

TITLE 1: “Ask the Doctors”

TITLE 2:

DATE: November 1997

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KEYWORDS:

- Brain
- Symptoms
- Pharmaceutical treatment

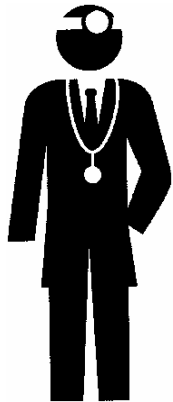
ABSTRACT OVERVIEW: A reader asks whether or not low blood pressure could be a symptom of RLS. Wayne Hening provides a detailed answer spending time discussing vascular disease, the nervous system and anemia as well as various other connections between the reader’s symptoms and RLS.

COPY OF ARTICLE:

Ask the Doctor

Q. *At our last support group meeting, the subject of blood pressure came up. Most of the people in the group seem to have low blood pressure. Is there any relationship between blood pressure and RLS? Is there any relationship between RLS and vascular disease?*

A. You have made an interesting observation. Such observations can provide important clues to scientists and doctors studying and treating RLS. One question that needs to be asked, however, is whether this low blood pressure is due to RLS or to its treatment. Almost all medications that are used to treat RLS tend to lower blood pressure. With some of these medications, such as pergolide (Permax) or clonidine (Catapres), low blood pressure that leads to dizziness is an important side effect. So, before we make the assumption that these RLS patients naturally have low blood pressure, we need to check their current medications!



So far, no clear relationship has been shown between blood pressure or vascular disease and RLS. However, no one has taken the time to systematically measure blood pressure or to check blood flow in large groups of RLS patients. The observation of this support group reminds physicians to check blood pressure and circulation to the legs more carefully in RLS patients. Unable to say anything definitive, I will make a few points about possible relationships between RLS and blood pressure or vascular disease. In each case, I should warn,

however, that we do not yet know enough to come to a clear conclusion.

A number of conditions that may cause RLS can be associated with poor blood-pressure control: anemia can be associated with low blood pressure, and peripheral nerve disease can damage blood-pressure control. A common symptom of poor blood-pressure control is orthostatic hypotension, a drop in blood pressure when the individual stands up. Two of the conditions most closely related to RLS, kidney failure or diabetes, can cause problems this way. Kidney failure can cause both anemia and peripheral nerve damage, while diabetes often causes nerve damage that affects bloodpressure control. Pregnancy, another condition that is related to RLS, can cause both high blood pressure (eclampsia) and low blood pressure. It is my impression, however, that many RLS patients, including those who have one of these conditions that can cause RLS, do not have abnormal blood pressure.

The association between RLS and vascular disease is also interesting, but little exact information is known about it. Ekbom, the Swedish doctor who first extensively studied RLS, thought that the condition was caused by poor blood flow to the legs, which could be due to vascular disease. As a result, he recommended treatment with medications that should increase blood flow. It has sometimes been suggested that RLS patients may have “cold feet,” suggesting that the blood flow to the feet and toes, especially through small arteries, is low. Other physicians have more recently suggested that RLS can be related to difficulties with blood flow in the veins of the leg, seen with varicose veins. Unfortunately, none of these associations has been clearly proven, and many RLS patients obviously have normal circulation in their legs and have normal veins.

One possible association between RLS and blood pressure or blood flow is through the autonomic nervous system, which is the part of the nervous system that controls the body’s basic functions, such as digestion, temperature, blood pressure, and blood flow. The actions of this system are largely unconscious, although some of the effects—such as light headedness or shivering—are felt directly. Brain chemicals that are affected by RLS treatments are used by the autonomic nervous system in controlling bodily function. The most important of these brain chemicals for RLS treatment is dopamine (acted upon by levodopa/carbidopa [Sinemet], pergolide,[Permax] or bromocriptine [Parlodel]), but also affected are the brain chemicals epinephrine and norepinephrine (acted upon by clonidine [Catapres]). It is certainly possible, though not proven, that one or more of these chemicals is abnormal in RLS patients. This abnormality might be in only one small part of the nervous system, or it might also involve the autonomic nervous system. If so, there may be some associated problems with blood pressure and blood flow in RLS. This is another intriguing possibility that scientists, hopefully, will have the chance to study further in the future.

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