 120 or, in my case 110/60, does not have hypertension. His advice to patients is to abstain from obsessively monitoring their blood pressure.

“If you are healthy and have no related health conditions, you will lose more quality months or years of life by checking your B.P. frequently than if you did not,” he wrote by email.

Blood pressure measurement is complicated, said Dr. Suzanne Oparil, the director of preventive cardiology at the University of Alabama at Birmingham and an investigator in the clinical trial, called **Sprint**, that found that a pressure below 120 was preferable for high-risk patients.

“There is a lot of controversy over when and how to measure it,” Dr. Oparil said. If it remains very high over time with multiple measurements, there is no mistaking the diagnosis of hypertension. And if it is normally very low, daily fluctuations will not generally push it into a danger zone. The problems come when blood pressure is in between.

“The guidelines in the U.S. are based on clinic blood pressures taken in a way that few providers do,” Dr. Oparil said. The patient should rest for five minutes in a chair, not on an exam table, and should not talk. The feet should be on the floor, the back straight and supported. The patient should not have had caffeine and should not have smoked in the past half-hour to an hour. If this procedure is not followed, she said, the reading is generally falsely elevated and does not reflect the true blood pressure.

Once Dr. Oparil makes a diagnosis of hypertension, she encourages her patients to learn to measure their own blood pressure correctly and keep a record of what it is outside an office setting. When she sees her patients, she considers their pressure numbers at home and in the clinic in order to adjust their medications.

There is another option: a device that automatically measures blood pressure every 15 to 30 minutes during the day and every 30 to 60 minutes at night. You wear the device for 24 hours. In Britain, Dr. Oparil said, this sort of ambulatory monitoring is required before a doctor can diagnose high blood pressure. But patients in the United States often refuse, saying they can't sleep with the cuff inflating through the night.

And yet the United States Preventive Services Task Force, a federally sponsored but independent group that draws up medical guidelines, concluded in a report last February that 24-hour ambulatory blood pressure monitoring was the preferred way to confirm whether a person has high blood pressure.

“This struck a lot of us as surprising,” said Dr. David Maron, the director of preventive cardiology at Stanford University School of Medicine. In addition

to the inconvenience, the test costs a couple of hundred dollars, although it is generally reimbursed through insurance.

Blood pressure measured in a doctor's office can be wrong about half the time, the task force reported. The group, though, found a lot of variability from study to study. In 24 studies in which patients had an office blood pressure measurement and an ambulatory one, the proportion who had high blood pressure with both tests ranged from 35 percent to 95 percent in the different studies.

The task force concluded that people whose pressure was in the high normal range in office visits risked receiving misleading diagnoses and being treated unnecessarily. Although the group did not have data on how many people with normal blood pressure were treated for hypertension, it concluded that "a substantial number of people" could fall into that category.

My doctor suggested the 24-hour test, but I am uncertain at this point if I want it. If Dr. McCarron is correct that I do not have hypertension, what is the point? Or should I do as Dr. Oparil suggested and measure my pressure twice a day for several days and send the readings to my doctor? She said she was "very comforted" by my low readings and did not really think I had high blood pressure.

Oh for the simplicity of a cholesterol test!

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