

# Letter from the Industrial Physician



## Takeshi Hirano, M.D.

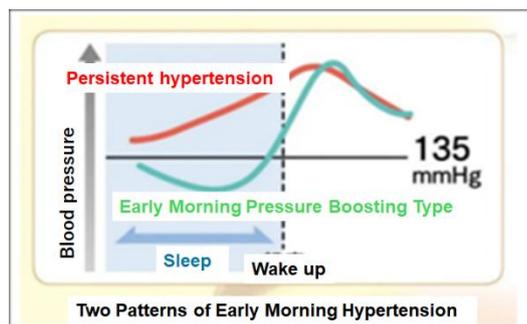
- Graduated from the School of Medicine, University of Occupational and Environmental Health, Japan
- 1990 - 1992: Research Fellow, University of Southern California School of Medicine
- 2003 – 2013: Professor of the University of Kitakyushu, Faculty of Environmental Engineering
- 2013 - 2023: Professor of Kamakura Women's University, Faculty of Home Economics and Nutrition Science

## Be cautious of morning blood pressure spikes. The danger of the morning surge

It is well known that mornings are the time when strokes and heart attacks occur most frequently. During this season when the cold intensifies, the drop in temperature makes blood pressure more likely to rise, making it a period when strokes and heart attacks are more common.

One major cause of this is a phenomenon called the “morning surge.” This refers to the phenomenon where blood pressure rises sharply around the time of waking in the morning. Medically, an “abnormal morning surge” is defined as an average systolic blood pressure within two hours of waking minus the lowest systolic blood pressure during sleep being 55 mmHg or higher.

Our blood pressure is naturally lower at night and rises toward morning. However, if this rise is too rapid, it places significant strain on blood vessels. Blood pressure can spike dramatically, especially immediately after waking, when straining in the bathroom, or when entering a cold washroom or changing room.



LIVING ふくおか・北九州HPより引用

rapid, it places significant strain on blood vessels. Blood pressure can spike dramatically, especially immediately after waking, when straining in the bathroom, or when entering a cold washroom or changing room.

Japanese research reports that individuals with a strong morning surge have approximately 2 to 3 times higher risk of stroke or myocardial infarction (Kario et al. *Circulation* 2003 107(10):1401-6.).

Particular caution is needed for those who: ① Have been diagnosed with hypertension, ② Received a “borderline hypertension” result in a health checkup, ③ Have diabetes, dyslipidemia, or a history of smoking, ④ Have family members with stroke or heart disease.

So, what should such individuals do? Here are key points to prevent the morning surge. All are measures you can start implementing today. ① Don't move immediately after waking: Stay in bed for 30 seconds to 1 minute to let your body adjust. ② Warm your room in the morning: Set your air conditioner or heater to turn on with a timer. ③ Keep the bathroom and changing area warm too: This also helps prevent heat shock. ④ Develop the habit of measuring your blood pressure at home to understand your own levels: It's recommended to measure in the morning (within one hour of waking) and at night. ⑤ Do aerobic exercise while protecting yourself from the cold, even in winter. Walking briskly for at least 30 minutes daily strengthens your blood vessels.

The most frightening aspect of the morning surge is that it “progresses without noticeable symptoms and strikes suddenly.” However, you can reliably lower your risk with small daily adjustments. Don't assume “I'm fine.” Especially in winter, make a conscious effort to live with awareness of your “morning blood pressure.”