

Taking a pill at bedtime may be healthier

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Study shows benefits for some with high blood pressure

WASHINGTON — Taking a blood-pressure pill at bedtime instead of in the morning may be healthier for some high-risk people.

New research suggests that this simple switch may normalize patterns of blood pressure in patients at extra risk from the twin epidemics of heart and kidney disease.

Why? When it comes to blood pressure, you want to be a dipper. In healthy people, blood pressure dips at night, by 10 percent to 20 percent. Scientists don't know why, but suspect the drop gives arteries a little rest.

People with high blood pressure that doesn't dip at night — the non-dippers — fare worse than other hypertension sufferers, developing more serious heart disease. Moreover, heart and kidney disease fuel each other — and the 26 million Americans with chronic kidney disease seem most prone to non-dipping. In addition to heart problems, they're at extra risk of their kidney damage worsening to the point of requiring dialysis.

Most blood-pressure patients need two or three medications. So Italian researchers performed an easy test: They told 32 non-dippers with kidney disease to switch one of those drugs from a morning to a bedtime dose. In two months, nearly 90 percent of these high-risk patients had turned into dippers. Their nighttime blood pressure dropped an average of 7 points, without side effects or increase in daytime blood pressure.

Better, a key sign of kidney function improved significantly, too, Dr. Roberto Minutolo of the Second University of Naples reports this month in the American Journal of Kidney Diseases.

It's the latest research in the field of chronotherapy: how our bodies' internal rhythms make certain diseases worse at certain times of the day, and in turn affect how to time treatments.

While the Italian study is too small for proof, similar studies from Europe also back a bedtime switch for non-dippers. The work is catching the attention of U.S. hypertension specialists, and now doctors

at Baltimore's Johns Hopkins University are planning a larger study to see if a bedtime switch really could give certain people healthier hearts and kidneys.

How big a problem is non-dipping?

"I think it's huge," says Hopkins' Dr. Lawrence Appel. "This is our best lead" into why black Americans with kidney disease, in particular, tend to worsen despite treatment.

Appel found 80 percent of black kidney patients in a recent study were non-dippers. Most startling, 40 percent had nighttime blood pressure that was even higher than daytime levels.

Two-thirds of chronic kidney disease patients, and at least 10 percent of the general population, are estimated to be non-dippers, says Dr. Joseph Vassalotti of the National Kidney Foundation. One theory is that their bodies have trouble excreting salt.

Yet few patients ever have heard of the problem — and few doctors know who is affected. Most people get their blood pressure checked only during the day. A

24-hour blood-pressure monitor can tell but is rarely used, partly because insurance seldom pays for the extra visit to download and diagnose the readings.

And most patients who take several once-a-day pills swallow them all in the morning, meaning they all start wearing off around the same time, says Dr. Gina Lundberg of St. Joseph's Hospital in Atlanta.

"It does make good sense to take some in the morning and some in the evening," says Lundberg, a spokeswoman for the American Heart Association.

Everyone has an internal clock, determined by genes, that affects health. Many of these biological rhythms are circadian, meaning they fluctuate on a 24-hour cycle.

Consider how that can affect the timing of treatments. Some older "statin" pills fight cholesterol best if taken at bedtime; they target a liver enzyme that's most active at night. Asthma attacks are more frequent at night, and the stomach secretes more heartburn-causing acid at

night, affecting some patients' dosing requirements. Researchers even are studying how to better time certain cancer chemotherapies and allergy treatments.

The best-known example: Blood pressure jumps in the early morning hours, as the awakening body produces more stress hormones. That's also why heart attacks and strokes are most common in the morning.

The nighttime dipping problem has gotten far less attention. The new Italian study marks an important advance, says Dr. Mahboob Rahman of the University Hospitals of Cleveland.

"We know now that you can change medication timing and lower blood pressure at night," he explains.

That doesn't mean everyone should switch willy-nilly to bedtime dosing. Morning may be best for people on just one drug, and no one yet knows if the switch truly gives non-dippers better overall health. "That's the million-dollar question," Rahman cautions.

Still, Lundberg says it's worth asking your doctor how to time doses, saying one at night for someone taking multiple medicines couldn't hurt.