

## Chiropractic Cuts Blood Pressure Study Finds Special 'Atlas Adjustment' Lowers Blood Pressure

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March 16, 2007 -- A special chiropractic adjustment can significantly lower high blood pressure, a placebo-controlled study suggests.

"This procedure has the effect of not one, but two blood-pressure medications given in combination," study leader George Bakris, MD, tells WebMD. "And it seems to be adverse-event free. We saw no side effects and no problems," adds Bakris, director of the University of Chicago hypertension center.

Eight weeks after undergoing the procedure, 25 patients with early-stage high blood pressure had significantly lower blood pressure than 25 similar patients who underwent a sham chiropractic adjustment. Because patients can't feel the technique, they were unable to tell which group they were in.

X-rays showed that the procedure realigned the Atlas vertebra -- the doughnut-like bone at the very top of the spine -- with the spine in the treated patients, but not in the sham-treated patients.

Compared to the sham-treated patients, those who got the real procedure saw an average 14 mm Hg greater drop in systolic blood pressure (the top number in a blood pressure count), and an average 8 mm Hg greater drop in diastolic blood pressure (the bottom blood pressure number).

None of the patients took blood pressure medicine during the eight-week study.

"When the statistician brought me the data, I actually didn't believe it. It was way too good to be true," Bakris says. "The statistician said, 'I don't even believe it.' But we checked for everything, and there it was."

Bakris and colleagues report their findings in the advance online issue of the *Journal of Human Hypertension*.

### Atlas Adjustment and Hypertension

The procedure calls for adjustment of the C-1 vertebra. It's called the Atlas vertebra because it holds up the head, just as the titan Atlas holds up the world in Greek mythology.

Marshall Dickholtz Sr., DC, of the Chiropractic Health Center, in Chicago, is the 84-year-old chiropractor who performed all the procedures in the study. He calls the Atlas vertebra "the fuse box to the body."

"At the base of the brain are two centers that control all the muscles of the body. If you pinch the base of the brain -- if the Atlas gets locked in a position as little as a half a millimeter out of line -- it doesn't cause any pain but it upsets these centers," Dickholtz tells WebMD.

The subtle adjustment is practiced by the very small subgroup of chiropractors certified in National Upper Cervical Chiropractic (NUCCA) techniques. The procedure employs precise measurements to determine a patient's Atlas vertebra alignment. If realignment is deemed necessary, the chiropractor uses his or her hands to gently manipulate the vertebra.

"We are not doctors. We are spinal engineers," Dickholtz says. "We use mathematics, geometry, and physics to learn how to slide everything back into place."

What does this have to do with high blood pressure?

Bakris notes that some researchers have suggested that injury to the Atlas vertebra can affect blood flow in the arteries at the base of the skull. Dickholtz thinks the misaligned Atlas triggers release of signals that make the arteries contract. Whether the procedure actually fixes such injuries is unknown, Bakris says.

Bakris began the study after a fellow doctor told him that something strange was happening in his family practice. The doctor had been sending some of his patients to a chiropractor. Some of these patients had high blood pressure.

Yet after seeing the chiropractor, the patients' blood pressure had normalized -- and a few of them were able to stop taking their blood pressure medications.

So Bakris, then at Rush University, designed the pilot study with 50 patients. He's now organizing a much bigger clinical trial.

"Is it going to be for everybody with high blood pressure? No," Bakris says. "We clearly need to identify those who can benefit. It is pretty clear that some kind of head or neck trauma early in life is related to this. This is really a work in progress. It is certainly in the early stages of research."

Dickholtz has been teaching, practicing, and studying the NUCCA technique for 50 years. He says high blood pressure is far from the only thing an Atlas misalignment causes.

"On the other hand, if people have high blood pressure, there is a tremendous possibility they need an Atlas adjustment," he says.

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